Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors DL Factor: 1.30 Pedestrian Load Factors DL Factor: 1.30

Condition: As-Built Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_1	-71.64	14.85	-81.06			0.90	1.24	16.53	-90.24	0.00	0.00	Vehicle	Vehicle	-----	-210.44	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**5.47**	**5.47**
	U_1 - U_2	-90.83	29.94	-130.18			0.90	1.24	33.34	-144.93	0.00	0.00	Vehicle	Vehicle	-----	-306.49	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**3.27**	**3.27**
	U_2 - U_3	-61.13	44.47	-147.72			0.90	1.24	49.51	-164.45	0.00	0.00	Vehicle	Vehicle	-----	-293.26	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	**3.07**	**3.07**
	U_3 - U_4	10.71	58.25	-137.27			0.90	1.24	64.85	-152.82	0.00	0.00	Vehicle	Vehicle	98.22	-184.75	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**10.18**	**10.18**	**3.77**	**3.77**
	U_4 - U_5	12.86	58.57	-136.82			0.90	1.24	65.20	-152.32	0.00	0.00	Vehicle	Vehicle	101.48	-181.29	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	**10.10**	**10.10**	**3.80**	**3.80**
	U_5 - U_6	121.37	67.82	-104.15			0.90	1.24	75.50	-115.95	0.00	0.00	Vehicle	Vehicle	255.93	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	**7.28**	**7.28**	-----	-----
	U_6 - U_7	249.49	75.05	-62.11			0.90	1.24	83.55	-69.14	0.00	0.00	Vehicle	Vehicle	432.95	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	**6.64**	**6.64**	-----	-----
	U_7 - U_8	376.92	76.60	-20.89			0.90	1.24	85.28	-23.26	0.00	0.00	Vehicle	Vehicle	600.86	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**8.60**	**8.60**	-----	-----
	U_8 - U_9	319.74	82.13	-19.69			0.90	1.20	88.56	-21.23	0.00	0.00	Vehicle	Vehicle	530.78	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	**6.99**	**6.99**	-----	-----
	U_9 - U_{10}	128.77	76.36	-60.66			0.90	1.20	82.33	-65.40	0.00	0.00	Vehicle	Vehicle	274.43	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**7.05**	**7.05**	-----	-----
	U_{10} - U_{11}	-70.90	68.75	-98.83			0.90	1.20	74.12	-106.56	0.00	0.00	Vehicle	Vehicle	4.19	-230.70	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**10.52**	**10.52**	**4.94**	**4.94**
	U_{11} - U_{12}	-252.96	60.84	-143.70			0.90	1.20	65.59	-154.93	0.00	0.00	Vehicle	Vehicle	-----	-530.27	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**3.61**	**3.61**
	U_{12} - U_{13}	-391.95	52.12	-179.01			0.90	1.20	56.20	-193.01	0.00	0.00	Vehicle	Vehicle	-----	-760.44	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	**3.86**	**3.86**
	U_{13} - U_{14}	-482.99	43.39	-197.48			0.90	1.20	46.78	-212.92	0.00	0.00	Vehicle	Vehicle	-----	-904.88	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**3.97**	**3.97**
	U_{14} - U_{15}	-454.44	43.23	-197.47			0.90	1.20	46.61	-212.92	0.00	0.00	Vehicle	Vehicle	-----	-906.57	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**3.96**	**3.96**
	U_{15} - U_{16}	-502.02	33.24	-196.86			0.90	1.20	35.84	-212.26	0.00	0.00	Vehicle	Vehicle	-----	-928.56	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**3.89**	**3.89**
	U_{16} - U_{17}	-467.99	24.19	-182.98			0.90	1.20	26.08	-197.29	0.00	0.00	Vehicle	Vehicle	-----	-864.86	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**4.36**	**4.36**
	U_{17} - U_{18}	-368.86	14.97	-143.91			0.90	1.20	16.14	-155.16	0.00	0.00	Vehicle	Vehicle	-----	-681.22	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**3.88**	**3.88**
	U_{18} - U_{19}	-251.56	7.48	-95.80			0.90	1.20	8.07	-103.29	0.00	0.00	Vehicle	Vehicle	-----	-461.31	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.12**	**4.12**
	U_{19} - U_{20}	-117.89	1.86	-42.83			0.90	1.20	2.00	-46.18	0.00	0.00	Vehicle	Vehicle	-----	-213.29	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	**12.12**	**12.12**
Structure 2	U_1 - U_1	-118.23	5.78	-49.22			0.90	1.18	6.15	-52.40	0.00	0.00	Vehicle	Vehicle	-----	-221.82	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**10.10**	**10.10**
	U_1 - U_2	-239.56	13.23	-97.44			0.90	1.18	14.09	-103.75	0.00	0.00	Vehicle	Vehicle	-----	-446.30	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**5.32**	**5.32**
	U_2 - U_3	-350.44	22.08	-143.11			0.90	1.18	23.51	-152.37	0.00	0.00	Vehicle	Vehicle	-----	-653.65	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	99.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**4.77**	**4.77**
	U_3 - U_4	-449.15	32.92	-180.71			0.90	1.18	35.05	-192.40	0.00	0.00	Vehicle	Vehicle	-----	-834.02	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**4.64**	**4.64**
	U_4 - U_5	-483.26	42.60	-197.02			0.90	1.18	46.72	-216.16	0.00	0.00	Vehicle	Vehicle	-----	-909.24	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**4.64**	**4.64**
	U_5 - U_6	-485.85	55.52	-213.41			0.90	1.18	59.11	-227.22	0.00	0.00	Vehicle	Vehicle	-----	-926.99	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	**4.41**	**4.41**
	U_6 - U_7	-428.85	65.79	-200.66			0.90	1.18	70.04	-213.64	0.00	0.00	Vehicle	Vehicle	-----	-835.23	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**4.27**	**4.27**
	U_7 - U_8	-428.37	65.95	-200.48			0.90	1.18	70.21	-213.45	0.00	0.00	Vehicle	Vehicle	-----	-834.36	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**4.28**	**4.28**
	U_8 - U_9	-335.42	75.63	-186.46			0.90	1.18	80.52	-198.52	0.00	0.00	Vehicle	Vehicle	-----	-694.12	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**3.98**	**3.98**
	U_9 - U_{10}	-200.29	81.84	-154.13			0.90	1.18	87.14	-164.10	0.00	0.00	Vehicle	Vehicle	-----	-473.70	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	**4.18**	**4.18**
	U_{10} - U_{11}	-52.14	86.88	-114.30			0.90	1.18	92.51	-121.69	0.00	0.00	Vehicle	Vehicle	52.47	-225.99	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	**10.41**	**10.41**	**5.89**	**5.89**
	U_{11} - U_{12}	107.02	86.73	-77.48			0.90	1.18	92.35	-82.50	0.00	0.00	Vehicle	Vehicle	259.17	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	**8.70**	**8.70**	-----	-----
	U_{12} - U_{13}	259.33	85.94	-43.00			0.90	1.18	91.50	-45.78	0.00	0.00	Vehicle	Vehicle	456.07	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	**9.62**	**9.62**	-----	-----
	U_{13} - U_{14}	391.98	80.93	-16.32			0.90	1.18	86.16	-17.38	0.00	0.00	Vehicle	Vehicle	621.58	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**13.61**	**13.61**	-----	-----
	U_{14} - U_{15}	439.40	81.31	-14.17			0.90	1.18	86.55	-14.91	0.00	0.00	Vehicle	Vehicle	682.44	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**13.15**	**13.15**	-----	-----
	U_{15} - U_{16}	369.66	80.02	-29.92			0.90	1.17	84.18	-31.48	0.00	0.00	Vehicle	Vehicle	590.00	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**10.72**	**10.72**	-----	-----
	U_{16} - U_{17}	271.39	77.08	-56.97			0.90	1.17	81.10	-59.94	0.00	0.00	Vehicle	Vehicle	458.23	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**9.53**	**9.53**	-----	-----
	U_{17} - U_{18}	171.75	73.42	-84.38			0.90	1.17	77.25	-88.78	0.00	0.00	Vehicle	Vehicle	323.70	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**7.70**	**7.70**	-----	-----
	U_{18} - U_{19}	72.78	66.94	-112.85			0.90	1.17	70.43	-118.73	0.00	0.00	Vehicle	Vehicle	186.17	-59.73	4.88	30.19	25.3075	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	**9.85**	**9.85**	**6.07**	**6.07**
	U_{19} - U_{20}	-8.11	59.63	-141.98			0.90	1.17	62.73	-149.38	0.00	0.00	Vehicle	Vehicle	71.01	-204.74	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**13.20**	**13.20**	**4.58**	**4.58**
	U_{20} - U_{21}	-60.13	50.38	-159.35			0.90	1.17	53.01	-167.65	0.00	0.00	Vehicle	Vehicle	-----	-296.11	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.63**	**4.63**
	U_{21} - U_{22}	-82.18	40.06	-166.09			0.90	1.17	42.15	-174.74	0.00	0.00	Vehicle	Vehicle	-----	-334.00	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.32**	**4.32**
	U_{22} - U_{23}	-82.40	39.92	-166.20			0.90	1.17	41.99	-174.86	0.00	0.00	Vehicle	Vehicle	-----	-334.44	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.31**	**4.31**
	U_{23} - U_{24}	-65.94	49.51	-165.66			0.90	1.17	52.08	-174.29	0.00	0.00	Vehicle	Vehicle	-----	-312.31	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	**4.42**	**4.42**
	U_{24} - U_{25}	61.51	60.18	-122.32			0.90	1.17	62.11	-159.27	0.00	0.00	Vehicle	Vehicle	57.39	-230.40	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	**13.50**	**13.50**	**4.24**	**4.24**
	U_{25} - U_{26}	55.02	67.07	-123.24			0.90	1.17	70.56	-129.67	0.00	0.00	Vehicle	Vehicle	163.26	-97.04	4.88	30.19	25.3075	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	**Fail**	42.67	50.00	Pass	10.67	12.00	Pass	**10.08**	**10.08**	**5.42**	**5.42**
	U_{26} - U_{27}	136.02	73.74	-97.04			0.90	1.17	77.58	-102.10	0.00	0.00	Vehicle	Vehicle	277.67	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	5.6806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	**8.12**	**8.12**	-----	-----
	U_{27} - U_{28}	216.87	76.90	-65.45			0.90	1.17	80.91	-68.86	0.00	0.00	Vehicle	Vehicle	387.11	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	**10.22**	**10.22**	-----	-----
	U_{28} - U_{29}	293.76	78.71	-37.33			0.90	1.17	82.81	-39.27	0.00	0.00	Vehicle	Vehicle	489.53	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	**11.82**	**11.82**	-----	-----
	U_{29} - U_{30}	358.11	77.77	-19.42			0.90	1.17	81.82	-20.43	0.00	0.00	Vehicle	Vehicle	571.91	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**14.74**	**14.74**	-----	-----
	U_{30} - U_{31}	339.33	88.31	-22.17			0.90	1.18	94.02	-23.60	0.00	0.00	Vehicle	Vehicle	563.35	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	**13.03**	**13.03**	-----	-----
	U_{31} - U_{32}	251.17	88.10	-33.74			0.90	1.18	92.38	-35.93	0.00	0.00	Vehicle	Vehicle	448.46	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30 — Pedestrian Load Factors: DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.85	5.63	-3.99			0.90	1.24	6.27	-4.44	0.00	0.00	Vehicle	Vehicle	14.46	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**79.41**	**79.41**	-----	-----
	L_1 - L_2	74.27	77.68	-17.03			0.90	1.24	86.49	-18.96	0.00	0.00	Vehicle	Vehicle	208.98	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.95**	**4.95**	-----	-----
	L_2 - L_3	97.77	123.84	-32.17			0.90	1.24	137.88	-35.81	0.00	0.00	Vehicle	Vehicle	306.34	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.14**	**4.14**	-----	-----
	L_3 - L_4	66.93	142.16	-46.57			0.90	1.24	158.27	-51.84	0.00	0.00	Vehicle	Vehicle	292.76	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.80**	**3.80**	-----	-----
	L_4 - L_5	-108.46	100.72	-69.92			0.90	1.24	112.13	-77.85	0.00	0.00	Vehicle	Vehicle	4.77	-242.20	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**6.26**	**6.26**	**5.03**	**5.03**
	L_5 - L_6	-237.28	59.45	-77.16			0.90	1.24	66.18	-85.90	0.00	0.00	Vehicle	Vehicle	-----	-420.14	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.92**	**4.92**
	L_6 - L_7	-362.27	18.12	-80.63			0.90	1.24	20.17	-89.76	0.00	0.00	Vehicle	Vehicle	-----	-587.64	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.49**	**6.49**
	L_7 - L_8	-478.66	1.77	-88.45			0.90	1.24	1.97	-98.47	0.00	0.00	Vehicle	Vehicle	-----	-750.27	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.32**	**7.32**
	L_8 - L_9	-477.02	0.23	-88.96			0.90	1.20	0.24	-95.92	0.00	0.00	Vehicle	Vehicle	-----	-744.81	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.53**	**7.53**
	L_9 - L_{10}	-301.43	13.45	-76.06			0.90	1.20	14.50	-82.01	0.00	0.00	Vehicle	Vehicle	-----	-498.47	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.85**	**7.85**
	L_{10} - L_{11}	-104.46	48.22	-67.22			0.90	1.20	51.99	-72.48	0.00	0.00	Vehicle	Vehicle	-----	-230.01	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.46**	**5.46**
	L_{11} - L_{12}	97.11	84.06	-59.35			0.90	1.20	90.63	-63.99	0.00	0.00	Vehicle	Vehicle	244.06	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.48**	**5.48**	-----	-----
	L_{12} - L_{13}	268.74	121.71	-51.49			0.90	1.20	131.22	-55.52	0.00	0.00	Vehicle	Vehicle	519.96	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.38**	**5.38**	-----	-----
	L_{13} - L_{14}	405.66	154.99	-43.44			0.90	1.20	167.11	-46.84	0.00	0.00	Vehicle	Vehicle	744.60	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.40**	**5.40**	-----	-----
	L_{14} - L_{15}	502.77	162.97	-24.29			0.90	1.20	175.71	-26.19	0.00	0.00	Vehicle	Vehicle	882.03	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.10**	**6.10**	-----	-----
	L_{15} - L_{16}	469.25	150.34	-19.79			0.90	1.20	162.10	-21.33	0.00	0.00	Vehicle	Vehicle	820.75	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.82**	**6.82**	-----	-----
	L_{16} - L_{17}	365.43	109.29	-13.48			0.90	1.20	117.84	-14.53	0.00	0.00	Vehicle	Vehicle	628.25	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**7.22**	**7.22**	-----	-----
	L_{17} - L_{18}	248.67	67.73	-10.16			0.90	1.20	73.02	-10.95	0.00	0.00	Vehicle	Vehicle	418.21	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.69**	**8.69**	-----	-----
	L_{18} - L_{19}	112.99	34.54	-28.61			0.90	1.20	37.24	-30.85	0.00	0.00	Vehicle	Vehicle	195.30	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**10.46**	**10.46**	-----	-----
	L_{19} - L_{20}	-14.26	27.28	-57.14			0.90	1.20	29.41	-61.61	0.00	0.00	Vehicle	Vehicle	19.70	-98.62	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**17.57**	**17.57**	**6.64**	**6.64**
Structure 2	L_0 - L_1	15.26	8.78	-9.04			0.90	1.18	9.35	-9.62	0.00	0.00	Vehicle	Vehicle	31.99	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**66.13**	**66.13**	-----	-----
	L_1 - L_2	136.12	43.79	-5.84			0.90	1.18	46.63	-6.21	0.00	0.00	Vehicle	Vehicle	237.57	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**10.66**	**10.66**	-----	-----
	L_2 - L_3	262.92	86.68	-11.77			0.90	1.18	92.29	-12.53	0.00	0.00	Vehicle	Vehicle	461.76	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.73**	**7.73**	-----	-----
	L_3 - L_4	373.32	128.79	-20.45			0.90	1.18	137.12	-21.77	0.00	0.00	Vehicle	Vehicle	663.58	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.83**	**6.83**	-----	-----
	L_4 - L_5	456.80	164.47	-30.81			0.90	1.18	175.11	-32.80	0.00	0.00	Vehicle	Vehicle	821.49	-----	11.08	65.05	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.81**	**6.81**	-----	-----
	L_5 - L_6	489.63	166.82	-41.66			0.90	1.18	198.91	-44.35	0.00	0.00	Vehicle	Vehicle	895.09	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.55**	**6.55**	-----	-----
	L_6 - L_7	479.27	196.21	-52.79			0.90	1.18	208.91	-56.21	0.00	0.00	Vehicle	Vehicle	894.63	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**6.41**	**6.41**	-----	-----
	L_7 - L_8	330.30	171.21	-72.46			0.90	1.18	182.29	-77.15	0.00	0.00	Vehicle	Vehicle	666.36	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**5.55**	**5.55**	-----	-----
	L_8 - L_9	189.19	137.53	-78.36			0.90	1.18	146.43	-83.43	0.00	0.00	Vehicle	Vehicle	436.30	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**6.22**	**6.22**	-----	-----
	L_9 - L_{10}	39.95	100.51	-83.51			0.90	1.18	107.01	-88.91	0.00	0.00	Vehicle	Vehicle	191.05	-63.65	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**7.68**	**7.68**	**8.63**	**8.63**
	L_{10} - L_{11}	-127.23	64.86	-84.20			0.90	1.18	69.05	-89.65	0.00	0.00	Vehicle	Vehicle	-----	-281.94	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.84**	**5.84**
	L_{11} - L_{12}	-282.51	33.29	-83.50			0.90	1.18	35.45	-88.90	0.00	0.00	Vehicle	Vehicle	-----	-482.84	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.29**	**7.29**
	L_{12} - L_{13}	-426.62	19.76	-80.73			0.90	1.18	21.04	-85.95	0.00	0.00	Vehicle	Vehicle	-----	-666.35	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.88**	**9.88**
	L_{13} - L_{14}	-536.34	18.38	-103.24			0.90	1.18	19.57	-109.92	0.00	0.00	Vehicle	Vehicle	-----	-840.13	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.91**	**8.91**
	L_{14} - L_{15}	-537.64	21.94	-89.53			0.90	1.17	23.08	-94.19	0.00	0.00	Vehicle	Vehicle	-----	-821.39	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.38**	**10.38**
	L_{15} - L_{16}	-475.53	20.27	-87.83			0.90	1.17	21.33	-92.41	0.00	0.00	Vehicle	Vehicle	-----	-738.32	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.66**	**8.66**
	L_{16} - L_{17}	-384.21	22.29	-79.48			0.90	1.17	23.45	-83.62	0.00	0.00	Vehicle	Vehicle	-----	-608.18	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.93**	**7.93**
	L_{17} - L_{18}	-281.70	46.52	-76.32			0.90	1.17	48.95	-80.29	0.00	0.00	Vehicle	Vehicle	-----	-470.60	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.55**	**5.55**
	L_{18} - L_{19}	-174.99	69.28	-69.62			0.90	1.17	72.89	-73.25	0.00	0.00	Vehicle	Vehicle	-----	-322.71	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**5.44**	**5.44**
	L_{19} - L_{20}	-76.34	94.85	-63.05			0.90	1.17	99.79	-66.33	0.00	0.00	Vehicle	Vehicle	30.48	-185.48	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.57**	**7.57**	**7.50**	**7.50**
Structure 3	L_0 - L_1	4.59	117.41	-53.67			0.90	1.17	123.52	-56.47	0.00	0.00	Vehicle	Vehicle	166.55	-67.43	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.77**	**7.77**	**14.50**	**14.50**
	L_1 - L_2	56.15	133.38	-44.44			0.90	1.17	140.33	-46.75	0.00	0.00	Vehicle	Vehicle	255.42	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.47**	**6.47**	-----	-----
	L_2 - L_3	63.16	128.69	-28.49			0.90	1.17	135.39	-29.97	0.00	0.00	Vehicle	Vehicle	258.12	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.66**	**6.66**	-----	-----
	L_3 - L_4	15.68	113.75	-37.97			0.90	1.17	119.68	-39.95	0.00	0.00	Vehicle	Vehicle	175.97	-31.55	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.93**	**7.93**	**20.78**	**20.78**
	L_4 - L_5	-55.90	82.28	-42.98			0.90	1.17	86.56	-45.22	0.00	0.00	Vehicle	Vehicle	39.86	-131.46	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.49**	**8.49**	**11.45**	**11.45**
	L_5 - L_6	-136.32	61.03	-49.61			0.90	1.17	64.21	-52.19	0.00	0.00	Vehicle	Vehicle	-----	-245.06	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.38**	**8.38**
	L_6 - L_7	-217.71	34.69	-68.43			0.90	1.17	36.50	-71.99	0.00	0.00	Vehicle	Vehicle	-----	-376.61	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.08**	**7.08**
	L_7 - L_8	-296.28	28.78	-96.26			0.90	1.17	30.28	-101.27	0.00	0.00	Vehicle	Vehicle	-----	-516.81	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.42**	**7.42**
	L_8 - L_9	-364.24	34.67	-127.74			0.90	1.17	36.48	-134.39	0.00	0.00	Vehicle	Vehicle	-----	-648.22	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.78**	**6.78**
	L_9 - L_{10}	-418.31	37.07	-147.74			0.90	1.17	39.00	-155.44	0.00	0.00	Vehicle	Vehicle	-----	-745.86	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.06**	**7.06**
	L_{10} - L_{11}	-350.66	18.37	-97.19			0.90	1.18	19.56	-103.48	0.00	0.00	Vehicle	Vehicle	-----	-590.39	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.25**	**11.25**
	L_{11} - L_{12}	-275.63	18.84	-78.80			0.90	1.18	20.05	-83.90	0.00	0.00	Vehicle	Vehicle	-----	-467.39	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.91**	**11.91**
	L_{12} - L_{13}	-178.96

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_0 - L_0	-77.20	13.30	-85.70			0.90	1.24	14.81	-95.41	0.00	0.00	Vehicle	Vehicle	------	-224.40	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.80	2.80
	U_0 - L_1	-33.88	11.96	-64.45			0.90	1.24	13.31	-71.75	0.00	0.00	Vehicle	Vehicle	------	-137.32	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.43	4.43
	U_1 - L_2	10.41	11.27	-50.01			0.90	1.24	12.55	-55.67	0.00	0.00	Vehicle	Vehicle	29.84	-58.85	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	33.26	33.26	6.51	6.51
	U_2 - L_2	44.37	15.93	-35.72			0.90	1.24	17.73	-39.77	0.00	0.00	Vehicle	Vehicle	80.73	------	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	21.62	21.62	------	------
	U_2 - L_3	-16.71	1.29	-57.79			0.90	1.24	1.43	-64.33	0.00	0.00	Vehicle	Vehicle	------	-105.36	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.18	5.18
	U_3 - L_3	-109.52	2.75	-69.81			0.90	1.24	3.06	-77.72	0.00	0.00	Vehicle	Vehicle	------	-243.41	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	4.06	4.06
	U_4 - L_4	-143.61	0.48	-85.12			0.90	1.24	0.54	-94.77	0.00	0.00	Vehicle	Vehicle	------	-309.89	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	3.85	3.85
	U_5 - L_5	-142.76	2.58	-87.36			0.90	1.24	2.87	-97.26	0.00	0.00	Vehicle	Vehicle	------	-312.02	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	3.26	3.26
	U_6 - L_6	-391.96	3.22	-104.11			0.90	1.24	3.58	-115.90	0.00	0.00	Vehicle	Vehicle	------	-660.22	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	5.81	5.81
	U_7 - L_7	-223.26	8.43	-85.35			0.90	1.20	9.09	-92.03	0.00	0.00	Vehicle	Vehicle	------	-409.87	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	45.00	Pass	9.60	12.00	Pass	------	------	------	------	------	4.58	4.58
	U_8 - L_8	-225.85	5.79	-79.72			0.90	1.20	6.24	-85.95	0.00	0.00	Vehicle	Vehicle	------	-405.35	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	6.01	6.01
	U_9 - L_9	-198.80	5.89	-79.52			0.90	1.20	6.35	-85.74	0.00	0.00	Vehicle	Vehicle	------	-369.90	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.16	5.16
	U_{10} - L_{10}	-154.81	9.72	-68.04			0.90	1.20	10.48	-73.36	0.00	0.00	Vehicle	Vehicle	------	-296.61	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	5.15	5.15
	U_{11} - L_{11}	-109.06	16.68	-60.18			0.90	1.20	17.99	-64.88	0.00	0.00	Vehicle	Vehicle	------	-226.13	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.18	4.18
	U_{12} - L_{12}	-12.31	1.67	-49.05			0.90	1.20	1.80	-52.89	0.00	0.00	Vehicle	Vehicle	------	-84.75	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	6.29	6.29
	U_{13} - L_{13}	-5.62	24.25	-48.47			0.90	1.20	26.15	-52.26	0.00	0.00	Vehicle	Vehicle	26.69	-75.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	16.57	16.57	6.46	6.46
	U_{14} - L_{14}	-51.73	16.78	-56.86			0.90	1.20	18.09	-61.30	0.00	0.00	Vehicle	Vehicle	------	-146.95	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.72	4.72
	U_{15} - L_{15}	-127.32	9.95	-77.11			0.90	1.20	10.73	-83.14	0.00	0.00	Vehicle	Vehicle	------	-273.60	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	3.42	3.42
	U_{16} - L_{16}	-159.94	9.18	-88.06			0.90	1.20	9.90	-94.95	0.00	0.00	Vehicle	Vehicle	------	-331.36	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	3.85	3.85
	U_{17} - L_{19}	-191.17	7.78	-90.50			0.90	1.20	8.38	-97.58	0.00	0.00	Vehicle	Vehicle	------	-375.37	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	4.36	4.36
	U_{18} - L_{20}	-212.33	7.78	-97.45			0.90	1.20	8.39	-105.07	0.00	0.00	Vehicle	Vehicle	------	-412.62	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.52	3.52
Structure 2	U_0 - L_0	-206.69	9.82	-93.68			0.90	1.18	10.46	-99.74	0.00	0.00	Vehicle	Vehicle	------	-398.36	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	4.37	4.37
	U_1 - L_1	-188.76	10.08	-84.98			0.90	1.18	10.74	-90.48	0.00	0.00	Vehicle	Vehicle	------	-363.01	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.35	5.35
	U_2 - L_2	-155.92	10.64	-78.83			0.90	1.18	11.33	-83.93	0.00	0.00	Vehicle	Vehicle	------	-311.80	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	4.99	4.99
	U_3 - L_3	-134.58	12.06	-77.49			0.90	1.18	12.84	-82.51	0.00	0.00	Vehicle	Vehicle	------	-282.21	0.00	22.75	22.7330	750.10	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	3.85	3.85
	U_4 - L_4	-64.49	14.09	-57.77			0.90	1.18	15.00	-61.51	0.00	0.00	Vehicle	Vehicle	------	-163.81	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.47	4.47
	U_5 - L_5	-19.94	23.90	-52.58			0.90	1.18	25.44	-55.99	0.00	0.00	Vehicle	Vehicle	7.16	-98.70	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	17.59	17.59	5.73	5.73
	U_6 - L_6	40.08	34.02	-39.48			0.90	1.18	36.23	-42.03	0.00	0.00	Vehicle	Vehicle	99.20	-2.54	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	10.70	10.70	9.09	9.09
	U_7 - L_7	-26.04	0.43	-52.85			0.90	1.18	0.46	-56.27	0.00	0.00	Vehicle	Vehicle	------	-106.99	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.59	5.59
	U_8 - L_8	-125.25	18.13	-61.26			0.90	1.18	19.31	-65.22	0.00	0.00	Vehicle	Vehicle	------	-247.60	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	6.21	6.21
	U_9 - L_9	-174.53	6.92	-76.67			0.90	1.18	7.36	-81.63	0.00	0.00	Vehicle	Vehicle	------	-333.01	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.33	6.33
	U_{10} - L_{10}	-202.66	3.68	-86.68			0.90	1.18	3.91	-92.28	0.00	0.00	Vehicle	Vehicle	------	-383.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.24	6.24
	U_{11} - L_{11}	-229.53	2.35	-92.90			0.90	1.18	2.50	-98.91	0.00	0.00	Vehicle	Vehicle	------	-426.97	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.41	5.41
	U_{12} - L_{12}	-250.85	3.34	-96.73			0.90	1.18	3.55	-102.99	0.00	0.00	Vehicle	Vehicle	------	-459.98	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.35	5.35
	U_{13} - L_{13}	-223.32	10.15	-95.69			0.90	1.18	10.81	-101.88	0.00	0.00	Vehicle	Vehicle	------	-422.76	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	4.58	4.58
	U_{14} - L_{14}	-343.31	2.09	-96.10			0.90	1.18	2.23	-102.32	0.00	0.00	Vehicle	Vehicle	------	-579.32	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	6.92	6.92
	U_{15} - L_{15}	-123.14	9.78	-83.63			0.90	1.17	10.28	-87.99	0.00	0.00	Vehicle	Vehicle	------	-274.47	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.44	6.44
	U_{16} - L_{16}	-156.70	7.60	-81.56			0.90	1.17	7.99	-85.81	0.00	0.00	Vehicle	Vehicle	------	-315.25	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.94	5.94
	U_{17} - L_{17}	-147.91	7.34	-82.65			0.90	1.17	7.72	-86.96	0.00	0.00	Vehicle	Vehicle	------	-305.34	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.47	5.47
	U_{18} - L_{18}	-142.22	9.21	-80.70			0.90	1.17	9.69	-84.91	0.00	0.00	Vehicle	Vehicle	------	-295.27	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.12	5.12
	U_{19} - L_{19}	-111.48	10.29	-73.51			0.90	1.17	10.83	-77.34	0.00	0.00	Vehicle	Vehicle	------	-245.47	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.17	5.17
	U_{20} - L_{20}	-76.55	17.33	-63.24			0.90	1.17	18.23	-66.54	0.00	0.00	Vehicle	Vehicle	------	-186.01	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.49	4.49
	U_{21} - L_{21}	-44.31	21.25	-57.31			0.90	1.17	22.36	-60.30	0.00	0.00	Vehicle	Vehicle	------	-135.99	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.91	4.91
	U_{22} - L_{22}	-21.25	1.41	-53.51			0.90	1.17	1.48	-56.36	0.00	0.00	Vehicle	Vehicle	------	-100.88	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.69	5.69
	U_{23} - L_{23}	-39.07	26.34	-48.64			0.90	1.17	27.71	-51.18	0.00	0.00	Vehicle	Vehicle	------	-117.32	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.89	5.89
	U_{24} - L_{24}	-74.84	17.42	-59.65			0.90	1.17	18.32	-62.76	0.00	0.00	Vehicle	Vehicle	------	-178.88	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.79	4.79
	U_{25} - L_{25}	-103.27	12.59	-75.64			0.90	1.17	13.25	-79.58	0.00	0.00	Vehicle	Vehicle	------	-237.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.13	5.13
	U_{26} - L_{26}	-120.22	11.88	-80.34			0.90	1.17	12.50	-84.53	0.00	0.00	Vehicle	Vehicle	------	-266.17	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.41	5.41
	U_{27} - L_{27}	-123.93	9.81	-87.22			0.90	1.17	10.32	-91.76	0.00	0.00	Vehicle	Vehicle	------	-280.40	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.44	5.44
	U_{28} - L_{28}	-135.60	8.93	-94.37			0.90	1.17	9.39	-99.28	0.00	0.00	Vehicle	Vehicle	------	-305.34	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.34	5.34
	U_{29} - L_{29}	-116.87	5.23	-87.98			0.90	1.17	5.50	-92.56	0.00	0.00	Vehicle	Vehicle	------	-272.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.19	6.19
	U_{30} - L_{30}	-262.02	3.78	-96.05			0.90	1.18	4.03	-102.26	0.00	0.00	Vehicle	Vehicle	------	-473.56	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	7.72	7.72
	U_{31} - L_{31}	-156.38	12.30	-82.47			0.90	1.18	13.10	-87.81	0.00	0.00	Vehicle	Vehicle	------	-317.44	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.08	6.08
	U_{32} - L_{32}	-185.51	8.76	-86.67			0.90	1.18	9.33	-92.28	0.00	0.00	Vehicle	Vehicle	------	-361.12	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.68	6.68
	U_{33} - L_{33}	-186.18

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Built Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals																																															
Structure 1	U_1 - L_1	87.33	98.69	-18.67			0.90	1.24	109.87	-20.78	0.00	0.00	Vehicle	Vehicle	256.35	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U_1 - L_2	23.35	79.43	-18.64			0.90	1.24	88.43	-20.76	0.00	0.00	Vehicle	Vehicle	145.31	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.57**	**4.57**	-----	-----
	U_2 - L_3	-37.85	53.51	-25.13			0.90	1.24	59.57	-27.98	0.00	0.00	Vehicle	Vehicle	28.23	-85.59	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.81**	**7.81**	**10.59**	**10.59**
	U_3 - L_4	-92.19	32.76	-56.13			0.90	1.24	36.47	-62.48	0.00	0.00	Vehicle	Vehicle	-----	-201.08	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**-----**	**-----**	**3.91**	**3.91**
	U_3 - L_4	143.37	78.36	-16.04			0.90	1.24	87.26	-17.86	0.00	0.00	Vehicle	Vehicle	299.81	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.37**	**4.37**	-----	-----
	U_4 - L_5	177.90	93.91	-3.22			0.90	1.24	104.55	-3.59	0.00	0.00	Vehicle	Vehicle	367.18	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.52**	**4.52**	-----	-----
	U_4 - L_6	184.42	105.20	-2.26			0.90	1.24	117.12	-2.51	0.00	0.00	Vehicle	Vehicle	392.00	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.98**	**3.98**	-----	-----
	U_5 - L_7	180.02	97.33	-3.61			0.90	1.24	108.36	-4.02	0.00	0.00	Vehicle	Vehicle	374.88	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.34**	**4.34**	-----	-----
	U_5 - L_8	268.98	92.66	-9.79			0.90	1.20	99.90	-10.56	0.00	0.00	Vehicle	Vehicle	479.54	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
	U_6 - L_{10}	278.85	94.07	-9.45			0.90	1.20	101.42	-10.19	0.00	0.00	Vehicle	Vehicle	494.35	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.74**	**6.74**	-----	-----
	U_{10} - L_{11}	285.04	100.01	-7.42			0.90	1.20	107.83	-8.00	0.00	0.00	Vehicle	Vehicle	510.73	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**5.80**	**5.80**	-----	-----
	U_{11} - L_{12}	250.60	91.88	-12.01			0.90	1.20	99.07	-12.95	0.00	0.00	Vehicle	Vehicle	454.56	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
	U_{12} - L_{13}	189.65	83.68	-22.95			0.90	1.20	90.23	-24.75	0.00	0.00	Vehicle	Vehicle	363.84	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.89**	**4.89**	-----	-----
	U_{13} - L_{14}	123.32	70.53	-30.56			0.90	1.20	76.05	-32.95	0.00	0.00	Vehicle	Vehicle	259.18	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.00**	**4.00**	-----	-----
	U_{14} - L_{14}	-24.41	48.26	-47.02			0.90	1.20	52.03	-50.70	0.00	0.00	Vehicle	Vehicle	35.90	-97.64	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.69**	**8.69**	**5.99**	**5.99**
	U_{14} - L_{15}	48.53	66.49	-32.14			0.90	1.20	71.69	-34.65	0.00	0.00	Vehicle	Vehicle	156.29	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U_{15} - L_{16}	146.59	84.42	-13.60			0.90	1.20	91.02	-14.66	0.00	0.00	Vehicle	Vehicle	308.89	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.15**	**4.15**	-----	-----
	U_{16} - L_{17}	182.46	92.09	-11.72			0.90	1.20	99.29	-12.64	0.00	0.00	Vehicle	Vehicle	366.28	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U_{17} - L_{18}	223.82	100.61	-9.82			0.90	1.20	108.48	-10.58	0.00	0.00	Vehicle	Vehicle	431.99	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.48**	**4.48**	-----	-----
	U_{20} - L_{19}	232.72	95.54	-8.21			0.90	1.20	103.01	-8.86	0.00	0.00	Vehicle	Vehicle	436.45	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.64**	**4.64**	-----	-----
Structure 2	U_1 - L_1	213.54	88.10	-10.48			0.90	1.18	93.80	-11.16	0.00	0.00	Vehicle	Vehicle	399.54	-----	0.00	30.63	30.6305	1010.81	131.71	10.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
	U_1 - L_2	200.48	89.47	-12.31			0.90	1.18	95.26	-13.10	0.00	0.00	Vehicle	Vehicle	384.47	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
	U_1 - L_3	172.81	88.42	-13.78			0.90	1.18	94.14	-14.67	0.00	0.00	Vehicle	Vehicle	347.03	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.08**	**5.08**	-----	-----
	U_1 - L_4	147.16	81.10	-16.20			0.90	1.18	86.35	-17.25	0.00	0.00	Vehicle	Vehicle	303.57	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**4.98**	**4.98**	-----	-----
	U_1 - L_5	49.10	67.75	-28.80			0.90	1.18	72.13	-30.67	0.00	0.00	Vehicle	Vehicle	157.61	-----	0.00	16.85	16.8486	556.00	131.71	13.3954	1.9682	61.41	29.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.25**	**5.25**	-----	-----
	U_1 - L_6	2.96	60.79	-37.63			0.90	1.18	64.73	-40.06	0.00	0.00	Vehicle	Vehicle	88.00	-48.23	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.56**	**6.56**	**8.20**	**8.20**
	U_1 - L_7	-85.74	38.76	-58.15			0.90	1.18	41.27	-61.91	0.00	0.00	Vehicle	Vehicle	-----	-191.95	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**-----**	**-----**	**4.42**	**4.42**
	U_8 - L_7	140.30	73.35	-31.82			0.90	1.18	78.10	-33.88	0.00	0.00	Vehicle	Vehicle	283.91	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.93**	**5.93**	-----	-----
	U_8 - L_8	204.22	87.59	-15.38			0.90	1.18	93.25	-16.37	0.00	0.00	Vehicle	Vehicle	386.71	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U_9 - L_9	234.87	93.88	-7.64			0.90	1.18	99.96	-8.14	0.00	0.00	Vehicle	Vehicle	435.27	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U_{11} - L_{10}	263.10	105.94	-2.41			0.90	1.18	112.79	-2.56	0.00	0.00	Vehicle	Vehicle	488.66	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.15**	**5.15**	-----	-----
	U_{11} - L_{11}	274.02	101.73	-2.95			0.90	1.18	108.31	-3.14	0.00	0.00	Vehicle	Vehicle	497.03	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.27**	**5.27**	-----	-----
	U_{12} - L_{12}	254.94	100.13	-10.52			0.90	1.18	106.61	-11.20	0.00	0.00	Vehicle	Vehicle	470.01	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.90**	**4.90**	-----	-----
	U_{13} - L_{13}	217.71	90.53	-12.17			0.90	1.18	96.39	-12.96	0.00	0.00	Vehicle	Vehicle	408.32	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.81**	**5.81**	-----	-----
	U_{14} - L_{15}	110.05	75.65	-10.28			0.90	1.17	79.59	-10.81	0.00	0.00	Vehicle	Vehicle	246.53	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
	U_{15} - L_{16}	132.30	78.50	-10.96			0.90	1.17	82.59	-11.53	0.00	0.00	Vehicle	Vehicle	279.35	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
	U_{16} - L_{17}	172.89	87.71	-7.70			0.90	1.17	92.28	-8.10	0.00	0.00	Vehicle	Vehicle	344.72	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
	U_{17} - L_{18}	160.19	90.85	-9.17			0.90	1.17	95.59	-9.65	0.00	0.00	Vehicle	Vehicle	332.51	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.13**	**5.13**	-----	-----
	U_{18} - L_{19}	152.35	85.71	-12.00			0.90	1.17	90.18	-12.62	0.00	0.00	Vehicle	Vehicle	315.28	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.53**	**5.53**	-----	-----
	U_{19} - L_{20}	120.69	83.66	-18.13			0.90	1.17	88.02	-19.08	0.00	0.00	Vehicle	Vehicle	271.32	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
	U_{20} - L_{21}	76.08	72.74	-26.18			0.90	1.17	76.53	-27.54	0.00	0.00	Vehicle	Vehicle	198.40	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.59**	**4.59**	-----	-----
	U_{21} - L_{22}	31.46	57.95	-37.09			0.90	1.17	60.97	-39.02	0.00	0.00	Vehicle	Vehicle	120.15	-9.84	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.50**	**6.50**	**9.15**	**9.15**
	U_{22} - L_{23}	24.30	56.52	-45.91			0.90	1.17	59.47	-48.31	0.00	0.00	Vehicle	Vehicle	108.89	-31.21	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.78**	**6.78**	**7.19**	**7.19**
	U_{23} - L_{23}	72.26	65.97	-33.79			0.90	1.17	69.40	-35.55	0.00	0.00	Vehicle	Vehicle	184.16	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.55	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.12**	**5.12**	-----	-----
	U_{23} - L_{24}	112.13	82.37	-18.27			0.90	1.17	86.66	-19.22	0.00	0.00	Vehicle	Vehicle	258.43	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U_{24} - L_{25}	127.84	92.34	-15.16			0.90	1.17	97.15	-15.95	0.00	0.00	Vehicle	Vehicle	292.49	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
	U_{25} - L_{26}	132.67	92.57	-12.28			0.90	1.17	97.40	-12.92	0.00	0.00	Vehicle	Vehicle	299.08	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
	U_{26} - L_{27}	137.94	95.50	-10.58			0.90	1.17	100.48	-11.13	0.00	0.00	Vehicle	Vehicle	309.94	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
	U_{26} - L_{28}	122.80	94.61	-6.25			0.90	1.17	99.54	-6.58	0.00	0.00	Vehicle	Vehicle	289.04	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
	U_{28} - L_{29}	102.75	82.67	-7.75			0.90	1.17	86.98	-8.16	0.00	0.00	Vehicle	Vehicle	246.65	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
	U_{30} - L_{31}	140.07	74.23	-12.67			0.90	1.18	79.03	-13.49	0.00	0.00	Vehicle	Vehicle	284.83	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.07**	**8.07**	-----	-----
	U_{31} - L_{32}	167.39	82.47	-14.02			0.90	1.18	87.80	-14.92	0.00	0.00	Vehicle	Vehicle	331.75	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.95**	**6.95**	-----	-----
	U_{32} - L_{33}	202.10	95.86	-8.20			0.90	1.18	102.06	-8.73	0.00	0.00	Vehicle	Vehicle	395.41	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
	U_{33} - L_{34}	201.91	94.03	-8.28			0.90	1.18	100.11	-8.82	0.00	0.00	Vehicle	Vehicle	392.63	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.42**	**6.42**	-----	-----
	U_{35} - L_{35}	180.76	94.64	-9.39			0.90	1.18	100.76	-9.99	0.00	0.00	Vehicle	Vehicle	365.98	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	(No Impact) Pedestrian Load$_{MAX}$	(No Impact) Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.64	15.64	-84.62			0.75	1.24	14.51	-78.50	0.00	0.00	Vehicle	Vehicle	-----	-170.48	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.53	6.53
		U_1 - U_2	-61.57	27.94	-127.83			0.75	1.24	25.92	-118.60	0.00	0.00	Vehicle	Vehicle	-----	-234.21	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.25	4.25
		U_2 - U_3	-26.99	38.61	-139.57			0.75	1.24	35.82	-129.48	0.00	0.00	Vehicle	Vehicle	11.48	-203.42	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	19.49	19.49	4.16	4.16
		U_3 - U_4	32.92	49.51	-121.53			0.75	1.24	45.93	-112.75	0.00	0.00	Vehicle	Vehicle	102.51	-103.77	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.89	13.89	5.31	5.31
		U_4 - U_5	34.77	49.75	-121.22			0.75	1.24	46.15	-112.46	0.00	0.00	Vehicle	Vehicle	105.20	-100.99	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.79	13.79	5.34	5.34
		U_5 - U_6	124.13	59.06	-100.01			0.75	1.24	54.79	-92.78	0.00	0.00	Vehicle	Vehicle	232.60	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	9.98	9.98	-----	-----
		U_6 - U_7	223.19	69.79	-69.38			0.75	1.24	64.74	-64.36	0.00	0.00	Vehicle	Vehicle	374.31	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.98	8.98	-----	-----
		U_7 - U_8	331.76	78.88	-28.62			0.75	1.24	73.18	-26.55	0.00	0.00	Vehicle	Vehicle	526.43	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.64	10.64	-----	-----
		U_8 - U_9	267.61	68.24	-26.85			0.75	1.20	61.31	-24.12	0.00	0.00	Vehicle	Vehicle	427.60	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.95	10.95	-----	-----
		U_9 - U_{10}	89.12	59.65	-67.26			0.75	1.20	53.60	-60.43	0.00	0.00	Vehicle	Vehicle	185.53	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	11.57	11.57	-----	-----
		U_{10} - U_{11}	-76.81	51.17	-103.45			0.75	1.20	45.97	-92.95	0.00	0.00	Vehicle	Vehicle	-----	-220.68	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.60	5.60
		U_{11} - U_{12}	-230.69	43.40	-141.46			0.75	1.20	38.99	-127.10	0.00	0.00	Vehicle	Vehicle	-----	-465.12	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.58	4.58
		U_{12} - U_{13}	-341.88	36.70	-165.48			0.75	1.20	32.98	-148.68	0.00	0.00	Vehicle	Vehicle	-----	-637.73	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.35	5.35
		U_{13} - U_{14}	-421.62	30.63	-176.76			0.75	1.20	27.52	-158.82	0.00	0.00	Vehicle	Vehicle	-----	-754.57	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.70	5.70
		U_{14} - U_{15}	-422.51	30.49	-176.74			0.75	1.20	27.40	-158.80	0.00	0.00	Vehicle	Vehicle	-----	-755.70	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.70	5.70
		U_{15} - U_{16}	-439.94	23.80	-185.65			0.75	1.20	21.38	-166.81	0.00	0.00	Vehicle	Vehicle	-----	-788.77	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.32	5.32
		U_{16} - U_{17}	-422.43	18.08	-175.11			0.75	1.20	16.25	-157.34	0.00	0.00	Vehicle	Vehicle	-----	-753.69	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.75	5.75
		U_{17} - U_{18}	-340.94	12.13	-145.37			0.75	1.20	10.89	-130.61	0.00	0.00	Vehicle	Vehicle	-----	-613.01	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	4.82	4.82
		U_{18} - U_{19}	-247.15	7.37	-99.91			0.75	1.20	6.62	-89.77	0.00	0.00	Vehicle	Vehicle	-----	-437.99	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.79	4.79
		U_{19} - U_{20}	-131.71	3.66	-47.57			0.75	1.20	3.28	-42.74	0.00	0.00	Vehicle	Vehicle	-----	-226.79	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	12.77	12.77
	Structure 2	U_0 - U_1	-131.51	7.98	-57.50			0.75	1.18	7.08	-51.02	0.00	0.00	Vehicle	Vehicle	-----	-237.28	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.11	10.11
		U_1 - U_2	-247.03	17.10	-106.17			0.75	1.18	15.17	-94.20	0.00	0.00	Vehicle	Vehicle	-----	-443.60	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.78	5.78
		U_2 - U_3	-347.15	26.50	-145.09			0.75	1.18	23.51	-128.73	0.00	0.00	Vehicle	Vehicle	-----	-618.65	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.67	5.67
		U_3 - U_4	-437.07	37.11	-175.22			0.75	1.18	32.93	-155.46	0.00	0.00	Vehicle	Vehicle	-----	-770.28	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.82	5.82
		U_4 - U_5	-468.70	45.46	-188.72			0.75	1.18	40.33	-167.44	0.00	0.00	Vehicle	Vehicle	-----	-826.98	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.08	6.08
		U_5 - U_6	-471.03	53.76	-186.96			0.75	1.18	47.70	-165.88	0.00	0.00	Vehicle	Vehicle	-----	-827.99	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.13	6.13
		U_6 - U_7	-414.41	59.95	-177.22			0.75	1.18	53.19	-157.24	0.00	0.00	Vehicle	Vehicle	-----	-743.14	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.90	5.90
		U_7 - U_8	-413.45	60.04	-176.89			0.75	1.18	53.27	-156.95	0.00	0.00	Vehicle	Vehicle	-----	-741.52	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
		U_8 - U_9	-321.98	65.66	-162.27			0.75	1.18	58.25	-143.98	0.00	0.00	Vehicle	Vehicle	-----	-605.75	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.59	5.59
		U_9 - U_{10}	-182.11	69.12	-138.57			0.75	1.18	61.33	-122.94	0.00	0.00	Vehicle	Vehicle	-----	-396.56	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.73	5.73
		U_{10} - U_{11}	-32.58	73.26	-106.66			0.75	1.18	65.00	-94.63	0.00	0.00	Vehicle	Vehicle	42.15	-165.37	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.51	14.51	7.79	7.79
		U_{11} - U_{12}	133.59	75.71	-78.53			0.75	1.18	67.18	-69.67	0.00	0.00	Vehicle	Vehicle	260.99	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	11.57	11.57	-----	-----
		U_{12} - U_{13}	289.99	78.12	-47.39			0.75	1.18	69.31	-42.05	0.00	0.00	Vehicle	Vehicle	467.09	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	12.25	12.25	-----	-----
		U_{13} - U_{14}	434.76	79.64	-20.38			0.75	1.18	70.66	-18.08	0.00	0.00	Vehicle	Vehicle	657.05	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.99	15.99	-----	-----
		U_{14} - U_{15}	474.45	67.77	-17.17			0.75	1.17	59.42	-15.06	0.00	0.00	Vehicle	Vehicle	694.03	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	18.34	18.34	-----	-----
		U_{15} - U_{16}	383.28	65.43	-40.54			0.75	1.17	57.37	-35.55	0.00	0.00	Vehicle	Vehicle	572.84	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	15.50	15.50	-----	-----
		U_{16} - U_{17}	279.57	61.49	-65.74			0.75	1.17	53.91	-57.64	0.00	0.00	Vehicle	Vehicle	433.53	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	14.18	14.18	-----	-----
		U_{17} - U_{18}	172.63	57.00	-84.35			0.75	1.17	49.97	-73.95	0.00	0.00	Vehicle	Vehicle	289.38	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	11.88	11.88	-----	-----
		U_{18} - U_{19}	74.36	50.88	-111.86			0.75	1.17	44.61	-98.07	0.00	0.00	Vehicle	Vehicle	154.66	-30.82	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.51	15.51	7.36	7.36
		U_{19} - U_{20}	-10.01	44.51	-129.41			0.75	1.17	39.03	-113.46	0.00	0.00	Vehicle	Vehicle	37.72	-160.51	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.27	21.27	6.02	6.02
	Structure 3	U_0 - U_1	-62.06	37.32	-140.11			0.75	1.17	32.72	-122.84	0.00	0.00	Vehicle	Vehicle	-----	-240.37	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.31	6.31
		U_1 - U_2	-88.74	32.22	-143.17			0.75	1.17	28.25	-125.52	0.00	0.00	Vehicle	Vehicle	-----	-278.53	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U_2 - U_3	-88.92	32.36	-143.12			0.75	1.17	28.37	-125.48	0.00	0.00	Vehicle	Vehicle	-----	-278.71	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U_3 - U_4	-76.67	39.68	-144.89			0.75	1.17	34.79	-127.04	0.00	0.00	Vehicle	Vehicle	-----	-264.81	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.98	5.98
		U_4 - U_5	-37.64	46.26	-132.64			0.75	1.17	40.56	-116.29	0.00	0.00	Vehicle	Vehicle	3.79	-200.11	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.15	21.15	5.63	5.63
		U_5 - U_6	37.23	52.11	-114.11			0.75	1.17	45.68	-100.04	0.00	0.00	Vehicle	Vehicle	107.79	-81.66	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.96	15.96	6.84	6.84
		U_6 - U_7	128.02	58.03	-91.62			0.75	1.17	50.88	-80.33	0.00	0.00	Vehicle	Vehicle	232.56	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.54	12.54	-----	-----
		U_7 - U_8	233.68	61.98	-66.29			0.75	1.17	54.34	-58.12	0.00	0.00	Vehicle	Vehicle	374.42	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	14.91	14.91	-----	-----
		U_8 - U_9	337.65	65.46	-41.70			0.75	1.17	57.39	-36.56	0.00	0.00	Vehicle	Vehicle	513.56	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	16.29	16.29	-----	-----
		U_9 - U_{10}	437.10	67.80	-16.08			0.75	1.17	59.44	-14.10	0.00	0.00	Vehicle	Vehicle	645.50	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	18.96	18.96	-----	-----
		U_{10} - U_{11}	420.53	80.86	-18.93			0.75	1.18	71.74	-16.79	0.00	0.00	Vehicle	Vehicle	639.95	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.94	15.94	-----	-----
		U_{11} - U_{12}	300.69	79.52	-46.49			0.75	1.18	70.55	-41.25	0.00	0.00	Vehicle	Vehicle	482.61	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	(No Impact) Pedestrian Load MAX	(No Impact) Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L_0 - L_1	8.49	12.37	-9.16			0.75	1.24	11.48	-8.49	0.00	0.00	Vehicle	Vehicle	25.96	0.00	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	43.05	43.05	50.87	50.87
		L_1 - L_2	50.81	82.62	-16.28			0.75	1.24	76.65	-15.10	0.00	0.00	Vehicle	Vehicle	165.70	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	5.89	5.89	-----	-----
		L_2 - L_3	61.22	116.65	-27.75			0.75	1.24	108.22	-25.75	0.00	0.00	Vehicle	Vehicle	220.27	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	5.61	5.61	-----	-----
		L_3 - L_4	25.70	127.62	-38.34			0.75	1.24	118.40	-35.57	0.00	0.00	Vehicle	Vehicle	187.33	-12.83	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	5.43	5.43	16.55	16.55
		L_4 - L_5	-118.45	90.52	-56.16			0.75	1.24	83.98	-52.10	0.00	0.00	Vehicle	Vehicle	-----	-221.72	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	7.33	7.33
		L_5 - L_6	-217.80	60.93	-67.22			0.75	1.24	56.53	-62.36	0.00	0.00	Vehicle	Vehicle	-----	-364.21	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	7.08	7.08
		L_6 - L_7	-320.36	26.07	-77.26			0.75	1.24	24.18	-71.67	0.00	0.00	Vehicle	Vehicle	-----	-509.64	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.71	8.71
		L_7 - L_8	-417.18	0.22	-83.44			0.75	1.24	0.20	-77.41	0.00	0.00	Vehicle	Vehicle	-----	-642.97	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	10.11	10.11
		L_8 - L_9	-410.79	0.04	-89.48			0.75	1.20	0.03	-80.39	0.00	0.00	Vehicle	Vehicle	-----	-638.54	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	9.81	9.81
		L_9 - L_{10}	-247.75	23.81	-64.67			0.75	1.20	21.40	-58.11	0.00	0.00	Vehicle	Vehicle	-----	-397.62	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	12.00	12.00
		L_{10} - L_{11}	-65.21	58.98	-56.27			0.75	1.20	53.00	-50.56	0.00	0.00	Vehicle	Vehicle	-----	-150.50	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	8.61	8.61
		L_{11} - L_{12}	101.88	95.76	-47.97			0.75	1.20	86.04	-43.10	0.00	0.00	Vehicle	Vehicle	244.30	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	5.72	5.72	-----	-----
		L_{12} - L_{13}	264.09	130.08	-41.19			0.75	1.20	116.87	-37.01	0.00	0.00	Vehicle	Vehicle	495.25	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	6.08	6.08	-----	-----
		L_{13} - L_{14}	373.73	153.95	-34.62			0.75	1.20	138.32	-31.11	0.00	0.00	Vehicle	Vehicle	665.67	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	6.75	6.75	-----	-----
		L_{14} - L_{15}	476.34	168.40	-22.57			0.75	1.20	151.31	-20.28	0.00	0.00	Vehicle	Vehicle	815.94	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	7.26	7.26	-----	-----
		L_{15} - L_{16}	459.97	157.00	-16.85			0.75	1.20	141.06	-15.14	0.00	0.00	Vehicle	Vehicle	781.34	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	7.90	7.90	-----	-----
		L_{16} - L_{17}	381.37	125.85	-11.20			0.75	1.20	113.08	-10.06	0.00	0.00	Vehicle	Vehicle	642.78	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	7.39	7.39	-----	-----
		L_{17} - L_{18}	288.98	83.84	-7.64			0.75	1.20	75.33	-6.86	0.00	0.00	Vehicle	Vehicle	473.59	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	7.89	7.89	-----	-----
		L_{18} - L_{19}	176.20	35.52	-6.46			0.75	1.20	31.91	-5.81	0.00	0.00	Vehicle	Vehicle	270.54	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	10.23	10.23	-----	-----
		L_{19} - L_{20}	69.74	13.78	-22.13			0.75	1.20	12.38	-19.88	0.00	0.00	Vehicle	Vehicle	106.76	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	34.97	34.97	-----	-----
		L_0' - L_1	24.59	8.30	-9.98			0.75	1.18	7.36	-8.85	0.00	0.00	Vehicle	Vehicle	41.54	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	82.68	82.68	-----	-----
		L_1 - L_2	138.59	57.95	-8.87			0.75	1.18	51.41	-7.87	0.00	0.00	Vehicle	Vehicle	247.00	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	9.62	9.62	-----	-----
		L_2 - L_3	252.83	109.43	-18.54			0.75	1.18	97.09	-16.45	0.00	0.00	Vehicle	Vehicle	454.89	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	7.45	7.45	-----	-----
		L_3 - L_4	352.30	142.66	-27.96			0.75	1.18	126.57	-24.80	0.00	0.00	Vehicle	Vehicle	622.54	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	7.56	7.56	-----	-----
		L_4 - L_5	447.17	165.61	-38.66			0.75	1.18	146.93	-34.30	0.00	0.00	Vehicle	Vehicle	772.33	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	8.19	8.19	-----	-----
		L_5 - L_6	477.93	175.15	-46.98			0.75	1.18	155.41	-41.68	0.00	0.00	Vehicle	Vehicle	823.34	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	8.46	8.46	-----	-----
		L_6 - L_7	482.68	176.07	-55.26			0.75	1.18	156.21	-49.03	0.00	0.00	Vehicle	Vehicle	830.56	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	8.55	8.55	-----	-----
		L_7 - L_8	336.61	152.20	-66.71			0.75	1.18	135.04	-59.19	0.00	0.00	Vehicle	Vehicle	613.15	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	7.44	7.44	-----	-----
		L_8 - L_9	196.05	127.05	-69.54			0.75	1.18	112.73	-61.70	0.00	0.00	Vehicle	Vehicle	401.41	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	8.02	8.02	-----	-----
		L_9 - L_{10}	45.60	94.87	-73.21			0.75	1.18	84.17	-64.95	0.00	0.00	Vehicle	Vehicle	168.69	-25.16	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	9.70	9.70	11.90	11.90
		L_{10} - L_{11}	-126.26	68.36	-75.00			0.75	1.18	60.65	-66.55	0.00	0.00	Vehicle	Vehicle	-----	-250.64	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.88	7.88
		L_{11} - L_{12}	-284.87	39.14	-77.37			0.75	1.18	34.72	-68.65	0.00	0.00	Vehicle	Vehicle	-----	-459.57	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.41	9.41
		L_{12} - L_{13}	-433.79	21.97	-83.19			0.75	1.18	19.49	-73.81	0.00	0.00	Vehicle	Vehicle	-----	-659.88	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.40	11.40
		L_{13} - L_{14}	-552.65	21.39	-84.60			0.75	1.18	18.97	-75.06	0.00	0.00	Vehicle	Vehicle	-----	-816.01	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.82	12.82
		L_{14} - L_{15}	-573.48	21.25	-89.62			0.75	1.17	18.63	-78.57	0.00	0.00	Vehicle	Vehicle	-----	-847.66	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.99	11.99
		L_{15} - L_{16}	-492.94	18.52	-70.89			0.75	1.17	16.24	-62.15	0.00	0.00	Vehicle	Vehicle	-----	-721.61	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.59	12.59
		L_{16} - L_{17}	-395.30	35.38	-66.26			0.75	1.17	31.02	-58.09	0.00	0.00	Vehicle	Vehicle	-----	-589.41	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	11.23	11.23
		L_{17} - L_{18}	-288.04	56.26	-62.19			0.75	1.17	49.32	-54.52	0.00	0.00	Vehicle	Vehicle	-----	-445.33	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	8.06	8.06
		L_{18} - L_{19}	-175.85	79.20	-57.58			0.75	1.17	69.44	-50.48	0.00	0.00	Vehicle	Vehicle	-----	-294.22	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	7.88	7.88
		L_{19} - L_{20}	-78.08	102.17	-51.49			0.75	1.17	89.57	-45.14	0.00	0.00	Vehicle	Vehicle	14.95	-160.18	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	8.45	8.45	10.98	10.98
	Structure 2	L_{20} - L_{21}	7.55	121.65	-45.25			0.75	1.17	106.66	-39.68	0.00	0.00	Vehicle	Vehicle	148.47	-41.76	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	8.97	8.97	20.71	20.71
		L_{21} - L_{22}	59.07	134.33	-38.03			0.75	1.17	117.77	-33.35	0.00	0.00	Vehicle	Vehicle	229.89	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	7.69	7.69	-----	-----
		L_{22} - L_{23}	71.98	136.12	-40.60			0.75	1.17	119.34	-35.60	0.00	0.00	Vehicle	Vehicle	248.72	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	7.48	7.48	-----	-----
		L_{23} - L_{24}	33.55	121.88	-47.11			0.75	1.17	106.86	-41.30	0.00	0.00	Vehicle	Vehicle	182.53	-10.08	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	8.71	8.71	20.53	20.53
		L_{24} - L_{25}	-45.09	98.26	-52.36			0.75	1.17	86.15	-45.90	0.00	0.00	Vehicle	Vehicle	53.38	-118.28	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	8.41	8.41	11.51	11.51
		L_{25} - L_{26}	-134.94	75.90	-57.47			0.75	1.17	66.55	-50.38	0.00	0.00	Vehicle	Vehicle	-----	-240.92	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	8.71	8.71
		L_{26} - L_{27}	-245.90	49.17	-60.52			0.75	1.17	43.11	-53.06	0.00	0.00	Vehicle	Vehicle	-----	-388.64	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	9.08	9.08
		L_{27} - L_{28}	-351.78	29.57	-63.82			0.75	1.17	25.93	-55.95	0.00	0.00	Vehicle	Vehicle	-----	-530.04	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	12.44	12.44
		L_{28} - L_{29}	-458.29	15.30	-74.45			0.75	1.17	13.41	-65.27	0.00	0.00	Vehicle	Vehicle	-----	-680.64	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.52	12.52
		L_{29} - L_{30}	-542.18	17.51	-95.26			0.75	1.17	15.35	-83.52	0.00	0.00	Vehicle	Vehicle	-----	-813.40	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.65	11.65
		L_{30} - L_{31}	-514.03	20.81	-82.83			0.75	1.18	18.46	-73.49	0.00	0.00	Vehicle	Vehicle	-----	-763.77	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.62	13.62
		L_{31} - L_{32}	-411.21	21.51	-77.38			0.75	1.18	19.08	-68.66	0.00	0.00	Vehicle	Vehicle	-----	-623.83	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.58	12.58
		L_{32} - L_{33}	-287.47	36.79	-75.64			0.75	1.18

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	10.99	-154.95			0.75	1.24	10.19	-143.75	0.00	0.00	Vehicle	Vehicle	-----	-274.76	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	44.64	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.93	1.93
		U_1 - L_1	-24.06	10.63	-68.67			0.75	1.24	9.86	-63.70	0.00	0.00	Vehicle	Vehicle	-----	-114.09	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.15	5.15
		U_2 - L_2	12.88	8.90	-54.87			0.75	1.24	8.26	-50.90	0.00	0.00	Vehicle	Vehicle	27.47	-49.43	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	50.23	50.23	7.17	7.17
		U_3 - L_3	37.35	23.94	-42.56			0.75	1.24	22.21	-39.49	0.00	0.00	Vehicle	Vehicle	77.42	-2.78	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	17.58	17.58	9.84	9.84
		U_4 - L_4	-15.53	7.37	-67.27			0.75	1.24	6.84	-62.41	0.00	0.00	Vehicle	Vehicle	-----	-101.33	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.36	5.36
		U_5 - L_5	-92.52	13.08	-70.43			0.75	1.24	12.13	-65.34	0.00	0.00	Vehicle	Vehicle	-----	-205.22	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.09	5.09
		U_6 - L_6	-117.01	3.54	-82.34			0.75	1.24	3.28	-76.39	0.00	0.00	Vehicle	Vehicle	-----	-251.42	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.12	5.12
		U_7 - L_7	-127.49	0.32	-92.54			0.75	1.24	0.29	-85.85	0.00	0.00	Vehicle	Vehicle	-----	-277.34	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.88	3.88
		U_8 - L_8	-368.60	3.51	-137.38			0.75	1.24	3.26	-127.46	0.00	0.00	Vehicle	Vehicle	-----	-644.88	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.47	5.47
		U_9 - L_9	-214.45	5.21	-106.65			0.75	1.20	4.68	-95.82	0.00	0.00	Vehicle	Vehicle	-----	-403.36	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.49	4.49
		U_{10} - L_{10}	-198.57	1.58	-96.23			0.75	1.20	1.42	-86.46	0.00	0.00	Vehicle	Vehicle	-----	-370.54	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.29	6.29
		U_{11} - L_{11}	-171.30	10.35	-87.59			0.75	1.20	9.30	-78.70	0.00	0.00	Vehicle	Vehicle	-----	-325.00	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.97	5.97
		U_{12} - L_{12}	-128.27	19.87	-75.51			0.75	1.20	17.85	-67.84	0.00	0.00	Vehicle	Vehicle	-----	-254.95	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.96	5.96
		U_{13} - L_{13}	-96.55	24.93	-68.47			0.75	1.20	22.40	-61.52	0.00	0.00	Vehicle	Vehicle	-----	-205.50	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.61	4.61
		U_{14} - L_{14}	-11.04	7.60	-58.89			0.75	1.20	6.83	-52.92	0.00	0.00	Vehicle	Vehicle	-----	-83.15	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.31	6.31
		U_{15} - L_{15}	-2.54	36.64	-50.54			0.75	1.20	32.92	-45.41	0.00	0.00	Vehicle	Vehicle	39.49	-62.33	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.07	13.07	7.50	7.50
		U_{16} - L_{16}	-31.31	28.75	-56.50			0.75	1.20	25.84	-50.77	0.00	0.00	Vehicle	Vehicle	-----	-106.70	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.11	6.11
		U_{17} - L_{17}	-105.02	10.98	-77.57			0.75	1.20	9.86	-69.70	0.00	0.00	Vehicle	Vehicle	-----	-227.13	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.39	4.39
		U_{18} - L_{18}	-126.66	5.13	-85.89			0.75	1.20	4.61	-77.17	0.00	0.00	Vehicle	Vehicle	-----	-264.97	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.17	5.17
		U_{19} - L_{19}	-166.54	4.79	-88.52			0.75	1.20	4.30	-79.53	0.00	0.00	Vehicle	Vehicle	-----	-319.89	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.66	5.66
		U_{20} - L_{20}	-184.30	4.45	-104.48			0.75	1.20	4.00	-93.87	0.00	0.00	Vehicle	Vehicle	-----	-361.62	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.24	4.24
	Structure 2	U_0 - L_0	-203.39	11.94	-117.87			0.75	1.18	10.59	-104.58	0.00	0.00	Vehicle	Vehicle	-----	-400.36	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.20	4.20
		U_1 - L_1	-176.11	12.90	-94.86			0.75	1.18	11.45	-84.16	0.00	0.00	Vehicle	Vehicle	-----	-338.35	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.90	5.90
		U_2 - L_2	-137.45	12.21	-91.34			0.75	1.18	10.83	-81.04	0.00	0.00	Vehicle	Vehicle	-----	-284.04	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.39	5.39
		U_3 - L_3	-117.61	12.67	-82.22			0.75	1.18	11.25	-72.95	0.00	0.00	Vehicle	Vehicle	-----	-247.72	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.58	4.58
		U_4 - L_4	-50.97	25.44	-64.52			0.75	1.18	22.57	-57.25	0.00	0.00	Vehicle	Vehicle	-----	-140.68	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.03	5.03
		U_5 - L_5	-13.79	33.00	-59.34			0.75	1.18	29.28	-52.65	0.00	0.00	Vehicle	Vehicle	20.14	-86.36	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.08	15.08	6.21	6.21
		U_6 - L_6	45.46	41.69	-47.37			0.75	1.18	36.99	-42.03	0.00	0.00	Vehicle	Vehicle	107.18	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	-----	-----	10.33	10.33	-----	-----
		U_7 - L_7	-22.33	4.32	-67.75			0.75	1.18	3.83	-60.11	0.00	0.00	Vehicle	Vehicle	-----	-107.18	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.29	5.29
		U_8 - L_8	-120.06	29.85	-64.12			0.75	1.18	26.48	-56.89	0.00	0.00	Vehicle	Vehicle	-----	-230.04	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	7.22	7.22
		U_9 - L_9	-177.00	19.81	-79.43			0.75	1.18	17.58	-70.47	0.00	0.00	Vehicle	Vehicle	-----	-321.72	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	7.30	7.30
		U_{10} - L_{10}	-205.85	17.73	-85.36			0.75	1.18	15.73	-75.74	0.00	0.00	Vehicle	Vehicle	-----	-366.07	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	7.56	7.56
		U_{11} - L_{11}	-239.21	9.57	-89.41			0.75	1.18	8.49	-79.32	0.00	0.00	Vehicle	Vehicle	-----	-414.09	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.63	6.63
		U_{12} - L_{12}	-257.92	5.60	-97.20			0.75	1.18	4.97	-86.24	0.00	0.00	Vehicle	Vehicle	-----	-447.41	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.31	6.31
		U_{13} - L_{13}	-243.80	6.14	-100.98			0.75	1.18	5.45	-89.60	0.00	0.00	Vehicle	Vehicle	-----	-433.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.98	4.98
		U_{14} - L_{14}	-420.84	6.09	-127.69			0.75	1.18	5.41	-113.29	0.00	0.00	Vehicle	Vehicle	-----	-694.38	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.57	5.57
		U_{15} - L_{15}	-158.85	10.09	-105.28			0.75	1.17	8.84	-92.30	0.00	0.00	Vehicle	Vehicle	-----	-326.49	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.76	5.76
		U_{16} - L_{16}	-174.03	7.85	-95.52			0.75	1.17	6.89	-83.74	0.00	0.00	Vehicle	Vehicle	-----	-335.10	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.88	5.88
		U_{17} - L_{17}	-156.46	9.51	-95.79			0.75	1.17	8.33	-83.98	0.00	0.00	Vehicle	Vehicle	-----	-312.57	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.56	5.56
		U_{18} - L_{18}	-142.20	14.30	-86.20			0.75	1.17	12.54	-75.57	0.00	0.00	Vehicle	Vehicle	-----	-283.11	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.76	5.76
		U_{19} - L_{19}	-113.66	20.78	-78.67			0.75	1.17	18.22	-68.98	0.00	0.00	Vehicle	Vehicle	-----	-237.43	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.77	5.77
		U_{20} - L_{20}	-76.52	26.70	-70.92			0.75	1.17	23.41	-62.18	0.00	0.00	Vehicle	Vehicle	-----	-180.30	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.80	4.80
		U_{21} - L_{21}	-45.78	28.06	-62.21			0.75	1.17	24.60	-54.54	0.00	0.00	Vehicle	Vehicle	-----	-130.42	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.40	5.40
		U_{22} - L_{22}	-17.71	7.31	-65.74			0.75	1.17	6.41	-57.64	0.00	0.00	Vehicle	Vehicle	-----	-97.96	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.62	5.62
		U_{23} - L_{23}	-30.66	34.73	-51.98			0.75	1.17	30.45	-45.57	0.00	0.00	Vehicle	Vehicle	-----	-99.10	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.80	6.80
		U_{24} - L_{24}	-62.03	27.15	-64.48			0.75	1.17	23.80	-56.53	0.00	0.00	Vehicle	Vehicle	-----	-154.13	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.54	5.54
		U_{25} - L_{25}	-103.10	22.25	-75.86			0.75	1.17	19.50	-66.51	0.00	0.00	Vehicle	Vehicle	-----	-220.49	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.14	6.14
		U_{26} - L_{26}	-134.31	16.16	-79.14			0.75	1.17	14.16	-69.38	0.00	0.00	Vehicle	Vehicle	-----	-264.80	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.38	6.38
		U_{27} - L_{27}	-155.93	9.17	-89.59			0.75	1.17	8.04	-78.54	0.00	0.00	Vehicle	Vehicle	-----	-304.81	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.95	5.95
		U_{28} - L_{28}	-179.28	6.75	-96.96			0.75	1.17	5.92	-85.01	0.00	0.00	Vehicle	Vehicle	-----	-343.58	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.73	5.73
		U_{29} - L_{29}	-171.45	4.76	-95.11			0.75	1.17	4.18	-83.39	0.00	0.00	Vehicle	Vehicle	-----	-331.28	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.22	6.22
		U_{30} - L_{30}	-392.76	8.91	-125.84			0.75	1.18	7.90	-111.65	0.00	0.00	Vehicle	Vehicle	-----	-655.73	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.90	5.90
		U_{31} - L_{31}	-203.21	10.18	-102.66			0.75	1.18	9.03	-91.08	0.00	0.00	Vehicle	Vehicle	-----	-382.58

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors DL Factor: 1.30 Pedestrian Load Factors DL Factor: 1.30

Condition: As-Built Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	105.38	-16.55			0.75	1.24	97.77	-15.35	0.00	0.00	Vehicle	Vehicle	196.32	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	7.23	-----	-----	-----	-----	-----	**5.45**	**5.45**	-----	-----
		U_1 - L_2	10.78	80.23	-15.20			0.75	1.24	74.43	-14.10	0.00	0.00	Vehicle	Vehicle	110.77	-4.33	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.60**	**5.60**	**24.54**	**24.54**
		U_2 - L_3	-44.02	62.98	-37.40			0.75	1.24	58.43	-34.70	0.00	0.00	Vehicle	Vehicle	18.73	-102.33	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.07**	**8.07**	**8.36**	**8.36**
		U_3 - L_4	-76.72	46.21	-65.64			0.75	1.24	42.88	-60.90	0.00	0.00	Vehicle	Vehicle	-----	-178.90	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**4.26**	**4.26**
		U_4 - L_4	118.39	79.25	-37.27			0.75	1.24	73.52	-34.58	0.00	0.00	Vehicle	Vehicle	249.48	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.52**	**5.52**	-----	-----
		U_5 - L_5	137.53	94.27	-16.99			0.75	1.24	87.46	-15.76	0.00	0.00	Vehicle	Vehicle	292.48	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.87**	**5.87**	-----	-----
		U_6 - L_6	157.34	97.49	-3.12			0.75	1.24	90.45	-2.90	0.00	0.00	Vehicle	Vehicle	322.12	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.45**	**5.45**	-----	-----
		U_7 - L_7	149.30	101.95	-0.35			0.75	1.24	94.59	-0.33	0.00	0.00	Vehicle	Vehicle	317.05	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
		U_8 - L_8	249.09	114.83	-5.92			0.75	1.20	103.17	-5.32	0.00	0.00	Vehicle	Vehicle	457.94	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
		U_9 - L_{10}	260.26	112.37	-4.81			0.75	1.20	100.97	-4.32	0.00	0.00	Vehicle	Vehicle	469.59	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.95**	**6.95**	-----	-----
		U_{10} - L_{11}	236.30	109.32	-13.05			0.75	1.20	98.22	-11.72	0.00	0.00	Vehicle	Vehicle	434.88	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**6.87**	**6.87**	-----	-----
		U_{11} - L_{12}	211.92	96.50	-26.74			0.75	1.20	86.71	-24.03	0.00	0.00	Vehicle	Vehicle	388.22	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
		U_{12} - L_{13}	151.66	92.87	-34.56			0.75	1.20	83.45	-31.05	0.00	0.00	Vehicle	Vehicle	305.64	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**5.74**	**5.74**	-----	-----
		U_{13} - L_{14}	108.60	78.02	-42.79			0.75	1.20	70.10	-38.45	0.00	0.00	Vehicle	Vehicle	232.32	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.55**	**4.55**	-----	-----
		U_{14} - L_{14}	-24.45	58.64	-65.30			0.75	1.20	52.69	-58.67	0.00	0.00	Vehicle	Vehicle	36.71	-108.05	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.58**	**8.58**	**5.18**	**5.18**
		U_{15} - L_{15}	23.99	68.95	-49.23			0.75	1.20	61.95	-44.23	0.00	0.00	Vehicle	Vehicle	111.73	-26.31	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.52**	**6.52**	**7.88**	**7.88**
		U_{17} - L_{16}	120.03	80.87	-29.58			0.75	1.20	72.67	-26.57	0.00	0.00	Vehicle	Vehicle	250.51	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.57**	**5.57**	-----	-----
		U_{18} - L_{17}	144.79	92.39	-13.11			0.75	1.20	83.01	-11.78	0.00	0.00	Vehicle	Vehicle	296.15	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_{19} - L_{18}	193.05	94.26	-6.20			0.75	1.20	84.70	-5.57	0.00	0.00	Vehicle	Vehicle	361.07	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
		U_{20} - L_{19}	193.51	93.32	-5.06			0.75	1.20	83.85	-4.55	0.00	0.00	Vehicle	Vehicle	360.56	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
		U_0 - L_1	202.41	98.30	-13.44			0.75	1.18	87.21	-11.93	0.00	0.00	Vehicle	Vehicle	376.51	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U_1 - L_2	190.86	98.96	-15.06			0.75	1.18	87.80	-13.36	0.00	0.00	Vehicle	Vehicle	362.26	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_2 - L_3	155.85	93.46	-14.63			0.75	1.18	82.92	-12.98	0.00	0.00	Vehicle	Vehicle	310.40	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
		U_3 - L_4	134.05	84.91	-26.98			0.75	1.18	75.34	-23.94	0.00	0.00	Vehicle	Vehicle	272.21	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**5.88**	**5.88**	-----	-----
		U_4 - L_5	46.02	73.71	-40.52			0.75	1.18	65.40	-35.95	0.00	0.00	Vehicle	Vehicle	144.84	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_5 - L_6	3.45	64.15	-51.55			0.75	1.18	56.92	-45.74	0.00	0.00	Vehicle	Vehicle	78.48	-54.98	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.45**	**7.45**	**7.20**	**7.20**
		U_6 - L_7	-84.29	49.57	-71.06			0.75	1.18	43.98	-63.05	0.00	0.00	Vehicle	Vehicle	-----	-191.53	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.36**	**4.36**
		U_7 - L_7	137.30	80.72	-45.73			0.75	1.18	71.62	-40.57	0.00	0.00	Vehicle	Vehicle	271.59	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.51**	**6.51**	-----	-----
		U_8 - L_8	210.89	86.01	-35.97			0.75	1.18	76.32	-31.92	0.00	0.00	Vehicle	Vehicle	373.37	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
		U_{10} - L_9	236.36	96.65	-23.53			0.75	1.18	85.75	-20.87	0.00	0.00	Vehicle	Vehicle	418.75	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.31**	**6.31**	-----	-----
		U_{11} - L_{10}	274.62	99.14	-19.75			0.75	1.18	87.96	-17.52	0.00	0.00	Vehicle	Vehicle	471.36	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
		U_{12} - L_{11}	281.06	97.83	-10.33			0.75	1.18	86.80	-9.16	0.00	0.00	Vehicle	Vehicle	478.22	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
		U_{13} - L_{12}	278.12	96.49	-6.70			0.75	1.18	85.61	-5.94	0.00	0.00	Vehicle	Vehicle	472.85	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_{14} - L_{13}	235.45	94.92	-8.27			0.75	1.18	84.22	-7.34	0.00	0.00	Vehicle	Vehicle	415.56	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{15} - L_{15}	143.03	93.71	-9.90			0.75	1.17	82.16	-8.68	0.00	0.00	Vehicle	Vehicle	292.74	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{16} - L_{16}	171.91	93.54	-9.94			0.75	1.17	82.01	-8.71	0.00	0.00	Vehicle	Vehicle	330.09	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_{17} - L_{17}	181.04	100.43	-10.00			0.75	1.17	88.05	-8.77	0.00	0.00	Vehicle	Vehicle	349.82	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{18} - L_{18}	171.16	92.69	-16.47			0.75	1.17	81.26	-14.44	0.00	0.00	Vehicle	Vehicle	328.14	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.90**	**5.90**	-----	-----
		U_{19} - L_{19}	150.64	91.15	-23.92			0.75	1.17	79.92	-20.97	0.00	0.00	Vehicle	Vehicle	299.73	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.26**	**6.26**	-----	-----
	Structure 2	U_0 - L_{20}	125.86	86.60	-33.70			0.75	1.17	75.93	-29.55	0.00	0.00	Vehicle	Vehicle	262.33	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
		U_{20} - L_{21}	76.05	78.09	-35.21			0.75	1.17	68.47	-30.87	0.00	0.00	Vehicle	Vehicle	187.87	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.14**	**5.14**	-----	-----
		U_{21} - L_{22}	38.34	63.21	-54.51			0.75	1.17	55.41	-47.79	0.00	0.00	Vehicle	Vehicle	121.89	-12.29	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.03**	**7.03**	**7.62**	**7.62**
		U_{23} - L_{22}	18.02	61.27	-60.91			0.75	1.17	53.71	-53.41	0.00	0.00	Vehicle	Vehicle	93.26	-46.00	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.63**	**7.63**	**6.39**	**6.39**
		U_{24} - L_{23}	58.54	69.82	-45.30			0.75	1.17	61.22	-39.72	0.00	0.00	Vehicle	Vehicle	155.69	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.03**	**6.03**	-----	-----
		U_{25} - L_{24}	114.92	83.09	-35.17			0.75	1.17	72.85	-30.83	0.00	0.00	Vehicle	Vehicle	244.10	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.70**	**6.70**	-----	-----
		U_{26} - L_{25}	142.93	92.33	-26.42			0.75	1.17	80.95	-23.16	0.00	0.00	Vehicle	Vehicle	291.05	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.27**	**6.27**	-----	-----
		U_{27} - L_{26}	173.71	88.46	-18.39			0.75	1.17	77.55	-16.12	0.00	0.00	Vehicle	Vehicle	326.64	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_{28} - L_{27}	186.49	97.77	-10.15			0.75	1.17	85.72	-8.90	0.00	0.00	Vehicle	Vehicle	353.87	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
		U_{29} - L_{28}	190.57	95.71	-5.77			0.75	1.17	83.91	-5.06	0.00	0.00	Vehicle	Vehicle	356.83	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U_{30} - L_{29}	161.74	88.43	-7.56			0.75	1.17	77.53	-6.62	0.00	0.00	Vehicle	Vehicle	311.05	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.31**	**6.31**	-----	-----
		U_{31} - L_{31}	191.49	92.41	-9.96			0.75	1.18	81.99	-8.84	0.00	0.00	Vehicle	Vehicle	355.53	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.15**	**7.15**	-----	-----
		U_{32} - L_{32}	226.17	100.46	-10.96			0.75	1.18	89.13	-9.72	0.00	0.00	Vehicle	Vehicle	409.89	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.19**	**6.19**	-----	-----
		U_{33} - L_{33}	243.26	103.30	-7.29			0.75	1.18	91.65	-6.46	0.00	0.00	Vehicle	Vehicle	435.38	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U_{34} - L_{34}	238.98	97.39	-15.73			0.75	1.18	86.41	-13.96	0.00	0.00	Vehicle	Vehicle	423.01	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.01**	**7.01**	-----	-----
		U_{35} - L_{35}	222.10	99.96	-21.94			0.75	1.18	88.69	-19.47	0.00	0.00	Vehicle	Vehicle	404.03	-----	0.00	30.63	30.6305	1010.81	131.71

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in²) **	A_{gross} (in²)	A_{net} (in²)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.77	10.20	-49.76	2.20	-8.83	0.90	1.24	11.36	-55.39	2.20	-8.83	Vehicle	Vehicle	-----	-158.81	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.00	9.00
		U_1 - U_2	-86.66	24.21	-79.95	6.00	-16.34	0.90	1.24	26.95	-89.00	6.00	-16.34	Vehicle	Vehicle	-----	-228.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.38	5.38
		U_2 - U_3	-48.28	35.88	-81.83	9.44	-19.05	0.90	1.24	39.95	-91.10	9.44	-19.05	Vehicle	Vehicle	-----	-181.19	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.68	5.68
		U_3 - U_4	36.43	46.30	-69.89	12.72	-17.47	0.90	1.24	51.54	-77.81	12.72	-17.47	Vehicle	Vehicle	114.36	-53.79	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.31	12.31	7.73	7.73
		U_4 - U_5	38.78	46.45	-69.29	12.78	-17.37	0.90	1.24	51.71	-77.14	12.78	-17.37	Vehicle	Vehicle	117.64	-49.86	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.23	12.23	7.83	7.83
		U_5 - U_6	154.43	52.18	-45.42	15.13	-12.03	0.90	1.24	58.09	-50.57	15.13	-12.03	Vehicle	Vehicle	276.27	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.89	8.89	-----	-----
		U_6 - U_7	288.19	56.73	-22.62	17.11	-4.31	0.90	1.24	63.16	-25.19	17.11	-4.31	Vehicle	Vehicle	456.75	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.17	8.17	-----	-----
		U_7 - U_8	410.75	58.06	-3.56	22.59	0.00	0.90	1.24	64.64	-3.96	22.59	0.00	Pedestrian	Vehicle	647.37	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	8.02	8.02	-----	-----
		U_8 - U_9	311.35	44.23	-8.39	19.05	0.00	0.90	1.20	47.69	-9.04	19.05	0.00	Pedestrian	Vehicle	491.51	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	9.40	9.40	-----	-----
		U_9 - U_{10}	78.25	44.68	-38.87	12.28	-6.83	0.90	1.20	48.17	-41.91	12.28	-6.83	Vehicle	Vehicle	164.35	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	13.10	13.10	-----	-----
		U_{10} - U_{11}	-141.75	42.14	-72.59	11.11	-18.45	0.90	1.20	45.43	-78.27	11.11	-18.45	Vehicle	Vehicle	-----	-286.02	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.82	5.82
		U_{11} - U_{12}	-338.40	38.83	-102.80	9.77	-27.96	0.90	1.20	41.86	-110.83	9.77	-27.96	Vehicle	Vehicle	-----	-584.01	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.28	4.28
		U_{12} - U_{13}	-480.50	34.00	-120.23	8.23	-34.35	0.90	1.20	36.66	-129.63	8.23	-34.35	Vehicle	Vehicle	-----	-793.17	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.07	5.07
		U_{13} - U_{14}	-571.10	28.88	-130.19	6.68	-37.24	0.90	1.20	31.14	-140.37	6.68	-37.24	Vehicle	Vehicle	-----	-924.91	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.39	5.39
		U_{14} - U_{15}	-571.52	28.74	-130.14	6.65	-37.25	0.90	1.20	30.99	-140.31	6.65	-37.25	Vehicle	Vehicle	-----	-925.38	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.39	5.39
		U_{15} - U_{16}	-582.34	22.44	-124.24	4.98	-36.14	0.90	1.20	24.20	-133.95	4.98	-36.14	Vehicle	Vehicle	-----	-931.18	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.56	5.56
		U_{16} - U_{17}	-539.92	16.76	-109.46	3.53	-31.87	0.90	1.20	18.07	-118.02	3.53	-31.87	Vehicle	Vehicle	-----	-855.32	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.67	6.67
		U_{17} - U_{18}	-422.72	10.85	-81.14	2.26	-25.07	0.90	1.20	11.70	-87.48	2.26	-25.07	Vehicle	Vehicle	-----	-663.26	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	6.27	6.27
		U_{18} - U_{19}	-286.53	6.12	-51.65	1.28	-16.97	0.90	1.20	6.60	-55.69	1.28	-16.97	Vehicle	Vehicle	-----	-444.88	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.02	7.02
		U_{19} - U_{20}	-140.97	2.59	-22.90	0.55	-8.68	0.90	1.20	2.80	-24.69	0.55	-8.68	Vehicle	Pedestrian	-----	-226.64	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	16.08	16.08
	Structure 2	U_0 - U_1	-147.48	5.15	-33.76	0.45	-4.88	0.90	1.18	5.48	-35.95	0.45	-4.88	Vehicle	Vehicle	-----	-238.46	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	13.91	13.91
		U_1 - U_2	-319.09	10.91	-68.47	1.96	-13.36	0.90	1.18	11.62	-72.90	1.96	-13.36	Vehicle	Vehicle	-----	-509.58	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.48	6.48
		U_2 - U_3	-460.93	19.58	-97.92	3.77	-20.95	0.90	1.18	20.85	-104.25	3.77	-20.95	Vehicle	Vehicle	-----	-734.73	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
		U_3 - U_4	-580.02	29.79	-123.88	5.92	-27.68	0.90	1.18	31.72	-131.89	5.92	-27.68	Vehicle	Vehicle	-----	-925.49	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.77	5.77
		U_4 - U_5	-616.47	38.66	-134.13	7.86	-31.35	0.90	1.18	41.16	-142.81	7.86	-31.35	Vehicle	Vehicle	-----	-987.07	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.10	6.10
		U_5 - U_6	-604.69	47.61	-137.43	9.87	-32.88	0.90	1.18	50.69	-146.32	9.87	-32.88	Vehicle	Vehicle	-----	-976.31	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.03	6.03
		U_6 - U_7	-514.75	54.43	-124.48	11.56	-31.23	0.90	1.18	57.95	-132.53	11.56	-31.23	Vehicle	Vehicle	-----	-841.47	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.24	6.24
		U_7 - U_8	-512.80	54.48	-124.19	11.57	-31.18	0.90	1.18	58.01	-132.23	11.57	-31.18	Vehicle	Vehicle	-----	-838.53	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.27	6.27
		U_8 - U_9	-373.48	60.54	-107.57	13.16	-27.41	0.90	1.18	64.45	-114.53	13.16	-27.41	Vehicle	Vehicle	-----	-634.41	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.57	6.57
		U_9 - U_{10}	-181.02	63.46	-81.75	14.25	-21.42	0.90	1.18	67.56	-87.04	14.25	-21.42	Vehicle	Vehicle	-----	-348.47	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.10	8.10
		U_{10} - U_{11}	26.21	65.78	-56.82	15.21	-14.40	0.90	1.18	70.03	-60.50	15.21	-14.40	Vehicle	Vehicle	125.11	-44.57	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.63	12.63	13.15	13.15
		U_{11} - U_{12}	237.41	64.45	-30.55	15.56	-6.85	0.90	1.18	68.62	-32.52	15.56	-6.85	Vehicle	Vehicle	397.83	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	9.81	9.81	-----	-----
		U_{12} - U_{13}	435.92	63.25	-16.72	18.38	0.00	0.90	1.18	67.35	-17.80	18.38	0.00	Vehicle	Vehicle	654.24	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	10.44	10.44	-----	-----
		U_{13} - U_{14}	595.85	60.31	-15.63	24.32	0.00	0.90	1.18	64.21	-16.64	24.32	0.00	Pedestrian	Vehicle	889.69	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	10.94	10.94	-----	-----
		U_{14} - U_{15}	615.52	54.29	-13.54	24.37	0.00	0.90	1.17	57.12	-14.25	24.37	0.00	Pedestrian	Vehicle	906.11	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	11.64	11.64	-----	-----
		U_{15} - U_{16}	486.12	56.66	-21.51	18.61	0.00	0.90	1.17	59.61	-22.63	18.61	0.00	Vehicle	Vehicle	709.46	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.19	13.19	-----	-----
		U_{16} - U_{17}	339.23	56.36	-39.11	14.66	-2.95	0.90	1.17	59.29	-41.15	14.66	-2.95	Vehicle	Vehicle	518.07	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	11.89	11.89	-----	-----
		U_{17} - U_{18}	192.06	55.12	-61.92	15.12	-9.49	0.90	1.17	57.99	-65.15	15.12	-9.49	Vehicle	Vehicle	325.07	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	9.90	9.90	-----	-----
		U_{18} - U_{19}	53.73	50.51	-80.65	15.12	-15.34	0.90	1.17	53.14	-84.85	15.12	-15.34	Vehicle	Vehicle	138.93	-40.46	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	13.41	13.41	8.26	8.26
		U_{19} - U_{20}	-59.08	44.80	-97.00	15.07	-19.84	0.90	1.17	47.13	-102.05	15.07	-19.84	Vehicle	Vehicle	-----	-209.48	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.21	6.21
	Structure 3	U_{20} - U_{21}	-125.50	37.36	-105.07	14.76	-22.39	0.90	1.17	39.31	-110.54	14.76	-22.39	Pedestrian	Vehicle	-----	-306.85	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.43	6.43
		U_{21} - U_{22}	-146.93	30.91	-105.83	14.37	-22.74	0.90	1.17	32.52	-111.34	14.37	-22.74	Pedestrian	Vehicle	-----	-335.75	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.20	6.20
		U_{22} - U_{23}	-146.70	31.00	-105.70	14.36	-22.72	0.90	1.17	32.61	-111.21	14.36	-22.72	Pedestrian	Vehicle	-----	-335.28	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.21	6.21
		U_{23} - U_{24}	-112.76	37.73	-96.29	13.87	-21.04	0.90	1.17	39.69	-101.30	13.87	-21.04	Pedestrian	Vehicle	-----	-278.29	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.15	7.15
		U_{24} - U_{25}	-36.27	43.51	-83.66	13.40	-17.33	0.90	1.17	45.77	-88.02	13.40	-17.33	Vehicle	Vehicle	12.35	-161.58	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	18.71	18.71	7.46	7.46
		U_{25} - U_{26}	80.70	47.35	-63.07	12.92	-12.15	0.90	1.17	49.81	-66.36	12.92	-12.15	Vehicle	Vehicle	169.66	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.76	13.76	-----	-----
		U_{26} - U_{27}	220.59	50.36	-43.10	12.57	-7.08	0.90	1.17	52.98	-45.34	12.57	-7.08	Vehicle	Vehicle	355.65	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	10.30	10.30	-----	-----
		U_{27} - U_{28}	363.31	50.86	-25.18	14.90	-2.16	0.90	1.17	53.51	-26.49	14.90	-2.16	Vehicle	Vehicle	541.86	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	12.72	12.72	-----	-----
		U_{28} - U_{29}	503.82	51.03	-11.99	21.74	0.00	0.90	1.17	53.68	-12.62	21.74	0.00	Pedestrian	Vehicle	753.02	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	10.19	10.19	-----	-----
		U_{29} - U_{30}	616.57	50.33	-13.89	27.08	0.00	0.90	1.17	52.95	-14.61	27.08	0.00	Pedestrian	Vehicle	905.57	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	11.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD													Member Capacity in Tension				Member Capacity in Compression						Plate Thickness/Ratios																		Axial Force Rating			
																																												Tension Member		Comp. Member	
Location		Member	D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Inventory RF	Operating RF	Inventory RF	Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	9.15	-6.91	0.36	-2.06	0.90	1.24	10.19	-7.69	0.36	-2.06	Vehicle	Vehicle	10.63	-12.61	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	49.54	49.54	54.81	54.81
		L_1 - L_2	67.91	48.79	-13.33	9.23	-3.36	0.90	1.24	54.31	-14.84	9.23	-3.36	Vehicle	Vehicle	158.89	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	8.00	8.00	-----	-----
		L_2 - L_3	78.84	84.18	-28.90	15.48	-7.39	0.90	1.24	93.71	-32.17	15.48	-7.39	Vehicle	Vehicle	224.32	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	6.29	6.29	-----	-----
		L_3 - L_4	39.14	85.45	-40.42	18.09	-10.83	0.90	1.24	95.13	-45.00	18.09	-10.83	Vehicle	Vehicle	174.56	-7.62	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	6.62	6.62	13.38	13.38
		L_4 - L_5	-166.38	51.98	-58.47	10.96	-16.90	0.90	1.24	57.87	-65.09	10.96	-16.90	Vehicle	Vehicle	-----	-300.92	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	5.13	5.13
		L_5 - L_6	-301.23	26.47	-63.19	3.23	-18.93	0.90	1.24	29.46	-70.35	3.23	-18.93	Vehicle	Vehicle	-----	-483.05	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	5.09	5.09
		L_6 - L_7	-438.94	6.22	-67.94	0.00	-26.51	0.90	1.24	6.92	-75.63	0.00	-26.51	Vehicle	Pedestrian	-----	-703.40	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	4.95	4.95
		L_7 - L_8	-551.65	3.57	-68.17	0.00	-35.55	0.90	1.24	3.98	-75.90	0.00	-35.55	Vehicle	Pedestrian	-----	-862.02	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	5.81	5.81
		L_8 - L_9	-570.53	8.38	-75.37	0.00	-37.48	0.90	1.20	9.03	-81.26	0.00	-37.48	Vehicle	Pedestrian	-----	-896.05	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	5.30	5.30
		L_9 - L_{10}	-355.48	9.42	-44.22	0.00	-24.70	0.90	1.20	10.16	-47.67	0.00	-24.70	Vehicle	Pedestrian	-----	-556.21	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	8.15	8.15
		L_{10} - L_{11}	-118.48	34.92	-37.45	0.00	-12.43	0.90	1.20	37.65	-40.38	0.00	-12.43	Vehicle	Vehicle	-----	-206.52	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	9.46	9.46
		L_{11} - L_{12}	103.45	64.07	-34.79	9.96	-9.47	0.90	1.20	69.08	-37.51	9.96	-9.47	Vehicle	Vehicle	224.29	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	7.10	7.10	-----	-----
		L_{12} - L_{13}	300.60	97.50	-32.30	17.83	-8.14	0.90	1.20	105.12	-34.82	17.83	-8.14	Vehicle	Vehicle	527.45	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	6.41	6.41	-----	-----
		L_{13} - L_{14}	441.19	112.66	-27.52	24.15	-6.61	0.90	1.20	121.47	-29.67	24.15	-6.61	Vehicle	Vehicle	731.46	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	7.14	7.14	-----	-----
		L_{14} - L_{15}	547.00	118.92	-17.71	24.57	-3.49	0.90	1.20	128.22	-19.10	24.57	-3.49	Vehicle	Vehicle	877.78	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.74	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	8.01	8.01	-----	-----
		L_{15} - L_{16}	506.09	103.09	-16.64	20.32	-2.03	0.90	1.20	111.15	-17.95	20.32	-2.03	Vehicle	Vehicle	802.41	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	9.61	9.61	-----	-----
		L_{16} - L_{17}	398.75	75.96	-14.91	12.72	-0.83	0.90	1.20	81.90	-16.08	12.72	-0.83	Vehicle	Vehicle	624.85	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	9.99	9.99	-----	-----
		L_{17} - L_{18}	263.81	46.60	-12.21	4.81	0.00	0.90	1.20	50.25	-13.17	4.81	0.00	Vehicle	Vehicle	408.27	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	12.33	12.33	-----	-----
		L_{18} - L_{19}	118.75	37.35	-9.57	0.71	-3.38	0.90	1.20	40.27	-10.32	0.71	-3.38	Vehicle	Vehicle	206.73	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	9.53	9.53	-----	-----
		L_{19} - L_{20}	-23.36	32.05	-9.37	1.28	-12.08	0.90	1.20	34.55	-10.10	1.28	-12.08	Vehicle	Pedestrian	14.55	-59.21	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	15.22	15.22	18.04	18.04
		L_0' L_1	-36.12	19.66	-13.30	1.33	-5.14	0.90	1.18	20.93	-14.16	1.33	-5.14	Vehicle	Pedestrian	-----	-72.04	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	25.85	25.85
		L_1 - L_2	132.64	31.97	-5.18	2.93	-0.06	0.90	1.18	34.03	-5.52	2.93	-0.06	Vehicle	Vehicle	216.68	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	14.71	14.71	-----	-----
		L_2 - L_3	303.94	69.94	-10.99	10.52	-1.79	0.90	1.18	74.46	-11.70	10.52	-1.79	Vehicle	Vehicle	491.92	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	9.03	9.03	-----	-----
		L_3 - L_4	445.73	97.22	-19.74	18.15	-3.63	0.90	1.18	103.50	-21.02	18.15	-3.63	Vehicle	Vehicle	714.01	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	8.34	8.34	-----	-----
		L_4 - L_5	567.64	125.43	-31.66	24.81	-6.10	0.90	1.18	133.54	-33.71	24.81	-6.10	Vehicle	Vehicle	911.54	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	8.11	8.11	-----	-----
		L_5 - L_6	603.43	133.83	-40.59	28.47	-8.06	0.90	1.18	142.49	-43.22	28.47	-8.06	Vehicle	Vehicle	969.70	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	8.35	8.35	-----	-----
		L_6 - L_7	599.28	141.56	-51.41	30.25	-10.41	0.90	1.18	150.71	-54.74	30.25	-10.41	Vehicle	Vehicle	974.99	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	8.08	8.08	-----	-----
		L_7 - L_8	373.73	111.95	-64.12	24.92	-13.66	0.90	1.18	119.19	-68.27	24.92	-13.66	Vehicle	Vehicle	640.79	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	8.12	8.12	-----	-----
		L_8 - L_9	195.51	88.98	-69.01	19.51	-15.12	0.90	1.18	94.73	-73.47	19.51	-15.12	Vehicle	Vehicle	377.31	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	9.55	9.55	-----	-----
		L_9 - L_{10}	-13.41	62.59	-71.46	12.45	-16.11	0.90	1.18	66.64	-76.08	12.45	-16.11	Vehicle	Vehicle	69.19	-116.34	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	13.13	13.13	9.39	9.39
		L_{10} - L_{11}	-217.51	37.35	-72.60	5.50	-17.02	0.90	1.18	39.76	-77.30	5.50	-17.02	Vehicle	Vehicle	-----	-383.25	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	5.60	5.60
		L_{11} - L_{12}	-420.12	19.65	-71.54	0.00	-23.35	0.90	1.18	20.92	-76.17	0.00	-23.35	Vehicle	Vehicle	-----	-645.17	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.70	6.70
		L_{12} - L_{13}	-591.61	19.72	-73.09	0.00	-30.09	0.90	1.18	21.00	-77.82	0.00	-30.09	Vehicle	Pedestrian	-----	-909.37	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.34	6.34
		L_{13} - L_{14}	-724.42	18.48	-70.05	0.00	-35.12	0.90	1.18	19.68	-74.58	0.00	-35.12	Vehicle	Pedestrian	-----	-1084.35	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.21	7.21
		L_{14} - L_{15}	-747.19	21.27	-80.59	0.00	-36.29	0.90	1.17	22.38	-84.78	0.00	-36.29	Vehicle	Pedestrian	-----	-1128.74	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.34	6.34
		L_{15} - L_{16}	-632.29	19.55	-66.47	0.00	-31.22	0.90	1.17	20.57	-69.93	0.00	-31.22	Vehicle	Pedestrian	-----	-953.46	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.36	6.36
		L_{16} - L_{17}	-488.73	19.08	-47.51	0.00	-25.40	0.90	1.17	20.08	-49.98	0.00	-25.40	Vehicle	Pedestrian	-----	-733.33	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	7.41	7.41
		L_{17} - L_{18}	-337.06	33.76	-47.11	0.00	-18.13	0.90	1.17	35.52	-49.56	0.00	-18.13	Vehicle	Pedestrian	-----	-526.17	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.77	5.77
		L_{18} - L_{19}	-183.64	55.44	-46.38	4.48	-11.34	0.90	1.17	58.32	-48.80	4.48	-11.34	Vehicle	Vehicle	-----	-302.16	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	7.99	7.99
		L_{19} - L_{20}	-45.76	71.04	-41.72	8.92	-9.58	0.90	1.17	74.74	-43.90	8.92	-9.58	Vehicle	Vehicle	37.68	-116.55	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	9.70	9.70	12.03	12.03
	Structure 2	L_{20} - L_{21}	68.06	89.91	-37.08	11.57	-9.12	0.90	1.17	94.59	-39.01	11.57	-9.12	Vehicle	Vehicle	211.45	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.48	9.48	-----	-----
		L_{21} - L_{22}	134.01	96.58	-29.65	13.61	-8.81	0.90	1.17	101.62	-31.20	13.61	-8.81	Vehicle	Vehicle	306.31	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	8.17	8.17	-----	-----
		L_{22} - L_{23}	122.68	91.99	-32.68	11.79	-7.57	0.90	1.17	96.79	-34.38	11.79	-7.57	Vehicle	Vehicle	285.31	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	8.70	8.70	-----	-----
		L_{23} - L_{24}	46.89	78.15	-36.50	8.09	-7.09	0.90	1.17	82.22	-38.41	8.09	-7.09	Vehicle	Vehicle	167.85	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	11.16	11.16	-----	-----
		L_{24} - L_{25}	-66.54	60.66	-40.64	3.32	-6.23	0.90	1.17	63.82	-42.76	3.32	-6.23	Vehicle	Vehicle	-----	-142.08	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	11.86	11.86
		L_{25} - L_{26}	-205.63	41.88	-43.47	0.00	-11.77	0.90	1.17	44.06	-45.73	0.00	-11.77	Vehicle	Vehicle	-----	-326.77	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	8.05	8.05
		L_{26} - L_{27}	-350.43	39.17	-44.28	0.00	-18.87	0.90	1.17	41.21	-46.59	0.00	-18.87	Vehicle	Pedestrian	-----	-540.65	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	5.76	5.76
		L_{27} - L_{28}	-494.65	32.84	-44.11	0.00	-25.89	0.90	1.17	34.55	-46.41	0.00	-25.89	Vehicle	Pedestrian	-----	-737.02	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	7.65	7.65
		L_{28} - L_{29}	-620.83	28.16	-49.57	0.00	-31.78	0.90	1.17	29.63	-52.15	0.00	-31.78	Vehicle	Pedestrian	-----	-916.18	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	7.80	7.80
		L_{29} - L_{30}	-716.91	22.14	-59.36	0.00	-36.29	0.90	1.17	23.29	-62.45	0.00	-36.29	Vehicle	Pedestrian	-----	-1060.35	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	(No Impact) Pedestrian Load MAX	(No Impact) Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	13.21	-58.74	3.44	-12.32	0.90	1.24	14.70	-65.39	3.44	-12.32	Vehicle	Vehicle	-----	-206.85	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.83	3.83
		U_1 - L_1	-46.53	11.37	-42.82	2.93	-9.05	0.90	1.24	12.66	-47.67	2.93	-9.05	Vehicle	Vehicle	-----	-122.47	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.41	6.41
		U_2 - L_2	-0.10	10.29	-27.49	2.84	-5.68	0.90	1.24	11.46	-30.60	2.84	-5.68	Vehicle	Vehicle	14.77	-39.92	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	37.33	37.33	11.50	11.50
		U_3 - L_3	39.60	9.08	-16.43	2.69	-2.12	0.90	1.24	10.11	-18.29	2.69	-2.12	Vehicle	Vehicle	64.62	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	38.39	38.39	-----	-----
		U_4 - L_4	-30.20	1.54	-24.50	0.00	-3.46	0.90	1.24	1.71	-27.28	0.00	-3.46	Vehicle	Vehicle	-----	-74.73	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.72	11.72
		U_5 - L_5	-130.49	3.73	-36.03	0.00	-10.23	0.90	1.24	4.15	-40.11	0.00	-10.23	Vehicle	Vehicle	-----	-221.77	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.35	7.35
		U_6 - L_6	-158.18	6.53	-36.61	0.00	-13.06	0.90	1.24	7.27	-40.76	0.00	-13.06	Vehicle	Vehicle	-----	-258.62	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.58	8.58
		U_7 - L_7	-152.32	11.50	-36.15	0.00	-13.24	0.90	1.24	12.81	-40.25	0.00	-13.24	Vehicle	Vehicle	-----	-250.34	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.65	7.65
		U_8 - L_8	-455.55	13.90	-58.18	0.00	-31.72	0.90	1.24	15.48	-64.77	0.00	-31.72	Vehicle	Pedestrian	-----	-717.64	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.32	6.32
		U_9 - L_9	-287.55	3.10	-58.92	0.00	-18.20	0.90	1.20	3.34	-63.53	0.00	-18.20	Vehicle	Vehicle	-----	-456.40	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	5.63	5.63
		U_{10} - L_{10}	-276.32	1.49	-56.67	0.00	-17.54	0.90	1.20	1.61	-61.10	0.00	-17.54	Vehicle	Vehicle	-----	-438.65	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.63	7.63
		U_{11} - L_{11}	-232.59	1.54	-51.13	0.00	-14.41	0.90	1.20	1.66	-55.13	0.00	-14.41	Vehicle	Vehicle	-----	-374.03	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.42	7.42
		U_{12} - L_{12}	-178.43	1.04	-43.04	0.00	-11.20	0.90	1.20	1.12	-46.40	0.00	-11.20	Vehicle	Vehicle	-----	-292.27	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.63	7.63
		U_{13} - L_{13}	-127.74	4.49	-34.26	0.00	-7.88	0.90	1.20	4.84	-36.93	0.00	-7.88	Vehicle	Vehicle	-----	-214.08	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	6.84	6.84
		U_{14} - L_{14}	-30.39	0.94	-28.45	0.00	-3.03	0.90	1.20	1.02	-30.67	0.00	-3.03	Vehicle	Vehicle	-----	-79.39	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.25	10.25
		U_{15} - L_{15}	-28.94	9.50	-25.57	1.55	-4.54	0.90	1.20	10.24	-27.57	1.55	-4.54	Vehicle	Vehicle	-----	-73.46	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.40	11.40
		U_{16} - L_{16}	-76.03	6.83	-30.36	1.39	-7.08	0.90	1.20	7.36	-32.74	1.39	-7.08	Vehicle	Vehicle	-----	-141.40	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.10	8.10
		U_{17} - L_{17}	-161.89	6.23	-41.16	1.30	-10.66	0.90	1.20	6.71	-44.37	1.30	-10.66	Vehicle	Vehicle	-----	-268.14	0.00	20.66	20.0644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.62	5.62
		U_{18} - L_{18}	-190.28	5.34	-40.57	1.12	-12.71	0.90	1.20	5.75	-43.75	1.12	-12.71	Vehicle	Vehicle	-----	-304.24	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.66	7.66
		U_{19} - L_{19}	-228.17	4.57	-40.37	0.97	-14.98	0.90	1.20	4.93	-43.52	0.97	-14.98	Vehicle	Pedestrian	-----	-372.68	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.63	6.63
		U_{20} - L_{20}	-242.83	4.14	-41.36	0.95	-15.63	0.90	1.20	4.47	-44.60	0.95	-15.63	Vehicle	Pedestrian	-----	-393.97	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.63	5.63
		U_0 - L_0	-303.03	10.08	-61.27	2.22	-15.08	0.90	1.18	10.74	-65.23	2.22	-15.08	Vehicle	Vehicle	-----	-478.74	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.20	5.20
		U_1 - L_1	-268.78	10.26	-59.20	2.12	-13.67	0.90	1.18	10.92	-63.03	2.12	-13.67	Vehicle	Vehicle	-----	-431.35	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.40	6.40
		U_2 - L_2	-220.87	11.05	-53.33	2.34	-12.32	0.90	1.18	11.76	-56.78	2.34	-12.32	Vehicle	Vehicle	-----	-360.95	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.23	6.23
		U_3 - L_3	-175.23	11.84	-48.70	2.49	-10.35	0.90	1.18	12.60	-51.85	2.49	-10.35	Vehicle	Vehicle	-----	-295.20	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.34	5.34
		U_4 - L_4	-82.08	10.26	-35.98	2.21	-6.62	0.90	1.18	10.92	-38.31	2.21	-6.62	Vehicle	Vehicle	-----	-156.50	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.71	6.71
		U_5 - L_5	-19.89	10.31	-26.91	2.23	-4.16	0.90	1.18	10.97	-28.65	2.23	-4.16	Vehicle	Vehicle	-----	-63.10	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.19	11.19
		U_6 - L_6	60.32	21.63	-15.09	1.75	-0.47	0.90	1.18	23.03	-16.06	1.75	-0.47	Vehicle	Vehicle	108.35	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	15.95	15.95	-----	-----
		U_7 - L_7	-41.77	1.45	-23.72	0.00	-2.50	0.90	1.18	1.54	-25.26	0.00	-2.50	Vehicle	Vehicle	-----	-87.14	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.83	11.83
		U_8 - L_8	-189.01	4.82	-37.43	0.00	-8.38	0.90	1.18	5.14	-39.85	0.00	-8.38	Vehicle	Vehicle	-----	-297.52	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.57	8.57
		U_9 - L_9	-253.99	1.94	-46.43	0.00	-10.55	0.90	1.18	2.07	-49.44	0.00	-10.55	Vehicle	Vehicle	-----	-394.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.84	8.84
		U_{10} - L_{10}	-290.02	3.54	-47.12	0.00	-12.18	0.90	1.18	3.77	-50.17	0.00	-12.18	Vehicle	Vehicle	-----	-442.25	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.74	9.74
		U_{11} - L_{11}	-312.18	7.61	-51.05	0.00	-12.59	0.90	1.18	8.11	-54.36	0.00	-12.59	Vehicle	Vehicle	-----	-476.49	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.33	8.33
		U_{12} - L_{12}	-327.28	11.01	-46.54	0.00	-13.75	0.90	1.18	11.72	-49.55	0.00	-13.75	Vehicle	Vehicle	-----	-489.87	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.58	9.58
		U_{13} - L_{13}	-277.21	14.79	-39.30	0.45	-12.38	0.90	1.18	15.74	-41.84	0.45	-12.38	Vehicle	Vehicle	-----	-414.77	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.87	9.87
		U_{14} - L_{14}	-505.44	18.96	-51.07	0.00	-21.41	0.90	1.18	20.19	-54.38	0.00	-21.41	Vehicle	Pedestrian	-----	-755.60	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	7.21	7.21
		U_{15} - L_{15}	-232.94	5.27	-54.65	1.67	-12.16	0.90	1.17	5.55	-57.50	1.67	-12.16	Vehicle	Vehicle	-----	-377.57	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.95	7.95
		U_{16} - L_{16}	-260.12	6.03	-57.67	0.83	-13.04	0.90	1.17	6.35	-60.67	0.83	-13.04	Vehicle	Vehicle	-----	-417.02	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.69	6.69
		U_{17} - L_{17}	-228.24	6.80	-53.95	0.66	-11.76	0.90	1.17	7.16	-56.76	0.66	-11.76	Vehicle	Vehicle	-----	-370.50	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.96	6.96
		U_{18} - L_{18}	-209.27	8.18	-49.33	0.00	-11.28	0.90	1.17	8.60	-51.90	0.00	-11.28	Vehicle	Vehicle	-----	-339.53	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.09	7.09
		U_{19} - L_{19}	-166.55	8.76	-45.53	0.00	-9.53	0.90	1.17	9.21	-47.91	0.00	-9.53	Vehicle	Vehicle	-----	-278.80	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.20	7.20
		U_{20} - L_{20}	-113.95	8.79	-34.53	0.00	-7.50	0.90	1.17	9.25	-36.33	0.00	-7.50	Vehicle	Vehicle	-----	-195.36	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.19	7.19
		U_{21} - L_{21}	-62.76	12.73	-27.53	0.00	-5.22	0.90	1.17	13.40	-28.96	0.00	-5.22	Vehicle	Vehicle	-----	-119.24	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.59	9.59
		U_{22} - L_{22}	-38.94	1.34	-26.06	0.00	-2.15	0.90	1.17	1.41	-27.41	0.00	-2.15	Vehicle	Vehicle	-----	-86.26	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.05	11.05
		U_{23} - L_{23}	-74.43	9.45	-30.54	0.48	-6.10	0.90	1.17	9.94	-32.13	0.48	-6.10	Vehicle	Vehicle	-----	-138.53	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.28	8.28
		U_{24} - L_{24}	-121.36	9.12	-35.78	0.37	-8.17	0.90	1.17	9.60	-37.64	0.37	-8.17	Vehicle	Vehicle	-----	-206.71	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U_{25} - L_{25}	-169.12	8.77	-42.15	0.43	-9.94	0.90	1.17	9.23	-44.34	0.43	-9.94	Vehicle	Vehicle	-----	-277.50	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.72	7.72
		U_{26} - L_{26}	-207.97	7.94	-44.81	0.14	-11.42	0.90	1.17	8.35	-47.14	0.14	-11.42	Vehicle	Vehicle	-----	-331.65	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.83	7.83
		U_{27} - L_{27}	-219.96	6.54	-46.72	0.16	-11.49	0.90	1.17	6.88	-49.16	0.16	-11.49	Vehicle	Vehicle	-----	-349.85	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.20	8.20
		U_{28} - L_{28}	-240.91	9.41	-42.88	0.00	-12.60	0.90	1.17	9.90	-45.12	0.00	-12.60	Vehicle	Vehicle	-----	-371.83	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.42	9.42
		U_{29} - L_{29}	-202.73	14.44	-37.93	0.00	-10.35	0.90	1.17	15.19	-39.90	0.00	-10.35	Vehicle	Vehicle	-----	-315.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	12.21	12.21
		U_{30} - L_{30}	-518.05	15.30	-51.86	0.00	-22.08	0.90	1.18	16.29	-55.21	0.00	-22.08	Vehicle	Pedestrian	-----	-773.94	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.91	6.91
		U_{31} - L_{31}	-318.43	7.07	-56.14	0.87	-14.13	0.90	1.18	7.52	-59.77	0.87	-14.13	Vehicle	Vehicle	-----	-491.66	2.57	36.98	34.4077

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	(No Impact) Pedestrian $Load_{MAX}$	(No Impact) Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.66	65.57	-17.84	14.00	-4.60	0.90	1.24	73.00	-19.86	14.00	-4.60	Vehicle	Vehicle	208.86	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**6.83**	**6.83**	-----	-----
		U_1 - L_2	23.90	46.13	-17.48	9.20	-4.71	0.90	1.24	51.35	-19.46	9.20	-4.71	Vehicle	Vehicle	97.82	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.86**	**7.86**	-----	-----
		U_2 - L_3	-49.02	25.61	-14.65	3.33	-4.32	0.90	1.24	28.51	-16.30	3.33	-4.32	Vehicle	Vehicle	-----	-84.92	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**17.49**	**17.49**
		U_3 - L_4	-108.88	13.01	-29.02	0.00	-6.30	0.90	1.24	14.48	-32.31	0.00	-6.30	Vehicle	Vehicle	-----	-183.54	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.04**	**7.04**
		U_4 - L_5	153.12	46.48	-5.95	10.11	0.00	0.90	1.24	51.75	-6.63	10.11	0.00	Vehicle	Vehicle	266.32	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.18**	**7.18**	-----	-----
		U_5 - L_5	186.35	48.39	-4.79	13.44	0.00	0.90	1.24	53.87	-5.33	13.44	0.00	Vehicle	Vehicle	312.28	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
		U_6 - L_6	177.52	44.69	-10.87	14.13	0.00	0.90	1.24	49.76	-12.10	14.13	0.00	Vehicle	Vehicle	295.46	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.51**	**9.51**	-----	-----
		U_7 - L_7	173.18	40.36	-12.74	13.87	0.00	0.90	1.24	44.93	-14.18	13.87	0.00	Vehicle	Vehicle	283.54	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.63**	**10.63**	-----	-----
		U_8 - L_8	328.11	64.65	-3.95	19.45	-0.13	0.90	1.20	69.71	-4.26	19.45	-0.13	Vehicle	Vehicle	517.17	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**9.10**	**9.10**	-----	-----
		U_9 - L_{10}	339.70	69.19	-2.80	19.74	0.00	0.90	1.20	74.60	-3.02	19.74	0.00	Vehicle	Vehicle	538.59	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.35**	**8.35**	-----	-----
		U_{10} - L_{11}	313.22	64.97	-2.04	18.15	0.00	0.90	1.20	70.05	-2.19	18.15	0.00	Vehicle	Vehicle	498.24	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**8.53**	**8.53**	-----	-----
		U_{11} - L_{12}	270.68	61.08	-2.05	14.84	0.00	0.90	1.20	65.85	-2.21	14.84	0.00	Vehicle	Vehicle	437.50	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.70**	**7.70**	-----	-----
		U_{12} - L_{13}	194.17	46.28	-6.23	10.79	0.00	0.90	1.20	49.90	-6.72	10.79	0.00	Vehicle	Vehicle	317.29	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_{13} - L_{14}	123.57	36.37	-13.10	5.96	0.00	0.90	1.20	39.21	-14.12	5.96	0.00	Vehicle	Vehicle	211.61	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.76**	**7.76**	-----	-----
		U_{15} - L_{14}	-16.32	29.46	-21.38	1.48	-2.35	0.90	1.20	31.76	-23.05	1.48	-2.35	Vehicle	Vehicle	20.07	-51.19	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**13.98**	**13.98**	**13.53**	**13.53**
		U_{16} - L_{15}	59.12	35.15	-12.69	6.08	-2.09	0.90	1.20	37.89	-13.68	6.08	-2.09	Vehicle	Vehicle	126.12	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
		U_{17} - L_{16}	172.14	49.42	-8.68	9.93	-1.86	0.90	1.20	53.29	-9.36	9.93	-1.86	Vehicle	Vehicle	293.06	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
		U_{18} - L_{17}	210.78	49.18	-7.36	12.51	-1.53	0.90	1.20	53.03	-7.93	12.51	-1.53	Vehicle	Vehicle	342.95	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
		U_{19} - L_{18}	242.64	48.25	-5.88	13.73	-1.21	0.90	1.20	52.02	-6.33	13.73	-1.21	Vehicle	Vehicle	383.05	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
		U_{20} - L_{19}	257.76	42.60	-4.82	15.70	-1.03	0.90	1.20	45.93	-5.20	15.70	-1.03	Pedestrian	Vehicle	415.21	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U_0 - L_1	298.99	61.48	-10.70	14.21	-2.21	0.90	1.18	65.46	-11.39	14.21	-2.21	Vehicle	Vehicle	473.78	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.31**	**7.31**	-----	-----
		U_1 - L_2	284.21	62.85	-12.74	14.05	-2.66	0.90	1.18	66.91	-13.56	14.05	-2.66	Vehicle	Vehicle	456.46	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.37**	**7.37**	-----	-----
		U_2 - L_3	221.42	56.49	-13.59	11.83	-2.85	0.90	1.18	60.14	-14.46	11.83	-2.85	Vehicle	Vehicle	366.03	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_3 - L_4	178.30	55.11	-15.34	10.08	-3.23	0.90	1.18	58.67	-16.33	10.08	-3.23	Vehicle	Vehicle	308.07	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U_4 - L_5	53.50	35.11	-13.11	5.37	-2.87	0.90	1.18	37.38	-13.96	5.37	-2.87	Vehicle	Vehicle	118.14	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.01**	**10.01**	-----	-----
		U_5 - L_6	-16.51	29.26	-20.59	2.23	-2.92	0.90	1.18	31.15	-21.92	2.23	-2.92	Vehicle	Vehicle	19.03	-49.97	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**14.26**	**14.26**	**14.11**	**14.11**
		U_6 - L_7	-133.21	14.11	-37.31	0.00	-5.36	0.90	1.18	15.02	-39.73	0.00	-5.36	Vehicle	Vehicle	-----	-224.81	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**5.69**	**5.69**
		U_7 - L_7	208.77	43.69	-10.11	8.33	0.00	0.90	1.18	46.52	-10.76	8.33	0.00	Vehicle	Vehicle	331.87	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.48**	**8.48**	-----	-----
		U_8 - L_8	289.58	55.91	-2.34	10.70	0.00	0.90	1.18	59.53	-2.49	10.70	0.00	Vehicle	Vehicle	453.84	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
		U_{10} - L_9	327.97	56.85	-2.28	12.66	0.00	0.90	1.18	60.53	-2.43	12.66	0.00	Vehicle	Vehicle	505.05	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.43**	**7.43**	-----	-----
		U_{11} - L_{10}	349.25	59.36	-8.05	12.70	0.00	0.90	1.18	63.20	-8.57	12.70	0.00	Vehicle	Vehicle	536.19	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.83**	**7.83**	-----	-----
		U_{12} - L_{11}	358.20	56.00	-8.56	13.52	0.00	0.90	1.18	59.62	-9.12	13.52	0.00	Vehicle	Vehicle	543.16	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**8.16**	**8.16**	-----	-----
		U_{13} - L_{12}	307.75	46.34	-16.16	12.26	-0.24	0.90	1.18	49.34	-17.21	12.26	-0.24	Vehicle	Vehicle	464.22	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.52**	**9.52**	-----	-----
		U_{14} - L_{13}	260.20	37.50	-13.74	11.72	-1.50	0.90	1.18	39.93	-14.63	11.72	-1.50	Vehicle	Vehicle	390.17	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**12.96**	**12.96**	-----	-----
		U_{15} - L_{14}	208.42	50.47	-6.91	11.04	-2.51	0.90	1.17	53.10	-7.27	11.04	-2.51	Vehicle	Pedestrian	339.98	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.33**	**8.33**	-----	-----
		U_{16} - L_{15}	243.55	58.73	-4.78	11.54	-1.48	0.90	1.17	61.79	-5.03	11.54	-1.48	Vehicle	Vehicle	396.95	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U_{16} - L_{17}	255.86	57.14	-7.17	12.23	-0.85	0.90	1.17	60.11	-7.54	12.23	-0.85	Vehicle	Vehicle	410.77	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.56**	**7.56**	-----	-----
		U_{17} - L_{18}	235.29	58.51	-8.40	11.35	-0.75	0.90	1.17	61.56	-8.83	11.35	-0.75	Vehicle	Vehicle	385.90	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
		U_{18} - L_{19}	212.11	53.82	-10.25	11.09	0.00	0.90	1.17	56.62	-10.78	11.09	0.00	Vehicle	Vehicle	349.35	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
	Structure 2	U_{19} - L_{20}	168.24	48.33	-11.35	9.14	0.00	0.90	1.17	50.85	-11.94	9.14	0.00	Vehicle	Vehicle	284.82	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
		U_{20} - L_{21}	97.26	36.34	-15.57	6.66	0.00	0.90	1.17	38.24	-16.39	6.66	0.00	Vehicle	Vehicle	176.14	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_{21} - L_{22}	30.60	29.72	-23.44	3.66	-2.18	0.90	1.17	31.27	-24.66	3.66	-2.18	Vehicle	Vehicle	80.43	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**12.70**	**12.70**	-----	-----
		U_{23} - L_{22}	49.78	34.28	-17.74	5.11	-0.95	0.90	1.17	36.07	-18.66	5.11	-0.95	Vehicle	Vehicle	111.60	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.48**	**10.48**	-----	-----
		U_{24} - L_{23}	115.07	41.35	-12.37	8.00	-0.72	0.90	1.17	43.50	-13.02	8.00	-0.72	Vehicle	Vehicle	206.15	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.19**	**7.19**	-----	-----
		U_{25} - L_{24}	179.22	50.90	-12.03	10.10	-0.73	0.90	1.17	53.55	-12.66	10.10	-0.73	Vehicle	Vehicle	302.60	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.92**	**7.92**	-----	-----
		U_{26} - L_{25}	220.97	51.63	-10.55	11.89	-0.57	0.90	1.17	54.32	-11.10	11.89	-0.57	Vehicle	Vehicle	357.88	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.91**	**7.91**	-----	-----
		U_{27} - L_{26}	234.87	54.08	-8.39	11.45	-0.35	0.90	1.17	56.90	-8.83	11.45	-0.35	Vehicle	Vehicle	379.30	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.31**	**7.31**	-----	-----
		U_{28} - L_{27}	253.15	51.28	-7.56	12.25	-0.28	0.90	1.17	53.95	-7.96	12.25	-0.28	Vehicle	Vehicle	399.23	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.47**	**8.47**	-----	-----
		U_{29} - L_{28}	215.91	41.43	-16.09	10.20	0.00	0.90	1.17	43.58	-16.93	10.20	0.00	Vehicle	Vehicle	337.35	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
		U_{30} - L_{29}	180.73	35.69	-13.66	8.90	-0.90	0.90	1.17	37.55	-14.37	8.90	-0.90	Vehicle	Vehicle	283.76	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.52**	**12.52**	-----	-----
		U_{30} - L_{31}	294.99	51.70	-8.19	12.90	-1.64	0.90	1.18	55.04	-8.72	12.90	-1.64	Vehicle	Vehicle	455.04	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.77**	**8.77**	-----	-----
		U_{31} - L_{32}	342.70	58.72	-7.25	13.70	-0.55	0.90	1.18	62.52	-7.71	13.70	-0.55	Vehicle	Vehicle	526.79	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.96**	**6.96**	-----	-----
		U_{32} - L_{33}	363.39	61.12	-3.76	14.16	0.00	0.90	1.18	65.07	-4.01	14.16	0.00	Vehicle	Vehicle	557.00	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64

Axial - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-129.89	-23.02	-0.20	1.35	-0.03	-12.11	-2.61	18.04	-0.41	-161.84
	U_1 - U_2	-54.81	-51.14	0.21	2.31	-1.34	-16.47	2.83	30.85	-17.88	-219.99
	U_2 - U_3	-3.09	44.50	-1.25	3.65	-4.36	-16.13	12.28	45.42	-37.54	-270.61
	U_3 - U_4	-52.27	61.68	2.10	3.38	-5.78	-16.20	28.07	45.16	-77.15	-316.48
	U_4 - U_5	-27.43	50.17	2.36	3.35	-6.35	-16.29	31.49	43.35	-235.90	-87.84
	U_5 - U_6	1.19	145.97	2.75	3.08	-12.79	-0.35	36.67	41.16	-170.91	-4.68
	U_6 - U_7	94.94	53.27	2.94	1.85	-10.76	4.45	39.26	24.76	-143.76	54.68
	U_7 - U_8	-70.13	598.66	1.67	4.42	-18.53	14.22	22.35	58.96	-220.78	189.90
	U_8 - U_9	528.73	-128.77	6.64	0.76	9.72	-12.57	85.90	9.82	125.77	-162.62
	U_9 - U_{10}	69.10	44.97	1.85	2.78	-0.23	-17.46	23.97	36.03	-27.94	-127.91
	U_{10} - U_{11}	101.46	-177.08	3.00	2.39	-5.87	-11.95	38.78	30.86	-11.20	-154.58
	U_{11} - U_{12}	8.84	-160.13	1.42	2.42	-4.21	-15.02	44.21	32.05	-5.60	-154.40
	U_{12} - U_{13}	-56.63	-218.18	2.66	0.90	-1.73	-16.74	34.45	11.63	-22.33	-216.58
	U_{13} - U_{14}	-173.99	-344.03	0.73	1.58	-2.53	-25.17	13.93	9.44	-47.36	-327.05
	U_{14} - U_{15}	-287.88	-237.50	2.36	1.30	-25.29	-10.06	29.20	16.85	-327.25	-130.20
	U_{15} - U_{16}	-196.26	-337.79	2.24	0.15	-18.98	-11.76	29.62	1.94	-245.57	-152.12
	U_{16} - U_{17}	-295.52	-164.89	3.55	-0.16	-24.83	-7.85	33.61	-20.47	-327.27	-97.50
	U_{17} - U_{18}	-190.08	-29.82	0.74	-0.69	-15.25	0.16	9.57	-8.93	-197.32	2.12
	U_{18} - U_{19}	-179.81	-40.24	0.66	-2.35	-13.05	-0.66	8.93	-14.55	-185.73	-8.83
	U_{19} - U_{20}	-290.19	260.74	0.49	-0.30	-11.00	9.48	6.35	-3.89	-142.30	-122.62
	U_{20} - U_{21}	-27.02	-172.57	-0.47	1.10	4.18	-12.75	-5.95	13.99	53.38	-162.87
	U_{21} - U_{22}	-25.34	194.81	-0.22	0.87	4.64	-13.77	-6.37	15.76	53.38	-168.32
	U_{22} - U_{23}	-52.13	-282.61	-0.50	1.49	1.41	-21.85	-6.40	19.02	18.03	-279.16
	U_{23} - U_{24}	-33.19	-324.41	-0.13	1.33	4.73	-22.74	-4.68	17.63	53.38	-279.72
	U_{24} - U_{25}	-360.73	-390.17	0.14	2.48	-9.20	-34.21	1.76	31.71	-118.76	-437.13
	U_{25} - U_{26}	-403.61	-397.50	1.85	4.76	-13.04	-32.46	-1.66	29.47	-288.66	-424.55
	U_{26} - U_{27}	-349.76	-208.78	3.45	3.41	-8.98	-34.81	44.10	43.55	-114.71	-444.77
	U_{27} - U_{28}	-253.89	-280.84	2.68	3.71	-35.29	-12.40	34.25	47.35	-450.90	-158.47
	U_{28} - U_{29}	-237.13	-39.43	3.33	3.86	-6.88	-21.50	49.28	62.30	-274.64	-67.59
	U_{29} - U_{30}	-237.13	-39.43	3.86	4.88	-21.50	-5.29	49.28	62.30	-274.64	-67.59
	U_{30} - U_{31}	-152.23	5.30	4.88	6.47	-14.54	-3.03	60.84	74.00	-274.64	-67.59
	U_{31} - U_{32}	-116.81	170.72	4.12	3.52	-17.21	-2.20	52.63	42.38	-219.82	-28.15
	U_{32} - U_{33}	-59.53	191.40	3.52	1.92	-14.38	4.40	32.12	19.61	-164.84	-28.15
	U_{33} - U_{34}	-48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{34} - U_{35}	-10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{35} - U_{36}	-58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{36} - U_{37}	-58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{37} - U_{38}	-58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{38} - U_{39}	-58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{39} - U_{40}	-271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{40} - U_{41}	-271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{41} - U_{42}	-156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{42} - U_{43}	-48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{43} - U_{44}	-92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{44} - U_{45}	-92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{45} - U_{46}	-59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{46} - U_{47}	-48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{47} - U_{48}	-10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{48} - U_{49}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{49} - U_{50}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{50} - U_{51}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{51} - U_{52}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{52} - U_{53}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{53} - U_{54}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{54} - U_{55}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{55} - U_{56}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{56} - U_{57}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{57} - U_{58}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{58} - U_{59}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{59} - U_{60}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{60} - U_{61}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{61} - U_{62}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{62} - U_{63}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{63} - U_{64}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{64} - U_{65}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{65} - U_{66}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{66} - U_{67}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{67} - U_{68}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{68} - U_{69}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{69} - U_{70}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{70} - U_{71}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{71} - U_{72}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{72} - U_{73}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{73} - U_{74}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{74} - U_{75}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{75} - U_{76}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{76} - U_{77}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{77} - U_{78}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{78} - U_{79}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{79} - U_{80}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{80} - U_{81}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{81} - U_{82}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{82} - U_{83}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{83} - U_{84}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{84} - U_{85}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{85} - U_{86}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{86} - U_{87}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{87} - U_{88}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{88} - U_{89}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{89} - U_{90}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{90} - U_{91}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{91} - U_{92}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{92} - U_{93}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{93} - U_{94}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{94} - U_{95}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{95} - U_{96}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{96} - U_{97}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{97} - U_{98}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{98} - U_{99}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{99} - U_{100}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{100} - U_{101}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{101} - U_{102}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{102} - U_{103}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{103} - U_{104}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{104} - U_{105}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{105} - U_{106}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{106} - U_{107}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{107} - U_{108}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{108} - U_{109}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{109} - U_{110}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{110} - U_{111}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{111} - U_{112}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{112} - U_{113}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{113} - U_{114}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{114} - U_{115}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{115} - U_{116}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{116} - U_{117}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{117} - U_{118}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{118} - U_{119}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{119} - U_{120}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{120} - U_{121}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{121} - U_{122}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{122} - U_{123}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{123} - U_{124}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{124} - U_{125}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{125} - U_{126}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{126} - U_{127}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{127} - U_{128}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{128} - U_{129}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{129} - U_{130}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{130} - U_{131}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{131} - U_{132}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{132} - U_{133}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{133} - U_{134}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{134} - U_{135}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{135} - U_{136}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{136} - U_{137}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{137} - U_{138}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{138} - U_{139}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{139} - U_{140}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{140} - U_{141}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{141} - U_{142}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{142} - U_{143}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{143} - U_{144}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{144} - U_{145}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{145} - U_{146}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{146} - U_{147}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{147} - U_{148}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{148} - U_{149}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{149} - U_{150}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{150} - U_{151}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{151} - U_{152}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{152} - U_{153}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{153} - U_{154}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{154} - U_{155}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{155} - U_{156}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{156} - U_{157}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{157} - U_{158}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{158} - U_{159}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{159} - U_{160}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{160} - U_{161}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{161} - U_{162}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{162} - U_{163}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{163} - U_{164}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{164} - U_{165}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{165} - U_{166}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{166} - U_{167}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{167} - U_{168}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{168} - U_{169}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{169} - U_{170}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{170} - U_{171}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{171} - U_{172}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{172} - U_{173}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{173} - U_{174}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{174} - U_{175}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{175} - U_{176}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
	U_{176} - U_{177}	48.21	-31.51	0.10	3.14	-20.43	-8.04	1.31	38.64	-257.98	-101.53
	U_{177} - U_{178}	10.71	137.69	2.89	3.52	-14.38	-4.85	30.39	49.25	-228.74	-52.89
	U_{178} - U_{179}	58.50	3.84	3.07	3.48	-18.12	-4.19	30.39	49.25	-228.74	-52.89
	U_{179} - U_{180}	58.50	3.84	3.07	3.48	-18.12	-4.19	37.97	60.76	-6.72	-6.18
	U_{180} - U_{181}	58.50	3.84	3.07	3.48	-18.12	-4.19	143.74	17.01	-11.53	5.81
	U_{181} - U_{182}	58.50	3.84	3.07	3.48	-18.12	-4.19	13.98	32.50	-37.11	-204.78
	U_{182} - U_{183}	271.33	25.12	2.83	2.65	-1.36	-17.16	35.67	33.49	-17.15	-216.62
	U_{183} - U_{184}	271.33	25.12	2.83	2.65	-1.36	-17.16	42.12	33.49	-17.15	-183.71
	U_{184} - U_{185}	156.46	-8.75	3.88	2.97	-1.28	-17.97	49.01	37.46	-16.20	-226.85
	U_{185} - U_{186}	48.44	11.25	3.96	3.10	-4.71	-19.80	48.75	39.13	-59.45	-250.00
	U_{186} - U_{187}	92.46	-47.00	3.36	4.79	-14.54	-3.03	49.28	62.30	-274.64	-67.59
	U_{187} - U_{188}	92.46	-65.91	1.54	1.69	-6.27	-26.21	19.49	21.39	-79.15	-330.87
	U_{188} - U_{189}	59.53	-191.40	2.89	3.52	-14.38	-4.40	32.12	19.61	-164.84	-28.15
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Axial - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-44.17	-99.07	0.46	-0.72	3.84	-4.59				
	L_1-L_2	-131.02	-112.64	-38.68	-10.13	-0.32	1.86				
	L_2-L_3	-73.50	-79.90	-72.44	-11.57	0.96	2.17				
	L_3-L_4	18.36	16.12	-13.11	-11.09	1.05	3.92				
	L_4-L_5	-68.34	210.23	-11.56	-4.89	1.00	4.01				
	L_5-L_6	8.36	229.14	-8.79	-6.43	2.36	4.53				
	L_6-L_7	62.83	137.52	-7.24	-6.63	3.19	4.46				
	L_7-L_8	1.61	499.47	-0.01	-0.09	0.41	10.09				
	L_8-L_9	439.88	-25.12	-0.01	-0.01	5.89	0.32				
	L_9-L_{10}	204.03	-117.02	-1.48	-0.78	-1.00	2.72				
	L_{10}-L_{11}	168.12	-117.13	-3.39	-5.27	4.10	1.55				
	L_{11}-L_{12}	235.72	-227.23	-2.73	-5.29	2.60	1.35				
	L_{12}-L_{13}	-19.73	-128.50	-6.35	-8.39	2.54	1.25				
	L_{13}-L_{14}	175.78	-425.21	-7.61	-15.76	1.98	1.72				
	L_{14}-L_{15}	-409.28	20.75	-15.53	-7.61	2.40	0.03				
	L_{15}-L_{16}	-209.39	-318.68	-10.15	-16.05	0.69	0.59				
	L_{16}-L_{17}	374.86	83.54	-2.91	-5.31	-0.57	0.16				
	L_{17}-L_{18}	-171.07	19.86	-4.62	-1.34	-0.55	1.20				
	L_{18}-L_{19}	-209.33	253.71	-2.03	0.12	-2.06	2.32				
	L_{19}-L_{20}	-84.78	1.02	1.25	1.25	-0.52	3.04				
	L_{20}-L_{21}	10.35	-213.29	0.47	-1.28	2.81	5.73				
	L_{21}-L_{22}	184.56	-247.73	0.16	-1.26	4.24	7.32				
	L_{22}-L_{23}	-0.36	-194.33	-2.30	-10.05	-0.43	0.86				
	L_{23}-L_{24}	0.88	-68.61	-0.75	-2.75	-0.43	0.69				
	L_{24}-L_{25}	-287.80	-299.08	-14.28	-16.36	-0.16	1.56				
	L_{25}-L_{26}	-0.48	-218.48	-12.47	-22.41	2.57	6.18				
	L_{26}-L_{27}	-467.54	-273.29	-25.58	-16.17	2.26	3.37				
	L_{27}-L_{28}	-310.55	-49.89	-16.25	-16.33	2.78	5.12				
	L_{28}-L_{29}	-272.23	-220.55	-13.58	-13.92	2.40	5.03				
	L_{29}-L_{30}	-261.97	188.33	-7.22	-9.22	2.45	5.05				
	L_{30}-L_{31}	-331.33	-88.73	-8.89	-4.99	2.82	5.09				
	L_{31}-L_{32}	-131.48	389.15	-8.89	-4.99	2.82	5.09				
	L_{32}-L_{33}	-164.35	-140.48	-1.09	-0.01	4.40	-1.83				
	L_{33}-L_{34}	-267.47	994.41	-3.39	-0.76	3.07	16.46				
	L_{34}-L_{35}	912.03	-326.86	-0.49	-0.37	6.71	0.39				
	L_{35}-L_{36}	-289.13	4.19	-2.97	-0.79	2.95	2.06				
	L_{36}-L_{37}	515.59	-35.24	-4.38	-5.51	5.38	1.68				
	L_{37}-L_{38}	1,000.31	-1,000.31	-3.59	-3.59	4.94	4.94				
	L_{38}-L_{39}	-252.02	-256.09	-7.08	-7.73	4.75	2.07				
	L_{39}-L_{40}	230.55	-46.37	-0.14	-12.88	2.79	3.16				
	L_{40}-L_{41}	1,000.31	-1,000.31	-3.59	-3.59	4.94	4.94				
	L_{41}-L_{42}	41.53	-186.96	-15.15	-18.23	2.30	2.07				
	L_{42}-L_{43}	-197.37	33.03	-11.03	-15.85	-0.51	1.71				
	L_{43}-L_{44}	-108.55	-10.73	-14.13	-13.31	1.42	3.83				
	L_{44}-L_{45}	-76.53	-76.53	-9.98	-9.98	4.60	4.60				
	L_{45}-L_{46}	-65.47	170.47	-7.83	-8.59	1.82	4.21				
	L_{46}-L_{47}	-30.98	151.24	-6.22	-8.54	-1.58	4.55				
	L_{47}-L_{48}	233.07	313.77	-5.60	-6.12	0.32	3.33				
	L_{48}-L_{49}	-19.38	-193.41	-0.82	-0.74	0.41	2.40				
	L_{49}-L_{50}	277.30	-118.86	-3.15	-1.98	2.36	1.13				
	L_{50}-L_{51}	140.88	268.07	-1.04	0.08	8.99	-0.69				
	L_{51}-L_{52}	-140.43	-76.07	0.19	-0.84	2.68	0.11				
	L_{52}-L_{53}	277.30	-118.86	-3.15	-1.98	2.36	1.13				
	L_{53}-L_{54}	147.94	-145.21	-3.16	-7.75	1.95	3.45				
	L_{54}-L_{55}	59.61	-59.61	-3.16	-3.16	0.53	0.53				
	L_{55}-L_{56}	95.37	-212.64	-5.88	-11.65	2.76	2.82				
	L_{56}-L_{57}	-79.16	-166.21	-5.15	-7.09	2.40	3.15				
	L_{57}-L_{58}	-182.93	-415.63	-12.20	-38.58	2.36	2.26				
	L_{58}-L_{59}	-370.36	-165.17	-22.69	-19.72	2.23	0.46				
	L_{59}-L_{60}	-204.72	-204.72	-19.73	-19.73	1.36	1.36				
	L_{60}-L_{61}	-304.19	-21.34	-16.02	-9.92	1.09	-0.25				
	L_{61}-L_{62}	-227.31	-59.39	-11.75	-6.97	0.71	-0.31				
	L_{62}-L_{63}	11.83	-117.87	0.27	-1.09	3.27	-4.41				
	L_{63}-L_{64}	-152.35	-177.82	0.42	-1.94	1.16	1.29				
	L_{64}-L_{65}	55.48	-320.54	-5.19	-11.45	-0.13	0.63				
	L_{65}-L_{66}	-64.07	-371.05	-11.68	-19.26	0.00	1.89				
	L_{66}-L_{67}	-370.76	82.43	-16.34	-6.07	1.27	2.14				
	L_{67}-L_{68}	-200.77	-149.87	-6.75	-6.73	1.57	2.52				
	L_{68}-L_{69}	-131.78	166.76	-5.15	-4.76	1.73	3.82				
	L_{69}-L_{70}	361.88	-178.02	-0.03	0.00	7.56	0.12				
	L_{70}-L_{71}	61.50	-61.50	-0.03	-0.03	0.00	0.00				
	L_{71}-L_{72}	61.50	21.66	-0.27	-0.27	-1.41	2.54				
	L_{72}-L_{73}	189.90	5.62	-4.30	-10.47	3.14	3.34				
	L_{73}-L_{74}	-38.98	-56.51	-8.76	-14.35	2.39	1.13				
	L_{74}-L_{75}	-66.62	-76.78	-9.02	-9.90	3.43	2.95				

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_b (in^3)	S_{bb} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bb}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 2	L_0-L_1	-49.40	-141.23	9.30	-208.42	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.045	0.58	0.58
	L_1-L_2	-106.48	-322.42	164.70	-114.06	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.335	0.47	0.47
	L_2-L_3	-256.55	-304.30	-68.62	-65.74	99.5	99.53	81.00	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.823	0.94	0.94
	L_3-L_4	-203.82	-171.68	42.03	89.06	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.842	0.94	0.94
	L_4-L_5	-288.52	-258.40	-44.92	-56.12	92.9	92.95	76.68	114.47	3186	1282.0	1.23	3777	0.99991186	3052.4	-0.078	0.57	0.57
	L_5-L_6	-22.34	186.28	51.82	376.63	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	0.138	0.66	0.66
	L_6-L_7	-70.44	138.98	29.17	242.50	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	0.063	0.66	0.66
	L_7-L_8	-76.48	-75.27	-42.55	-41.49	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	-0.117	0.55	0.55
	L_8-L_9	1.61	499.47	-0.01	-0.09	0.41	10.09											
	L_9-L_{10}	-0.12	-1.14	5.40	134.28	0.00	0.00	1.94	595.76	9.18	771.79	140.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952915
	L_{10}-L_{11}	-0.10	-0.13	76.16	4.18	0.00	0.00	571.71	-32.82	670.85	27.22	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99952915
	L_{11}-L_{12}	-19.17	-87.67	12.95	24.33	0.00	0.00	240.31	-266.10	248.48	-106.31	144.9	144.85	129.09	192.84	5010	2376.8	1.33	6364	0.99991186
	L_{12}-L_{13}	-168.12	-117.13	-3.39	-5.27	4.10	1.55											
	L_{13}-L_{14}	-43.31	-68.17	52.98	-25.17	0.00	0.00	161.47	-240.89	287.43	-119.55	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387
	L_{14}-L_{15}	-48.22	-76.42	33.82	-22.44	0.00	0.00	263.76	-384.31	340.94	-255.79	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99991387
	L_{15}-L_{16}	-132.37	-308.14	11.10	-145.98	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99992422	4288.6	0.430	0.77	0.77
	L_{16}-L_{17}	-100.47	-817.77	261.77	-523.82	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99990106	5370.6	-0.123	0.55	0.55
	L_{17}-L_{18}	-117.59	-264.77	113.29	-146.16	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99990106	5370.6	-0.044	0.56	0.56
	L_{18}-L_{19}	-354.46	-694.17	-260.56	-404.34	179.7	179.69	170.68	251.43	6743	3050.7	1.40	8297	0.99912252	5924.6	0.647	0.86	0.86
	L_{19}-L_{20}	-704.40	-18.98	-475.45	-106.40	153.9	153.89	138.16	206.43	5972	2460.7	1.34	7957	0.99912252	5924.6	0.647	0.86	0.86
	L_{20}-L_{21}	-363.98	-3.24	-233.71	-45.91	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904448	3891.8	-0.009	0.60	0.60
	L_{21}-L_{22}	-350.64	331.19	-330.39	304.21	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99000394	2755.5	-0.009	0.57	0.57
	L_{22}-L_{23}	-228.53	-469.33	-28.45	-188.26	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.5	-0.204	0.50	0.50
	L_{23}-L_{24}	-144.29	52.08	-179.54	45.64	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99050598	2755.5	-0.294	0.50	0.50
	L_{24}-L_{25}	21.18	-298.53	60.11	-372.52	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.161	0.54	0.54
	L_{25}-L_{26}	-228.53	-469.33	-28.45	-188.26	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.479	0.44	0.44
	L_{26}-L_{27}	-38.42	-419.50	-7.59	-228.10	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.092	0.64	0.64
	L_{27}-L_{28}	-20.61	-176.70	108.45	-238.62	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99918882	5357.7	0.092	0.64	0.64
	L_{28}-L_{29}	0.01	-19.01	-0.06	-8.57	0.00	0.00	0.00	0.00	0.00	0.00							
	L_{29}-L_{30}	-0.01	-19.01	-0.06	-8.57	0.00	0.00	0.00	0.00	0.00	0.00							
	L_{30}-L_{31}	-0.01	-19.01	-0.06	-8.57	0.00	0.00	0.00	0.00	0.00	0.00							
	L_{31}-L_{32}	-131.48	389.15	-8.89	-4.99	2.82	5.09											
	L_{32}-L_{33}	-164.35	-140.48	-1.09	-0.01	4.40	-1.83											
	L_{33}-L_{34}	-267.47	994.41	-3.39	-0.76	3.07	16.46											
	L_{34}-L_{35}	912.03	-326.86	-0.49	-0.37	6.71	0.39											
	L_{35}-L_{36}	-289.13	4.19	-2.97	-0.79	2.95	2.06											
	L_{36}-L_{37}	515.59	-35.24	-4.38	-5.51	5.38	1.68											
	L_{37}-L_{38}	1,000.31	-1,000.31	-3.59	-3.59	4.94	4.94											
	L_{38}-L_{39}	-252.02	-256.09	-7.08	-7.73	4.75	2.07											
	L_{39}-L_{40}	230.55	-46.37	-0.14	-12.88	2.79	3.16											
	L_{40}-L_{41}	1,000.31	-1,000.31	-3.59	-3.59	4.94	4.94											
	L_{41}-L_{42}	41.53	-186.96	-15.15	-18.23	2.30	2.07											
	L_{42}-L_{43}	-197.37	33.03	-11.03	-15.85	-0.51	1.71											
	L_{43}-L_{44}	-108.55	-10.73	-14.13	-13.31	1.42	3.83											
	L_{44}-L_{45}	-76.53	-76.53	-9.98	-9.98	4.60	4.60											
	L_{45}-L_{46}	-65.47	170.47	-7.83	-8.59	1.82	4.21											
	L_{46}-L_{47}	-30.98	151.24	-6.22	-8.54	-1.58	4.55											
	L_{47}-L_{48}	233.07	313.77	-5.60	-6.12	0.32	3.33											
	L_{48}-L_{49}	-19.38	-193.41	-0.82	-0.74	0.41	2.40											
	L_{49}-L_{50}	277.30	-118.86	-3.15	-1.98	2.36	1.13											
	L_{50}-L_{51}	140.88	268.07	-1.04	0.08	8.99	-0.69											
	L_{51}-L_{52}	-140.43	-76.07	0.19	-0.84	2.68	0.11											
	L_{52}-L_{53}	277.30	-118.86	-3.15	-1.98	2.36	1.13											
	L_{53}-L_{54}	147.94	-145.21	-3.16	-7.75	1.95	3.45											
	L_{54}-L_{55}	59.61	-59.61	-3.16	-3.16	0.53	0.53											
	L_{55}-L_{56}	95.37	-212.64	-5.88	-11.65	2.76	2.82											
	L_{56}-L_{57}	-79.16	-166.21	-5.15	-7.09	2.40	3.15											
	L_{57}-L_{58}	-182.93	-415.63	-12.20	-38.58	2.36	2.26											
	L_{58}-L_{59}	-370.36	-165.17	-22.69	-19.72	2.23	0.46											
	L_{59}-L_{60}	-204.72	-204.72	-19.73	-19.73	1.36	1.36											
	L_{60}-L_{61}	-304.19	-21.34	-16.02	-9.92	1.09	-0.25											
	L_{61}-L_{62}	-227.31	-59.39	-11.75	-6.97	0.71	-0.31											
	L_{62}-L_{63}	11.83	-117.87	0.27	-1.09	3.27	-4.41											
	L_{63}-L_{64}	-152.35	-177.82	0.42	-1.94	1.16	1.29											
	L_{64}-L_{65}	55.48	-320.54	-5.19	-11.45	-0.13	0.63											
	L_{65}-L_{66}	-64.07	-371.05	-11.68	-19.26	0.00	1.89											
	L_{66}-L_{67}	-370.76	82.43	-16.34	-6.07	1.27	2.14											
	L_{67}-L_{68}	-200.77	-149.87	-6.75	-6.73	1.57	2.52											
	L_{68}-L_{69}	-131.78	166.76	-5.15	-4.76	1.73	3.82											
	L_{69}-L_{70}	361.88	-178.02	-0.03	0.00	7.56	0.12											
	L_{70}-L_{71}	61.50	-61.50	-0.03	-0.03	0.00	0.00											
	L_{71}-L_{72}	61.50	21.66	-0.27	-0.27	-1.41	2.54											
	L_{72}-L_{73}	189.90	5.62	-4.30	-10.47	3.14	3.34											
	L_{73}-L_{74}	-38.98	-56.51	-8.76	-14.35	2.39	1.13											
	L_{74}-L_{75}	-66.62	-76.78	-9.02	-9.90	3.43	2.95											

Tension

Location	Member	Yield 1.8 Term * F'c/S_{bb}	Axial Force (k)	Moment Force (k)	Pass	Fracture A_n (in^2)	Fracture U	Fracture A_e (in^2)	Fracture P_r (k)	Pass	Axial Force (k)	Buckle K_x	Buckle K_y	Buckle K_z	Buckle P_r (k)	Pass
Structure 1	L_0-L_1	0.99	0.013	0.541	0.06	Yes	—	—	—	—	—	—	—	—	—	—
	L_1-L_2	0.99	0.166	0.088	0.29	Yes	—	—	—	—	—	—	—	—	—	—
	L_2-L_3	0.99	0.082	0.440	0.16	Yes	—	—	—	—	—	—	—	—	—	—
	L_3-L_4	0.99	0.200	0.039	0.24	Yes	—	—	—	—	—	—	—	—	—	—
	L_4-L_5	0.99	0.207	0.171	0.36	Yes	0.372	0.899	0.348	9.42	Yes	0.369	0.121	0.49	Yes	9.42
	L_5-L_6	0.99	0.490	0.087	0.58	Yes	0.485	0.883	0.457	12.37	Yes	0.485	0.083	0.57	Yes	12.37
	L_6-L_7	0.99	0.477	0.051	0.53	Yes	0.473	0.894	0.451	12.06	Yes	0.473	0.034	0.51	Yes	12.06
	L_7-L_8	0.99	0.485	0.167	0.65	Yes	0.475	0.702	0.35	9.05	Yes	0.475	0.102	0.58	Yes	9.05
	L_8-L_9	0.99	0.481	0.107	0.59	Yes	0.475	0.894	0.453	11.56	Yes	0.475	0.067	0.54	Yes	11.56
	L_9-L_{10}	0.99	0.476	0.166	0.64	Yes	0.472	0.899	0.57	14.53	Yes	0.472	0.089	0.57	Yes	14.53
	L_{10}-L_{11}	0.99	0.477	0.043	0.52	Yes	0.471	0.894	0.567	14.46	Yes	0.471	0.042	0.51	Yes	14.46
	L_{11}-L_{12}	0.99	0.354	0.054	0.41	Yes	0.350	0.878	0.43	10.96	Yes	0.350	0.035	0.43	Yes	10.96
	L_{12}-L_{13}															
	L_{13}-L_{14}															
	L_{14}-L_{15}															
	L_{15}-L_{16}															
	L_{16}-L_{17}															
	L_{17}-L_{18}															
	L_{18}-L_{19}															
	L_{19}-L_{20}															
	L_{20}-L_{21}															
	L_{21}-L_{22}															
	L_{22}-L_{23}															
	L_{23}-L_{24}															
	L_{24}-L_{25}															
	L_{25}-L_{26}															
	L_{26}-L_{27}															
	L_{27}-L_{28}															
	L_{28}-L_{29}															
	L_{29}-L_{30}															
	L_{30}-L_{31}															
	L_{31}-L_{32}	0.99	0.399	0.072	0.48	Yes	0.396	0.880	0.449	10.46	Yes	0.396	0.080	0.48	Yes	10.46
	L_{32}-L_{33}	0.99	0.422	0.031	0.44	Yes	0.399	0.623	0.43	10.14	Yes	0.399	0.023	0.43	Yes	10.14
	L_{33}-L_{34}	0.99	0.917	0.464	1.38	Yes	0.913	0.894	1.05	24.46	Yes	0.913	0.464	1.38	Yes	24.46
	L_{34}-L_{35}	0.99	0.417	0.099	0.52	Yes	0.413	0.113	0.53	Yes	0.413	0.113	0.53	Yes	0.413	0.113
	L_{35}-L_{36}	0.99	0.446	0.040	0.49	Yes	0.443	0.894	0.456	10.79	Yes	0.443	0.040	0.49	Yes	10.79
	L_{36}-L_{37}	0.99	0.443	0.094	0.54	Yes	0.443	0.894	0.456	10.79	Yes	0.443	0.094	0.54	Yes	10.79
	L_{37}-L_{38}	0.99	0.464	0.092	0.55	Yes	0.464	0.894	0.456	10.79	Yes	0.464	0.092	0.55	Yes	10.79
	L_{38}-L_{39}	0.99	0.433	0.077	0.51	Yes										
	L_{39}-L_{40}	0.99	0.249	0.062	0.32	Yes	0.247	0.867	0.32	7.56	Yes	0.247	0.062	0.32	Yes	7.56
	L_{40}-L_{41}	0.99	0.464	0.092	0.55	Yes	0.464	0.894	0.456	10.79	Yes	0.464	0.092	0.55	Yes	10.79
	L_{41}-L_{42}	0.99	0.204	0.086	0.29	Yes	0.138	0.554	0.19	Yes						
	L_{42}-L_{43}	0.99	0.138	0.054	0.19	Yes										
	L_{43}-L_{44}	0.99	0.140	0.059	0.20	Yes	0.030	0.863	0.03	0.69	Yes	0.030	0.054	0.09	Yes	0.69
	L_{44}-L_{45}	0.99	0.066	0.011	0.08	Yes	0.027	0.863	0.027	0.62	Yes	0.027	0.011	0.04	Yes	0.62
	L_{45}-L_{46}	0.99	0.329	0.042	0.38	Yes	0.327	0.857	0.39	8.96	Yes	0.327	0.042	0.39	Yes	8.96
	L_{46}-L_{47}	0.99	0.329	0.043	0.38	Yes	0.326	0.857	0.389	8.94	Yes	0.326	0.043	0.44	Yes	8.94
	L_{47}-L_{48}	0.99	0.398	0.036	0.44	Yes	0.395	0.843	0.46	10.57	Yes	0.395	0.043	0.46	Yes	10.57
	L_{48}-L_{49}	0.99	0.391	0.029	0.43	Yes	0.388	0.826	0.442	10.15	Yes	0.388	0.026	0.42	Yes	10.15
	L_{49}-L_{50}	0.99	0.391	0.029	0.43	Yes	0.388	0.826	0.442	10.15	Yes	0.388	0.026	0.42	Yes	10.15
	L_{50}-L_{51}	0.99	0.391	0.029	0.43	Yes	0.388	0.826	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.50	DL Factor:	1.50
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0~L_1	-56.29	86.22	0.53	-0.71	3.35	4.36	7.09	-9.46	-44.76	68.60
	L_1~L_2	-14.44	23.27	0.70	-0.72	2.72	3.04	9.38	-9.37	-36.35	40.67
	L_2~L_3	-5.69	-5.55	0.94	-0.26	2.91	2.91	11.25	-12.70	-29.87	38.93
	L_3~L_4	36.84	-39.22	1.38	-1.38	-0.95	1.44	18.40	-18.37	-12.66	19.28
	L_4~U_4	49.77	-49.19	2.08	-2.08	0.67	0.81	13.97	-13.97	-5.07	10.09
	U_0~U_1	-57.71	-69.80	-0.09	0.04	3.16	-3.52	-1.14	0.47	-45.23	-46.99
	U_1~U_2	68.32	-67.29	0.31	0.23	3.00	-4.17	-0.60	-0.42	-45.20	-56.71
	U_2~U_3	-106.28	-118.16	-0.12	0.10	-6.68	-4.84	-1.58	1.30	-62.55	-64.59
	U_3~U_4	-10.96	6.72	0.18	-0.22	0.99	-1.10	2.40	-2.91	-13.21	-14.67
	U_4~L_4	-144.91	167.70	0.32	-0.31	-3.30	3.57	4.15	-4.06	-42.64	-51.31
	U_4~L_5	-102.02	95.66	0.15	-0.30	-2.53	3.43	1.93	-3.86	-37.84	44.35
	L_4~L_5	-111.13	108.65	0.31	-0.21	-2.68	3.47	4.01	-3.46	-34.73	41.88
	L_5~L_6	-96.42	93.90	0.47	-0.42	-2.10	2.56	6.03	-5.42	-27.14	33.16
	L_6~L_7	-90.91	75.94	0.84	-0.82	-3.04	3.23	10.64	-10.66	-39.27	41.83
	L_7~L_8	-84.73	63.55	0.97	-0.97	-3.33	3.33	11.72	-11.72	-43.23	43.23
	L_8~L_9	82.32	-15.87	-1.48	1.53	3.13	-3.28	-19.20	19.82	-40.46	-42.46
	L_9~L_{10}	47.73	-30.39	-1.01	1.05	4.19	-4.15	-11.64	12.25	-41.19	-43.08
	L_{10}~L_{11}	61.55	-72.81	-0.46	0.47	3.27	-3.44	-5.98	6.06	-42.32	-44.46
	L_{11}~L_{12}	133.11	-138.25	-0.64	0.65	3.91	-3.26	-8.32	8.42	-57.17	-59.53
	L_{12}~L_{13}	157.87	-153.86	-0.66	0.69	6.27	-6.11	-8.51	7.63	-81.06	-79.11
	L_{13}~L_{14}	131.38	-213.66	-0.29	0.48	4.44	-5.70	-3.69	6.18	57.47	-73.72
	L_{14}~L_{15}	147.13	191.00	-0.30	0.48	4.57	-5.70	-3.69	6.18	-162.97	237.57
	L_{15}~L_{16}	-122.87	130.77	0.60	-0.62	-4.41	4.74	7.70	-7.91	-56.28	60.57
	L_{16}~L_{17}	117.87	-120.75	0.74	-0.72	4.02	4.88	9.74	-9.74	-52.36	52.36
	L_{17}~L_{18}	-62.46	69.03	0.48	-0.49	-2.31	2.62	6.12	-6.23	-25.55	33.46
	L_{18}~L_{19}	37.86	-43.29	0.12	-0.12	-1.81	2.03	2.51	-2.51	-25.77	33.77
	L_{19}~L_{20}	-8.11	15.69	1.09	0.37	-1.34	2.49	17.70	-17.06	-31.85	39.25
	L_{20}~L_{21}	14.84	-14.93	1.64	-1.74	-1.75	1.90	20.99	-22.21	-22.36	24.26
	L_{21}~L_{22}	39.69	-45.43	1.30	-1.30	-1.25	1.30	16.61	-16.73	-17.24	17.24
	L_{22}~L_{23}	88.81	-97.92	-1.01	1.04	3.67	-4.03	-12.89	10.74	49.47	-51.46
	L_{23}~L_{24}	-133.08	133.02	0.54	-0.56	3.81	-5.38	-7.85	7.85	-69.52	-69.67
	L_{24}~L_{25}	140.09	-147.00	-0.18	0.04	4.87	-5.15	-2.35	0.51	62.22	-65.73
	L_{25}~L_{26}	148.96	-153.44	-0.11	0.20	4.78	-4.95	-1.42	2.56	61.01	-63.23
	L_{26}~L_{27}	147.97	-139.95	-0.33	0.11	4.72	-4.87	-4.27	1.42	60.45	-62.36
	L_{27}~L_{28}	185.41	-182.32	-0.51	0.48	5.82	-5.56	-6.48	6.07	74.32	-71.06
	L_{28}~L_{29}	72.60	-71.13	0.19	-0.09	-2.39	2.50	2.50	-1.25	-7.47	8.34
	L_{29}~L_{30}	-128.28	129.98	0.54	-0.48	4.72	4.65	6.79	-6.03	-69.54	68.64
	L_{30}~L_{31}	82.32	-82.32	0.53	-0.53	3.63	-3.63	6.83	-6.83	-42.45	42.45
	L_{31}~L_{32}	-125.94	122.64	0.56	-0.52	-5.24	5.42	7.01	-6.55	-66.12	68.38
	L_{32}~L_{33}	-109.69	106.91	0.73	-0.72	4.43	5.15	9.23	-9.08	-55.89	54.97
	L_{33}~L_{34}	93.80	92.39	-1.08	1.08	3.87	-4.03	10.01	-10.01	-48.31	48.31
	L_{34}~L_{35}	-43.25	43.74	0.79	-0.70	-2.72	2.91	10.01	-8.84	-34.37	36.79
	L_{35}~L_{36}	29.16	34.19	0.93	-0.93	-2.61	2.61	13.07	-13.07	-30.52	30.52
	L_{36}~L_{37}	-4.28	1.60	-1.19	1.40	-0.67	0.70	-15.01	17.70	-8.45	8.77
	L_{37}~L_{38}	33.07	-34.57	-1.50	1.50	0.00	0.00	-21.17	21.17	-38.34	40.64
	L_{38}~L_{39}	46.57	-51.68	0.81	0.76	2.94	-3.10	-10.23	9.61	37.09	-39.11
	L_{39}~L_{40}	62.68	-61.36	-0.74	0.71	4.12	4.08	-9.29	8.98	52.07	-51.52
	L_{40}~L_{41}	107.54	-107.54	-0.45	0.45	3.53	-3.53	-6.79	6.79	-81.53	81.53
	L_{41}~L_{42}	108.60	-105.79	-0.79	0.76	6.27	-6.46	-9.91	9.61	-79.20	-81.55
	L_{42}~L_{43}	120.30	-120.30	0.31	-0.31	-2.68	2.68	4.01	-4.01	-84.66	84.66
	L_{43}~L_{44}	114.56	-114.55	-0.38	0.32	6.29	-5.96	-4.82	4.01	-79.36	-75.18
	L_{44}~L_{45}	-13.74	5.73	-0.43	0.43	3.46	-3.46	-7.30	7.30	-15.56	-15.56
	L_{45}~L_{46}	-121.12	118.67	0.59	-0.55	-3.66	3.52	7.58	-7.58	-49.37	50.03
	L_{46}~L_{47}	-92.37	86.40	0.47	-0.55	-3.89	4.06	6.04	-5.29	-49.75	51.92
	L_{47}~L_{48}	33.05	-33.05	0.30	-0.30	-2.00	2.00	4.01	-4.01	-21.96	21.96
	L_{48}~L_{49}	-96.77	103.11	0.23	-0.15	-3.01	3.67	2.99	-1.88	-38.48	46.88
	L_{49}~L_{50}	81.56	-81.56	0.57	-0.57	-4.03	4.03	5.64	-5.64	-43.60	43.60
	L_{50}~L_{51}	-83.45	70.59	0.59	-0.51	-3.29	3.54	7.50	-6.53	-41.97	40.22
	L_{51}~L_{52}	-32.66	38.67	0.50	-0.60	-1.15	1.27	6.44	-7.61	-14.73	18.28
	L_{52}~L_{53}	-16.10	17.75	0.53	-0.53	-1.30	1.30	6.44	-6.44	-14.73	14.73
	L_{53}~L_{54}	4.46	-8.40	-1.37	1.56	2.39	-2.63	-20.07	19.87	30.51	-33.63
	L_{54}~L_{55}	-10.35	11.03	0.46	-0.46	-2.68	2.68	-15.48	15.48	-38.34	38.34
	L_{55}~L_{56}	47.22	-50.55	-0.58	0.59	3.16	-3.29	-7.41	7.49	40.31	-41.94
	L_{56}~L_{57}	46.57	-46.57	0.53	-0.53	-3.63	3.63	7.49	-7.49	40.31	-40.31
	L_{57}~L_{58}	-104.86	112.00	-0.83	0.78	6.38	-6.30	-10.62	9.98	81.48	-80.54
	L_{58}~L_{59}	108.12	-102.78	-0.42	0.69	4.10	-6.13	-5.34	8.75	53.03	-78.27
	L_{59}~L_{60}	-124.18	124.18	0.53	-0.53	-4.06	4.06	5.60	-5.60	-105.47	105.47
	L_{60}~L_{61}	-109.22	116.95	0.43	-0.41	-4.66	4.83	5.60	-5.30	-60.25	62.43
	L_{61}~L_{62}	-100.35	111.03	0.40	-0.40	-4.66	4.83	6.47	-6.47	-53.68	53.68
	L_{62}~L_{63}	-48.65	58.79	0.36	-0.36	-2.68	2.89	4.64	-4.71	-34.69	37.40
	L_{63}~L_{64}	-39.15	42.89	0.60	-0.60	-4.03	4.03	4.64	-4.64	-34.69	34.69
	L_{64}~L_{65}	-5.41	11.55	1.18	1.19	-2.01	2.32	15.22	-15.45	-29.97	29.97
	L_{65}~L_{66}	27.86	-30.67	1.42	-1.59	0.09	-0.35	18.37	-20.53	1.13	-0.58
	L_{66}~L_{67}	76.25	-76.25	1.27	-1.27	-0.39	0.39	16.61	-16.61	-16.73	16.73
	L_{67}~L_{68}	85.70	-83.03	-0.66	0.56	3.56	-3.71	-8.50	7.22	46.01	-47.96
	L_{68}~L_{69}	76.35	-77.33	0.42	-0.42	-3.63	3.63	7.50	-7.50	40.31	-40.31
	L_{69}~L_{70}	-42.87	69.54	0.27	-0.25	-3.46	3.70	3.57	-3.45	-46.22	49.48
	L_{70}~L_{71}	-41.66	38.38	0.53	-0.53	-3.63	3.63	7.50	-7.50	-40.31	40.31
	L_{71}~L_{72}	-36.85	40.05	-0.21	-0.15	-2.67	3.05	2.85	-2.06	-35.66	41.25
	L_{72}~L_{73}	-39.84	39.91	0.57	-0.51	-1.93	1.94	7.56	-6.85	-25.82	25.86

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{bc}$	M_r (k-in)	Equivalent Mom. Factor a	C_{mx}	C_{mx}/a
U_0~L_1	-63.97	99.79	-131.39	188.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_1~L_2	-6.58	18.08	-66.03	83.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_2~L_3	-30.49	43.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_3~L_4	71.80	-69.67	31.43	-20.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_4~U_4	-102.85	97.59	-151.62	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	
U_0~U_1	72.54	-90.13	128.88	-151.62	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
U_1~U_2	-183.01	212.76	-243.92	284.73	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
U_2~U_3	-130.11	119.35	-181.82	182.02	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5
U_3~U_4	-139.22	200.14	-189.58	271.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
U_4~L_4	-160.63	165.18	21.1	21.09	21.09	39.40	10	1137.6	1.68	1170	1.5		
U_4~L_5	-83.24	81.63	-119.62	133.24	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
L_4~L_5	-87.29	86.57	-125.45	140.82	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
L_5~L_6	-11.16	-1.78	-53.25	66.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_6~L_7	20.99	-22.21	-22.36	24.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_7~L_8	21.72	-23.02	-49.23	53.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_8~L_9	-14.15	5.13	63.41	-75.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_9~L_{10}	46.91	-53.48	118.58	-121.62	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
L_{10}~L_{11}	72.24	-88.78	135.03	-152.44	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
L_{11}~L_{12}	162.22	-168.80	266.86	-276.50	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
L_{12}~L_{13}	194.17	-190.09	310.61	-302.85	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
L_{13}~L_{14}	165.97	-269.71	245.48	-373.59	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
L_{14}~L_{15}	-162.97	237.57	-211.03	307.70	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
L_{15}~L_{16}	-149.72	159.72	-232.90	248.75	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
L_{16}~L_{17}	-134.89	134.89	-209.81	209.81	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
L_{17}~L_{18}	-119.62	133.24	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5		
L_{18}~L_{19}	-63.24	63.24	-98.37	98.37	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
L_{19}~L_{20}	-46.87	46.87	-72.91	72.91	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
L_{20}~L_{21}	-53.25	66.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_{21}~L_{22}	-22.36	24.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_{22}~L_{23}	-49.23	53.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_{23}~L_{24}	-69.52	69.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_{24}~L_{25}	62.22	-65.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_{25}~L_{26}	61.01	-63.23	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_{26}~L_{27}	60.45	-62.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_{27}~L_{28}	74.32	-71.06	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5		
L_{28}~L_{29}	-7.47	8.34	2.50	-1.25	2.50	3.47	4	120.9	1.67	202	1.5		
L_{29}~L_{30}	-69.54	68.64	14.4	-14.39	14.39	22.20	2	751.9	1.54	782	1.5		
L_{30}~L_{31}	-42.45	42.45	8.83	-8.83	8.83	13.62	2	751.9	1.54	782	1.5		
L_{31}~L_{32}	-66.12	68.38	14.4	-14.39	14.39	22.20	2	751.9	1.54	782	1.5		
L_{32}~L_{33}	-55.89	54.97	11.4	-11.42	11.42	17.62	2	751.9	1.54	782	1.5		
L_{33}~L_{34}	48.31	-48.31	10.0	-10.04	10.04	15.49	2	751.9	1.54	782	1.5		
L_{34}~L_{35}	-34.37	36.79	7.52	-7.52	7.52	11.60	2	751.9	1.54	782	1.5		
L_{35}~L_{36}	-30.52	30.52	6.34	-6.34	6.34	9.78	2	751.9	1.54	782	1.5		
L_{36}~L_{37}	-38.34	40.64	8.83	-8.83	8.83	13.62	2	751.9	1.54	782	1.5		
L_{37}~L_{38}	-49.37	50.03	10.4	-10.39	10.39	16.03	2	751.9	1.54	782	1.5		
L_{38}~L_{39}	40.31	-40.31	8.37	-8.37	8.37	12.91	2	751.9	1.54	782	1.5		
L_{39}~L_{40}	-79.38	81.48	16.9	-16.93	16.93	26.11	2	751.9	1.54	782	1.5		
L_{40}~L_{41}	-81.53	81.53	16.9	-16.93	16.93	26.11	2	751.9	1.54	782	1.5		
L_{41}~L_{42}	-79.20	81.55	16.9	-16.93	16.93	26.11	2	751.9	1.54	782	1.5		
L_{42}~L_{43}	-84.66	84.66	17.5	-17.55	17.55	27.07	2	751.9	1.54	782	1.5		
L_{43}~L_{44}	-79.36	75.18	15.6	-15.58	15.58	24.03	2	751.9	1.54	782	1.5		
L_{44}~L_{45}	-15.56	15.56	3.23	-3.23	3.23	4.98	2	751.9	1.54	782	1.5		
L_{45}~L_{46}	-49.37	50.03	10.4	-10.39	10.39	16.03	2	751.9	1.54	782	1.5		
L_{46}~L_{47}	-49.75	51.92	10.8	-10.77	10.77	16.61	2	751.9	1.54	782	1.5		
L_{47}~L_{48}	-21.96	21.96	4.56	-4.56	4.56	7.03	2	751.9	1.54	782	1.5		
L_{48}~L_{49}	-38.48	46.88	9.73	-9.73	9.73	15.01	2	751.9	1.54	782	1.5		
L_{49}~L_{50}	-43.60	43.60	9.05	-9.05	9.05	13.96	2	751.9	1.54	782	1.5		
L_{50}~L_{51}	-41.97	40.22	8.35	-8.35	8.35	12.87	2	751.9	1.54	782	1.5		
L_{51}~L_{52}	-14.73	18.28	3.80	-3.80	3.80	5.86	2	751.9	1.54	782	1.5		
L_{52}~L_{53}	-14.73	14.73	3.06	-3.06	3.06	4.72	2	751.9	1.54	782	1.5		
L_{53}~L_{54}	-20.07	19.87	30.51	-33.63	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{54}~L_{55}	-15.48	15.48	-38.34	38.34	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{55}~L_{56}	-7.41	7.49	40.31	-41.94	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{56}~L_{57}	-7.49	7.49	40.31	-40.31	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{57}~L_{58}	-10.62	9.98	81.48	-80.54	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{58}~L_{59}	-5.34	8.75	53.03	-78.27	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{59}~L_{60}	-5.60	5.30	-105.47	105.47	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{60}~L_{61}	-5.60	-5.30	-60.25	62.43	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{61}~L_{62}	-6.47	6.47	-53.68	53.68	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{62}~L_{63}	-4.64	4.71	-34.69	37.40	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{63}~L_{64}	-4.64	4.64	-34.69	34.69	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{64}~L_{65}	-15.22	15.45	-29.97	29.97	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{65}~L_{66}	-18.37	-20.53	1.13	-0.58	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{66}~L_{67}	-16.61	-16.61	16.73	-16.73	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{67}~L_{68}	-8.50	7.22	46.01	-47.96	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{68}~L_{69}	-7.50	7.50	-40.31	40.31	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{69}~L_{70}	-3.57	-3.45	-46.22	49.48	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{70}~L_{71}	-7.50	7.50	-40.31	40.31	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{71}~L_{72}	-2.85	-2.06	-35.66	41.25	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5
L_{72}~L_{73}	-7.56	6.85	-25.82	25.86	0.00	0.00	0.00	23.71	2	751.9	1.54	782	1.5

YY Axis Moments from STAAD

Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
U_0~L_1	-3.89	1.15	50.90	-53.98	0.00	0.00	0.00	0.00	123.77	-169.45
L_1~L_2	-8.92	2.07	47.13	-55.03	0.00	0.00	0.00	0.00	122.44	-134.99
L_2~L_3	-2.25	2.01	66.01	-71.98	0.00	0.00	0.00	0.00	173.17	-197.73
L_3~L_4	1.68	-1.92	-6.57	4.44	0.00	0.00	0.00	0.00	70.79	-89.12
L_4~U_4	3.57	-3.45	-46.22	49.48	0.00	0.00	0.00	0.00	-77.10	85.92
U_0~L_4	1.78	-3.07	-28.52	37.89	0.00	0.00	0.00	0.00	-51.84	42.00
U_1~L_5	2.83	-2.06	-35.66	41.25	0.00	0.00	0.00	0.00	-44.20	49.39
U_4~L_5	7.56	-6.85	-25.82	25.86	0.00	0.00	0.00	0.00	-41.96	42.97
L_4~L_5	-24.78	26.08	25.28	-31.37	0.00	0.00	0.00	0.00	-82.75	86.29
L_5~L_6	-13.46	15.22	36.24	-44.10	0.00	0.00	0.00	0.00	-34.93	38.16
L_6~L_7	-14.11	12.53	59.58	-55.71	0.00	0.00	0.00	0.00	-10.72	-3.78
L_7~L_8	-2.91	9.61	11.20	-35.31	0.00	0.00	0.00	0.00	22.46	-40.57

YY Axis Moment Properties

Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{bc}$	M_r (k-in)	Equivalent Mom. Factor a	C_{my}	C_{my}/a
U_0~L_1	-131.39	188.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	782	1.5
L_1~L_2	-66.03	83.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5		
L_2~L_3	-43.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5			
L_3~L_4	-20.73	15.4	15.42

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.44	-7.53	-1.10	0.65	0.19	-0.17				
	U_1-L_1	-3.41	-8.42	-1.72	0.17	0.28	-0.11				
	U_1-L_2	-77.69	-73.54	-2.45	-1.80	0.29	-0.11				
	U_2-L_2	-7.93	-13.37	-0.63	-0.46	0.11	-0.84				
	U_2-L_3	-14.61	-18.52	-1.33	-1.15	0.74	-0.88				
	U_3-L_3	-37.44	-76.90	-2.61	-2.16	-0.04	-0.37				
	U_3-L_4	-71.19	-117.15	-2.90	-2.65	-0.07	0.49				
	U_4-L_4	-8.75	-101.99	-1.72	-3.36	0.26	0.05				
	U_4-L_5	-5.11	-118.70	-1.26	-2.77	0.32	-0.19				
	U_5-L_5	-77.69	-73.54	-2.45	-1.80	0.29	-0.11				
	U_5-L_6	-43.88	-73.22	-2.22	-1.05	-0.09	-0.27				
	U_6-L_6	-25.22	-75.22	-2.67	-2.67	-0.33	0.26				
	U_6-L_7	-65.20	-48.77	-2.02	-1.61	0.02	-0.69				
	U_7-L_7	-24.90	-8.63	-1.23	-0.35	0.22	-0.69				
	U_7-L_8	-0.81	-2.29	-0.23	-0.13	0.12	-0.84				
	U_8-L_8	-25.30	-9.99	-1.54	-1.25	0.21	-0.70				
	U_8-L_9	-3.37	-7.01	-1.50	-1.67	0.30	-0.27				
	U_9-L_9	-101.94	-74.52	-3.69	-3.20	0.42	-0.42				
	U_9-L_{10}	-115.87	-80.00	-4.13	-3.22	0.39	-0.35				
	U_{10}-L_{10}	-73.88	-78.94	-2.42	-2.85	0.09	-0.21				
	U_{10}-L_{11}	-109.41	-98.91	-3.18	-3.18	-0.38	-0.40				
	U_{11}-L_{11}	-89.79	-73.04	-2.56	-2.56	-0.56	-0.56				
	U_{11}-L_{12}	-90.87	-71.82	-2.76	-2.84	0.56	-0.49				
	U_{12}-L_{12}	-42.19	-131.40	-2.73	-3.79	0.58	-0.41				
	U_{12}-L_{13}	-20.35	-5.86	-1.68	-1.32	0.37	-0.68				
	U_{13}-L_{13}	-1.38	-11.28	-1.40	-1.06	0.53	-0.45				
	U_{13}-L_{14}	-8.85	-23.87	-0.91	0.37	0.64	-1.23				
	U_{14}-L_{14}	-44.41	-35.31	-1.86	-1.20	0.09	-0.92				
	U_{14}-L_{15}	-96.57	-89.69	-3.28	-3.24	0.76	-0.47				
	U_{15}-L_{15}	-85.40	-67.30	-2.22	-2.17	-0.34	-0.52				
	U_{15}-L_{16}	-66.77	-66.99	-2.52	-2.03	0.35	-0.50				
	U_{16}-L_{16}	-109.84	-116.34	-3.69	-3.29	0.32	0.04				
	U_{16}-L_{17}	-141.98	-130.02	-4.84	-4.08	0.62	-0.30				
	U_{17}-L_{17}	-82.19	-131.40	-2.73	-3.79	0.58	-0.41				
	U_{17}-L_{18}	-11.96	-79.20	-2.61	-3.13	0.49	-0.39				
	U_{18}-L_{18}	-77.27	-74.24	-2.92	-2.92	-0.54	-0.54				
	U_{18}-L_{19}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{19}-L_{19}	-67.07	-73.97	-2.18	-2.76	0.33	-0.49				
	U_{19}-L_{20}	-58.07	-72.69	-3.46	-2.34	-0.36	-0.40				
	U_{20}-L_{20}	-31.84	-37.59	-2.38	-1.85	0.04	-0.64				
	U_{20}-L_{21}	-70.27	-73.97	-2.18	-2.76	0.33	-0.49				
	U_{21}-L_{21}	-10.03	-3.77	-1.14	0.60	0.29	-0.96				
	U_{21}-L_{22}	-19.43	-19.57	-1.55	-1.33	0.03	-0.61				
	U_{22}-L_{22}	-19.43	-19.57	-1.55	-1.33	0.03	-0.61				
	U_{22}-L_{23}	-82.19	-131.40	-2.73	-3.79	0.58	-0.41				
	U_{23}-L_{23}	-46.51	-58.29	-3.40	-2.87	-0.48	-0.54				
	U_{23}-L_{24}	-54.32	-68.37	-3.40	-3.08	0.40	-0.49				
	U_{24}-L_{24}	-20.96	-5.85	-1.68	-1.32	0.37	-0.68				
	U_{24}-L_{25}	-69.49	-72.12	-4.00	-4.08	0.27	-0.33				
	U_{25}-L_{25}	-17.09	-73.63	-2.61	-3.13	0.49	-0.39				
	U_{25}-L_{26}	-35.84	-53.55	-2.70	-3.24	0.64	-0.52				
	U_{26}-L_{26}	-67.07	-73.97	-2.18	-2.76	0.33	-0.49				
	U_{26}-L_{27}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{27}-L_{27}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{28}-L_{28}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{28}-L_{29}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{29}-L_{29}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{29}-L_{30}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{30}-L_{30}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{31}-L_{31}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{31}-L_{32}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{32}-L_{32}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{32}-L_{33}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{33}-L_{33}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{34}-L_{34}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{34}-L_{35}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{35}-L_{35}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
Structure 2	U_{35}-L_{36}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{36}-L_{36}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{37}-L_{37}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{37}-L_{38}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{38}-L_{38}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{38}-L_{39}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{39}-L_{39}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{40}-L_{40}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{40}-L_{41}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{41}-L_{41}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{41}-L_{42}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{42}-L_{42}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{43}-L_{43}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{43}-L_{44}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{44}-L_{44}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{44}-L_{45}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{45}-L_{45}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{46}-L_{46}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{46}-L_{47}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{47}-L_{47}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{47}-L_{48}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{48}-L_{48}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{49}-L_{49}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{49}-L_{50}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{50}-L_{50}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{50}-L_{51}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{51}-L_{51}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{52}-L_{52}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{52}-L_{53}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{53}-L_{53}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
Structure 3	U_{53}-L_{54}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{54}-L_{54}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{55}-L_{55}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{55}-L_{56}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{56}-L_{56}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{56}-L_{57}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{57}-L_{57}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{58}-L_{58}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{58}-L_{59}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{59}-L_{59}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{59}-L_{60}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{60}-L_{60}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{61}-L_{61}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{61}-L_{62}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{62}-L_{62}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{62}-L_{63}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{63}-L_{63}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{64}-L_{64}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{64}-L_{65}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{65}-L_{65}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{65}-L_{66}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{66}-L_{66}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{67}-L_{67}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{67}-L_{68}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{68}-L_{68}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{68}-L_{69}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{69}-L_{69}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{70}-L_{70}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{70}-L_{71}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{71}-L_{71}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{71}-L_{72}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{72}-L_{72}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{73}-L_{73}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{73}-L_{74}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{74}-L_{74}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{74}-L_{75}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{75}-L_{75}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{76}-L_{76}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{76}-L_{77}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{77}-L_{77}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{77}-L_{78}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{78}-L_{78}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{79}-L_{79}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{79}-L_{80}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{80}-L_{80}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{80}-L_{81}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{81}-L_{81}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{82}-L_{82}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{82}-L_{83}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{83}-L_{83}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{83}-L_{84}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{84}-L_{84}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{85}-L_{85}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{85}-L_{86}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{86}-L_{86}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{86}-L_{87}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{87}-L_{87}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{88}-L_{88}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{88}-L_{89}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{89}-L_{89}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{89}-L_{90}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{90}-L_{90}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{91}-L_{91}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{91}-L_{92}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{92}-L_{92}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{92}-L_{93}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{93}-L_{93}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{94}-L_{94}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{94}-L_{95}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{95}-L_{95}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{95}-L_{96}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{96}-L_{96}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{97}-L_{97}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{97}-L_{98}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{98}-L_{98}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{98}-L_{99}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{99}-L_{99}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{100}-L_{100}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{100}-L_{101}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{101}-L_{101}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{101}-L_{102}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{102}-L_{102}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{103}-L_{103}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{103}-L_{104}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{104}-L_{104}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{104}-L_{105}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{105}-L_{105}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{106}-L_{106}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{106}-L_{107}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{107}-L_{107}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{107}-L_{108}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{108}-L_{108}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{109}-L_{109}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{109}-L_{110}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{110}-L_{110}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{110}-L_{111}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{111}-L_{111}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{112}-L_{112}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{112}-L_{113}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{113}-L_{113}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{113}-L_{114}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{114}-L_{114}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{115}-L_{115}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{115}-L_{116}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{116}-L_{116}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{116}-L_{117}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{117}-L_{117}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{118}-L_{118}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{118}-L_{119}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{119}-L_{119}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{119}-L_{120}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{120}-L_{120}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{121}-L_{121}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{121}-L_{122}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{122}-L_{122}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{122}-L_{123}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{123}-L_{123}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{124}-L_{124}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{124}-L_{125}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{125}-L_{125}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{125}-L_{126}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{126}-L_{126}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{127}-L_{127}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{127}-L_{128}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{128}-L_{128}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{128}-L_{129}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{129}-L_{129}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{130}-L_{130}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{130}-L_{131}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{131}-L_{131}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{131}-L_{132}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{132}-L_{132}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{133}-L_{133}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{133}-L_{134}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{134}-L_{134}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{134}-L_{135}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{135}-L_{135}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{136}-L_{136}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{136}-L_{137}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{137}-L_{137}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{137}-L_{138}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{138}-L_{138}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{139}-L_{139}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{139}-L_{140}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{140}-L_{140}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{140}-L_{141}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{141}-L_{141}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{142}-L_{142}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{142}-L_{143}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{143}-L_{143}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{143}-L_{144}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{144}-L_{144}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{145}-L_{145}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{145}-L_{146}	-76.64	-55.13	-3.47	-2.34	-0.08	-0.67				
	U_{146}-L_{146}	-77.05	-73.90	-2.84	-2.48	-0.48	-0.48				
	U_{146}-L_{147}	-76.26	-86.09	-3.42	-2.83	-0.50	-0.21				
	U_{147}-L_{147}	-78.38	-71.14	-3.35	-2.09	0.45	-0.54				
	U_{148}-L_{148}	-66.19	-89.97	-3.57	-3.37	0.26	-0.32				
	U_{148}-L_{149}	-76.64

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) Start (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-75.12	-0.70	0.95	1.07	-1.99	-14.21	10.54	11.96	-15.46	-158.21
	U_1 - U_2	-46.81	-20.16	0.19	2.21	-2.23	-18.54	7.16	24.50	-24.84	-206.38
	U_2 - U_3	-112.19	86.51	1.01	2.78	-3.35	-18.89	11.26	30.93	-37.40	-210.34
	U_3 - U_4	-15.68	66.14	1.74	2.95	-3.83	-17.02	14.03	33.16	-42.62	-192.67
	U_4 - U_5	-9.16	61.58	1.73	2.62	-3.27	-4.61	19.26	29.11	-203.44	61.36
	U_5 - U_6	42.76	120.09	1.98	2.61	-13.96	-0.20	22.04	29.06	-159.45	-2.23
	U_6 - U_7	93.72	43.54	1.96	2.65	-14.35	43.85	21.25	17.86	-143.35	43.85
	U_7 - U_8	-47.40	525.96	0.19	6.93	-20.81	16.53	-2.15	77.14	-231.70	184.07
	U_8 - U_9	-64.51	-124.27	6.60	7.05	-131.45	-18.47	71.11	0.85	-131.45	-18.47
	U_9 - U_{10}	46.76	20.63	1.58	1.90	-1.68	-10.13	17.05	20.46	-18.12	-109.47
	U_{10} - U_{11}	64.51	-138.68	1.92	1.63	-1.68	-15.79	25.86	17.59	18.09	-170.14
	U_{11} - U_{12}	27.83	-140.42	2.68	1.23	-0.60	-17.56	28.90	13.23	-6.44	-189.31
	U_{12} - U_{13}	-106.18	-154.99	1.94	0.69	-3.35	-17.47	20.87	7.43	-36.12	-188.39
	U_{13} - U_{14}	-137.97	-302.06	1.31	0.28	-6.71	-26.23	14.03	2.62	-67.41	-282.72
	U_{14} - U_{15}	-245.66	-182.98	1.33	0.98	-26.11	-10.18	14.31	10.60	-281.56	-109.73
	U_{15} - U_{16}	-323.12	-326.70	1.62	0.24	-25.18	-9.29	17.52	-27.51	-337.52	-100.13
	U_{16} - U_{17}	-269.82	-144.58	0.63	0.08	-27.25	-8.88	6.77	0.83	-293.77	-95.73
	U_{17} - U_{18}	-164.16	-67.25	0.65	0.29	-15.02	-2.23	7.05	3.16	-186.42	-23.45
	U_{18} - U_{19}	-170.35	-20.48	0.51	-0.06	-11.29	-0.38	5.48	-0.83	-121.76	-4.12
	U_{19} - U_{20}	-186.12	24.46	0.56	-0.45	-9.46	2.74	5.98	-4.86	-101.99	29.53
	U_{20} - U_{21}	-186.12	110.67	0.56	-0.45	-9.46	2.74	5.98	-4.86	-101.99	29.53
	U_{21} - U_{22}	-70.88	-181.00	-0.21	1.59	-5.49	-18.51	-2.21	16.88	-5.21	-197.11
	U_{22} - U_{23}	-70.88	-181.00	-0.21	1.59	-5.49	-18.51	-2.21	16.88	-5.21	-197.11
	U_{23} - U_{24}	-327.18	-325.33	1.05	2.25	-8.67	-33.16	11.21	23.93	-66.59	-352.02
	U_{24} - U_{25}	-338.53	-346.79	1.29	2.67	-9.03	-33.17	13.69	24.49	-143.81	-387.99
	U_{25} - U_{26}	-396.09	-197.74	2.20	4.26	-19.19	-21.94	23.38	45.40	-204.27	-233.61
	U_{26} - U_{27}	-344.13	-179.39	3.29	2.87	-7.57	-41.99	35.02	30.58	-80.54	-447.01
	U_{27} - U_{28}	-226.10	291.11	2.43	3.25	-12.48	-4.32	24.62	34.59	-250.47	-91.86
	U_{28} - U_{29}	-350.17	-90.75	2.79	3.66	-22.50	-8.07	29.72	38.99	-250.17	-85.91
	U_{29} - U_{30}	-237.28	219.63	3.23	3.79	-22.50	-8.07	34.10	39.70	-250.17	-85.91
	U_{30} - U_{31}	-167.07	39.82	3.52	3.97	-19.20	-6.11	37.49	38.02	-204.46	-65.00
	U_{31} - U_{32}	-109.77	170.72	3.16	2.87	-19.07	-2.52	33.61	30.54	-209.42	-26.83
	U_{32} - U_{33}	-261.00	1365.93	0.20	11.79	-0.57	-1.13	2.12	125.58	-6.07	-12.00
	U_{33} - U_{34}	-1192.75	-52.80	0.32	0.72	-1.77	-3.12	3.42	7.66	-18.89	-33.22
	U_{34} - U_{35}	-25.30	11.62	0.79	1.83	-4.51	-20.86	8.33	19.52	-48.09	-219.44
	U_{35} - U_{36}	-24.53	10.85	0.77	1.81	-4.48	-18.68	8.24	19.48	-47.98	-196.51
	U_{36} - U_{37}	-150.58	33.05	2.71	2.32	-3.60	-15.64	28.46	24.45	-37.87	-163.50
	U_{37} - U_{38}	-147.23	32.88	2.53	2.33	-3.33	-21.49	32.88	23.50	-32.42	-226.06
	U_{38} - U_{39}	-86.04	-71.75	1.57	1.37	-2.01	-19.72	26.84	14.42	-21.08	-206.74
	U_{39} - U_{40}	-31.67	-34.01	2.55	0.49	-6.85	-19.71	26.84	5.10	-72.07	-207.40
	U_{40} - U_{41}	-86.04	-71.75	1.57	1.37	-2.01	-19.72	26.84	14.42	-21.08	-206.74
	U_{41} - U_{42}	-60.95	-66.97	1.02	1.40	-26.13	-10.35	10.73	14.69	-295.92	-108.93
	U_{42} - U_{43}	-32.99	28.66	2.32	3.01	-19.86	-6.96	24.45	31.70	-208.98	-73.26
	U_{43} - U_{44}	-15.12	113.75	2.01	3.18	-22.00	-2.98	23.09	33.45	-231.46	-31.31
	U_{44} - U_{45}	-24.73	23.33	2.31	3.01	-19.86	-6.96	24.45	31.70	-208.98	-73.26
	U_{45} - U_{46}	-2.69	209.81	1.77	2.38	-19.28	-0.96	18.62	25.00	-202.80	-10.26
	U_{46} - U_{47}	-15.12	113.75	2.01	3.18	-22.00	-2.98	23.09	33.45	-231.46	-31.31
	U_{47} - U_{48}	-122.28	1156.58	0.18	11.95	0.11	-1.47	1.88	125.79	1.13	-15.41
	U_{48} - U_{49}	-1153.78	-166.80	5.42	0.97	-0.91	-0.64	100.34	10.34	-9.70	-6.64
	U_{49} - U_{50}	-178.87	-69.61	2.85	3.03	1.95	-19.82	30.32	32.21	20.75	-211.02
	U_{50} - U_{51}	-178.87	-178.57	3.84	3.10	-5.49	-22.43	40.50	32.96	-58.40	-238.80
	U_{51} - U_{52}	-236.40	-153.06	3.91	2.55	-4.59	-40.90	30.95	27.18	-48.87	-435.48
	U_{52} - U_{53}	-98.63	-313.14	3.08	2.89	-40.61	-12.02	32.81	30.73	-432.40	-127.97
	U_{53} - U_{54}	-139.47	-392.96	3.45	2.58	-34.28	-18.60	36.58	27.38	-362.42	-196.03
	U_{54} - U_{55}	-200.27	-386.72	2.29	0.63	-36.61	-12.78	24.33	6.65	-389.74	-136.11
	U_{55} - U_{56}	-278.82	-117.63	1.54	-0.41	-31.18	-5.79	16.41	-4.32	-331.97	-61.52
	U_{56} - U_{57}	-282.26	-37.63	1.54	-0.72	-31.18	-2.12	16.41	-7.62	-331.97	-18.19
	U_{57} - U_{58}	-186.18	-74.10	1.14	-0.66	-12.11	-7.92	12.11	-7.02	-128.89	-84.36
	U_{58} - U_{59}	-139.58	-187.78	-0.11	0.70	3.75	-10.50	-1.13	7.54	40.46	-113.23
	U_{59} - U_{60}	-47.42	-115.54	-0.62	0.67	1.07	-13.02	-5.52	7.25	-6.57	-139.74
	U_{60} - U_{61}	-52.50	-226.93	-0.18	0.89	-1.11	-17.02	-1.94	9.61	-11.92	-183.47
	U_{61} - U_{62}	-210.39	-24.50	-0.14	0.41	-26.25	-4.46	-7.27	5.15	-15.17	-183.47
	U_{62} - U_{63}	-277.57	-111.60	0.67	1.75	-5.19	-22.73	7.18	18.83	-55.96	-245.10
	U_{63} - U_{64}	-166.87	-240.33	1.71	1.63	-11.29	-25.91	12.66	17.54	-121.72	-279.36
	U_{64} - U_{65}	-287.72	-127.71	1.41	1.41	-26.25	-6.46	12.66	15.16	-282.43	-69.68
	U_{65} - U_{66}	-141.30	-113.93	0.99	1.86	-17.44	-2.85	15.71	20.08	-187.99	-30.76
	U_{66} - U_{67}	-146.41	-22.73	1.22	2.77	-17.10	-3.33	13.18	-29.91	-184.38	-35.85
	U_{67} - U_{68}	-141.54	56.98	1.54	2.52	-15.40	-1.18	16.60	27.21	-166.68	-12.69
	U_{68} - U_{69}	-112.19	86.51	1.01	2.78	-3.35	-18.89	11.26	30.93	-37.40	-210.34
	U_{69} - U_{70}	-15.68	66.14	1.74	2.95	-3.83	-17.02	14.03	33.16	-42.62	-192.67
	U_{70} - U_{71}	-9.16	61.58	1.73	2.62	-18.27	-4.61	19.26	29.11	-203.44	61.36
	U_{71} - U_{72}	42.76	120.09	1.98	2.61	-13.96	-0.20	22.04	29.06	-159.45	-2.23
	U_{72} - U_{73}	93.72	43.54	1.96	2.65	-14.35	43.85	21.25	17.86	-143.35	43.85
	U_{73} - U_{74}	-47.40	525.96	0.19	6.93	-20.81	16.53	-2.15	77.14	-231.70	184.07
	U_{74} - U_{75}	-64.51	-124.27	6.60	7.05	-131.45	-18.47	71.11	0.85	-131.45	-18.47
	U_{75} - U_{76}	46.76	20.63	1.58	1.90	-1.68	-10.13	17.05	20.46	-18.12	-109.47
	U_{76} - U_{77}	64.51	-138.68	1.92	1.63	-1.68	-15.79	25.86	17.59	18.09	-170.14
	U_{77} - U_{78}	27.83	-140.42	2.68	1.23	-0.60	-17.56	28.90	13.23	-6.44	-189.31
	U_{78} - U_{79}	-106.18	-154.99	1.94	0.69	-3.35	-17.47	20.87	7.43	-36.12	-188.39
	U_{79} - U_{80}	-137.97	-302.06	1.31	0.28	-6.71	-26.23	14.03	2.62	-67.41	-282.72
	U_{80} - U_{81}	-245.66	-182.98	1.33	0.98	-26.11	-10.18	14.31	10.60	-281.56	-109.73
	U_{81} - U_{82}	-323.12	-326.70	1.62	0.24	-25.18	-9.29	17.52	-27.51	-337.52	-100.13
	U_{82} - U_{83}	-269.82	-144.58	0.63	0.08	-27.25	-8.88	6.77	0.83	-293.77	-95.73
	U_{83} - U_{84}	-164.16	-67.25	0.65	0.29	-15.02	-2.23	7.05	3.16	-186.42	-23.45
	U_{84} - U_{85}	-170.35	-20.48	0.51	-0.06	-11.29	-0.38	5.48	-0.83	-121.76	-4.12
	U_{85} - U_{86}	-186.12	24.46	0.56	-0.45	-9.46	2.74	5.98	-4.86	-101.99	29.53
	U_{86} - U_{87}	-186.12	110.67	0.56	-0.45	-9.46	2.74	5.98	-4.86	-101.99	29.53
	U_{87} - U_{88}	-70.88	-181.00	-0.21	1.59	-5.49	-18.51	-2.21	16.88	-5.21	-197.11
	U_{88} - U_{89}	-70.88	-181.00	-0.21	1.59	-5.49	-18.51	-2.21	16.88	-5.21	-197.11
	U_{89} - U_{90}	-327.18	-325.33	1.05	2.25	-8.67	-33.16	11.21	23.93	-66.59	-352.02
	U_{90} - U_{91}	-338.53	-346.79	1.29	2.67	-9.03	-33.17	13.69	24.49	-143.81	-387.99
	U_{91} - U_{92}	-396.09	-197.74	2.20	4.26	-19.19	-21.94	23.38	45.40	-204.27	-233.61
	U_{92} - U_{93}	-344.13	-179.39	3.29	2.87	-7.57	-41.99	35.02	30.58	-80.54	-447.01
	U_{93} - U_{94}	-226.10	291.11	2.43	3.25	-12.48	-4.32	24.62	34.59	-250.47	-91.86
	U_{94} - U_{95}	-350.17	-90.75	2.79	3.66	-22.50	-8.07	29.72	38.99	-250.17	-85.91
	U_{95} - U_{96}	-237.28	219.63	3.23	3.79	-22.50	-8.07	34.10	39.70	-250.17	-85.91
	U_{96} - U_{97}	-167.07	39.82	3.52	3.97	-19.20	-6.11	37.49	38.02	-204.46	-65.00
	U_{97} - U_{98}	-109.77	170.72	3.16	2.87	-19.07	-2.52	33.61	30.54	-209.42	-26.83
	U_{98} - U_{99}	-261.00	1365.93	0.20	11.79	-0.57	-1.13	2.12	125.58	-6.07	-12.00
	U_{99} - U_{100}	-1192.75	-52.80	0.32	0.72	-1.77	-3.12	3.42	7.66	-18.89	-33.22
	U_{100} - U_{101}	-25.30	11.62	0.79	1.83	-4.51	-20.86	8.33	19.52	-48.09	-219.44
	U_{101} - U_{102}	-24.53	10.85	0.77	1.81	-4.48	-18.68	8.24	19.48	-47.98	-196.51
	U_{102} - U_{103}	-150.58	33.05	2.71	2.32	-3.60	-15.64	28.46	24.45	-37.87	-163.50
	U_{103} - U_{104}	-147.23	32.88	2.53	2.33	-3.33	-21.49	32.88	23.50	-32.42	-226.06
	U_{104} - U_{105}	-86.04	-71.75	1.57	1.37	-2.01	-19.72	26.84	14.42	-21.08	-206.74
	U_{105} - U_{106}	-31.67	-34.01	2.55	0.49	-6.85	-19.71	26.84	5.10	-72.07	-207.40
	U_{106} - U_{107}	-86.04	-71.75	1.57	1.37	-2.01	-19.72	26.84	14.42	-21.08	-206.74
	U_{107} - U_{108}	-60.95	-66.97	1.02	1.40	-26.13	-10.35	10.73	14.69	-295.92	-108.93
	U_{108} - U_{109}	-32.99	28.66	2.32	3.01	-19.86	-6.96	24.45	31.70	-208.98	-73.26
	U_{109} - U_{110}	-15.12	113.75	2.01	3.18	-22.00	-2.98	23.09	33.45	-231.46	-31.31
	U_{110} - U_{111}	-24.73	23.33	2.31	3.01	-19.86	-6.96	24.45	31.70	-208.98	-73.26
	U_{111} - U_{112}	-2.69	209.81	1.77	2.38	-19.28	-0.96	18.62	25.00	-202.80	-10.26
	U_{112} - U_{113}	-15.12	113.75	2.01	3.18	-22.00	-2.98	23.09	33.45	-231.46	-31.31
	U_{113} - U_{114}	-122.28	1156.58	0.18	11.95	0.11	-1.47	1.88	125.79	1.13	-15.41
	U_{114} - U_{115}	-1153.78	-166.80	5.42	0.97	-0.91	-0.64	100.34	10.34	-9.70	-6.64
	U_{115} - U_{116}	-178.87	-69.61	2.85	3.03	1.95	-19.82	30.32	32.21	20.75	-211.02
	U_{116} - U_{117}	-178.87	-178.57	3.84	3.10	-5.49	-22.43	40.50	32.96	-58.40	-238.80
	U_{117} - U_{118}	-236.40	-153.06	3.91	2.55	-4.59	-40.90	30.95	27.18	-48.87	-435.48
	U_{118} - U_{119}	-98.63	-313.14	3.08	2.89	-40.61	-12.02	32.81	30.73	-432.40	-127.97
	U_{119} - U_{120}	-139.47	-392.96	3.45	2.58	-34.28	-18.60	36.58	27.38	-362.42	-196.03
	U_{120} - U_{121}	-200.27	-386.72	2.29	0.63	-36.61	-12.78	24.33	6.65	-389.74	-136.11
	U_{121} - U_{122}	-278.82	-117.63	1.54	-0.41	-31.18	-5.79	16.41	-4.32	-331.97	-61.52
	U_{122} - U_{123}	-282.26	-37.63	1.54	-0.72	-31.18	-2.12	16.41	-7.62	-331.97	-18.19
	U_{123} - U_{124}	-186.18	-74.10	1.14	-0.66	-12.11	-7.92	12.11	-7.02	-128.89	-84.36
	U_{124} - U_{125}	-139.58	-187.78	-0.11	0.70	3.75	-10.50	-1.13	7.54	40.46	-113.23
	U_{125} - U_{126}	-47.42	-115.54	-0.62	0.67	1.07	-13.02	-5.52	7.25	-6.57	-139.74
	U_{126} - U_{127}	-52.50	-226.93	-0.18	0.89	-1.11	-17.02	-1.94	9.61	-11.92	-183.47
	U_{127} - U_{128}	-210.39	-24.50	-0.14	0.41	-26.25	-4.46	-7.27	5.15	-15.17	-183.47
	U_{128} - U_{129}	-277.57	-111.60	0.67	1.75	-5.19	-22.73	7.18	18.83	-55.96	-245.10
	U_{129} - U_{130}	-166.87	-240.33	1.71	1.63	-11.29	-25.91	12.66	17.54	-121.72	-279.36
	U_{130} - U_{131}	-287.72	-127.71	1.41	1.41	-26.25	-6.46	12.66	15.16	-282.43	-69.68
	U_{131} - U_{132}	-141.30	-113.93	0.99	1.86	-17.44	-2.85	15.71	20.08	-187.99	-30.76
	U_{132} - U_{133}	-146.41	-22.73	1.22	2.77	-17.10	-3.33	13.18	-29.91	-184.38	-35.85
	U_{133} - U_{134}	-141.54	56.98	1.54	2.52	-15.40	-1.18	16.60	27.21	-166.68	-12.69

M_2 Information — ZZ Axis Moment Properties

Location	Member	Min. Rec. Moments Start (k-in)	Min. Rec. Moments End (k-in)	S_{tot} (in^3)	S_b (in^3)	S_{tb} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F/ S_{tot}	M_u k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mod}	Equivalent Mom. Factor C_{com}
Structure 1	U_0 - U_1	-77.40	14.64	-111.26	-206.58	90.2	90.24	72.24	1.42	4206	0.99880042	2974.3	0.539	0.62	0.82
	U_1 - U_2	-58.04	63.16	-224.53	-264.51	90.2	90.24	72.24	1.42	4206	0.99880042	2974.3	0.330	0.70	0.75
	U_2 - U_3	-131.21	152.67	-194.46	-160.98	90.2	90.24	76.71	1.40	4206	0.99880042	2974.3	0.829	0.93	0.83
	U_3 - U_4	4.83	143.76	-183.56	-142.62	90.2	90.24	72.24	1.42	4206	0.99880042	2974.3	0.460	0.58	0.68
	U_4 - U_5	-278.39	13.29	92.20	90.24	72.24	1.42	4206	0.99880042	2974.3	-0.048	0.58	0.58	0.58	42.41
	U_5 - U_6	84.25	193.90	-146.49	153.23	90.2	90.24	76.71	1.40	4206	0.99880042	2974.3	0.435	0.77	0.77
	U_6 - U_7	-148.69	85.29	-29.41	-13.45	90.2	90.24	78.18	1.42	4206	0.99880042	2974.3	0.574	0.58	0.58
	U_7 - U_8	-58.82	784.02	-362.82	923.05	138.2	138.17	111.77	1.42	6028	0.99875895	4241.5	0.040	0.62	0.62
	U_8 - U_9	709.69	-160.46	788.14	-369.59	130.3	130.26	105.11	1.42	5665	0.99880004	4250.8	-0.527	0.39	0.39
	U_9 - U_{10}	82.95	53.42	37.22	-115.50	96.6	96.61	79.12	1.42	4485	0.99873194	3184.1	-0.322	0.47	0.47
	U_{10} - U_{11}	-118.52	-137.43	326.14	-451.46	96.6	96.61	79.12	1.42	4485	0.99873194	3184.1	-0.322	0.47	0.47
	U_{11} - U_{12}	73.74	-160.34	21.81	-428.64	128.7	128.69	105.26	1.42	6028	0.99875895	4241.5	-0.065	0.53	0.57
	U_{12} - U_{13}	-110.89	-191.83	-184.98	-446.40	151.8	151.76	130.54	1.42	7252	0.99905092	5003.4	0.414	0.77	0.77
	U_{13} - U_{14}	-167.41	-382.72	-276.25	-1.96	151.8	151.76	130.54	1.42	7252	0.99905092	5003.4	0.414	0.77	0.77
	U_{14} - U_{15}	300.76	-224.59	-689.39	-380.52	188.5	188.51	157.55	1.42	9004	0.99899941	6214.6	0.555	0.82	0.82
	U_{15} - U_{16}	-177.52	-421.34	-513.55	-564.88	188.5	188.51	164.41	1.42	9004	0.99899941	6214.6	0.397	0.93	0.82
	U_{16} - U_{17}	341.71	-187.39	-732.40	-312.92	188.5	188.51	157.55	1.42	9004	0.99899941	6214.6	0.427	0.77	0.77
	U_{17} - U_{18}	-191.24	-81.54	-400.76	-50.81	127.3	127.33	110.40	1.42	6146	0.99907149	4197.7	0.190	0.68	0.68
	U_{18} - U_{19}	214.34	-27.43	-379.66	-31.97	104.8	104.75	86.43	1.42	4971	0.99880452	3452.6	0.084	0.63	0.63
	U_{19} - U_{20}	-234.18	25.48	374.54	70.19	104.8	104.75	86.43	1.40	4971	0.99880452	3452.6	-0.187	0.53	0.53
	U_{20} - U_{21}	152.84	-253.89	181.97	-363.15	104.8	104.75	86.43	1.42	4971	0.99880452	3452.6	0.284	0.63	0.63
	U_{21} - U_{22}	-95.02	-213.37	-98.91	-491.55	138.2	138.15	119.05	1.42	6634	0.99880481	4553.8	0.201	0.68	0.68
	U_{22} - U_{23}	-95.02	-213.37	-98.91	-491.55	138.2	138.15	119.05	1.42	6634	0.99880481	4553.8	0.201	0.68	0.68
	U_{23} - U_{24}	-410.79	-391.81	-650.84	-881.66	232.7	232.70	186.86	1.42	10799	0.99893050	7310.6	0.625	0.85	0.85
	U_{24} - U_{25}	-410.79	-391.81	-650.84	-881.66	232.7	232.70	186.86	1.40	10799	0.99893050	7310.6	0.625	0.85	0.85
	U_{25} - U_{26}	-419.68	-448.92	-1268.67	-1268.67	232.7	232.70	186.86	1.42	10799	0.99893050	7310.6	0.746	0.85	0.85
	U_{26} - U_{27}	-484.53	-198.04	-780.48	-560.75	251.7	251.73	219.41	1.42	11679	0.99893181	8298.1	0.718	0.85	0.89
	U_{27} - U_{28}	-401.88	-193.46	-552.11	-614.33	232.7	232.70	189.45	1.42	10799	0.99893181	7670.6	0.678	0.87	0.87
	U_{28} - U_{29}	-260.63	-339.45	-881.89	-523.84	232.7	232.70	189.45	1.42	10799	0.99893181	7670.6	0.811	0.87	0.87
	U_{29} - U_{30}	-416.59	-67.29	-780.45	-229.66	198.9	198.88	169.65	1.42	9234	0.99893181	6555.5	0.294	0.72	0.72
	U_{30} - U_{31}	-359.56	-150.92	-661.41	-376.80	198.9	198.88	169.65	1.42	9234	0.99893181	6555.5	0.487	0.72	0.72
	U_{31} - U_{32}	-168.45	101.20	-482.99	-32.73	156.8	156.80	134.92	1.42	7282	0.99893181	5168.9	0.068	0.63	0.63
	U_{32} - U_{33}	-99.00	261.63	-414.94	187.06	156.8	156.80	128.72	1.42	7282	0.99893181	5168.9	0.451	0.42	0.42
	U_{33} - U_{34}	-338.54	1808.93	-347.18	1630.03	221.8	221.77	196.91	1.42	10799	0.99893050	7310.6	-0.186	0.53	0.53
	U_{34} - U_{35}	-22.08	118.19	-94.57	-152.16	185.7	185.70	154.12	1.42	8626	0.99880004	6124.2	0.452	0.80	0.80
	U_{35} - U_{36}	-22.08	118.19	-94.57	-152.16	185.7	185.70	154.12	1.42	8626	0.99880004	6124.2	0.452	0.80	0.80
	U_{36} - U_{37}	232.75	74.75	146.53	-170.92	127.9	127.93	110.16	1.42	6891	0.99863137	4212.5	0.321	0.73	0.73
	U_{37} - U_{38}	234.23	36.22	195.94	268.22	127.9	127.93	111.16	1.42	6891	0.99863137	4212.5	-0.680	0.33	0.33
	U_{38} - U_{39}	111.48	28.02	76.86	205.65	127.9	127.93	110.16	1.42	6891	0.99863137	4212.5	-0.680	0.33	0.33

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-15.54	-73.33	3.63	-5.93	3.28	-4.46			0.00	0.00
	L_1-L_2	39.76	-87.96	-5.93	5.41	-0.10	1.76			0.00	0.00
	L_2-L_3	39.39	-42.20	-22.25	10.97	1.09	1.85			0.00	0.00
	L_3-L_4	-11.34	11.55	-16.15	-8.21	0.96	3.05			0.00	0.00
	L_4-L_5	-49.11	208.03	-28.88	-9.87	-0.74	4.64			0.00	0.00
	L_5-L_6	-0.48	181.07	-5.68	-7.47	1.68	4.14			0.00	0.00
	L_6-L_7	41.44	78.72	-8.06	-4.45	0.98	2.76			0.00	0.00
	L_7-L_8	-25.11	448.74	0.01	-0.02	-0.05	7.59			0.00	0.00
	L_8-L_9	425.89	-36.02	0.00	0.00	8.42	-0.56			0.00	0.00
	L_9-L_{10}	150.02	-126.13	-3.89	-1.41	4.75	1.75			0.00	0.00
	L_{10}-L_{11}	120.44	-115.99	-4.39	-5.65	3.29	1.37			0.00	0.00
	L_{11}-L_{12}	89.08	-98.12	-3.83	-6.02	2.17	1.46			0.00	0.00
	L_{12}-L_{13}	-45.24	-121.26	-9.15	-9.37	1.86	0.87			0.00	0.00
	L_{13}-L_{14}	96.32	-264.98	-10.44	-13.92	1.48	1.05			0.00	0.00
	L_{14}-L_{15}	39.52	-64.08	-3.79	-4.73	0.73	0.39			0.00	0.00
	L_{15}-L_{16}	-191.89	-319.35	-10.26	-17.47	0.69	0.31			0.00	0.00
	L_{16}-L_{17}	-339.58	44.88	-13.18	-7.72	0.93	-0.27			0.00	0.00
	L_{17}-L_{18}	-154.59	-31.26	-9.43	-2.09	0.18	-0.12			0.00	0.00
	L_{18}-L_{19}	-215.80	145.76	-9.18	-1.27	0.02	-0.16			0.00	0.00
	L_{19}-L_{20}	-136.32	49.67	-0.71	-0.08	0.83	3.62			0.00	0.00
	L_{20}-L_{21}	-2.68	-185.02	2.70	-7.91	2.91	3.67			0.00	0.00
	L_{21}-L_{22}	134.75	240.37	5.34	-12.37	-5.75	14.88			0.00	0.00
	L_{22}-L_{23}	-4.23	-180.72	0.33	-10.52	-0.14	1.14			0.00	0.00
	L_{23}-L_{24}	-84.77	-84.77	0.00	-14.71	0.00	2.74			0.00	0.00
	L_{24}-L_{25}	-252.89	-295.03	-17.56	-13.54	1.06	1.85			0.00	0.00
	L_{25}-L_{26}	-475.08	-292.15	-24.70	-16.54	2.86	2.85			0.00	0.00
	L_{26}-L_{27}	-280.47	-64.51	-15.37	-16.55	2.33	4.12			0.00	0.00
	L_{27}-L_{28}	-292.36	219.74	-10.70	-12.93	0.87	2.39			0.00	0.00
	L_{28}-L_{29}	-225.83	141.30	-7.78	-9.41	1.57	3.91			0.00	0.00
	L_{29}-L_{30}	-207.32	-29.05	-6.23	-6.68	1.10	2.39			0.00	0.00
	L_{30}-L_{31}	-160.03	387.16	-9.25	-6.00	2.00	4.63			0.00	0.00
	L_{31}-L_{32}	-202.71	-204.45	-0.92	-5.21	1.61	-5.11			0.00	0.00
	L_{32}-L_{33}	-379.75	-103.16	0.10	-4.79	1.33	-4.70			0.00	0.00
	L_{33}-L_{34}	1072.48	-412.35	-1.37	-0.10	14.28	-3.06			0.00	0.00
	L_{34}-L_{35}	331.46	-41.51	-0.54	-0.12	4.27	-0.48			0.00	0.00
	L_{35}-L_{36}	475.57	-49.03	-5.06	-0.30	4.60	1.19			0.00	0.00
	L_{36}-L_{37}	1.03	-226.51	-4.26	-4.95	0.01	2.63			0.00	0.00
	L_{37}-L_{38}	-226.51	-41.81	-7.19	-8.27	3.80	1.57			0.00	0.00
	L_{38}-L_{39}	214.45	-56.43	-8.29	-12.54	2.24	2.33			0.00	0.00
	L_{39}-L_{40}	207.50	-295.05	-8.23	-6.68	1.10	2.39			0.00	0.00
	L_{40}-L_{41}	49.27	-202.49	-17.74	-16.39	1.82	1.42			0.00	0.00
	L_{41}-L_{42}	-197.10	-39.30	-12.45	-12.45	1.32	1.41			0.00	0.00
	L_{42}-L_{43}	-111.92	0.86	-15.02	-13.64	1.51	3.28			0.00	0.00
	L_{43}-L_{44}	379.75	-103.16	-0.10	-4.79	1.33	-4.70			0.00	0.00
	L_{44}-L_{45}	-60.79	179.81	-8.05	-10.03	1.61	3.74			0.00	0.00
	L_{45}-L_{46}	-81.80	266.56	-10.99	-6.13	2.63	1.52			0.00	0.00
	L_{46}-L_{47}	-139.46	139.46	-6.13	-6.13	1.52	1.52			0.00	0.00
	L_{47}-L_{48}	-99.81	-279.28	-0.30	-0.55	-0.27	1.43			0.00	0.00
	L_{48}-L_{49}	-371.96	1004.43	-2.45	-0.15	0.00	0.00			0.00	0.00
	L_{49}-L_{50}	1026.29	-362.30	-0.81	0.03	14.86	-3.79			0.00	0.00
	L_{50}-L_{51}	-226.76	-125.36	0.13	-0.95	-3.20	2.52			0.00	0.00
	L_{51}-L_{52}	128.96	-114.25	-0.95	-3.20	2.52	0.13			0.00	0.00
	L_{52}-L_{53}	278.05	-132.91	-2.84	-9.52	2.03	3.11			0.00	0.00
	L_{53}-L_{54}	128.96	-114.25	-0.95	-3.20	2.52	0.13			0.00	0.00
	L_{54}-L_{55}	222.98	-243.21	-8.87	-11.51	2.44	2.68			0.00	0.00
	L_{55}-L_{56}	139.96	-114.25	-0.95	-3.20	2.52	0.13			0.00	0.00
	L_{56}-L_{57}	-167.98	-470.72	-11.20	-28.44	2.80	2.10			0.00	0.00
	L_{57}-L_{58}	-445.06	-93.48	-23.43	-23.09	2.40	0.50			0.00	0.00
	L_{58}-L_{59}	-291.70	-319.50	-7.47	-10.46	1.99	1.32			0.00	0.00
	L_{59}-L_{60}	-392.27	38.30	-15.13	-13.15	1.09	-0.37			0.00	0.00
	L_{60}-L_{61}	-297.04	199.10	-12.43	-2.44	0.71	-0.35			0.00	0.00
	L_{61}-L_{62}	-24.53	-109.42	2.11	-4.22	3.37	-4.97			0.00	0.00
	L_{62}-L_{63}	139.90	-177.77	-0.13	-7.10	-0.31	0.70			0.00	0.00
	L_{63}-L_{64}	-11.57	138.51	-0.70	-0.31	-0.31	0.70			0.00	0.00
	L_{64}-L_{65}	47.96	-293.64	-4.65	-12.53	-2.22	1.00			0.00	0.00
	L_{65}-L_{66}	139.96	-114.25	-0.95	-3.20	2.52	0.13			0.00	0.00
	L_{66}-L_{67}	-47.68	-343.07	-15.69	-16.86	0.29	1.80			0.00	0.00
	L_{67}-L_{68}	-341.10	86.20	-8.47	-10.46	1.99	1.32			0.00	0.00
	L_{68}-L_{69}	-201.09	152.50	-5.67	-6.48	0.98	2.24			0.00	0.00
	L_{69}-L_{70}	-148.24	148.96	-6.76	-6.30	1.96	-0.26			0.00	0.00
	L_{70}-L_{71}	-428.31	-26.46	-0.02	-0.01	8.69	-0.17			0.00	0.00
	L_{71}-L_{72}	70.66	-27.56	-3.64	-8.46	1.92	1.62			0.00	0.00
	L_{72}-L_{73}	194.48	-25.11	-6.37	-9.55	2.64	2.19			0.00	0.00
	L_{73}-L_{74}	139.96	-114.25	-0.95	-3.20	2.52	0.13			0.00	0.00
	L_{74}-L_{75}	-45.48	-80.88	-6.19	-10.54	1.55	0.53			0.00	0.00
	L_{75}-L_{76}	-74.64	-5.53	-5.54	-3.44	4.63	3.76			0.00	0.00

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	L_0-L_1	-21.71	-79.81	1.19	-4.43	0.00	0.00	0.00	0.00	-33.42	-122.83
	L_1-L_2	-134.23	-23.81	0.55	-3.20	0.00	0.00	0.00	0.00	-187.66	-57.36
	L_2-L_3	-28.53	-10.15	-2.37	-2.76	0.00	0.00	0.00	0.00	-14.76	-8.27
	L_3-L_4	-10.65	18.32	4.85	-6.68	0.00	0.00	0.00	0.00	-72.55	96.62
	L_4-L_5	-20.89	27.01	18.38	-3.04	0.00	0.00	0.00	0.00	-31.13	-70.25
	L_5-L_6	-9.57	-5.99	5.53	0.92	0.00	0.00	0.00	0.00	-33.83	72.26
	L_6-L_7	-2.19	-22.18	2.52	0.54	0.00	0.00	0.00	0.00	-14.06	-12.20
	L_7-L_8	39.93	-20.23	1.13	1.38	0.00	0.00	0.00	0.00	40.98	71.79
	L_8-L_9	31.56	55.10	0.00	0.01	0.00	0.00	0.00	0.00	37.27	-13.89
	L_9-L_{10}	1.06	0.42	0.62	0.92	0.00	0.00	0.00	0.00	25.81	5.46
	L_{10}-L_{11}	-6.83	-2.34	2.37	-0.96	0.00	0.00	0.00	0.00	43.24	15.22
	L_{11}-L_{12}	-29.08	-6.30	4.63	1.89	0.00	0.00	0.00	0.00	-134.22	52.43
	L_{12}-L_{13}	-8.14	4.70	3.63	-3.85	0.00	0.00	0.00	0.00	-8.62	-3.54
	L_{13}-L_{14}	-6.03	19.30	0.65	-5.42	0.00	0.00	0.00	0.00	-120.79	121.02
	L_{14}-L_{15}	-20.73	-2.42	-2.24	-2.21	0.00	0.00	0.00	0.00	-113.55	62.42
	L_{15}-L_{16}	-13.45	-23.76	-1.22	-2.66	0.00	0.00	0.00	0.00	-84.40	3.18
	L_{16}-L_{17}	-19.61	27.12	0.41	-1.80	0.00	0.00	0.00	0.00	-82.64	-40.79
	L_{17}-L_{18}	15.82	-8.40	8.42	5.29	0.00	0.00	0.00	0.00	-83.72	-49.90
	L_{18}-L_{19}	-30.02	34.24	2.30	3.10	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{19}-L_{20}	-0.04	0.00	0.33	0.19	0.00	0.00	0.00	0.00	-4.27	-0.98
	L_{20}-L_{21}	-23.64	-82.08	1.84	6.42	0.00	0.00	0.00	0.00	-35.86	-124.57
	L_{21}-L_{22}	-84.72	-22.03	0.00	0.00	0.00	0.00	0.00	0.00	-62.17	143.44
	L_{22}-L_{23}	-20.26	-65.46	-1.52	2.87	0.00	0.00	0.00	0.00	109.15	56.15
	L_{23}-L_{24}	-80.11	176.70	108.45	-23.83	0.00	0.00	0.00	0.00	-20.83	133.87
	L_{24}-L_{25}	34.96	-11.94	-0.83	-0.44	0.00	0.00	0.00	0.00	68.74	-22.47
	L_{25}-L_{26}	-3.35	-7.52	1.30	0.27	0.00	0.00	0.00	0.00	-154.67	-76.41
	L_{26}-L_{27}	-3.55	-28.95	0.75	-5.63	0.00	0.00	0.00	0.00	41.95	70.00
	L_{27}-L_{28}	-17.13	-16.01	4.43	0.98	0.00	0.00	0.00	0.00	-127.77	50.18
	L_{28}-L_{29}	-18.04	29.65	4.38	3.00	0.00	0.00	0.00	0.00	-113.55	62.42
	L_{29}-L_{30}	-11.59	-13.30	0.88	-2.16	0.00	0.00	0.00	0.00	-84.40	3.18
	L_{30}-L_{31}	-40.25	-53.42	-3.60	-6.26	0.00	0.00	0.00	0.00	-83.72	-49.90
	L_{31}-L_{32}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{32}-L_{33}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{33}-L_{34}	-10.97	-69.69	0.42	-1.18	0.44	-0.24			-8.40	-48.30
	L_{34}-L_{35}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{35}-L_{36}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{36}-L_{37}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{37}-L_{38}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{38}-L_{39}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{39}-L_{40}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{40}-L_{41}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{41}-L_{42}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{42}-L_{43}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{43}-L_{44}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{44}-L_{45}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{45}-L_{46}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{46}-L_{47}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{47}-L_{48}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{48}-L_{49}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{49}-L_{50}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{50}-L_{51}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{51}-L_{52}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{52}-L_{53}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{53}-L_{54}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{54}-L_{55}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{55}-L_{56}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{56}-L_{57}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{57}-L_{58}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{58}-L_{59}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{59}-L_{60}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{60}-L_{61}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{61}-L_{62}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{62}-L_{63}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{63}-L_{64}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{64}-L_{65}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{65}-L_{66}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{66}-L_{67}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{67}-L_{68}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{68}-L_{69}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{69}-L_{70}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{70}-L_{71}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{71}-L_{72}	-8.40	-48.30	-8.22	-67.80	2.94	-1.71			-8.40	-48.30
	L_{72}-L_{73}	-4.03	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{73}-L_{74}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{74}-L_{75}	-4.01	-25.53	2.49	-3.58	0.00	0.00	0.00	0.00	-63.17	-43.03
	L_{75}-L_{76}	-3.97	-49.63	2.49	-4.14	0.00	0.00	0.00	0.00	-63.17	-43.03

M_y Information

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 2	L_0-L_1	32.28	-181.20	21.28	-159.88	83.6	83.58	74.65	100.97	0.00	0.00
	L_1-L_2	-34.13	-292.50	50.29	-88.89	83.6	83.58	67.49	100.97	0.00	0.00
	L_2-L_3	-279.89	-213.63	86.89	99.5	99.5	99.53	91.00	125.49	0.00	0.00
	L_3-L_4	-248.52	-103.82	-0.87	99.12	99.9	99.93	84.14	125.49	0.00	0.00
	L_4-L_5	-206.74	117.08	-33.36	313.08	168.2	168.54	147.99	210.12	0.00	0.00
	L_5-L_6	-82.51	127.31	23.78	284.37	104.6	104.58	95.61	136.37	0.00	0.00
	L_6-L_7	-170.54	-24.87	36.86	154.9	129.09	132.94	109.21	170.58	0.00	0.00
	L_7-L_8	94.98	-229.95	204.14	-131.55	92.6	92.58	83.65	114.47	0.00	0.00
	L_8-L_9	-153.09	-300.35	237.19	-242.92	92.6	92.58	76.68	114.47	0.00	0.00
	L_9-L_{10}	-653.43	-46.80	671.62	-545.73	145.5	145.75	136.74	228.84	0.00	0.00
	L_{10}-L_{11}	-140.45	-279.06	174.78	-142.01	144.9	144.85	129.09	192.84	0.00	0.00
	L_{11}-L_{12}	-47.38	-60.90	36.59	14.79	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}-L_{13}	-41.32	-77.90	23.39	11.26	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}-L_{14}	-87.92	-101.03	20.07	9.39	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	-112.52	-150.10	15.96	11.34	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-119.72	-241.93	29.12	-26.76	0.00	0.00	0.00	0.00	0.00	0.00
	L_{16}-L_{17}	-393.19	-188.33	-72.36	-123.42	0.00	0.00	0.00	0.00	0.00	0.00
	L_{17}-L_{18}	-142.14	-83.36	37.47	-2.93	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	-101.66	-22.07	1.89	-3.20	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	-66.95	-33.51	1.15	-0.16	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	-7.68	-0.83	-62.82	39.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	26.77	-84.18	35.99	-40.38	0.00	0.00	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	2.37	-123.23	5.76	14.88	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	-84.76	-84.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	-187.00	-144.13	-11.31	-19.67	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}-L_{26}	-239.07	-113.79	8.38	32.55	0.00	0.00	0.00	0.00	0.00	0.00
	L_{26}-L_{27}	-353.01	-176.06	30.47	30.38	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	-163.61	-176.23	24.85	43.61	0.00	0.00	0.00	0.00	0.00	0.00
	L_{28}-L_{29}	-134.73	-94.48	31.16	29.29	0.00	0.00	0.00	0.00	0.00	0.00
	L_{29}-L_{30}	-62.62	-100.22	20.92	42.27	0.00	0.00	0.00	0.00	0.00	0.00
	L_{30}-L_{31}	-25.63	-22.63	22.68	22.68	0.00	0.00	0.00	0.00	0.00	0.00
	L_{31}-L_{32}	-98.47	-63.88	21.27	49.24	0.00	0.00	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	-8.84	2.19	17.14	-54.44	0.00	0.00	0.00	0.00	0.00	0.00
	L_{33}-L_{34}	-487.12	-320.31	-0.04	-0.03	0.00	0.00	0.00	0.00	0.00	0.00
	L_{34}-L_{35}	-14.36	-1.02	150.21	-32.24	0.00	0.00	0.00	0.00	0.00	0.00
	L_{35}-L_{36}	-3.16	-3.14	-47.19	37.30	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	-53.26	-87.31	48.35	12.53	0.00	0.00	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	-87.68	-87.68	26.26	26.26	0.00	0.00	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	-75.69	-86.99	39.99	56.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{39}-L_{40}	-87.22	-131.94	23.56	24.50	0.00	0.00	0.00	0.00	0.00	0.00
	L_{40}-L_{41}	-186.68	-172.41	19.15	19.01	0.00	0.00	0.00	0.00	0.00	0.00
	L_{41}-L_{42}	-137.39	-137.39	22.45	22.45	0.00	0.00	0.00	0.00	0.00	0.00
	L_{42}-L_{43}	-158.00	-143.55	15.84	34.50	0.00	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	-487.12	-320.31	-0.04	-0.03	0.00	0.00	0.00	0.00	0.00	0.00
	L_{44}-$L_{45

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
See Guidelines for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0~L_1	-29.84	49.00	0.65	-0.71	-0.52	2.04	7.20	-7.85	-5.76	22.73
	U_1~L_2	-9.06	15.16	0.55	-0.60	-3.31	3.42	6.13	-6.62	-36.01	38.05
	U_2~L_3	10.50	-9.71	0.51	-0.55	-19.67	18.07	5.71	-6.56	-187.27	38.07
	U_3~L_4	33.43	-34.38	1.73	-1.80	-1.25	1.77	19.22	-20.04	-13.91	19.67
	U_4~L_5	41.60	-42.42	1.40	-1.50	-1.02	3.70	-13.33	14.52	3.70	-4.29
	U_5~L_6	45.52	-51.05	-0.73	0.52	3.23	-2.72	-8.29	5.77	35.97	-39.27
	U_6~L_7	53.57	-55.55	0.48	-0.51	-65.58	44.92	0.00	0.00	0.00	0.00
	U_7~L_8	91.21	-101.85	-0.03	0.03	4.71	-4.99	-0.29	0.32	52.40	-55.55
	U_8~L_9	-20.53	21.18	0.32	-0.39	-2.20	2.72	3.55	-4.34	-24.54	30.27
	U_9~L_{10}	-135.19	151.71	0.24	-0.30	-3.85	4.88	-2.48	3.23	-47.45	52.64
	U_{10}~L_{11}	-88.41	88.14	0.01	-0.12	-2.51	3.69	0.00	-1.25	-31.42	39.83
	U_{11}~L_{12}	-91.03	92.95	0.04	-0.06	-2.22	3.57	1.84	-4.81	-29.44	42.13
	U_{12}~L_{13}	-79.50	78.32	1.02	-0.95	-2.15	2.63	11.04	-10.20	-29.15	28.40
	U_{13}~L_{14}	-49.20	60.09	1.26	-1.28	-2.77	3.02	13.60	-13.76	-29.87	32.51
	U_{14}~L_{15}	-29.72	34.60	1.40	-1.47	-2.84	-4.87	15.27	-17.89	-30.43	18.82
	U_{15}~L_{16}	-1.46	-2.70	-2.29	2.32	3.25	-3.36	-24.73	25.04	35.06	-36.27
	U_{16}~L_{17}	34.16	-36.57	-1.53	1.60	-3.18	-3.28	-16.81	17.66	34.52	-35.39
	U_{17}~L_{18}	46.21	-55.82	-0.47	0.35	3.21	-3.33	-5.11	3.74	34.64	-39.21
	U_{18}~L_{19}	110.34	-114.53	-0.37	0.38	3.50	-3.66	-4.00	4.19	59.50	-61.04
	U_{19}~L_{20}	-121.24	-131.09	-0.33	0.33	5.78	-5.79	-3.53	3.56	62.27	-62.40
	U_{20}~L_{21}	-134.20	-173.18	-0.20	0.28	5.71	-6.44	-2.18	3.00	61.53	-69.38
	U_{21}~L_{22}	-114.26	-168.30	0.75	-0.87	4.61	-5.39	8.00	-9.35	-49.36	57.69
	U_{22}~L_{23}	-124.38	-133.15	0.72	-0.77	-4.55	5.07	7.69	-8.21	-48.41	53.97
	U_{23}~L_{24}	-113.22	-132.82	0.84	-0.90	-4.45	5.07	9.04	-9.76	-47.45	51.93
	U_{24}~L_{25}	-56.00	62.15	0.48	-0.51	-2.08	2.49	5.14	-5.43	-22.09	26.52
	U_{25}~L_{26}	-34.04	39.78	0.15	-0.16	-1.13	1.39	1.29	-1.66	-10.79	12.22
	U_{26}~L_{27}	-7.09	12.30	1.84	-1.82	-2.17	2.51	19.59	-19.40	-23.15	26.71
	U_{27}~L_{28}	15.85	-15.58	2.23	-2.34	-2.06	2.18	23.72	-24.96	-21.96	23.18
	U_{28}~L_{29}	38.85	-44.93	0.97	-1.12	-12.62	5.92	10.62	-12.65	-134.72	63.16
	U_{29}~L_{30}	86.89	-96.05	-1.68	1.56	4.38	-4.29	-17.86	16.62	46.67	-45.53
	U_{30}~L_{31}	-155.09	159.44	1.97	-1.78	3.10	-3.28	-16.81	17.66	34.52	-35.39
	U_{31}~L_{32}	-141.21	-149.39	-1.06	0.74	4.76	-4.94	-11.28	7.83	60.69	-62.62
	U_{32}~L_{33}	-192.53	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{33}~L_{34}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{34}~L_{35}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{35}~L_{36}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{36}~L_{37}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{37}~L_{38}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{38}~L_{39}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{39}~L_{40}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{40}~L_{41}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{41}~L_{42}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{42}~L_{43}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{43}~L_{44}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{44}~L_{45}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{45}~L_{46}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{46}~L_{47}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{47}~L_{48}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{48}~L_{49}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{49}~L_{50}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{50}~L_{51}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{51}~L_{52}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{52}~L_{53}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{53}~L_{54}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{54}~L_{55}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{55}~L_{56}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{56}~L_{57}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{57}~L_{58}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{58}~L_{59}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{59}~L_{60}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{60}~L_{61}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{61}~L_{62}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{62}~L_{63}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{63}~L_{64}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{64}~L_{65}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{65}~L_{66}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{66}~L_{67}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{67}~L_{68}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{68}~L_{69}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{69}~L_{70}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{70}~L_{71}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{71}~L_{72}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{72}~L_{73}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{73}~L_{74}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{74}~L_{75}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{75}~L_{76}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{76}~L_{77}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{77}~L_{78}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{78}~L_{79}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{79}~L_{80}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{80}~L_{81}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{81}~L_{82}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{82}~L_{83}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{83}~L_{84}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{84}~L_{85}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{85}~L_{86}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{86}~L_{87}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{87}~L_{88}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{88}~L_{89}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{89}~L_{90}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{90}~L_{91}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{91}~L_{92}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{92}~L_{93}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{93}~L_{94}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{94}~L_{95}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{95}~L_{96}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{96}~L_{97}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{97}~L_{98}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{98}~L_{99}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{99}~L_{100}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{100}~L_{101}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{101}~L_{102}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{102}~L_{103}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{103}~L_{104}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{104}~L_{105}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{105}~L_{106}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{106}~L_{107}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{107}~L_{108}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{108}~L_{109}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{109}~L_{110}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{110}~L_{111}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{111}~L_{112}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{112}~L_{113}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{113}~L_{114}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{114}~L_{115}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{115}~L_{116}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{116}~L_{117}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{117}~L_{118}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{118}~L_{119}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{119}~L_{120}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{120}~L_{121}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{121}~L_{122}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{122}~L_{123}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{123}~L_{124}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{124}~L_{125}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{125}~L_{126}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{126}~L_{127}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{127}~L_{128}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{128}~L_{129}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{129}~L_{130}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{130}~L_{131}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{131}~L_{132}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{132}~L_{133}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{133}~L_{134}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{134}~L_{135}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{135}~L_{136}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{136}~L_{137}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{137}~L_{138}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{138}~L_{139}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{139}~L_{140}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{140}~L_{141}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{141}~L_{142}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{142}~L_{143}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{143}~L_{144}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{144}~L_{145}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{145}~L_{146}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{146}~L_{147}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{147}~L_{148}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{148}~L_{149}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{149}~L_{150}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{150}~L_{151}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{151}~L_{152}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{152}~L_{153}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{153}~L_{154}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{154}~L_{155}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{155}~L_{156}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{156}~L_{157}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{157}~L_{158}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{158}~L_{159}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{159}~L_{160}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{160}~L_{161}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{161}~L_{162}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{162}~L_{163}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{163}~L_{164}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{164}~L_{165}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{165}~L_{166}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{166}~L_{167}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{167}~L_{168}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{168}~L_{169}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{169}~L_{170}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{170}~L_{171}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{171}~L_{172}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{172}~L_{173}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{173}~L_{174}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{174}~L_{175}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{175}~L_{176}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{176}~L_{177}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{177}~L_{178}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{178}~L_{179}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{179}~L_{180}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{180}~L_{181}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{181}~L_{182}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{182}~L_{183}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{183}~L_{184}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{184}~L_{185}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{185}~L_{186}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{186}~L_{187}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{187}~L_{188}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{188}~L_{189}	-192.02	-192.81	0.44	0.37	4.48	-4.66	-4.66	3.89	47.67	-49.81
	U_{189}~L_{190}	-147.39	-149.76	0.46	0.39	4.21	-4.34	-22.64	18.79	42.47	-43.24
	U_{190}~L_{191}	-203.50	-203.15	-0.40	0.42	6.05	-5.82	-4.23	4.51	64.37	-61.95
	U_{191}~L_{192}	-192.02	-192

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-12.55	3.37	0.40	0.45	0.52	-0.18	-4.49	4.98	3.01	-2.02
	L_1-U_1	-1.68	-7.06	1.36	0.13	0.22	-0.05	-15.11	1.49	0.40	-0.60
	U_1-L_2	-1.68	-7.06	1.36	0.13	0.22	-0.05	-15.11	1.49	0.40	-0.60
	L_2-U_2	9.76	-11.75	-0.71	-0.39	2.26	-0.79	-7.93	-4.32	2.85	-9.74
	U_2-L_3	-10.32	17.59	-1.00	-0.97	-1.92	0.67	-42.18	4.53	-4.89	4.07
	L_3-U_3	-26.82	58.45	-2.21	2.18	-9.95	-9.46	-24.64	24.26	-10.58	-5.10
	U_3-L_4	-6.36	38.63	-2.58	2.61	-9.47	-18.51	-38.81	31.52	-18.31	5.23
	L_4-U_4	-21.56	38.81	0.12	-0.11	0.00	0.00	-21.56	38.81	0.12	-0.11
	U_4-L_5	-9.60	109.51	1.54	2.86	2.22	-0.11	-31.93	20.52	2.89	2.89
	L_5-U_5	-74.77	111.64	-2.16	1.94	0.27	0.08	-31.93	20.52	2.89	2.89
	U_5-L_6	-56.82	54.75	-2.53	1.02	-0.05	-0.40	-27.25	10.94	-0.50	-4.26
	L_6-U_6	-56.82	54.75	-2.53	1.02	-0.05	-0.40	-27.25	10.94	-0.50	-4.26
	U_6-L_7	-55.23	39.04	2.12	1.53	0.28	-0.90	-22.66	16.47	2.99	-9.68
	L_7-U_7	-20.96	7.36	-1.30	0.53	0.41	-0.76	-14.00	5.75	4.42	-8.21
	U_7-L_8	-66.38	68.64	-3.19	2.72	-1.95	-12.29	-13.15	-20.08	1.96	-0.65
	L_8-U_8	-15.77	11.42	-1.46	1.24	0.35	-0.90	-15.77	11.42	1.46	1.24
	U_8-L_9	-28.63	13.01	-1.95	0.92	0.35	-0.76	-20.58	10.56	-0.24	-6.34
	L_9-U_9	-69.28	58.13	-3.44	3.01	-2.29	-13.16	-37.12	32.48	-3.16	-1.91
	U_9-L_{10}	-39.21	61.35	-3.83	3.03	-2.26	-8.26	-41.27	23.71	3.85	-2.11
	L_{10}-U_{10}	-105.04	88.64	3.18	3.08	6.17	-0.17	-34.31	33.25	8.80	1.08
	U_{10}-L_{11}	-82.69	87.74	-3.63	3.61	0.61	-0.57	-40.78	38.39	6.53	-6.03
	L_{11}-U_{11}	-87.97	71.76	-4.29	3.49	0.61	-0.23	-44.88	34.11	6.24	-5.23
	U_{11}-L_{12}	-81.28	63.04	-3.79	2.92	0.64	-0.52	-41.28	33.04	6.73	-5.86
	L_{12}-U_{12}	-74.77	111.64	-2.16	1.94	0.27	0.08	-22.03	21.64	2.84	-7.05
	U_{12}-L_{13}	-17.30	7.21	-1.76	1.29	0.64	-0.92	-18.78	13.69	6.77	-8.80
	L_{13}-U_{13}	-9.62	-11.45	-1.50	0.98	0.64	-13.40	-13.95	9.54	-13.40	0.00
	U_{13}-L_{14}	7.42	-23.91	-1.04	0.48	1.92	-1.41	-11.06	5.06	10.87	-15.01
	L_{14}-U_{14}	-44.31	35.87	-1.84	1.30	0.16	-1.00	-19.59	13.86	1.68	-10.59
	U_{14}-L_{15}	-66.38	68.64	-3.19	2.72	-1.95	-12.29	-13.15	-20.08	1.96	-0.65
	L_{15}-U_{15}	-88.54	73.82	-2.96	2.20	0.03	-0.82	-31.49	23.38	0.27	-8.76
	U_{15}-L_{16}	-69.45	58.24	-2.28	2.61	0.03	-0.76	-37.12	32.48	-3.16	-1.91
	L_{16}-U_{16}	-108.36	115.66	-3.58	3.08	0.23	-0.28	-38.15	32.84	-2.42	-2.93
	U_{16}-L_{17}	-154.28	139.69	-4.73	3.99	0.40	-0.15	-50.31	42.43	4.21	-1.71
	L_{17}-U_{17}	-86.62	148.30	-2.26	4.21	0.40	-0.15	-34.54	41.39	5.17	-4.76
	U_{17}-L_{18}	-24.74	100.39	-3.28	3.93	0.49	-0.45	-34.54	41.39	5.17	-4.76
	L_{18}-U_{18}	-98.29	79.74	-3.29	4.23	0.49	-0.45	-48.33	38.42	-3.39	0.00
	U_{18}-L_{19}	-74.15	95.51	-4.13	3.65	0.20	-0.26	-43.46	38.40	2.07	-2.72
	L_{19}-U_{19}	-74.15	95.51	-4.13	3.65	0.20	-0.26	-37.01	33.20	1.04	-2.72
	U_{19}-L_{20}	-55.45	68.85	-3.52	2.37	0.30	-0.93	-37.05	24.96	3.18	-0.76
	L_{20}-U_{20}	-32.97	39.97	-2.49	1.80	0.36	-0.90	-26.18	18.96	3.81	-0.50
	U_{20}-L_{21}	-24.80	31.46	-2.16	1.56	0.36	-0.84	-20.68	14.88	7.05	-12.91
Structure 2	U_0-L_1	-10.33	4.39	-1.22	0.69	0.61	-1.06	-12.79	7.25	6.43	-11.19
	L_1-U_1	-6.26	3.56	-1.22	0.69	0.61	-1.06	-12.33	6.99	6.21	-8.71
	U_1-L_2	-17.07	16.15	-1.56	-1.32	0.29	-0.82	-16.37	13.85	10.39	-8.65
	L_2-U_2	-55.66	60.11	-3.26	2.76	-0.27	-0.73	-34.28	28.99	-2.79	-7.66
	U_2-L_3	-69.18	80.37	-3.48	3.01	-0.67	-0.15	-36.61	31.68	-7.07	-1.59
	L_3-U_3	-106.02	102.50	-4.54	4.12	0.26	-0.29	-47.77	43.35	2.69	-3.01
	U_3-L_4	-59.07	102.50	-2.60	4.12	0.26	-0.29	-47.77	43.35	2.69	-3.01
	L_4-U_4	-47.57	127.97	-3.24	4.20	0.56	-0.49	-34.54	44.66	5.91	-5.21
	U_4-L_5	-89.45	99.26	-3.88	2.95	0.18	-0.19	-41.35	31.44	1.91	-2.03
	L_5-U_5	-86.48	82.53	-3.19	2.48	-0.11	-0.48	-33.91	29.36	-1.16	-5.06
	U_5-L_6	-60.13	67.65	-2.33	2.38	-0.39	-1.09	-35.49	29.25	-4.05	-3.33
	L_6-U_6	-60.13	67.65	-2.33	2.38	-0.39	-1.09	-35.49	29.25	-4.05	-3.33
	U_6-L_7	-12.59	-26.40	-1.00	0.46	0.66	-1.21	-10.68	4.88	7.05	-12.91
	L_7-U_7	6.51	-17.79	-1.38	0.99	0.68	-1.21	-14.72	10.55	7.20	-12.87
	U_7-L_8	-11.68	0.88	-1.38	0.99	0.68	-1.21	-14.72	10.55	7.20	-12.87
	L_8-U_8	-38.91	20.55	-2.06	1.74	-0.01	-0.60	-21.95	18.55	-0.15	-6.39
	U_8-L_9	-68.49	71.14	-3.85	3.07	0.47	-0.40	-41.11	34.76	5.05	-4.39
	L_9-U_9	-68.49	71.14	-3.85	3.07	0.47	-0.40	-41.11	34.76	5.05	-4.39
	U_9-L_{10}	-70.17	69.10	-3.88	3.26	0.96	-0.30	-47.82	35.14	3.92	-3.20
	L_{10}-U_{10}	-86.86	56.37	-3.77	2.95	0.34	-0.25	-40.63	31.79	3.67	-2.76
	U_{10}-L_{11}	-59.56	52.05	-3.45	2.45	0.34	-0.25	-47.64	33.21	3.67	-2.76
	L_{11}-U_{11}	-54.59	58.66	-3.07	2.48	0.03	-0.04	-29.26	12.70	2.10	-1.44
	U_{11}-L_{12}	-54.59	58.66	-3.07	2.48	0.03	-0.04	-29.26	12.70	2.10	-1.44
	L_{12}-U_{12}	-9.16	17.57	-1.26	0.13	-0.22	-0.64	-13.99	1.48	-2.39	-12.47
	U_{12}-L_{13}	-9.16	17.57	-1.26	0.13	-0.22	-0.64	-13.99	1.48	-2.39	-12.47
	L_{13}-U_{13}	0.12	-8.77	-0.83	0.23	-0.73	-0.73	-8.26	3.72	-2.58	-8.15
	U_{13}-L_{14}	-23.22	7.61	-0.63	0.71	0.13	-0.11	-7.01	7.86	1.43	-14.04

ZZ Axis Moments from STAAD

Location	Member	Start (k-in)	End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	U_0-L_1	-22.15	10.85	-11.76	1.78	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	L_1-U_1	-21.82	-7.24	9.95	-8.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1-L_2	-19.18	-11.50	12.17	-19.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_2-U_2	-7.93	-4.32	2.85	-8.74	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3
	U_2-L_3	-12.18	-4.32	4.89	-6.07	0.00	0.00	0.00	0.00	0	909.0	1.54	782	1.5	763.3
	L_3-U_3	-24.64	24.26	-10.58	-5.10	0.00	0.00	0.00	0.00	0	1183.7	1.51	1753	1.5	1737.0
	U_3-L_4	-38.81	31.52	-18.31	5.23	0.00	0.00	0.00	0.00	0	1183.7	1.51	1753	1.5	1737.0
	L_4-U_4	-21.56	38.81	0.12	-0.11	0.00	0.00	0.00	0.00	0	1183.7	1.51	1753	1.5	1737.0
	U_4-L_5	-9.60	109.51	1.54	2.86	2.22	-0.11	-31.93	20.52	2.89	2.89	0.27	1661.0	1.67	2241
	L_5-U_5	-74.77	111.64	-2.16	1.94	0.27	0.08	-31.93	20.52	2.89	2.89	0.27	1661.0	1.67	2241
	U_5-L_6	-56.82	54.75	-2.53	1.02	-0.05	-0.40	-27.25	10.94	-0.50	-4.26	0.00	1939.29	85.40	-74.52
	L_6-U_6	-56.82	54.75	-2.53	1.02	-0.05	-0.40	-27.25	10.94	-0.50	-4.26	0.00	1939.29	85.40	-74.52
	U_6-L_7	-55.23	39.04	2.12	1.53	0.28	-0.90	-22.66	16.47	2.99	-9.68	0.00	1931.24	72.17	-67.93
	L_7-U_7	-20.96	7.36	-1.30	0.53	0.41	-0.76	-14.00	5.75	4.42	-8.21	0.00	1931.24	72.17	-67.93
	U_7-L_8	-66.38	68.64	-3.19	2.72	-1.95	-12.29	-13.15	-20.08	1.96	-0.65	0.00	1931.24	72.17	-67.93
	L_8-U_8	-15.77	11.42	-1.46	1.24	0.35	-0.90	-15.77	11.42	1.46	1.24	0.35	1931.24	72.17	-67.93
	U_8-L_9	-28.63	13.01	-1.95	0.92	0.35	-0.76	-20.58	10.56	-0.24	-6.34	0.00	1931.24	72.17	-67.93
	L_9-U_9	-69.28	58.13	-3.44	3.01	-2.29	-13.16	-37.12	32.48	-3.16	-1.91	0.00	1931.24	72.17	-67.93
	U_9-L_{10}	-39.21	61.35	-3.83	3.03	-2.26	-8.26	-41.27	23.71	3.85	-2.11	0.00	1931.24	72.17	-67.93
	L_{10}-U_{10}	-105.04	88.64	3.18	3.08	6.17	-0.17	-34.31	33.25	8.80	1.08	0.00	1931.24	72.17	-67.93
	U_{10}-L_{11}	-82.69	87.74	-3.63	3.61	0.61	-0.57	-40.78	38.39	6.53	-6.03	0.00	1939.29	85.40	-74.52
	L_{11}-U_{11}	-87.97	71.76	-4.29	3.49	0.61	-0.23	-44.88	34.11	6.24	-5.23	0.00	1939.29	85.40	-74.52
	U_{11}-L_{12}	-81.28	63.04	-3.79	2.92	0.64	-0.52	-41.28	33.04	6.73	-5.86	0.00	1939.29	85.40	-74.52
	L_{12}-U_{12}	-74.77	111.64	-2.16	1.94	0.27	0.08	-22.03	21.64	2.84	-7.05	0.00	1931.24	72.17	-67.93
	U_{12}-L_{13}	-17.30	7.21	-1.76	1.29	0.64	-0.92	-18.78	13.69	6.77	-8.80	0.00	0.00	0.00	0.00
	L_{13}-U_{13}	-9.62	-11.45	-1.50	0.98	0.64	-13.40	-13.95	9.54	-13.40	0.00	0.00	0.00	0.00	0.00
	U_{13}-L_{14}	7.42	-23.91	-1.04	0.48	1.92	-1.41	-11.06	5.06	10.87	-15.01	0.00	0.00	0.00	0.00
	L_{14}-U_{14}	-44.31	35.87	-1.84	1.30	0.16	-1.00	-19.59	13.86	1.68	-10.59	0.00	0.00	0.00	0.00
	U_{14}-L_{15}	-66.38	68.64	-3.19	2.72	-1.95	-12.29	-13.15	-20.08	1.96	-0.65	0.00	1931.24	72.17	-67.93
	L_{15}-U_{15}	-88.54	73.82	-2.96	2.20	0.03	-0.82	-31.49	23.38	0.27	-8.76	0.00	0.00	0.00	0.00
	U_{15}-L_{16}	-69.45	58.24	-2.28	2.61	0.03	-0.76	-37.12	32.48	-3.16	-1.91	0.00	1931.24	72.17	-67.93
	L_{16}-U_{16}	-108.36	115.66	-3.58	3.08	0.23	-0.28	-38.15	32.84	-2.42	-2.93	0.00	1939.29	85.40	-74.52
	U_{16}-L_{17}	-154.28	139.69	-4.73	3.99	0.40	-0.15	-50.31	42.43	4.21	-1.71	0.00	0.00	0.00	0.00
	L_{17}-U_{17}	-86.62	148.30	-2.26	4.21	0.40	-0.15	-34.54	41.39	5.17	-4.76	0.00	0.00	0.00	0.00
	U_{17}-L_{18}	-24.74	100.39	-3.28	3.93	0.49	-0.45	-34.54	41.39	5.17	-4.76	0.00	0.00	0.00	0.00
	L_{18}-U_{18}	-98.29	79.74	-3.29	4.23	0.49	-0.45	-48.33	38.42	-3.39	0.00	0.00	0.00	0.00	0.00
	U_{18}-L_{19}	-74.15	95.51	-4.13	3.65	0.20	-0.26	-43.46	38.40	2.07	-2.72	0.00	0.00	0.00	0.00
	L_{19}-U_{19}	-74.15	95.51	-4.13	3.65	0.20	-0.26	-37.01	33.20	1.04	-2.72	0.00	0.00	0.00	0.00
	U_{19}-L_{20}	-55.45	68.85	-3.52	2.37	0.30	-0.93	-37.05	24.96	3.18	-0.76	0.00	0.00	0.00	0.00
	L_{20}-U_{20}	-32.97	39.97	-2.49	1.80	0.36	-0.90	-26.18	18.96	3.81	-0.50	0.00	0.00	0.00	0.00
	U_{20}-L_{21}	-24.80	31.46	-2.16	1.56	0.36	-0.84	-20.68	14.88	7.05	-12.91	0.00	0.00	0.00	0.00
Structure 2	U_0-L_1	-10.33	4.39	-1.22	0.69	0.61	-1.06	-12.79	7.25	6.43	-11.19	0.00	0.00	0.00	0.00
	L_1-U_1	-6.26	3.56	-1.22	0.69	0.61	-1.06	-12.33	6.99	6.21	-8.71	0.00	0.00	0.00	0.00
	U_1-L_2	-17.07	16.15	-1.56	-1.32	0.29	-0.82	-16.37	13.85	10.39	-8.65	0.00	0.00	0.00	0.00
	L_2-U_2	-55.66	60.11	-3.26	2.76	-0.27	-0.73	-34.28	28.99	-2.79	-7.66	0.00	0.00	0.00	0.00
	U_2-L_3	-69.18	80.37	-3.48	3.01	-0.67	-0.15	-36.61	31.68	-7.07	-1.59	0.00	0.00	0.00	0.00
	L_3-U_3	-106.02	102.50	-4.54	4.12	0.26	-0.29	-47.77	43.35	2.69	-3.01	0.00	0.00	0.00	0.00
	U_3-L_4	-59.07	102.50	-2.60	4.12	0.26	-0.29	-47.77	43.35	2.69	-3.01	0.00	0.00	0.00	0.00
	L_4-U_4	-47.57	127.97	-3.24	4.20	0.56	-0.49	-34.54	44.66	5.91	-5.21	0.00	0.00	0.00	0.00
	U_4-L_5	-89.45	99.26	-3.88	2.95	0.18	-0.19	-41.35	31.44	1.91	-2.03	0.00	0.00	0.00	0.00
	L_5-U_5	-86.48	82.53	-3.19	2.48	-0.11	-0.48	-33.91	29.36	-1.16	-5.06	0.00	0.00	0.00	0.00
	U_5-L_6	-60.13	67.65	-2.33	2.38	-0.39	-1.09	-35.49	29.25	-4.05	-3.33	0.00	0.00	0.00	0.00
	L_6-U_6	-60.13	67.65	-2.33	2.38	-0.39	-1.09	-35.49	29.25	-4.05	-3.33	0.00	0.00	0.00	0.00
	U_6-L_7	-12.59	-26.40	-1.00	0.46	0.66	-1.21	-10.68	4.88	7.05	-12.91	0.00	0.00	0.00	0.00
	L_7-U_7	6.51	-17.79	-1.38	0.99	0.68	-1.21	-14.72	10.55	7.20	-12.87	0.00	0.00	0.00	0.00
	U_7-L_8	-11.68	0.88	-1.38	0.99	0.68	-1.21	-14.72	10.55	7.20	-12.87	0.00	0.00	0.00	0.00
	L_8-U_8	-38.91	20.55	-2.06	1.74	-0.01	-0.60	-21.95	18.55	-0.15	-6.39	0.00	0.00	0.00	0.00
	U_8-L_9	-68.49	71.14	-3.85	3.07	0.47	-0.40	-41.11	34.76	5.05	-4.39	0.00	0.00	0.00	0.00
	L_9-U_9	-68.49	71.14	-3.85	3.07	0.47	-0.40	-41.11	34.76	5.05	-4.39	0.00	0.00	0.00	0.00
	U_9-L_{10}	-70.17	69.10	-3.88	3.26	0.96	-0.30	-47.82	35.14	3.92	-3.20	0.00	0.00	0.00	0.00
	L_{10}-U_{10}	-86.86	56.37	-3.77	2.95	0.34	-0.25	-40.63	31.79	3.67	-2.76	0.00	0.00	0.00	0.00
	U_{10}-L_{11}	-59.56	52.05	-3.45	2.45	0.34	-0.25	-47.64	33.21	3.67	-2.76	0.00	0.00	0.00	0.00
	L_{11}-U_{11}	-54.59	58.66	-3.07	2.48	0.03	-0.04	-29.26	12.70	2.10	-1.44	0.00	0.00	0.00	0.00
	U_{11}-L_{12}	-54.59	58.66	-3.07	2.48	0.03	-0.04	-29.26	12.70	2.10	-1.44	0.00	0.00	0.00	0.00
	L_{12}-U_{12}	-9.16	17.57	-1.26	0.13	-0.22	-0.64	-13.99	1.48	-2.39	-12.47	0.00	0.00	0.00	0.00
	U_{12}-L_{13}	-9.16	17.57	-1.26	0.13	-0.22	-0.64	-13.99	1.48	-2.39	-12.47	0.00	0.00	0.00	0.00
	L_{13}-U_{13}	0.12	-8.77	-0.83	0.23	-0.73	-0.73	-8.26	3.72	-2.58	-8.15	0.00	0.00	0.00	0.00
	U_{13}-L_{14}	-23.22	7.61	-0.63	0.71	0.13	-0.11	-7.01	7.86	1.43	-14.04	0.00	0.00	0.00	0.00

M_1 Information

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-19.03	-37.11	3.53	0.88	0.00	0.00	-50.36	-73.38	-64.04	-24.00
	L_1-U_1	-8.03	-22.18	8.38	7.34	0.00	0.00	-51.37	-67.80	-30.03	-29.43
	U_1-L_2	-20.43	-22.29	-27.03	-7.79	0.00	0.00	-87.29	-122.14	-95.92	-89.39
	L_2-U_2	-29.30	-33.38	-4.75	-15.86	0.00	0.00	-150.80	-91.94	-122.80	-69.17
	U_2-L_3	-28.43	-22.37	-42.39	-22.64	0.00	0.00	-81.30	-15.26	-5.55	-23.93
	L_3-U_3	-21.06	-27.22	-41.58	-12.66	0.00	0.00	-161.54	-65.62	-134.86	-79.55
	U_3-L_4	-10.61	-3.58	-2.01	-3.95	0.00	0.00	-310.05	-160.61	-256.53	-175.61
	L_4-U_4	9.90	-2.24	-0.52	-0.42	0.00	0.00	-255.98	-174.57	-242.43	-174.34
	U_4-L_5	14.16	7.59	-9.41	-4.85	0.00	0.00	-160.91	-144.76	-130.27	-128.61
	L_5-U_5	16.77	7.55	-9.41	-4.85	0.00	0.00	-111.03	-113.32	-88.20	-102.95
	U_5-L_6	-4.03	-10.05	10.74	3.72	0.00	0.00	-68.31	-82.18	-39.11	-64.28
	L_6-U_6	-16.59	-18.21	-10.48	-10.35	0.00	0.00	-147.97	-125.46	-153.59	-146.56
	U_6-L_7	-22.04	-23.04	-6.64	-14.14	0.00	0.00	-258.13	-225.38	-238.11	-213.80
	L_7-U_7	-19.38	-19.64	-9.32	-18.57	0.00	0.00	-234.71	-232.69	-216.43	-221.29
	U_7-L_8	-26.00	-26.01	-12.45	-24.33	0.00	0.00	-208.78	-208.81	-194.49	-198.58
	L_8-U_8	-20.62	-25.23	-37.33	-30.20	-11.22	0.00	-99.84	-149.15	-99.44	-132.94
	U_8-L_9	-21.22	-19.77	-44.11	-5.04	0.00	0.00	-107.84	-82.62	-133.87	-80.32
	L_9-U_9	-26.43	-17.12	-61.89	-3.37	0.00	0.00	-13.63	-75.56	-101.18	-57.69
	U_9-L_{10}	-20.64	-31.44	-2.58	-0.33	0.00	0.00	-39.83	-14.48	-52.97	-21.78
	L_{10}-U_{10}	-8.75	-33.37	3.68	-5.98	0.00	0.00	-19.53	8.97	-47.94	-16.60
	U_{10}-L_{11}	-6.40	-58.90	2.01	2.57	0.00	0.00	-142.07	-43.33	-131.14	-36.57
	L_{11}-U_{11}	-8.43	-58.90	2.01	2.57	0.00	0.00	-142.07	-43.33	-131.14	-36.57
	U_{11}-L_{12}	-20.94	-5.25	3.14	-2.51	0.00	0.00	-121.94	-170.38	-90.64	-166.82
	L_{12}-U_{12}	-19.02	-33.37	3.68	-5.98	0.00	0.00	-19.53	8.97	-47.94	-16.60
	U_{12}-L_{13}	-15.53	-17.87	-0.73	-9.82	0.00	0.00	-235.96	-189.03	-216.72	-174.57
	L_{13}-U_{13}	-28.34	-33.53	-0.73	-17.65	0.00	0.00	-279.20	-231.60	-258.96	-215.61
	U_{13}-L_{14}	-22.06	-22.41	-27.39	-19.44	0.00	0.00	-242.88	-200.00	-183.08	-156.41
	L_{14}-U_{14}	-11.50	-27.98	-19.20	-18.19	0.00	0.00	-40.53	-149.63	-50.54	-136.90
	U_{14}-L_{15}	-23.62	-20.25	-33.37	-4.39	0.00	0.00	-13.30	-67.16	-93.94	-54.65
	L_{15}-U_{15}	-17.04	-20.72	-13.33	-8.95	0.00	0.00	23.86	-46.10	28.42	-30.81
	U_{15}-L_{16}	-4.89	-18.52	-37.33	-4.39	0.00	0.00	-138.39	-20.57	-137.40	-14.53
	U_{16}-L_{17}	-9.45	-8.36	69.93	6.94	0.00	0.00	202.81	104.39	306.61	124.28
	L_{17}-U_{17}	5.37	-2.80	1.88	1.33

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Bridge Trusses (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	U_0-U_1	-98.19	-1.82	1.62	2.01	-8.74	-0.65	0.45	2.38	-2.03	-24.30
	U_1-U_2	-154.58	-44.02	0.49	2.15	-3.81	-11.27	0.13	0.51	-1.04	-6.49
	U_2-U_3	-130.88	58.71	0.97	2.85	-4.83	-7.46	0.20	0.80	-1.35	12.99
	U_3-U_4	-46.29	76.63	1.30	2.85	-3.44	-3.53	0.27	0.72	-0.96	17.19
	U_4-U_5	-26.07	74.96	2.02	2.64	-2.07	0.47	0.77	1.36	-0.71	16.96
	U_5-U_6	19.43	119.86	2.26	2.33	-6.13	0.13	0.62	0.72	-1.37	0.17
	U_6-U_7	131.07	62.39	2.26	2.26	-6.82	0.01	0.41	0.80	-1.52	-0.41
	U_7-U_8	-71.37	606.06	3.07	4.08	-5.74	6.10	-1.34	3.99	0.00	0.00
	U_8-U_9	624.62	-195.24	2.22	1.09	5.48	-6.70	3.57	-1.52	0.00	0.00
	U_9-U_{10}	71.38	-13.83	1.06	1.92	0.57	-6.17	0.28	0.49	0.23	-0.97
	U_{10}-U_{11}	97.28	223.17	1.71	1.92	-2.36	0.49	0.39	0.26	-1.61	2.34
	U_{11}-U_{12}	35.32	221.77	2.00	1.82	-0.63	0.66	0.33	0.24	-1.72	25.83
	U_{12}-U_{13}	-120.58	-238.24	1.73	0.66	-2.25	-8.24	0.44	0.14	-0.62	-1.62
	U_{13}-U_{14}	201.64	-42.36	1.73	0.66	-4.61	-13.72	0.67	0.14	-1.36	-2.41
	U_{14}-U_{15}	380.63	263.81	1.52	0.88	-14.77	-6.00	0.32	0.20	-2.38	-1.60
	U_{15}-U_{16}	1.03	1.03	0.15	0.09	-4.87	0.36	-0.03	0.84	-0.40	-0.22
	U_{16}-U_{17}	-353.36	-172.80	0.60	-0.01	-13.17	-2.93	0.05	-0.04	-1.64	-0.73
	U_{17}-U_{18}	-227.30	-24.62	0.55	-0.07	-5.62	1.90	0.10	-0.06	-1.49	0.22
	U_{18}-U_{19}	-214.14	19.61	0.44	-0.18	-4.79	0.84	0.09	-0.06	-1.42	0.34
	U_{19}-U_{20}	-232.24	7.36	0.41	-0.46	-3.89	1.80	0.06	-0.04	-1.35	0.05
	U_{20}-U_{21}	-113.13	229.08	0.23	-0.22	-2.23	0.23	0.03	-0.02	-0.78	1.58
	U_{21}-U_{22}	-113.13	-299.08	-0.04	0.95	-0.62	-10.84	0.00	0.18	-0.50	-1.31
	U_{22}-U_{23}	-433.72	-277.73	0.63	0.14	-4.27	-3.33	0.29	0.05	-1.48	-0.96
	U_{23}-U_{24}	-433.72	-494.87	0.53	1.66	-8.62	-17.05	0.08	0.31	-1.29	-2.64
	U_{24}-U_{25}	-485.37	-642.49	0.76	2.38	-9.49	-19.45	0.11	0.44	-1.77	-3.78
	U_{25}-U_{26}	-543.26	-229.94	1.91	4.50	-15.66	0.37	0.87	2.15	-3.13	24.45
	U_{26}-U_{27}	-414.57	-309.81	3.16	2.72	-10.71	-13.99	0.64	0.58	-1.77	-2.26
	U_{27}-U_{28}	-386.52	-329.14	2.67	3.79	-14.55	-6.54	0.64	0.64	-2.44	-1.77
	U_{28}-U_{29}	-443.90	-59.15	2.80	3.62	-10.70	-2.55	0.49	0.82	-2.51	-0.82
	U_{29}-U_{30}	-318.56	-39.23	3.27	3.76	-12.03	-2.96	0.54	0.85	-2.94	-0.93
	U_{30}-U_{31}	-165.92	101.76	3.80	3.31	-8.69	-2.08	0.77	0.79	-1.44	-0.69
	U_{31}-U_{32}	-149.71	264.88	3.39	2.41	-7.47	0.72	0.73	0.60	-1.58	0.49
	U_{32}-U_{33}	-80.76	264.88	3.39	2.41	-7.47	0.72	0.73	0.60	-1.58	0.49
	U_{33}-U_{34}	-291.45	1963.41	1.81	5.99	-0.56	-0.11	-1.35	5.47	0.00	0.00
	U_{34}-U_{35}	1538.34	-183.83	3.69	1.10	5.53	-7.10	3.57	-1.52	0.00	0.00
	U_{35}-U_{36}	-27.62	20.42	1.22	2.39	-3.62	-9.45	-0.01	-0.26	0.00	0.00
	U_{36}-U_{37}	301.94	-42.36	1.22	2.39	-3.62	-9.45	-0.01	-0.26	0.00	0.00
	U_{37}-U_{38}	186.22	-23.02	2.29	2.65	-0.69	-11.19	0.46	0.70	0.18	-1.09
	U_{38}-U_{39}	179.28	-73.30	2.96	2.13	-2.36	-9.56	0.59	0.66	0.03	-1.32
	U_{39}-U_{40}	29.36	-74.05	2.21	2.96	-12.72	-2.36	0.44	0.59	-1.32	0.03
	U_{40}-U_{41}	-76.62	-111.17	2.57	0.19	-3.93	-10.88	0.57	0.05	-1.30	-1.47
	U_{41}-U_{42}	-158.30	-180.90	2.57	0.19	-3.93	-10.88	0.57	0.05	-1.30	-1.47
	U_{42}-U_{43}	-164.26	-164.79	1.16	1.12	-14.10	-6.53	0.68	0.50	-1.67	-1.21
	U_{43}-U_{44}	-137.26	-137.26	1.16	1.12	-14.10	-6.53	0.68	0.50	-1.67	-1.21
	U_{44}-U_{45}	-44.20	54.61	2.42	2.57	-10.88	-3.56	0.49	0.43	0.96	-0.34
	U_{45}-U_{46}	-69.18	212.29	2.06	2.58	-8.43	-0.61	0.53	0.34	-1.17	0.41
	U_{46}-U_{47}	-80.76	264.88	3.39	2.41	-7.47	0.72	0.73	0.60	-1.58	0.49
	U_{47}-U_{48}	-40.92	345.56	1.82	1.71	-8.24	0.05	-0.61	1.31	-0.96	0.63
	U_{48}-U_{49}	91.24	-22.64	1.82	1.71	-8.24	0.05	-0.61	1.31	-0.96	0.63
	U_{49}-U_{50}	-149.00	1535.72	1.00	6.04	-0.13	-0.93	-0.98	5.62	0.00	0.00
	U_{50}-U_{51}	1621.12	-341.75	3.02	2.05	-0.43	-0.60	1.68	-1.53	0.00	0.00
	U_{51}-U_{52}	-68.85	-17.72	2.26	2.94	0.00	-9.62	0.52	0.59	0.38	-1.49
	U_{52}-U_{53}	253.89	-149.73	2.26	2.94	0.00	-9.62	0.52	0.59	0.38	-1.49
	U_{53}-U_{54}	-358.58	-362.06	2.71	2.43	-7.45	-16.17	0.54	0.55	-1.63	-2.66
	U_{54}-U_{55}	-300.98	-456.96	2.97	2.63	-16.04	-9.99	0.69	0.61	-1.72	-3.10
	U_{55}-U_{56}	-358.47	-507.75	3.53	3.07	-17.77	-11.08	0.77	0.69	-1.91	-3.44
	U_{56}-U_{57}	-569.52	-449.99	1.96	0.30	-17.29	-7.85	0.38	-0.04	-2.55	-1.21
	U_{57}-U_{58}	-406.59	-544.41	1.22	-0.63	-9.90	-0.49	0.21	-0.18	-1.89	0.04
	U_{58}-U_{59}	-290.66	-12.32	0.95	0.97	4.70	2.07	0.20	-0.01	-1.64	0.67
	U_{59}-U_{60}	-434.97	-311.66	0.41	0.32	0.18	-7.20	0.25	0.07	3.50	-2.00
	U_{60}-U_{61}	-55.48	-266.27	0.41	0.32	0.18	-7.20	0.25	0.07	3.50	-2.00
	U_{61}-U_{62}	-21.73	-219.02	0.40	0.69	1.05	-8.89	-0.12	0.10	0.40	-1.52
	U_{62}-U_{63}	-444.50	-197.91	0.34	0.15	0.18	-16.01	-1.62	0.79	-0.62	-2.32
	U_{63}-U_{64}	-361.44	-188.05	0.43	1.70	-6.65	-8.47	-0.02	0.37	1.24	-1.70
	U_{64}-U_{65}	-252.08	-374.59	1.13	0.72	-6.27	-11.92	0.20	0.27	-1.74	-2.43
	U_{65}-U_{66}	-444.50	-197.91	0.34	0.15	0.18	-16.01	-1.62	0.79	-0.62	-2.32
	U_{66}-U_{67}	-235.24	-84.04	0.96	1.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{67}-U_{68}	-202.01	70.38	1.78	2.21	-7.70	-0.88	0.30	0.99	-1.62	-0.15
	U_{68}-U_{69}	-214.94	128.20	1.80	1.83	-6.37	0.06	0.39	0.52	-1.79	0.34
	U_{69}-U_{70}	-187.04	640.76	0.54	3.87	-5.19	1.90	-1.47	3.55	0.00	0.00
	U_{70}-U_{71}	35.32	221.77	2.00	1.82	-0.63	0.66	0.33	0.24	-1.72	25.83
	U_{71}-U_{72}	-120.58	-238.24	1.73	0.66	-2.25	-8.24	0.44	0.14	-0.62	-1.62
	U_{72}-U_{73}	201.64	-42.36	1.73	0.66	-4.61	-13.72	0.67	0.14	-1.36	-2.41
	U_{73}-U_{74}	380.63	263.81	1.52	0.88	-14.77	-6.00	0.32	0.20	-2.38	-1.60
	U_{74}-U_{75}	1.03	1.03	0.15	0.09	-4.87	0.36	-0.03	0.84	-0.40	-0.22
	U_{75}-U_{76}	-353.36	-172.80	0.60	-0.01	-13.17	-2.93	0.05	-0.04	-1.64	-0.73
	U_{76}-U_{77}	-227.30	-24.62	0.55	-0.07	-5.62	1.90	0.10	-0.06	-1.49	0.22
	U_{77}-U_{78}	-214.14	19.61	0.44	-0.18	-4.79	0.84	0.09	-0.06	-1.42	0.34
	U_{78}-U_{79}	-232.24	7.36	0.41	-0.46	-3.89	1.80	0.06	-0.04	-1.35	0.05
	U_{79}-U_{80}	-113.13	229.08	0.23	-0.22	-2.23	0.23	0.03	-0.02	-0.78	1.58
	U_{80}-U_{81}	-113.13	-299.08	-0.04	0.95	-0.62	-10.84	0.00	0.18	-0.50	-1.31
	U_{81}-U_{82}	-433.72	-277.73	0.63	0.14	-4.27	-3.33	0.29	0.05	-1.48	-0.96
	U_{82}-U_{83}	-433.72	-494.87	0.53	1.66	-8.62	-17.05	0.08	0.31	-1.29	-2.64
	U_{83}-U_{84}	-485.37	-642.49	0.76	2.38	-9.49	-19.45	0.11	0.44	-1.77	-3.78
	U_{84}-U_{85}	-543.26	-229.94	1.91	4.50	-15.66	0.37	0.87	2.15	-3.13	24.45
	U_{85}-U_{86}	-414.57	-309.81	3.16	2.72	-10.71	-13.99	0.64	0.58	-1.77	-2.26
	U_{86}-U_{87}	-386.52	-329.14	2.67	3.79	-14.55	-6.54	0.64	0.64	-2.44	-1.77
	U_{87}-U_{88}	-443.90	-59.15	2.80	3.62	-10.70	-2.55	0.49	0.82	-2.51	-0.82
	U_{88}-U_{89}	-318.56	-39.23	3.27	3.76	-12.03	-2.96	0.54	0.85	-2.94	-0.93
	U_{89}-U_{90}	-165.92	101.76	3.80	3.31	-8.69	-2.08	0.77	0.79	-1.44	-0.69
	U_{90}-U_{91}	-149.71	264.88	3.39	2.41	-7.47	0.72	0.73	0.60	-1.58	0.49
	U_{91}-U_{92}	-80.76	264.88	3.39	2.41	-7.47	0.72	0.73	0.60	-1.58	0.49
	U_{92}-U_{93}	-291.45	1963.41	1.81	5.99	-0.56	-0.11	-1.35	5.47	0.00	0.00
	U_{93}-U_{94}	1538.34	-183.83	3.69	1.10	5.53	-7.10	3.57	-1.52	0.00	0.00
	U_{94}-U_{95}	-27.62	20.42	1.22	2.39	-3.62	-9.45	-0.01	-0.26	0.00	0.00
	U_{95}-U_{96}	301.94	-42.36	1.22	2.39	-3.62	-9.45	-0.01	-0.26	0.00	0.00
	U_{96}-U_{97}	186.22	-23.02	2.29	2.65	-0.69	-11.19	0.46	0.70	0.18	-1.09
	U_{97}-U_{98}	179.28	-73.30	2.96	2.13	-2.36	-9.56	0.59	0.66	0.03	-1.32
	U_{98}-U_{99}	29.36	-74.05	2.21	2.96	-12.72	-2.36	0.44	0.59	-1.32	0.03
	U_{99}-U_{100}	-76.62	-111.17	2.57	0.19	-3.93	-10.88	0.57	0.05	-1.30	-1.47
	U_{100}-U_{101}	-158.30	-180.90	2.57	0.19	-3.93	-10.88	0.57	0.05	-1.30	-1.47
	U_{101}-U_{102}	-164.26	-164.79	1.16	1.12	-14.10	-6.53	0.68	0.50	-1.67	-1.21
	U_{102}-U_{103}	-137.26	-137.26	1.16	1.12	-14.10	-6.53	0.68	0.50	-1.67	-1.21
	U_{103}-U_{104}	-44.20	54.61	2.42	2.57	-10.88	-3.56	0.49	0.43	0.96	-0.34
	U_{104}-U_{105}	-69.18	212.29	2.06	2.58	-8.43	-0.61	0.53	0.34	-1.17	0.41
	U_{105}-U_{106}	-80.76	264.88	3.39	2.41	-7.47	0.72	0.73	0.60	-1.58	0.49
	U_{106}-U_{107}	-40.92	345.56	1.82	1.71	-8.24	0.05	-0.61	1.31	-0.96	0.63
	U_{107}-U_{108}	91.24	-22.64	1.82	1.71	-8.24	0.05	-0.61	1.31	-0.96	0.63
	U_{108}-U_{109}	-149.00	1535.72	1.00	6.04	-0.13	-0.93	-0.98	5.62	0.00	0.00
	U_{109}-U_{110}	1621.12	-341.75	3.02	2.05	-0.43	-0.60	1.68	-1.53	0.00	0.00
	U_{110}-U_{111}	-68.85	-17.72	2.26	2.94	0.00	-9.62	0.52	0.59	0.38	-1.49
	U_{111}-U_{112}	253.89	-149.73	2.26	2.94	0.00	-9.62	0.52	0.59	0.38	-1.49
	U_{112}-U_{113}	-358.58	-362.06	2.71	2.43	-7.45	-16.17	0.54	0.55	-1.63	-2.66
	U_{113}-U_{114}	-300.98	-456.96	2.97	2.63	-16.04	-9.99	0.69	0.61	-1.72	-3.10
	U_{114}-U_{115}	-358.47	-507.75	3.53	3.07	-17.77	-11.08	0.77	0.69	-1.91	-3.44
	U_{115}-U_{116}	-569.52	-449.99	1.96	0.30	-17.29	-7.85	0.38	-0.04	-2.55	-1.21
	U_{116}-U_{117}	-406.59	-544.41	1.22	-0.63	-9.90	-0.49	0.21	-0.18	-1.89	0.04
	U_{117}-U_{118}	-290.66	-12.32	0.95	0.97	4.70	2.07	0.20	-0.01	-1.64	0.67
	U_{118}-U_{119}	-434.97	-311.66	0.41	0.32	0.18	-7.20	0.25	0.07	3.50	-2.00
	U_{119}-U_{120}	-55.48	-266.27	0.41	0.32	0.18	-7.20	0.25	0.07	3.50	-2.00
	U_{120}-U_{121}	-21.73	-219.02	0.40	0.69	1.05	-8.89	-0.12	0.10	0.40	-1.52
	U_{121}-U_{122}	-444.50	-197.91	0.34	0.15	0.18	-16.01	-1.62	0.79	-0.62	-2.32
	U_{122}-U_{123}	-361.44	-188.05	0.43	1.70	-6.65	-8.47	-0.02	0.37	1.24	-1.70
	U_{123}-U_{124}	-252.08	-374.59	1.13	0.72	-6.27	-11.92	0.20	0.27	-1.74	-2.43
	U_{124}-U_{125}	-444.50	-197.91	0.34	0.15	0.18	-16.01	-1.62	0.79	-0.62	-2.32
	U_{125}-U_{126}	-235.24	-84.04	0.96	1.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{126}-U_{127}	-202.01	70.38	1.78	2.21	-7.70	-0.88	0.30	0.99	-1.62	-0.15
	U_{127}-U_{128}	-214.94	128.20	1.80	1.83	-6.37	0.06	0.39	0.52	-1.79	0.34
	U_{128}-U_{129}	-187.04	640.76	0.54	3.87	-5.19	1.90	-1.47	3.55	0.00	0.00
	U_{129}-U_{130}	705.88	-108.92	2.29	1.37	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{130}-U_{131}	53.55	84.28	1.29	2.13	-1.79	-6.02	0.40	0.65	-0.20	-0.87
	U_{131}-U_{132}	156.29	-12.44	2.04	1.96	-0.14	-6.84	0.70	0.62	0.15	-1.34
	U_{132}-U_{133}	46.88	-46.33	2.27	1.96	-3.05	-8.67	0.74	0.52	-0.74	-1.39
	U_{133}-U_{134}	57.85	-78.76	2.65	1.48	-7.86	-4.30	0.74	0.46	-1.03	-1.25
	U_{134}-U_{135}	20.60	-172.48	2.43	0.63	-7.38	-3.74	0.76	0.23	-1.42	-1.15
	U_{135}-U_{136}	-101.33	-63.04	1.71	0.14	-7.65	-1.20	0.53	0.02	-1.79	-0.65
	U_{136}-U_{137}	-55.82	-170.13	1.03	-0.46	-3.39	0.68	0.26	0.12	-1.52	-0.15

ZZ Axis Moment Properties

Location	Member	Start (k-in)	End (k-in)	a	C_{Axial}	C_{Joint}	S_{top} (in^3)	S_b (in^3)	S_{bt} (in^3)	I (in^4)	I_{NA} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F/S_{bt}	M_y (k-in)
Structure 1	U_0-U_1	0.9987285	4241.5	-0.1196	0.52	0.52	161.86	180.19	-0.06	0.63	-3.34	0.46	0.16	0.19	0.31
	U_1-U_2	0.9987153	3184.1	-0.4956	0.42	0.42	157.79	152.79	0.26	1.19	-1.94	2.25	-0.04	0.21	0.65
	U_2-U_3	0.9988004	2974.3	0.2209	0.68	0.68	73.71	3.14	-0.25	1.47	-0.85	-7.72	0.07	0.22	-0.69
	U_3-U_4	0.9988004	2974.3	-0.0224	0.59	0.59	153.23	68.34	-0.19	0.71	-1.15	-2.38	0.50	0.48	-1.37
	U_4-U_5	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_5-U_6	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_6-U_7	0.9988004	4704	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_7-U_8	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_8-U_9	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_9-U_{10}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{10}-U_{11}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{11}-U_{12}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{12}-U_{13}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{13}-U_{14}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{14}-U_{15}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{15}-U_{16}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{16}-U_{17}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{17}-U_{18}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{18}-U_{19}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{19}-U_{20}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{20}-U_{21}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{21}-U_{22}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{22}-U_{23}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{23}-U_{24}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{24}-U_{25}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{25}-U_{26}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{26}-U_{27}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{27}-U_{28}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{28}-U_{29}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{29}-U_{30}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{30}-U_{31}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{31}-U_{32}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{32}-U_{33}	0.9988004	2974.3	0.2235	0.65	0.65	69.22	0.45	-0.27	1.55	-3.27	-2.32	-0.04	0.35	0.47
	U_{33}-U_{34}	0.9988004	2974.3	0.2238	0.70	0.70	507.79	80.55	-0.04	-0.03	1.35	0.57	-0.10	0.00	-0.03
	U_{34}-U_{35}	0.9988004	2974.3	0.3460	0.74	0.74	59.78	109.85	1.01	0.77	0.74	1.47	-0.10	0.18	0.45
	U_{35}-U_{36}	0.9988004	2974.3	0.3981	0.74	0.74	30.98	29.38	0.35	0.04	-1.06	-3.36	0.00	-0.13	0.25
	U_{36}-U_{37}	0.9988004	2974.3	0.3869	0.76	0.76	192.32	-168.03	-0.67	0.10	-3.31	0.26	-0.34	-0.03	2.40
	U_{37}-U_{38}	0.9988004	2974.3	0.2238	0.70	0.70	507.79	80.55	-0.04	-0.03	1.35	0.57	-0.10	0.00	-0.03
	U_{38}-U_{39}	0.9988004	2974.3	0.3460	0.74	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-Built**

Vehicle Load Factors — Pedestrian Load Factors
DL Factor: 1.30 — DL Factor: 1.30
LL Factor: 1.30 — LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Does Lomastney vs. Tenn/Compression Load)

Axial - AB2

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	YY Axis Moments from STAAD: Start (k-in)	End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	I_{min} (in^4)	Shape Factor	M_p (k-in)	Formula L/8 Terms F$_y$*S_{bot}	M_z (k-in)	Equivalent Mom. Factor: a	$C_{b(max)}$	$C_{b(min)}$	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Axial Tension (k)	Moment Tension (k-in)	Total Tension (k)	Pass
Structure 1	L_0-L_1	-19.48	-91.71	0.57	-0.31	1.61	-1.59	-0.11	0.13	0.00	-0.64	7.60	-4.09	21.48	-21.26	-1.37	1.50	3.54	-7.68	-15.44	-124.54	2.61	-146.85	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.018	0.59	0.59	39.09	129.06	0.48	1.79	-0.69	-2.52	-0.03	-0.11	0.46	1.68	6.35	23.33	0.18	33.71	-0.46	-1.68	6.78	24.94	53.87	198.10	33.69	123.96	128.3	128.29	121.63	141.18	626.8	1.10	4659	—	0.99805042	4225.3	0.272	0.71	0.71	0.016	0.087	0.11	Yes	0.010	0.052	0.027	Yes	0.023	0.065	0.09	Yes
	L_1-L_2	30.33	-116.64	-2.44	-6.65	-0.50	1.76	-0.07	-0.13	0.43	-32.61	-88.88	-6.68	23.50	-6.82	-15.98	-1.85	5.12	-2.97	-267.18	30.75	201.55	0.49	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	0.011	0.60	0.60	169.01	-70.76	-1.96	-0.87	0.16	9.28	29.02	-12.93	2.29	-1.71	-138.95	-1.85	242.97	-104.66	12.4	138.3	128.29	115.05	141.18	626.8	1.10	4659	—	0.99805042	4225.3	-0.428	0.43	0.43	0.243	0.132	0.38	Yes	0.148	0.080	0.23	Yes	0.214	0.036	0.25	Yes
	L_2-L_3	31.20	-78.07	-3.50	-7.05	-0.50	1.91	-0.04	-0.27	0.21	-50.56	-110.75	-79.28	14.19	-25.52	-17.42	-4.23	7.25	-5.92	-5.98	-276.76	204.50	-114.97	-68.32	99.5	99.53	84.14	125.49	3469	1372.0	1.26	4141	0.99911881	3294.8	0.334	0.73	0.73	-135.73	-144.72	-17.26	1.64	1.20	-0.45	1.79	-1.01	0.04	0.05	-239.63	21.87	16.00	-5.97	26.53	-15.02	0.62	1.38	-123.37	-199.71	197.25	-199.90	171.6	171.62	158.81	188.47	749.3	1.10	6220	—	0.99199191	5851.9	-0.993	0.20	0.20	0.201	0.083	0.29	Yes	0.119	0.052	0.18	Yes	0.010	0.004	0.07	Yes
	L_3-L_4	-50.77	-124.31	0.57	-0.31	1.61	-1.59	-0.09	0.63	0.72	-32.47	-32.83	-17.81	-1.08	2.39	-1.36	1.47	3.47	-7.53	-12.62	-212.78	2.56	-344.37	92.6	76.68	74.47	100.97	2577	1026.3	1.21	3332	0.99900094	3052.4	-0.099	0.59	0.59	-66.28	-170.56	3.08	-1.44	1.34	0.19	-4.36	-16.88	28.74	0.42	-217.09	3.96	-13.51	57.52	-84.26	196.12	-135.07	31.39	225.18	784.3	1.10	6464	—	0.99199191	5851.9	-0.993	0.20	0.20	0.201	0.083	0.29	Yes	0.119	0.052	0.18	Yes	0.010	0.004	0.07	Yes
	L_4-L_5	-2.22	-269.06	-3.14	-1.66	1.88	3.55	-0.84	0.05	0.53	1.12	-41.94	-22.20	25.14	-47.37	-10.07	0.55	6.35	13.38	-6.47	-633.50	320.31	29.80	241.35	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99925482	3845.9	0.043	0.62	0.62	140.99	-140.80	5.48	1.64	-0.24	-0.42	0.33	-0.87	-0.36	-0.37	173.48	2.84	-54.52	88.14	-156.34	177.43	-209.34	205.5	206.53	176.18	225.18	784.3	1.10	7464	—	0.99577898	6850.4	-0.890	0.26	0.26	0.555	0.183	0.74	Yes	0.557	0.191	0.75	Yes
	L_5-L_6	-2.29	-58.33	-3.65	-0.81	-2.07	-1.13	0.02	0.00	-0.29	-0.14	-48.76	-19.75	32.37	-55.13	-14.46	-0.34	7.35	16.01	-66.34	-57.95	32.07	-24.76	103.9	103.94	94.61	136.57	4040	1678.1	1.31	4520	0.99925482	4776.0	-0.073	0.62	0.62	140.99	-140.80	-5.44	1.64	-0.24	0.42	0.33	0.87	0.36	0.37	27.27	-240.38	4.48	-1.64	0.24	-0.42	0.33	-0.87	0.36	0.37	196.12	-135.07	31.39	225.18	784.3	1.10	7464	—	0.99577898	6850.4	-0.890	0.26	0.26	0.555	0.183	0.74	Yes	0.557	0.191	0.75	Yes
	L_6-L_7	-38.40	-570.96	0.26	-1.09	2.20	-4.60	0.00	0.00	0.35	3.65	3.42	-14.50	2.70	61.45	0.00	0.00	0.00	-4.16	43.81	-45.48	723.41	-51.83	86.92	145.8	145.75	130.44	228.84	6500	2932.4	1.37	7552	0.99952915	4806.3	-0.063	0.57	0.57	219.77	184.07	1.18	-0.11	1.79	4.44	0.00	0.00	-0.09	15.80	-1.40	23.94	59.36	0.00	0.00	11.40	-1.34	352.76	212.34	328.16	357.64	355.4	355.44	352.52	403.40	1093.1	1.13	13312	—	0.99711976	11898.3	0.918	0.97	0.97	0.553	0.119	0.68	Yes	0.396	0.096	0.49	Yes
	L_7-L_8	555.48	-39.97	-1.02	0.35	5.43	-0.55	0.00	0.00	5.40	-0.27	-13.20	45.50	70.23	-0.58	0.00	0.00	40.84	-3.23	-85.56	868.51	717.17	145.5	145.75	130.74	228.84	6500	2932.4	1.37	7552	0.99952915	4806.3	0.828	0.93	0.93	287.52	215.72	-0.07	2.17	4.22	1.69	0.00	0.00	2.51	16.85	216.55	31.69	292.44	268.52	355.4	355.44	304.93	403.40	1093.1	1.13	13312	—	0.99711976	11898.3	0.693	0.87	0.87	0.575	0.167	0.78	Yes	0.567	0.115	0.69	Yes
	L_8-L_9	186.35	-153.68	3.91	-0.25	2.73	-1.56	0.00	0.00	0.34	-0.49	-11.73	-3.23	20.35	-20.20	0.00	0.00	0.00	-1.53	4.03	-5.92	257.48	-203.99	203.45	248.31	144.93	129.09	152.84	5010	2376.8	1.33	6364	0.99946914	4776.1	0.723	0.86	0.86	133.15	-0.77	34.61	0.99	4.23	6.75	0.00	0.00	19.06	17.09	286.06	10.74	260.35	238.14	288.5	288.46	248.21	327.90	1086.4	1.12	10626	—	0.99754326	9469.7	0.370	0.45	0.45	0.453	0.069	0.53	Yes	0.448	0.053	0.50	Yes
	L_9-L_{10}	-164.35	-164.49	-2.09	-3.11	2.27	1.28	0.00	0.00	-27.03	-27.07	-40.29	29.36	16.60	0.00	0.00	0.00	11.99	-8.75	178.47	-268.21	251.82	-192.25	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.670	0.33	0.33	-135.95	67.91	1.99	-6.23	-0.86	-0.35	0.00	0.00	-1.05	25.76	-85.63	-11.12	-4.48	0.00	0.00	-11.47	15.25	-143.24	-17.06	-191.16	81.94	158.2	158.16	151.51	173.24	694.3	1.10	5717	—	0.99578832	5208.8	-0.429	0.43	0.43	0.317	0.045	0.37	Yes	0.315	0.070	0.39	Yes
	L_{10}-L_{11}	78.54	-251.25	1.63	-0.17	1.52	0.16	-1.26	0.42	0.25	-21.08	-61.60	19.24	14.63	6.78	-14.53	3.76	7.35	-15.23	-7.35	-435.75	413.68	236.49	-467.05	145.8	145.75	130.74	228.84	6500	2932.4	1.37	7552	0.99952915	4806.3	-0.493	0.46	0.46	74.19	-12.73	1.37	0.44	-0.58	1.54	0.80	-2.07	-7.50	22.07	-11.47	0.73	-0.92	-207.39	17.46	103.85	-20.36	218.3	213.34	144.53	172.24	694.3	1.10	5717	—	0.99578832	5208.8	-0.429	0.43	0.43												
	L_{11}-L_{12}	-57.28	-170.48	-0.05	-4.91	1.66	0.83	-0.97	-0.97	0.43	0.20	-65.35	-43.53	52.50	-70.23	-19.56	1.78	-11.64	5.10	2.41	-159.42	-304.21	-48.51	-207.61	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99921252	4288.6	0.524	0.81	0.81	-96.77	102.89	1.44	-8.37	-0.43	-0.19	-1.11	1.03	-0.64	-0.59	-101.65	-3.33	-133.92	131.93	233.3	233.26	201.34	269.94	975.8	1.11	8919	—	0.99716998	7679.8	-0.490	0.32	0.32	0.296	0.042	0.34	Yes	0.266	0.042	0.31	Yes
	L_{12}-L_{13}	70.09	-469.84	-4.55	-8.82	1.28	1.15	-0.45	-2.28	0.35	0.23	-58.82	-114.09	16.57	14.83	-5.44	-27.35	4.18	2.75	14.65	-799.10	112.66	-591.51	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99910036	5370.6	-0.019	0.59	0.59	106.42	40.42	-16.70	7.8	1.01	-0.43	1.78	-1.05	-0.05	0.08	-216.01	10.12	1.36	-5.54	25.56	-15.04	-0.68	1.19	-142.46	65.70	140.11	45.34	321.7	321.70	275.89	363.71	1221.7	1.13	12002	—	0.99741170	10568.7	-0.461	0.42	0.42	0.430	0.116	0.55	Yes	0.279	0.071	0.35	Yes
	L_{13}-L_{14}	-488.80	-187.61	0.57	-0.31	1.61	-1.59	-0.11	0.13	0.00	-0.64	7.60	-4.09	21.48	-21.26	-1.37	1.50	3.54	-7.68	-15.44	-124.54	2.61	-146.85	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.018	0.59	0.59	39.09	129.06	0.48	1.79	-0.69	-2.52	-0.03	-0.11	0.46	1.68	6.35	23.33	0.18	33.71	-0.46	-1.68	6.78	24.94	53.87	198.10	33.69	123.96	128.3	128.29	121.63	141.18	626.8	1.10	4659	—	0.99805042	4225.3	0.272	0.71	0.71	0.016	0.087	0.11	Yes	0.010	0.052	0.027	Yes	0.023	0.065	0.09	Yes
	L_{14}-L_{15}	-272.90	-364.22	-7.14	-7.08	0.44	0.78	-1.43	-1.04	0.13	-0.03	-92.38	-91.63	59.65	12.09	-17.14	-12.52	1.55	-25.35	-474.86	-579.62	-347.62	-447.38	179.7	179.69	170.68	251.43	7453	3000.1	1.42	8297	0.99912321	5924.6	0.819	0.93	0.93	-10.67	-168.47	7.81	1.61	1.04	0.46	1.47	2.07	-0.11	-0.01	-161.02	20.82	13.46	-15.32	-1.51	-0.07	-140.20	-165.94	3.62	-185.20	375.5	375.47	322.87	431.42	1347.7	1.15	14237	—	0.99727272	12356.7	-0.205	0.34	0.34	0.252	0.049	0.31	Yes	0.256	0.066	0.33	Yes
	L_{15}-L_{16}	389.86	-47.23	-2.05	-0.77	-2.06	-1.26	-0.12	0.05	0.07	-0.37	-20.34	-17.58	3.91	7.00	6.96	-2.65	0.83	-0.72	-3.84	-147.43	-646.74	-312.77	-202.05	80.4	80.43	69.54	101.66	2400	1072.4	1.25	3716	0.99952915	5370.6	-0.007	0.57	0.57	-113.05	71.52	3.04	-3.55	0.18	0.69	-2.07	1.06	0.02	0.05	-85.64	39.56	-5.34	22.40	-29.70	82.50	33.18	-143.32	164.53	302.9	302.89	258.42	342.42	1154.2	1.12	11429	—	0.99741170	10568.7	-0.461	0.42	0.42	0.430	0.116	0.55	Yes	0.279	0.071	0.35	Yes
	L_{16}-L_{17}	-202.42	-201.75	-0.75	-0.35	0.23	0.05	-0.91	0.20	0.00	0.00	-9.73	-4.57	3.00	0.62	-10.86	2.40	0.00	0.00	-275.79	21.03	-259.24	27.78	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5183	0.99904481	3891.8	-0.076	0.57	0.57	54.74	-106.62	-0.92	-0.86	0.26	0.29	0.89	-0.77	0.00	0.00	-11.88	-11.14	3.35	3.79	12.77	-11.08	0.00	0.00	55.73	-153.08	75.52	-133.67	213.3	213.34	184.04	236.66	808.1	1.11	7813	—	0.99727381	7024.3	-0.364	0.45	0.45	0.356	0.073	0.43	Yes	0.228	0.044	0.28	Yes
	L_{17}-L_{18}	-240.36	-179.73	-1.48	-3.41	0.00	0.06	-0.06	-0.12	0.07	-0.19	-19.18	-14.36	-2.44	0.51	-0.77	-13.26	6.89	-3.06	-238.16	-224.22	-306.28	23.04	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.5	-0.693	0.53	0.53	-128.46	114.23	1.31	1.06	-0.25	0.43	0.01	-1.25	0.99	4.04	16.87	0.72	-13.11	11.99	-17.84	14.22	-150.45	19.72	0.39	-17.98	14.22	-150.45	19.72	0.39	-17.98	14.22	-133.11	107.46	146.13	626.8	1.10	4822	—	0.99810102	4303.9	-0.562	0.42	0.42	0.214	0.087	0.30	Yes	0.214	0.087	0.30	Yes
	L_{18}-L_{19}	-190.79	100.10	-0.73	-0.09	-2.73	1.90	0.06	-0.06	-1.21	0.90	-9.47	-1.14	-35.27	24.54	0.74	-0.71	-14.53	10.82	260.34	128.64	312.77	-202.05	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.5	0.646	0.86	0.86	109.51	24.52	1.31	0.29	-1.07	-0.24	0.03	0.01	0.91	0.21	16.98	3.79	-3.09	0.46	0.10	13.14	2.96	164.43	36.81	141.44	142.17	133.1	133.11	119.24	146.13	626.8	1.10	4822	—	0.99810099	4383.9	0.224	0.69	0.69	0.022	0.128	0.16	Yes	0.104	0.062	0.17	Yes
	L_{19}-L_{20}	26.57	-260.07	0.27	-0.14	1.09	-2.39	-0.05	0.10	0.35	-1.08	3.44	-1.78	13.94	-30.50	-0.56	-1.20	4.19	-12.92	39.01	-340.40	58.11	-21.90	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.115	0.55	0.55	22.46	78.18	0.42	1.67	-0.28	-0.96	0.01	0.04	0.23	0.80	5.42	18.77	-3.53	-12.21	0.16	0.53	3.28	11.39	36.25	126.03	28.88	28.13	167.9	167.91	155.45	184.50	1098.1	1.10	6089	—	0.99834634	5531.9	0.288	0.72	0.72												
	L_{20}-L_{21}	201.83	-347.02	0.75	-0.45	1.27	-0.12	-0.17	-0.12	0.07	-0.36	5.39	-2.79	19.26	-28.36	-0.78	1.86	4.86	-11.78	-214.85	-511.93	39.22	-357.96	103.29	148.92	129.52	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.491	0.55	0.55	89.18	-52.82	-0.58	-0.50	0.30	-0.21	-0.12	0.08	0.39	-0.25	-0.12	0.08	0.39	-0.25	-0.12	-0.83	71.63	117.12	-0.35	188.2	188.2	167.91	155.45	184.50	1098.1	1.10	6089	—	0.99834634	5531.9	-0.048	0.58	0.58	0.259	0.131	0.41	Yes	0.157	0.080	0.25	Yes
	L_{21}-L_{22}	7.20	-277.30	-2.44	-6.42	-0.52	0.86	0.23	-0.18	-0.13	0.17	-31.11	-81.96	-68.66	-6.68	-10.92	2.78	-14.17	-1.60	2.04	-231.08	-667.04	6.68	-346.29	162.5	162.51	151.98	209.67	4946	2122.2	1.29	6919	0.99904245	5357.2	0.067	0.63	0.63	-55.27	127.02	-1.43	-10.33	-0.02	-0.10	-0.47	0.98	-0.03	-0.09	-18.30	-131.95	-0.31	-1.23	-6.67	13.97	-0.37	-77.37	-95.63	-6.42	-72.25	163.53	298.9	218.75	284.83	1462.8	1.10	9499	—	0.99811519	8526.4	-0.146	0.42	0.42	0.388	0.085	0.48	Yes	0.388	0.085	0.48	Yes
	L_{22}-L_{23}	-30.33	-479.13	0.83	-0.63	1.61	-1.59	-0.11	0.13	0.00	-0.64	7.60	-4.09	21.48	-21.26	-1.37	1.50	3.54	-7.68	-15.44	-124.54	2.61	-146.85	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.4	-0.018	0.59	0.59	39.09	129.06	0.48	1.79	-0.69	-2.52	-0.03	-0.11	0.46	1.68	6.35	23.33	0.18	33.71	-0.46	-1.68	6.78	24.94	53.87	198.10	33.69	123.96	128.3	128.29	121.63	141.18	626.8	1.10	4659	—	0.99805042	4225.3	0.272	0.71	0.71	0.016	0.087	0.11	Yes	0.010	0.052	0.027	Yes	0.023	0.065	0.09	Yes
	L_{23}-L_{24}	-387.44	-421.31	-11.49	-9.22	0.41	1.56	-1.24	-1.72	0.04	0.32	-165.72	-146.96	-117.85	5.29	-19.89	-14.87	-20.62	0.43	3.78	-668.48	-700.91	-470.79	-521.84	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.964	0.98	0.98	-229.89	134.81	4.71	-7.17	-0.53	-0.13	-0.58	0.93	-0.13	-0.07	60.15	-91.56	-6.76	-1.61	-8.22	13.13	-1.83	-0.37	48.44	56.23	-38.54	173.16	385.1	385.05	321.50	445.45	1668.6	1.16	14832	—	0.99795552	12807.3	-0.223	0.31	0.31	0.425	0.078	0.51	Yes	0.281	0.047	0.33	Yes
	L_{24}-L_{25}	-4.19	-324.22	-2.60	-7.51	-0.24	0.41	-1.42	-2.42	0.01	0.15	-132.68	-152.81	8.37	28.39	-17.09	-26.07	-1.44	4.60	-4.02	-492.62	-856.65	-289.39	-639.72	162.5	162.51	151.98	209.67	4946	2122.2	1.29	6919	0.99904245	5357.2	-0.063	0.63	0.63	-51.53	157.21	-1.34	-9.63	-0.50	-0.12	-0.54	1.16	-0.12	-0.06	-175.32	16.30	-4.66	-1.53	-7.66	16.23	-1.71	-0.34	-175.32	16.30	-4.66	-1.53	-7.66	16.23	-1.71	-0.34	104.64	76.55	181.19	385.1	385.05	321.50	445.45	1668.6	1.16	14832	—	0.99795552	12807.3	-0.223	0.31	0.31	0.425	0.078	0.51	Yes	0.281	0.047	0.33	Yes
	L_{25}-L_{26}	-419.34	-397.03	-16.29	-10.13	2.58	2.79	-2.41	-2.51	0.47	0.59	-208.08	-129.41	32.94	33.68	-29.98	-29.41	5.41	5.63	7.06	-1070.64	-832.38	-762.32	-417.75	216.3	216.33	205.74	344.19	7625	3425.8	1.99	11778	0.99911944	7132.6	0.588	0.94	0.94	-312.39	163.26	1.18	-11.88	-0.16	0.07	-1.29	1.10	0.04	-0.01	-215.09	-157.72	-2.07	0.91	-218.42	-157.72	-2.07	0.91	-218.42	-148.78	213.42	428.2	253.42	403.90	1947.0	1.15	16201	—	0.99729739	14088.7	-0.697	0.32	0.32	0.413	0.108	0.52	Yes	0.333	0.086	0.42	Yes
	L_{26}-L_{27}	-394.51	-7.27	-11.19	-6.07	2.27	4.21	-1.56	-0.96	0.46	0.50	-142.94	-77.54	28.95	53.79	-23.32	-11.46	5.50	10.76	-698.69	-110.25	-475.23	60.48	255.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.158	0.86	0.86	95.17	-118.49	-10.85	3.37	1.05	0.12	0.87	-1.62	0.14	0.21	-136.68	43.09	13.83	1.53	12.31	-23.04	1.97	0.02	-56.54	-88.01	140.39	-152.04	330.3	330.27	276.06	369.76	1851.4	1.12	12202	—	0.99739952	10877.1	-0.923	0.23	0.23	0.367	0.090	0.46	Yes	0.241	0.053	0.30	Yes
	L_{27}-L_{28}	-324.22	-260.75	-1.40	-3.41	-0.50	0.58	-1.43	-0.77	0.13	-0.37	-85.29	-39.47	37.27	20.34	-17.58	-8.79	5.69	-3.10	-238.16	-224.22	-306.28	23.04	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900094	2755.5	-0.693	0.53	0.53	-128.46	114.23	1.31	1.06	-0.25	0.43	0.01	-1.25	0.99	4.04	16.87	0.72	-13.11	11.99	-17.84	14.22	-150.45	19.72	0.39	-17.98	14.22	-150.45	19.72	0.39	-17.98	14.22	-133.11	107.46	146.13	626.8	1.10	4822	—	0.99810102	4303.9	-0.562	0.42	0.42	0.214	0.087	0.30	Yes	0.214	0.087	0.30	Yes
	L_{28}-L_{29}	-295.55	-262.64	-5.69	-3.12	2.03	3.96	-1.43	-0.65	0.41	0.92	-72.67	-39.91	25.94	50.01	-17.12	-5.60	4.93	10.98	-479.69	-289.54	-350.50	407.22	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99912321	5924.6	0.819	0.93	0.93	-10.67	-168.47	7.81	1.61	1.04	0.46	1.47	2.07	-0.11	-0.01	-161.02	20.82	13.46	-15.32	-1.51	-0.07	-140.20	-165.94	3.62	-185.20	375.5	375.47	322.87	431.42	1347.7	1.15	14237	—	0.99727272	12356.7	-0.205	0.34	0.34	0.252	0.049	0.31	Yes	0.256	0.066	0.33	Yes
	L_{29}-L_{30}	-388.96	-84.24	-6.42	-3.13	2.03	3.96	-1.43	-0.65	0.41	0.92	-72.67	-39.91	25.94	50.01	-17.12	-5.60	4.93	10.98	-479.69	-289.54	-350.50	407.22	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99912321	5924.6	0.819	0.93	0.93	-10.67	-168.47	7.81	1.61	1.04	0.46	1.47	2.07	-0.11	-0.01	-161.02	20.82	13.46	-15.32	-1.51	-0.07	-140.20	-165.94	3.62	-185.20	375.5	375.47	322.87	431.42	1347.7	1.15	14237	—	0.99727272	12356.7	-0.205	0.34	0.34	0.252	0.049	0.31	Yes	0.256	0.066	0.33	Yes
	L_{30}-L_{31}	-188.92	-585.38	-0.59	-0.99	2.08	4.09	0.00	0.00	-0.58	-1.88	-7.56	-12.62	26.51	52.28	0.00	0.00	0.00	-6.97	22.08	-255.43	744.59	-211.13	828.86	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916217	5408.6	-0.255	0.50	0.50	108.48	-203.02	0.20	0.96	-1.14	-1.52	0.00	0.00	0.01	0.77	-0.84	-0.21	-0.11	0.00	0.00	0.01	0.77	-0.84	-0.21	-0.11	0.00	0.00	10.15	-14.04	144.40	-254.60	122.14	-289.13	294.1	294.09	243.19	323.60	1490.3	1.10	10679	—	0.99809332

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: 4F1
Condition: As-Built

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 1.30
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	U_0–L_1	-15.70	54.51	0.22	-0.56	-2.37	2.35	0.03	-0.13	-0.04	0.43
	U_1–L_1	-27.61	29.28	0.75	-0.69	-1.87	2.04	0.20	-0.18	-0.57	0.52
	U_1–L_2	40.61	-5.24	0.55	-0.23	-0.26	0.35	9.26	-10.81	-10.23	10.33
	U_1–U_2	40.61	-41.50	0.55	-0.69	-0.68	0.88	0.17	-0.21	-0.06	0.10
	L_1–L_2	56.81	-57.80	0.00	-0.00	-0.00	0.00	0.30	-0.31	-0.10	0.10
	U_2–L_2	64.44	-72.22	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
	U_2–L_3	64.44	-72.27	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
	U_3–L_3	109.00	-121.35	-0.60	0.65	1.90	-1.96	0.00	0.00	0.00	0.00
	U_3–L_4	-42.62	47.12	0.70	0.82	-2.41	2.90	0.00	0.00	0.00	0.00
	U_4–L_4	-101.01	109.70	0.70	0.82	-2.41	3.01	0.00	0.00	-0.94	1.08
	U_5–L_5	-123.92	126.16	0.04	-0.11	-1.62	2.22	0.00	0.00	0.00	0.00
	U_6–L_6	-127.70	170.40	-0.01	-0.05	-2.24	2.99	0.00	0.00	-6.18	8.60
	U_6–L_7	-106.29	107.56	0.15	-0.08	-1.84	1.87	0.00	0.00	-5.55	5.61
	U_7–L_7	-66.48	79.89	0.27	-0.25	-1.23	1.43	0.00	0.00	-0.33	0.40
	U_7–L_8	-31.84	36.73	0.40	-0.13	-0.59	0.67	0.00	0.00	-0.09	0.10
	U_8–L_8	17.16	23.69	-0.68	0.64	1.62	-1.71	-0.10	0.11	0.27	-0.30
	U_8–L_9	64.44	-72.27	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
	U_9–L_9	74.44	-85.11	-0.28	0.29	1.76	-1.83	-0.06	0.06	0.44	-0.49
	U_9–L_{10}	64.44	-77.77	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
	U_{10}–L_{10}	164.37	-173.76	-0.33	0.32	2.63	-2.69	-0.07	0.07	0.91	-0.96
	U_{10}–L_{11}	194.92	-235.55	-0.22	0.29	2.34	-2.73	-0.06	0.07	1.06	-1.17
	U_{11}–L_{11}	113.48	204.38	-2.29	2.11	0.00	0.00	-0.72	0.89	-2.78	2.48
	U_{11}–L_{12}	-201.32	204.79	0.69	-0.64	-3.18	3.95	0.14	-0.18	-0.51	0.63
	U_{12}–L_{12}	-79.54	88.71	0.47	-0.48	-1.79	1.93	0.10	-0.10	-0.37	0.41
	U_{12}–L_{13}	-79.54	88.71	0.47	-0.48	-1.79	1.93	0.10	-0.10	-0.37	0.41
	U_{13}–L_{13}	-4.04	12.50	0.66	-0.62	-0.87	1.10	0.13	-0.17	-0.21	0.39
	U_{13}–L_{14}	27.52	-27.99	-1.08	-1.11	-0.52	0.56	0.10	-0.12	-0.04	0.05
	U_{14}–L_{14}	59.94	-69.39	-0.31	-0.13	1.18	-1.25	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	130.31	-141.80	-0.26	0.20	2.28	-2.39	0.00	0.00	0.47	-0.50
	U_{15}–L_{15}	216.58	-221.43	-0.11	0.07	3.79	-3.80	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	193.18	-200.19	-0.19	0.28	2.72	-2.86	0.00	0.00	0.67	-0.68
	U_{16}–L_{16}	194.78	-194.55	-0.35	0.42	2.57	-2.66	0.00	0.00	0.65	-0.65
	U_{16}–L_{17}	170.72	-170.02	-0.46	0.56	2.25	-2.33	0.00	0.00	0.57	-0.57
	U_{17}–L_{17}	231.65	-230.62	-0.89	0.90	2.41	-2.27	0.07	-0.12	0.72	-0.68
	U_{17}–L_{18}	26.62	-29.23	0.71	-0.68	0.15	0.09	-0.02	0.03	-0.80	0.75
	U_{18}–L_{18}	-225.23	219.22	0.18	-0.13	-3.57	3.40	0.02	0.03	-6.80	6.75
	U_{18}–L_{19}	-182.78	187.59	0.38	-0.33	-2.87	3.01	0.04	-0.05	-5.48	5.61
	U_{19}–L_{19}	-182.78	181.59	0.51	-0.49	-3.00	3.30	0.07	-0.08	-5.48	5.61
	U_{19}–L_{20}	-159.35	163.90	0.61	-0.62	-3.22	3.59	0.00	0.00	-4.84	5.07
	U_{20}–L_{20}	-144.26	147.73	0.74	-0.76	-3.44	3.77	0.00	0.00	-4.39	4.84
	U_{20}–L_{21}	-99.51	63.36	0.47	-0.47	-1.04	1.26	0.00	0.00	-0.34	0.35
	U_{21}–L_{21}	-99.51	63.36	0.47	-0.47	-1.04	1.26	0.00	0.00	-0.34	0.35
	U_{21}–L_{22}	-5.06	-5.01	-0.12	0.14	0.13	-0.13	0.00	0.00	-0.07	0.09
	U_{22}–L_{22}	49.28	-55.09	-0.54	0.53	1.34	-1.41	0.00	0.00	0.00	0.00
	U_{23}–L_{23}	70.77	-74.09	-0.53	0.53	1.84	-1.91	-0.05	0.05	0.40	-0.41
	U_{24}–L_{24}	104.65	-105.00	-0.92	0.48	2.19	-2.18	-0.06	0.06	0.52	-0.51
	U_{25}–L_{25}	119.78	-119.16	-0.91	0.48	2.19	-2.18	-0.06	0.06	0.52	-0.51
	U_{26}–L_{26}	189.58	-191.05	-0.31	0.39	3.42	-3.47	-0.06	0.06	0.80	-0.81
	U_{27}–L_{27}	53.53	-57.01	-0.31	0.39	1.03	-1.08	-0.06	0.06	0.24	-0.25
	U_{28}–L_{28}	207.01	-210.59	-0.56	0.56	3.66	-3.72	0.00	0.00	0.81	-0.81
	U_{29}–L_{29}	144.26	-147.73	-0.74	0.76	2.62	-2.68	0.00	0.00	0.58	-0.58
	U_{30}–L_{30}	-251.15	245.11	0.37	-0.29	-2.99	2.91	-0.03	0.06	0.81	-0.77
	U_{31}–L_{31}	-185.39	176.08	0.22	-0.22	-2.46	2.33	0.00	0.00	-0.60	0.56
	U_{32}–L_{32}	-185.34	192.19	0.04	0.01	-2.42	2.76	0.00	0.00	-0.60	0.56
	U_{33}–L_{33}	-116.39	129.36	0.24	-0.15	-2.12	2.25	0.00	0.00	-0.42	0.45
	U_{34}–L_{34}	-116.39	129.36	0.24	-0.15	-2.12	2.25	0.00	0.00	-0.42	0.45
	U_{35}–L_{35}	-52.79	62.48	-0.15	0.18	-0.33	0.39	0.00	0.00	-0.18	0.20
	U_{36}–L_{36}	-19.17	20.05	-0.38	0.38	-0.12	0.13	0.00	0.00	-0.06	0.07
	U_{37}–L_{37}	18.83	25.50	-0.74	0.67	1.59	-1.72	-0.14	0.14	0.22	-0.25
	U_{38}–L_{38}	18.83	25.50	-0.74	0.67	1.59	-1.72	-0.14	0.14	0.22	-0.25
	U_{39}–L_{39}	95.02	-96.90	-0.45	0.45	1.75	-1.83	-0.10	0.10	0.37	-0.40
	U_{40}–L_{40}	171.23	-183.34	-0.69	0.69	2.91	-3.04	-0.10	0.10	0.61	-0.67
	U_{41}–L_{41}	189.59	-202.30	-0.55	0.53	2.70	-2.75	-0.12	0.11	0.78	-0.81
	U_{42}–L_{42}	214.89	-270.10	-0.33	0.49	2.21	-2.84	-0.06	0.10	0.72	-0.93
Structure 2	U_0–L_1	140.58	-181.45	-0.22	0.19	2.11	-2.64	0.00	0.00	0.72	-0.89
	U_1–L_1	129.25	-129.19	-0.17	0.33	1.83	-2.02	0.00	0.00	0.67	-0.69
	U_1–L_2	180.48	-209.68	-0.67	0.79	2.05	-2.18	0.00	0.00	0.93	-1.09
	U_2–L_2	24.90	-48.24	-0.64	0.81	-1.70	1.88	0.00	0.00	0.01	-0.14
	U_2–L_3	-121.66	132.24	0.09	-0.08	-2.60	2.70	0.00	0.00	-0.72	0.78
	U_3–L_3	-77.50	76.02	0.05	-0.05	-1.69	2.11	0.00	0.00	-0.47	0.49
	U_3–L_4	42.60	70.37	0.03	-0.05	-1.18	1.57	0.00	0.00	-0.40	0.45
	U_4–L_4	-57.67	58.82	-0.13	0.13	-0.60	0.65	0.00	0.00	-0.32	0.33
	U_4–L_5	-41.96	42.31	-0.91	0.90	1.13	-1.27	-0.17	0.20	0.03	-0.06
	U_5–L_5	-9.20	-2.43	-0.66	0.74	1.62	-1.89	-0.19	0.21	0.28	-0.35
	U_5–L_6	28.09	-38.34	-0.58	0.55	1.82	-1.79	-0.15	0.16	0.50	-0.53
	U_6–L_6	78.23	-95.55	-0.36	0.33	1.49	-1.91	-0.15	0.17	0.56	-0.71

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula (.8 Tens.* F_y-f_a)	M_r (k-in)
U_0–L_1	-61.65	-61.23	-61.65	117.09	15.4	15.42	15.42	23.71	2	751.9	1.54
U_1–L_1	-61.65	-113.09	15.4	15.42	15.42	23.71	2	751.9	1.54
U_1–L_2	-10.23	-20.89	-32.11	14.01	15.4	15.42	15.42	23.71	2	751.9	1.54
U_1–U_2	-38.63	-38.63	-60.97	-38.63	15.4	15.42	15.42	23.71	2	751.9	1.54
L_1–L_2	-0.10	-0.10	-0.16	-0.10	15.4	15.42	15.42	23.71	2	751.9	1.54
U_2–L_2	-54.85	-25.01	-20.12	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_2–L_3	-54.85	-25.01	-20.12	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_3–L_3	-96.04	-45.62	-35.79	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_3–L_4	-37.49	-17.72	-13.97	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_4–L_4	-88.92	-88.92	-140.40	-88.92	15.4	15.42	15.42	23.71	2	751.9	1.54
U_5–L_5	-107.12	-107.12	-169.12	-107.12	15.4	15.42	15.42	23.71	2	751.9	1.54
U_6–L_6	-110.36	-147.27	-232.49	-147.27	15.4	15.42	15.42	23.71	2	751.9	1.54
U_6–L_7	-92.08	-92.08	-145.39	-92.08	15.4	15.42	15.42	23.71	2	751.9	1.54
U_7–L_7	-57.49	-69.06	-109.01	-69.06	15.4	15.42	15.42	23.71	2	751.9	1.54
U_7–L_8	-27.53	-31.77	-50.15	-31.77	15.4	15.42	15.42	23.71	2	751.9	1.54
U_8–L_8	14.84	20.49	32.52	20.49	15.4	15.42	15.42	23.71	2	751.9	1.54
U_8–L_9	-54.85	-25.01	-20.12	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_9–L_9	-64.36	-29.33	-23.16	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_9–L_{10}	-54.85	-34.91	-55.14	-34.91	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{10}–L_{10}	-142.17	-64.81	-51.15	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{10}–L_{11}	-168.64	-209.54	-330.92	-209.54	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{11}–L_{11}	-250.68	-250.68	-396.00	-250.68	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{11}–L_{12}	-250.18	-222.01	-350.78	-222.01	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{12}–L_{12}	-252.19	-252.19	-398.43	-252.19	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{12}–L_{13}	-252.19	-252.19	-398.43	-252.19	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{13}–L_{13}	-21.04	-84.24	-133.12	-84.24	15.4	15.42	15.42	23.71	2	751.9	1.54
U_{13}–L_{14}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{14}–L_{14}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{14}–L_{15}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{15}–L_{15}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{15}–L_{16}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{16}–L_{16}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{16}–L_{17}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{17}–L_{17}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{17}–L_{18}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{18}–L_{18}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{18}–L_{19}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{19}–L_{19}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{19}–L_{20}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{20}–L_{20}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{20}–L_{21}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{21}–L_{21}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{21}–L_{22}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{22}–L_{22}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{23}–L_{23}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{24}–L_{24}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{25}–L_{25}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{26}–L_{26}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{27}–L_{27}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{28}–L_{28}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{29}–L_{29}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{30}–L_{31}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{31}–L_{32}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{32}–L_{33}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{33}–L_{34}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{34}–L_{35}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{35}–L_{36}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{36}–L_{37}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{37}–L_{38}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{38}–L_{39}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{39}–L_{40}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{40}–L_{41}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_{41}–L_{42}	-84.24	-21.04	-16.60	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54
U_0–L_1	-140.58	-181.45	-0.22	0.19	2.11	-2.64	0.00	0.00	0.72	-0.89	-2.78
U_1–L_1	-129.25	-129.19	-0.17	0.33	1.83	-2.02	0.00	0.00	0.67	-0.69	-2.20
U_1–L_2	-180.48	-209.68	-0.67	0.79	2.05	-2.18	0.00	0.00	0.93	-1.09	-8.62
U_2–L_2	-24.90	-48.24	-0.64	0.81	-1.70	1.88	0.00	0.00	0.01	-0.14	-8.59
U_2–L_3	-121.66	132.24	0.09	-0.08	-2.60	2.70	0.00	0.00	-0.72	0.78	1.20
U_3–L_3	-77.50	76.02	0.05	-0.05	-1.69	2.11	0.00	0.00	-0.47	0.49	0.69
U_3–L_4	-42.60	70.37	0.03	-0.05	-1.18	1.57	0.00	0.00	-0.40	0.45	0.40
U_4–L_4	-57.67	58.82	-0.13	0.13	-0.60	0.65	0.00	0.00	-0.32	0.33	-1.76
U_4–L_5	-41.96	42.31	-0.91	0.90	1.13	-1.27	-0.17	0.20	0.03	-0.06	-12.09
U_5–L_5	-9.20	-2.43	-0.66	0.74	1.62	-1.89	-0.19	0.21	0.28	-0.35	-8.87
U_5–L_6	28.09	-38.34	-0.58	0.55	1.82	-1.79	-0.15	0.16	0.50	-0.53	-7.71
U_6–L_6	78.23	-95.55	-0.36	0.33	1.49	-1.91	-0.15	0.17	0.56	-0.71	-4.82

ZZ Axis Moments from STAAD

Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
U_0–L_1	-15.70	54.51	0.22	-0.56	-2.37	2.35	0.03	-0.13	-0.04	0.43
U_1–L_1	-27.61	29.28	0.75	-0.69	-1.87	2.04	0.20	-0.18	-0.57	0.52
U_1–L_2	40.61	-5.24	0.55	-0.23	-0.26	0.35	9.26	-10.81	-10.23	10.33
U_1–U_2	40.61	-41.50	0.55	-0.69	-0.68	0.88	0.17	-0.21	-0.06	0.10
L_1–L_2	56.81	-57.80	0.00	-0.00	-0.00	0.00	0.30	-0.31	-0.10	0.10
U_2–L_2	64.44	-72.22	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
U_2–L_3	64.44	-72.27	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
U_3–L_3	109.00	-121.35	-0.60	0.65	1.90	-1.96	0.00	0.00	0.00	0.00
U_3–L_4	-42.62	47.12	0.70	0.82	-2.41	2.90	0.00	0.00	0.00	0.00
U_4–L_4	-101.01	109.70	0.70	0.82	-2.41	3.01	0.00	0.00	-0.94	1.08
U_5–L_5	-123.92	126.16	0.04	-0.11	-1.62	2.22	0.00	0.00	0.00	0.00
U_6–L_6	-127.70	170.40	-0.01	-0.05	-2.24	2.99	0.00	0.00	-6.18	8.60
U_6–L_7	-106.29	107.56	0.15	-0.08	-1.84	1.87	0.00	0.00	-5.55	5.61
U_7–L_7	-66.48	79.89	0.27	-0.25	-1.23	1.43	0.00	0.00	-0.33	0.40
U_7–L_8	-31.84	36.73	0.40	-0.13	-0.59	0.67	0.00	0.00	-0.09	0.10
U_8–L_8	17.16	23.69	-0.68	0.64	1.62	-1.71	-0.10	0.11	0.27	-0.30
U_8–L_9	64.44	-72.27	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
U_9–L_9	74.44	-85.11	-0.28	0.29	1.76	-1.83	-0.06	0.06	0.44	-0.49
U_9–L_{10}	64.44	-77.77	-0.16	0.12	1.58	-1.77	0.00	0.00	0.42	-0.47
U_{10}–L_{10}	164.37	-173.76	-0.33	0.32	2.63	-2.69	-0.07	0.07	0.91	-0.96
U_{10}–L_{11}	194.92	-235.55	-0.22	0.29	2.34	-2.73	-0.06	0.07	1.06	-1.17
U_{11}–L_{11}	113.48	204.38	-2.29	2.11	0.00	0.00	-0.72	0.89	-2.78	2.48
U_{11}–L_{12}	-201.32	204.79	0.69	-0.64	-3.18	3.95	0.14	-0.18	-0.51	0.63
U_{12}–L_{12}	-79.54	88.71	0.47	-0.48	-1.79	1.93	0.10	-0.10	-0.37	0.41
U_{12}–L_{13}	-79.54	88.71	0.47	-0.48	-1.79	1.93	0.10	-0.10	-0.37	0.41
U_{13}–L_{13}	-4.04	12.50	0.66	-0.62	-0.87	1.10	0.13	-0.17	-0.21	0.39
U_{13}–L_{14}	27.52	-27.99	-1.08	-1.11	-0.52	0.56	0.10	-0.12	-0.04	0.05
U_{14}–L_{14}	59.94	-69.39	-0.31	-0.13	1.18	-1.25	0.00	0.00	0.00	0.00
U_{14}–L_{15}	130.31	-141.80	-0.26	0.20	2.28	-2.39	0.00	0.00	0.47	-0.50
U_{15}–L_{15}	216.58	-221.43	-0.11	0.07	3.79	-3.80	0.00	0.00	0.00	0.00
U_{15}–L_{16}	193.18	-200.19	-0.19	0.28	2.72	-2.86	0.00	0.00	0.67	-0.68
U_{16}–L_{16}	194.78	-194.55	-0.35	0.42	2.57	-2.66	0.00	0.00	0.65	-0.65
U_{16}–L_{17}	170.72	-170.02	-0.46	0.56	2.25	-2.33	0.00	0.00	0.57	-0.57
U_{17}–L_{17}	231.65	-230.62	-0.89	0.90	2.41	-2.27	0.07	-0.12	0.72	-0.68
U_{17}–L_{18}	26.62	-29.23	0.71	-0.68	0.15	0.09	-0.02	0.03	-0.80	0.75
U_{18}–L_{18}	-225.23	219.22	0.18	-0.13	-3.57	3.40	0.02	0.03	-6.80	6.75
U_{18}–L_{19}

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start k-in	Max. Pos. Mom. End k-in	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_bb	M_2 (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Factor A	B	C_{m2b}	C_{m2t}	Max. Neg. Mom. Start k-in	Max. Neg. Mom. End k-in	S_{bb} (in^3)	S_{tb} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Tension: Shape Factor	M_p (k-in)	P_{cm} (kips)	Formula 1.8 Term * F_y/S_bb	M_{n1} (k-in)	Equivalent Mom. Factor a	C_{m1b}	C_{m1t}	Pass	Axial Portion	Buckle Moment Portion	Total	Pass	Axial Portion	Yield Moment Portion	Total	Pass
Structure 1	U_1-L_1	3.65	-1.42	0.48	0.36	-0.04	-0.09	0.15	0.01	0.03	-0.02	-6.39	4.76	-0.48	-1.24	1.75	0.12	-0.34	-0.23	-3.90	6.34	4.12	-3.45	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.819	0.27	0.27	-84.92	-28.02	-2.72	-5.56	1.79	1.78	-1.09	-0.56	0.55	0.50	-36.38	-74.21	23.95	23.79	-16.17	-8.33	8.12	7.42	-157.69	-132.91	-79.26	-5.50	100.5	100.48	126.29	66.1	1.20	3970	144	0.94257/76	3126.1	0.843	0.94	0.94	0.274	0.045	0.32	Yes	0.165	0.525	0.20	Yes	—	—	—
	U_1-L_2	-11.48	-3.33	-0.87	0.02	0.30	-0.12	-0.25	0.07	0.08	-0.04	-11.66	0.20	3.88	-1.64	-2.95	0.84	0.98	-0.47	-30.08	-4.06	-9.74	-6.46	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.135	0.65	0.65	-122.21	-23.62	-9.01	-7.05	2.33	1.85	-1.18	-0.11	0.49	0.45	-120.38	-84.21	31.09	24.72	17.52	-1.60	7.33	6.34	-238.1	-2	1.30	3454	166	0.95270/57	2947.1	0.315	0.73	0.73	0.076	0.096	0.28	Yes	0.097	0.053	0.15	Yes	—	—	—
	U_1-L_3	11.79	-5.09	-0.39	-0.37	-0.02	-0.09	0.00	0.00	0.00	0.00	11.79	-5.09	-0.39	-0.37	-10.26	-0.39	5.47	-16.58	15.4	15.42	15.42	23.71	3	791.9	1.54	782	1.5	763.3	-0.321	0.47	0.47	139.74	-40.92	-16.04	-19.24	19.27	2.19	5.18	3.44	136.47	-22.34	219.05	77.95	94.0	93.99	104.66	65.3	1.11	3454	160	0.94257/97	2947.3	0.336	0.74	0.74	0.195	0.070	0.27	Yes	0.195	0.070	0.27	Yes	—	—	—
	U_1-L_4	9.81	-15.01	-0.39	-0.37	-0.02	-0.60	0.00	0.00	-0.11	-5.17	-4.88	-0.28	-7.98	0.00	0.00	-0.04	-1.27	6.04	-25.85	12.39	-29.87	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.415	0.43	0.43	206.47	91.61	-2.92	-3.84	-12.76	-4.02	0.00	0.00	0.00	0.00	34.30	11.46	217.76	52.44	46.73	49.35	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.95180/76	2952.4	0.241	0.70	0.70	0	0.420	0.077	0.5	Yes	0.388	0.038	0.43	Yes	—	—	—
	U_1-L_5	-16.21	25.06	-0.71	0.16	-0.03	0.26	-0.47	2.16	-1.65	1.48	-1.69	1.26	0.00	0.00	0.00	0.00	-33.39	26.45	15.4	15.42	15.42	23.71	4	791.9	1.54	782	1.5	763.3	-0.507	0.22	0.22	-154.31	8.15	0.22	-2.96	-7.24	87.72	18.76	-27.04	-8.39	0.00	0.00	-186.17	-112.27	34.59	113.4	113.37	133.37	130.15	82.8	1.13	3454	181	0.91173/46	3588.3	0.086	0.60	0.60	0.381	0.062	0.48	Yes	0.273	0.045	0.25	Yes	—	—	—
	U_1-L_6	-34.06	79.08	-1.25	1.15	-0.12	-0.13	-0.28	0.44	0.00	0.00	-16.74	15.39	-1.78	-3.32	5.24	0.00	0.00	0.00	-66.04	-122.82	-46.34	100.62	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.592	0.38	0.38	-192.51	23.27	-1.21	1.87	10.36	0.34	-1.71	-0.37	0.00	0.00	-21.29	52.69	-35.72	36.18	148.0	147.96	147.96	147.96	167.25	201.8	1.13	5519	262	0.99348/52	4728.8	-0.237	0.36	0.18	0.223	0.066	0.27	Yes							
	U_1-L_7	-7.11	52.03	-1.73	1.15	-0.17	-0.13	-0.39	0.44	-0.23	0.17	-6.61	1.64	-2.54	-4.55	6.19	0.00	0.00	0.00	-13.42	-131.07	-63.83	104.41	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.934	0.23	0.23	-132.49	-131.97	-83.83	-54.41	36.98	0.19	-2.44	-0.60	0.00	0.00	-96.35	-28.53	-87.42	-32.58	94.0	147.96	147.96	147.96	167.25	201.8	1.13	5519	245	0.96626/76	4718.1	0.064	0.63	0.63	0.345	0.102	0.45	Yes	0.192	0.060	0.25	Yes	—	—	—
	U_1-L_8	-1.39	102.62	-0.74	1.37	0.27	-0.45	-0.09	0.65	0.00	0.00	-9.86	18.34	3.57	-5.95	-1.07	7.76	0.00	0.00	-14.62	158.55	2.84	126.38	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.992	0.56	0.56	-153.23	-83.91	37.67	2.18	-2.93	-1.73	-1.81	-0.82	0.00	0.00	-7.60	29.12	-39.09	-23.05	-26.84	-12.19	0.00	0.00	-189.32	-83.44	-250.02	-151.26	148.0	147.96	147.96	167.25	201.8	1.13	5519	205	0.99994/47	4689.9	0.605	0.84	0.84	0.329	0.136	0.48	Yes	0.184	0.075	0.26	Yes	—	—	—
	U_1-L_9	-12.27	139.07	0.80	1.76	0.28	0.04	-0.19	0.58	0.21	0.13	-10.35	22.75	3.66	0.47	-2.32	6.95	2.47	1.56	-29.41	210.36	-11.19	181.39	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.140	0.54	0.54	251.60	97.15	-4.44	-7.06	2.68	1.62	-0.21	0.07	2.17	0.60	-57.38	-91.37	54.67	20.95	-3.05	0.98	31.12	8.83	252.48	7.51	372.15	153.53	202.9	202.86	190.44	238.56	256.9	1.18	7872	228	1.06384/5	6452.3	0.413	0.77	0.77	0.431	0.117	0.55	Yes	0.256	0.080	0.34	Yes	—	—	—
	U_1-L_{10}	-23.43	69.78	-1.49	0.84	0.14	0.05	-0.31	0.35	0.00	0.00	-19.28	10.82	1.82	0.63	-3.77	4.25	0.00	0.00	-120.52	104.78	-53.09	91.54	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.869	0.25	0.25	-72.48	-78.50	-5.60	-6.54	1.04	0.94	1.09	0.30	0.00	0.00	-72.48	-84.66	13.39	12.14	22.67	4.36	0.00	0.00	-13.02	-212.11	98.61	-86.28	197.4	197.41	184.99	230.30	248.6	1.17	7602	299	0.99831/36	6309.9	0.061	0.62	0.62	0.421	0.084	0.51	Yes	0.261	0.047	0.31	Yes	—	—	—
	U_1-L_{11}	-60.32	108.87	-1.59	0.89	0.14	0.05	-0.39	0.23	0.00	0.00	-32.06	3.87	1.89	0.62	-2.71	2.20	0.00	0.00	-135.31	32.39	-55.76	43.81	42.74	42.74	42.74	65.30	9	1389.8	1.53	2155	1.5	2115.6	-0.275	0.40	0.40	49.31	-87.17	-7.03	-7.13	1.23	1.59	2.23	0.69	0.00	0.00	-53.66	-222.35	84.77	-76.05	193.7	193.70	173.70	202.71	247.5	1.17	6690	277	0.91252/26	5901.6	0.236	0.69	0.69	0.432	0.088	0.54	Yes	0.228	0.054	0.30	Yes	—	—	—
	U_1-L_{12}	-69.90	47.85	-1.32	0.71	-0.14	-0.25	-0.31	0.21	0.00	0.00	-17.01	9.15	-1.81	-3.78	2.56	0.00	0.00	0.00	-112.99	74.10	-93.23	58.67	20.8	20.80	20.67	34.66	1	1076.0	1.67	1344	1.5	1229.6	-0.656	0.34	0.34	-129.35	-151.39	-113.36	133.5	133.45	123.27	155.40	108.8	1.16	5128	176	0.93018/81	4196.9	0.243	0.70	0.70	0.387	0.148	0.54	Yes	0.243	0.085	0.33	Yes	—	—	—
	U_1-L_{13}	-27.40	6.37	-0.62	0.20	0.02	-0.43	-0.15	0.03	0.00	0.00	-8.01	2.64	0.26	-0.51	-1.75	0.34	0.00	0.00	-46.03	11.71	-35.28	1.11	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.254	0.50	0.50	59.25	-79.65	-2.98	-3.53	-10.14	-2.44	2.35	0.79	0.00	0.00	-38.61	-45.71	-131.13	-31.60	33.81	11.47	0.00	0.00	26.84	-162.96	-93.44	-144.61	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237/93	2925.7	-0.165	0.53	0.53	0.381	0.106	0.49	Yes	0.229	0.058	0.27	Yes	—	—	—
	U_1-L_{14}	-0.39	3.22	-0.16	0.05	0.00	-0.10	-0.05	0.04	0.00	0.00	-0.44	3.26	0.04	-0.10	-0.43	0.24	0.00	0.00	-0.36	26.45	-0.36	26.45	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.507	0.22	0.22	-260.28	-163.04	-2.92	-3.36	12.23	-0.10	2.89	0.96	0.00	0.00	-4.06	-0.86	-41.99	-8.93	10.79	-0.79	-323.19	-231.88	-239.67	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93172/27	2994.2	0.372	0.75	0.75	0.227	0.147	0.38	Yes	0.125	0.081	0.21	Yes	—	—	—
	U_1-L_{15}	-31.05	12.71	-0.91	0.67	-0.15	-0.20	-0.19	0.11	0.05	-0.04	-11.80	8.60	-1.97	-2.60	-2.29	1.32	0.56	-0.32	-55.70	27.71	-42.92	13.14	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.497	0.40	0.40	-199.02	-99.98	-0.23	1.91	13.18	-1.49	-2.86	-0.48	0.07	-0.03	-2.94	24.76	170.50	-19.27	-40.94	-4.90	1.06	-0.43	-262.54	-97.78	-37.07	-155.01	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93172/27	2994.2	0.372	0.75	0.75	0.227	0.147	0.38	Yes	0.125	0.081	0.21	Yes	—	—	—
	U_1-L_{16}	-46.66	27.26	-1.14	0.85	0.13	-0.16	-0.28	-0.14	-14.75	11.04	-2.51	-2.17	-3.51	-2.27	-0.50	-4.48	-79.83	-69.78	-57.29	32.61	19.44	19.37	19.37	29.87	1	907.0	1.54	986	1.5	958.8	-0.032	0.25	0.25	-312.52	-82.25	-26.13	-3.11	-1.16	0.08	-0.54	-0.32	0.00	0.00	-28.10	-13.39	-0.03	-3.16	-44.71	-16.68	11.13	32.02	94.0	93.99	93.99	104.66	65.3	1.11	3454	160	0.93109/66	3555.8	0.289	0.72	0.72	0.240	0.100	0.59	Yes	0.236	0.083	0.32	Yes	—	—	—
	U_1-L_{17}	-118.88	85.32	-1.99	1.68	0.28	-0.26	-0.55	0.42	0.06	-0.05	-25.71	21.71	3.56	-3.30	-6.59	5.04	0.67	-0.62	-187.71	139.13	-149.66	106.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.741	0.30	0.30	-307.40	-67.04	-1.12	-1.93	-0.69	-0.29	-3.13	-1.42	0.03	0.05	-45.00	-5.50	-14.49	5.50	-1.18	-3.69	-45.00	-20.41	0.39	0.79	-410.66	-80.01	-393.35	-81.95	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.99021/95	4688.3	0.195	0.68	0.68	0.405	0.181	0.59	Yes	0.223	0.099	0.32	Yes	—	—	—
	U_1-L_{18}	-118.21	87.78	-1.92	1.68	0.27	-0.26	-0.57	0.46	0.04	-0.04	-24.80	21.19	-2.99	-2.66	-6.63	5.47	0.00	-0.46	-185.71	139.01	-149.78	110.29	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.744	0.30	0.30	-297.12	-100.44	1.15	2.47	0.10	-0.08	-3.27	-1.47	0.00	0.00	-47.05	-22.57	-0.17	0.22	-49.46	-18.67	-44.72	-78.60	181.2	147.96	147.96	167.25	201.8	1.13	5519	193	0.95172/64	3972.2	0.245	0.71	0.71	0.405	0.171	0.59	Yes	0.228	0.094	0.33	Yes	—	—	—
	U_1-L_{19}	-146.00	120.10	-1.79	1.59	0.10	-0.16	-0.77	0.62	0.04	-0.04	-23.16	20.81	1.94	-2.03	-9.29	7.49	0.50	-0.46	-231.98	192.72	-187.27	153.55	38.8	38.83	38.83	59.23	1	1284.6	1.53	1955	1.5	1922.1	-0.831	0.22	0.22	-127.98	8.71	0.01	0.16	25.46	-14.74	-2.29	0.17	0.00	0.00	-19.50	-108.48	-255.33	-140.83	160.8	160.57	160.57	184.25	223.9	1.15	6080	156	0.94717/76	5078.9	0.842	0.82	0.82	0.482	0.240	0.72	Yes	0.247	0.090	0.34	Yes	—	—	—
	U_1-L_{20}	-86.84	116.71	-2.02	2.17	0.17	-0.32	-0.13	0.38	0.01	-0.06	-25.78	27.75	2.16	-4.13	-1.51	4.57	0.14	-0.70	-146.41	187.80	-110.08	146.36	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.780	0.29	0.29	-189.77	-31.06	-4.40	-7.92	1.23	0.62	-1.06	-0.10	0.41	0.20	-58.22	-101.13	15.70	7.96	-15.09	-1.36	5.79	2.83	-319.78	-171.85	-226.29	-30.04	173.7	173.70	173.70	202.71	247.5	1.17	6690	180	0.95415/61	5469.3	0.537	0.81	0.81	0.469	0.135	0.61	Yes	0.258	0.074	0.34	Yes	—	—	—
	U_1-L_{21}	-54.13	114.46	-2.27	2.17	-0.69	-0.33	0.12	0.38	0.00	0.00	-26.56	27.75	2.16	-4.13	-1.21	4.57	0.00	-0.70	-240.67	187.80	-89.52	146.36	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.735	0.29	0.29	-147.50	-31.06	-4.40	-7.92	1.23	1.06	-0.25	0.41	0.20	-58.22	-101.13	15.70	7.96	-15.09	-1.36	5.79	2.83	-319.78	-171.85	-226.29	-30.04	173.7	173.70	173.70	202.71	247.5	1.17	6690	180	0.95415/61	5469.3	0.537	0.81	0.81	0.469	0.135	0.61	Yes	0.258	0.074	0.34	Yes	—	—	—
	U_1-L_{22}	-118.22	92.25	-2.44	2.01	0.56	-0.49	-0.52	0.43	0.11	-0.10	-31.11	25.62	7.10	-6.27	-6.28	5.11	1.37	-1.25	-194.13	153.23	-164.13	153.23	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.789	0.26	0.26	32.87	-71.75	-5.67	-7.25	1.29	1.03	1.01	0.01	0.33	0.26	-72.47	-92.67	16.43	13.16	14.32	-0.16	4.71	3.62	-51.48	-213.74	64.09	-76.17	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.96189/76	4686.6	0.121	0.72	0.72	0.424	0.149	0.59	Yes	0.228	0.082	0.32	Yes	—	—	—
	U_1-L_{23}	-54.32	110.87	-2.44	2.01	0.56	-0.49	-0.52	0.43	0.11	-0.10	-26.77	25.62	7.10	-6.27	-4.84	5.11	1.37	-1.25	-240.67	153.23	-89.52	153.23	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.789	0.26	0.26	98.37	-71.75	-5.67	-7.25	1.29	1.03	1.01	0.01	0.33	0.26	-72.47	-92.67	16.43	13.16	14.32	-0.16	4.71	3.62	-51.48	-213.74	64.09	-76.17	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.96189/76	4686.6	0.121	0.72	0.72	0.424	0.149	0.59	Yes	0.228	0.082	0.32	Yes	—	—	—
	U_1-L_{24}	-24.32	8.60	-0.96	0.74	0.33	-0.28	-0.18	0.11	0.07	-0.06	-12.24	9.44	4.27	-3.51	-2.14	1.27	0.86	-0.72	-47.53	23.48	-26.07	6.62	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.486	0.40	0.40	88.14	-32.22	-4.61	-3.94	1.25	1.09	1.44	0.29	0.21	0.14	-58.87	-62.28	15.34	9.91	20.43	4.07	3.04	1.52	38.54	-157.89	134.52	-29.60	94.0	93.99	93.99	104.66	65.3	1.11	3454	96	0.91396/27	2834.9	-0.220	0.51	0.51	0.212	0.100	0.32	Yes	0.117	0.055	0.18	Yes	—	—	—
	U_1-L_{25}	-5.48	13.42	-0.71	0.38	0.16	-0.14	-0.08	0.00	0.00	0.00	-4.78	4.17	-1.17	0.00	-0.86	0.00	-4.63	17.13	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.274	0.43	0.43	124.18	-32.43	-1.07	-1.80	-1.37	0.00	-0.46	-0.31	0.00	0.00	-46.21	-47.74	-6.01	-1.74	94.0	93.99	93.99	104.66	65.3	1.11	3454	126	0.94257/97	2947.3	0.336	0.74	0.74	0.195	0.070	0.27	Yes	0.195	0.070	0.27	Yes	—	—	—
	U_1-L_{26}	13.33	-37.03	-0.40	0.12	0.41	-0.79	0.00	0.00	0.04	-5.16	1.52	-5.28	0.28	10.12	0.00	0.00	0.00	-1.54	10.75	46.16	24.19	-61.29	17.2	17.24	17.24	26.54	1	824.7	1.54	878	1.5	853.4	-0.395	0.44	0.44	131.93	1.78	-1.99	-3.01	-1.00	-0.50	0.00	0.00	2.09	0.73	-25.46	-31.39	-140.58	-8.36	0.00	0.00	29.68	10.41	138.05	-107.68	103.1	103.08	133.08	116.41	73.3	1.13	3841	126	0.93455/47	3779.0	-0.345	0.46	0.46	0.481	0.063	0.55	Yes							
	U_1-L_{27}	-66.01	54.01	-1.12	0.88	0.00	-0.39	-0.23	0.17	0.00	0.00	-14.36	11.23	-0.54	-4.92	-2.80	2.04	0.00	0.00	-154.48	84.82	-85.86	63.82	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.872	0.26	0.28	243.32	-138.08	0.01	1.90	7.16	0.35	-1.76	-0.67	0.00	0.00	-316.46	-147.93	-197.67	-173.70	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.94859/63	4015.5	0.467	0.79	0.79	0.423	0.158	0.59	Yes	0.266	0.090	0.36	Yes	—	—	—
	U_1-L_{28}	-133.76	104.25	-2.13	1.77	0.48	-0.43	-0.46	0.38	0.09	-0.08	-27.58	19.69	-4.43	-2.72	-7.22	4.51	1.18	-1.08	-209.22	150.80	-174.60	132.24	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.783	0.27	0.27	-222.79	-100.80	-1.81	-2.63	0.89	0.25	-3.18	-1.28	0.00	0.00	-46.31	-22.74	-0.03	0.21	-48.07	-18.14	-43.46	-76.37	176.1	147.96	147.96	167.25	201.8	1.13	5519	204	0.95172/64	3972.2	0.245	0.71	0.71	0.405	0.171	0.59	Yes	0.228	0.094	0.33	Yes	—	—	—
	U_1-L_{29}	-116.16	105.67	-1.88	1.35	0.00	-0.13	-0.36	0.36	0.00	0.00	-24.06	17.30	-3.00	-4.63	-1.64	4.27	0.31	0.00	-182.28	159.86	-151.04	135.24	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	-0.877	0.25	0.25	-153.52	-20.51	0.68	2.23	0.27	0.22	-1.64	-0.32	0.00	0.00	-18.28	10.70	-195.06	-22.96	173.7	173.70	173.70	202.71	247.5	1.17	6690	234	0.95473/58	5530.1	0.118	0.65	0.65	0.500	0.114	0.62	Yes	0.275	0.063	0.34	Yes	—	—	—
	U_1-L_{30}	-39.38	50.79	-0.74	0.31	0.30	-0.45	-0.45	0.00	0.00	0.00	-27.18	17.30	-3.00	-4.63	-0.80	4.27	0.00	0.00	-201.58	159.44	-151.04	135.24	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	-0.877	0.25	0.25	-326.01	-20.51	0.68	2.23	0.27	0.22	-1.64	-0.32	0.00	0.00	-18.28	10.70	-195.06	-22.96	173.7	173.70	173.70	202.71	247.5	1.17	6690	234	0.95473/58	5530.1	0.118	0.65	0.65	0.500	0.114	0.62	Yes	0.275	0.063	0.34	Yes	—	—	—
	U_1-L_{31}	-131.93	101.03	-2.00	1.48	0.49	-0.26	-0.42	0.51	0.00	0.00	-25.67	22.98	6.08	-5.36	-3.03	6.11	0.00	0.00	-204.74	226.22	-163.69	191.97	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.905	0.24	0.24	-325.23	1.03	-1.69	3.21	-1.45	0.63	-2.21	-0.57	0.00	0.00	-450.79	54.70	-447.67	11.83	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.91184/45	6323.0	-0.121	0.55	0.55	0.495	0.108	0.66	Yes	0.272	0.087	0.36	Yes	—	—	—
	U_1-L_{32}	-179.29	162.92	-2.13	1.93	0.78	-0.56	-0.64	0.56	0.04	-0.02	-27.25	24.61	9.99	-7.59	-7.64	6.67	0.42	-0.22	-263.30	241.95	-214.68	202.44	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.526	0.23	0.23	-293.53	-32.62	-10.51	-13.76	14.32	0.16	4.71	3.62	-51.48	-213.74	64.09	-76.17	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.96189/76	4686.6	0.121	0.72	0.72	0.424	0.149	0.59	Yes	0.228	0.082	0.32	Yes	—	—	—
	U_1-L_{33}	-45.28	135.72	-1.75	2.21	0.51	-0.14	-0.36	0.49	0.18	-0.02	-22.14	27.86	8.39	-7.79	-4.34	5.82	2.17	-0.28	-87.66	212.66	-47.74	41.56	35.1	35.09	35.09	53.51	4	1183.7	1

Axial AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

| | | | Vehicle | Pedestrian | Axial Force | | ZZ Axis Bending | | | | YY Axis Bending | | | | Tension | | | | | | | | Compression | | | | | | | |

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass				
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																			
North Truss - Lower Chord	Structure 1	L_0 - L_1	1.300	1.300	204.48	-----	138	-431	1565	-2065	-78	-286	64	233	0.313	0.681	1.00	Yes	0.184	0.417	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.32**
		L_1 - L_2			451.79	-----	-31	-702	153	-44	-431	-157	-30	-30	0.691	0.303	1.00	Yes	0.422	0.200	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		L_2 - L_3			690.71	-----	-646	-735	-23	15	-126	70	-32	21	0.795	0.198	1.00	Yes	0.460	0.119	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		L_3 - L_4			697.97	-----	-652	-551	78	223	203	78	52	69	0.803	0.190	1.00	Yes	0.477	0.122	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		L_4 - L_5			387.98	-508.25	-817	95	104	597	-221	467	55	35	0.502	0.299	0.81	Yes	0.301	0.194	0.50	Yes	0.781	0.197	0.98	Yes	0.774	0.216	1.00	Yes	1.00	**3.63**
		L_5 - L_6			-----	-731.87	-305	-125	166	596	185	44	72	127	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.139	1.00	Yes	0.844	0.132	0.98	Yes	1.00	**3.79**
		L_6 - L_7			-----	-1088.88	-746	-295	213	178	101	715	121	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.106	1.00	Yes	0.876	0.117	1.00	Yes	1.00	**5.30**
		L_7 - L_8			-----	-1237.61	1	590	36	1436	-103	-113	-80	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.202	1.00	Yes	0.784	0.190	0.98	Yes	1.00	**4.81**
		L_8 - L_9			-----	-1313.66	571	-34	1123	-2	-139	-153	4	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.157	1.00	Yes	0.832	0.149	0.99	Yes	1.00	**5.56**
		L_9 - L_{10}			-----	-1066.12	108	-873	159	138	540	61	31	135	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.067	0.94	Yes	0.858	0.137	1.00	Yes	1.00	**6.32**
		L_{10} - L_{11}			-----	-560.19	-39	-551	529	-5	120	79	139	49	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.096	0.96	Yes	0.853	0.146	1.00	Yes	1.00	**4.50**
		L_{11} - L_{12}			596.83	-----	56	-690	483	-176	229	22	94	-34	0.773	0.223	1.00	Yes	0.464	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		L_{12} - L_{13}			1046.00	-----	-461	-743	149	-81	229	331	31	33	0.825	0.171	1.00	Yes	0.528	0.103	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		L_{13} - L_{14}			1290.81	-----	-221	-1484	345	-451	388	93	9	0	0.759	0.237	1.00	Yes	0.492	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_{14} - L_{15}			1646.79	-----	-1343	-1192	-355	-27	-164	369	-116	-67	0.805	0.188	1.00	Yes	0.523	0.114	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_{15} - L_{16}			1578.77	-----	-1057	-1655	-219	-369	8	-332	-120	-58	0.771	0.223	1.00	Yes	0.495	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		L_{16} - L_{17}			1174.58	-----	-1479	-303	-433	97	-384	384	-105	-45	0.743	0.251	1.00	Yes	0.482	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_{17} - L_{18}			878.15	-----	-1050	-106	-277	143	146	-212	-125	-59	0.765	0.230	1.00	Yes	0.489	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_{18} - L_{19}			487.57	-----	-512	343	-514	604	-79	304	-324	-23	0.746	0.249	1.00	Yes	0.505	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		L_{19} - L_{20}			199.94	-476.11	-243	51	-445	255	178	40	-66	-15	0.306	0.170	0.48	Yes	0.187	0.114	0.31	Yes	0.865	0.112	0.98	Yes	0.857	0.134	1.00	Yes	1.00	**5.71**
	Structure 2	L_0 - L_1			318.20	-----	203	-799	1159	-2616	28	96	-130	-452	0.386	0.607	1.00	Yes	0.230	0.390	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.56**
		L_1 - L_2			526.53	-----	298	-1271	182	-247	-604	-203	-42	23	0.639	0.358	1.00	Yes	0.380	0.227	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_2 - L_3			1034.55	-----	-221	-1216	-42	-169	-76	17	71	74	0.815	0.184	1.00	Yes	0.535	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_3 - L_4			1305.10	-----	-293	-1731	30	-437	279	99	154	81	0.767	0.225	1.00	Yes	0.516	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		L_4 - L_5			1741.41	-----	-1570	-1759	-388	-258	93	266	93	198	0.812	0.184	1.00	Yes	0.537	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_5 - L_6			1812.86	-----	-1591	-2226	-148	-398	305	38	110	-15	0.778	0.216	1.00	Yes	0.522	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_6 - L_7			1779.69	-----	-2418	-1499	-448	-117	-34	463	-161	45	0.753	0.241	1.00	Yes	0.501	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		L_7 - L_8			1420.10	-----	-1532	-1194	-211	296	84	-131	-131	8	0.814	0.180	1.00	Yes	0.535	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_8 - L_9			1080.88	-----	-1343	-198	-112	516	-159	602	-29	15	0.756	0.238	1.00	Yes	0.509	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_9 - L_{10}			893.13	-647.00	-1066	-681	-93	752	154	-218	20	97	0.797	0.197	1.00	Yes	0.464	0.122	0.59	Yes	0.684	0.127	0.82	Yes	0.679	0.171	0.85	Yes	1.00	**6.05**
		L_{10} - L_{11}			-----	-706.71	-940	36	106	538	-222	495	61	0	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.121	0.96	Yes	0.830	0.164	1.00	Yes	1.00	**4.64**
		L_{11} - L_{12}			-----	-1039.79	-1030	24	102	998	322	-85	83	239	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.124	0.99	Yes	0.853	0.140	1.00	Yes	1.00	**5.82**
		L_{12} - L_{13}			-----	-1545.66	-374	-184	434	-453	119	-163	200	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.062	1.00	Yes	0.925	0.045	0.97	Yes	1.00	**8.87**
		L_{13} - L_{14}			-----	-1523.36	-367	1230	-586	2566	-262	-454	-253	-551	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.190	0.97	Yes	0.767	0.224	1.00	Yes	1.00	**5.78**
		L_{14} - L_{15}			-----	-1624.77	1125	-471	2018	-376	-519	-320	-323	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.151	0.98	Yes	0.818	0.176	1.00	Yes	1.00	**7.56**
		L_{15} - L_{16}			-----	-1501.13	-470	-16	-985	354	-214	98	11	401	-----	-----	-----	-----	-----	-----	-----	-----	0.905	0.087	1.00	Yes	0.898	0.098	1.00	Yes	1.00	**7.35**
		L_{16} - L_{17}			-----	-1161.62	233	-597	1209	122	27	-5	405	192	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.146	1.00	Yes	0.846	0.149	1.00	Yes	1.00	**6.09**
		L_{17} - L_{18}			-----	-825.26	81	-742	473	232	211	59	102	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.118	1.00	Yes	0.867	0.119	0.99	Yes	1.00	**4.40**
		L_{18} - L_{19}			-----	-640.52	-177	-583	666	115	183	260	-4	33	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.140	1.00	Yes	0.854	0.128	0.99	Yes	1.00	**4.34**
		L_{19} - L_{20}			606.67	-568.48	-160	-1211	549	222	495	-32	58	-43	0.687	0.309	1.00	Yes	0.407	0.195	0.61	Yes	0.762	0.223	0.99	Yes	0.758	0.234	1.00	Yes	1.00	**5.44**
		L_{20} - L_{21}			949.18	-425.20	-1056	-1386	525	35	101	377	-92	-96	0.757	0.243	1.00	Yes	0.496	0.146	0.65	Yes	0.402	0.224	0.63	Yes	0.399	0.202	0.61	Yes	1.00	**5.87**
		L_{21} - L_{22}			898.87	-----	-1072	-1598	225	-89	392	86	-91	-28	0.717	0.275	1.00	Yes	0.479	0.173	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		L_{22} - L_{23}			911.47	-----	-1483	-1360	-156	202	-72	521	-21	3	0.727	0.272	1.00	Yes	0.486	0.172	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		L_{23} - L_{24}			930.93	-283.54	-1496	-1292	-2	354	293	-99	9	75	0.742	0.250	1.00	Yes	0.487	0.149	0.64	Yes	0.268	0.264	0.54	Yes	0.266	0.218	0.49	Yes	1.00	**5.85**
		L_{24} - L_{25}			610.14	-429.39	-1028	-776	236	354	-258	679	61	0	0.691	0.302	1.00	Yes	0.409	0.189	0.60	Yes	0.576	0.216	0.80	Yes	0.572	0.198	0.78	Yes	1.00	**6.07**
		L_{25} - L_{26}			-----	-615.68	-926	-685	108	672	238	-225	38	124	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.142	0.97	Yes	0.821	0.179	1.00	Yes	1.00	**6.46**
		L_{26} - L_{27}			-----	-839.81	-648	-432	-194	641	-125	485	-207	15	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.108	1.00	Yes	0.882	0.104	0.99	Yes	1.00	**5.95**
		L_{27} - L_{28}			-----	-1169.98	-67	216	-226	1147	88	197	-41	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.119	0.98	Yes	0.852	0.141	1.00	Yes	1.00	**5.96**
		L_{28} - L_{29}			-----	-1587.40	-111	-329	18	0	171	-19	-87	8	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.037	1.00	Yes	0.950	0.033	0.99	Yes	1.00	**6.38**
		L_{29} - L_{30}			-----	-1641.21	-373	804	-453	1978	-65	-129	-16	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.123	0.96	Yes	0.826	0.173	1.00	Yes	1.00	**5.43**
		L_{30} - L_{31}			-----	-1586.79	818	-338	2218	-445	-134	-117	-602	-478	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.169	0.98	Yes	0.798	0.194	1.00	Yes	1.00	**8.41**
		L_{31} - L_{32}			-----	-1557.61	-154	-252	301	-68	-60	73	-394	112	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.051	1.00	Yes	0.932	0.030	0.97	Yes	1.00	**11.00**
		L_{32} - L_{33}			-----	-1045.20	382	-372	1013	156	136	-2	-145	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.102	0.97	Yes	0.857	0.138	1.00	Yes	1.00	**8.50**
		L_{33} - L_{34}			-----	-693.87	-153	-1036	405	187	498	103	8	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.149	0.97	Yes	0.815	0.181	1.00	Yes	1.00	**6.57**
		L_{34} - L_{35}			792.96	-537.06	-356	-1294	582	11	406	661	-11	72	0.708	0.287	1.00	Yes	0.412	0.176	0.59	Yes	0.568	0.227	0.80	Yes	0.564	0.207	0.78	Yes	1.00	**6.57**
		L_{35} - L_{36}			1075.01	-----	-387	-1289	364	-31	739	134	102	-43	0.752	0.243	1.00	Yes	0.506	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_{36} - L_{37}			1367.69	-----	-1103	-1628	244	1	-18	381	-101	10	0.784	0.211	1.00	Yes	0.515	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_{37} - L_{38}			1744.62	-----	-1167	-2717	-58	-368	214	-82	-43	-11	0.738	0.252	1.00	Yes	0.491	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		L_{38} - L_{39}			1774.39	-----	-2308	-1802	-302	-176	-88	432	-25	-15	0.761	0.232	1.00	Yes	0.511	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		L_{39} - L_{40}			1686.69	-----	-1971	-1541	-200	-308	135	-375	-51	-35	0.786	0.212	1.00	Yes	0.521	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_{40} - L_{41}			1278.83	-----	-1680	-823	-308	-48	-280	535	-59	-11	0.751	0.239	1.00	Yes	0.506	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		L_{41} - L_{42}			1014.76	-----	-1205	-580	-162	-64	218	-118	-28	11	0.800	0.197	1.00	Yes	0.524	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_{42} - L_{43}			504.69	-----	-1512	70	-223	45	-416	449	-3	-10	0.613	0.382	1.00	Yes	0.365	0.244	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		L_{43} - L_{44}			415.15	-----	-780	323	-1746	766	800	234	294	86	0.504	0.487	1.00	Yes	0.300	0.309	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**21.09**
	Structure 3	L_0 - L_1			382.63	-404.30	103	-339	612	-902	-28	-128	0	0	0.586	0.297	0.89	Yes	0.357	0.201	0.56	Yes	0.734	0.156	0.90	Yes	0.728	0.271	1.00	Yes	1.00	**10.10**
		L_1 - L_2			538.45	-----	253	-487	351	-401	-66	33	41	112	0.824	0.169	1.00	Yes	0.557	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.83**
		L_2 - L_3			894.20	-----	-195	-924	6	-176	150	320	18	4	0.779	0.219	1.00	Yes	0.498	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_3 - L_4			1195.90	-----	-345	-1337	62	-367	451	210	46	54	0.756	0.236	1.00	Yes	0.491	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_4 - L_5			1642.50	-----	-1320	-1378	-330	-217	184	372	80	118	0.802	0.192	1.00	Yes	0.515	0.113	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_5 - L_6			1542.80	-----	-867	-1775	-83	-356	345	141	141	76	0.754	0.238	1.00	Yes	0.490	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		L_6 - L_7			1290.64	-----	-1454	-376	-406	235	-90	471	-186	17	0.759	0.240	1.00	Yes	0.492	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		L_7 - L_8			1084.72	-----	-629	-711	-84	117	109	-40	-29	39	0.856	0.139	1.00	Yes	0.548	0.083	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		L_8 - L_9			569.22	-----	-627	-62	-176	331	-160	503	-18	46	0.737	0.254	1.00	Yes	0.442	0.163	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		L_9 - L_{10}			326.61	-524.28	-741	-182	0	485	356	104	68	127	0.423	0.258	0.69	Yes	0.246	0.155	0.41	Yes	0.806	0.170	0.98	Yes	0.799	0.196	1.00	Yes	1.00	**5.26**
		L_{10} - L_{11}			-----	-1066.84	-880	-439	-409	742	107	1098	-57	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.124	1.00	Yes	0.859	0.138	1.00	Yes	1.00	**8.18**
		L_{11} - L_{12}			-----	-1255.74	-42	467	-68	1188	-158	-175	-351	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1.00	Yes	0.795	0.157	0.96	Yes	1.00	**4.87**
		L_{12} - L_{13}			-----	-1249.39	468	-23	1151	-12	-243	-217	-567	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.192	1.00	Yes	0.791	0.152	0.95	Yes	1.00	**5.20**
		L_{13} - L_{14}			-----	-1087.33	-278	-480	-38	275	305	128	-228	119	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.111	1.00	Yes	0.875	0.075	0.96	Yes	1.00	**4.82**
		L_{14} - L_{15}			-----	-747.39	28	-390	569	167	113	16	149	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.122	1.00	Yes	0.862	0.126	0.99	Yes	1.00	**3.61**
		L_{15} - L_{16}			-----	-542.06	6	-580	423	194	129	19	16	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.159	1.00	Yes	0.826	0.153	0.98	Yes	1.00	**3.23**
		L_{16} - L_{17}			621.36	-218.81	-148	-921	310	27	83	378	93	-29	0.715	0.283	1.00	Yes	0.425	0.181	0.61	Yes	0.299	0.229	0.53	Yes	0.296	0.222	0.52	Yes	1.00	**3.10**
		L_{17} - L_{18}			654.74	-----	-555	-899	87	-9	147	-54	3	12	0.753	0.241	1.00	Yes	0.436	0.145	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.31**
		L_{18} - L_{19}			426.11	-----	-902	51	47	1	-154	334	23	-105	0.652	0.342	1.00	Yes	0.398	0.228	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		L_{19} - L_{20}			184.29	-308.57	-372	247	-1154	885	1150	313	210	58	0.282	0.593	0.88	Yes	0.166	0.356	0.53	Yes	0.560	0.432	1.00	Yes	0.556	0.346	0.91	Yes	1.00	**17.94**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-322.53	-57	90	-177	248	-32	-10	-71	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.142	0.87	Yes	0.682	0.317	1.00	Yes	1.00	**1.79**
		$U_1 - L_1$			-----	-349.27	21	-10	-173	203	-3	-1	-447	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.203	0.97	Yes	0.739	0.260	1.00	Yes	1.00	**3.27**
		$U_2 - L_2$			90.76	-329.17	77	-85	-176	232	48	25	479	225	0.163	0.436	0.60	Yes	0.090	0.240	0.33	Yes	0.719	0.214	0.94	Yes	0.697	0.297	1.00	Yes	1.00	**4.74**
		$U_3 - L_3$			215.83	-----	212	-210	-65	126	-62	46	1176	329	0.388	0.611	1.00	Yes	0.214	0.336	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_4 - L_4$			-----	-339.37	202	-201	112	-114	-431	-158	744	216	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.249	1.00	Yes	0.718	0.258	0.98	Yes	1.00	**3.80**
		$U_5 - L_5$			-----	-424.24	71	-89	228	-261	39	2	102	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.101	0.87	Yes	0.732	0.265	1.00	Yes	1.00	**2.79**
		$U_6 - L_6$			-----	-519.39	87	-83	262	-283	-199	-67	296	36	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.132	0.92	Yes	0.745	0.247	1.00	Yes	1.00	**2.70**
		$U_7 - L_7$			-----	-439.01	134	-150	301	-322	-176	11	215	28	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.141	0.88	Yes	0.677	0.317	1.00	Yes	1.00	**2.00**
		$U_8 - L_8$			-----	-1158.19	-1	-8	60	-73	-181	-17	1592	390	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.157	1.00	Yes	0.803	0.014	0.82	Yes	1.00	**4.31**
		$U_9 - L_9$			-----	-667.58	-171	201	-363	428	-417	-173	278	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.151	0.95	Yes	0.754	0.238	1.00	Yes	1.00	**3.15**
		$U_{10} - L_{10}$			-----	-773.28	-122	103	-344	372	-755	-428	-576	-496	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.191	1.00	Yes	0.763	0.193	0.96	Yes	1.00	**4.29**
		$U_{11} - L_{11}$			-----	-671.82	-125	191	-312	454	-506	-299	-47	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.163	0.97	Yes	0.782	0.211	1.00	Yes	1.00	**3.71**
		$U_{12} - L_{12}$			-----	-550.72	-97	96	-255	280	-378	-210	509	45	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.187	0.99	Yes	0.756	0.239	1.00	Yes	1.00	**3.66**
		$U_{13} - L_{13}$			-----	-370.56	-41	61	-218	246	-172	6	136	1	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.124	0.88	Yes	0.710	0.281	1.00	Yes	1.00	**2.71**
		$U_{14} - L_{14}$			-----	-320.94	-167	191	-62	72	-34	-47	827	120	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.278	1.00	Yes	0.679	0.244	0.93	Yes	1.00	**4.44**
		$U_{15} - L_{15}$			144.00	-309.65	-100	94	245	-266	81	52	343	-80	0.259	0.440	0.70	Yes	0.142	0.242	0.39	Yes	0.694	0.166	0.86	Yes	0.655	0.340	1.00	Yes	1.00	**4.45**
		$U_{16} - L_{16}$			-----	-320.80	14	-27	236	-244	46	-52	255	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.132	0.86	Yes	0.679	0.312	1.00	Yes	1.00	**3.18**
		$U_{17} - L_{17}$			-----	-437.47	60	-75	218	-240	-122	-113	214	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.122	0.95	Yes	0.755	0.244	1.00	Yes	1.00	**2.52**
		$U_{18} - L_{18}$			-----	-538.36	144	-151	424	-439	-133	-121	277	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.100	0.89	Yes	0.749	0.249	1.00	Yes	1.00	**2.68**
		$U_{19} - L_{19}$			-----	-644.00	171	-169	534	-521	-116	-45	215	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.106	0.91	Yes	0.750	0.248	1.00	Yes	1.00	**3.12**
		$U_{20} - L_{20}$			-----	-577.76	160	-260	336	-489	33	4	663	87	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1.00	Yes	0.672	0.227	0.90	Yes	1.00	**2.21**
	Structure 2	$U_0 - L_0$			-----	-638.47	-168	218	-436	524	-38	-6	-945	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.230	1.00	Yes	0.684	0.222	0.91	Yes	1.00	**2.85**
		$U_1 - L_1$			-----	-720.45	-119	128	-455	488	-105	-5	-877	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.170	1.00	Yes	0.772	0.207	0.98	Yes	1.00	**4.04**
		$U_2 - L_2$			-----	-596.77	-108	119	-437	456	-108	-38	153	23	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.087	0.89	Yes	0.760	0.233	1.00	Yes	1.00	**3.61**
		$U_3 - L_3$			-----	-503.20	-57	65	-199	223	73	-46	397	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.135	1.00	Yes	0.789	0.203	1.00	Yes	1.00	**3.06**
		$U_4 - L_4$			-----	-348.42	-10	25	-149	167	-55	43	473	92	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.206	1.00	Yes	0.737	0.214	0.96	Yes	1.00	**3.31**
		$U_5 - L_5$			116.14	-338.52	87	-75	-190	217	-110	96	310	6	0.209	0.368	0.58	Yes	0.115	0.202	0.32	Yes	0.765	0.197	0.97	Yes	0.716	0.278	1.00	Yes	1.00	**4.30**
		$U_6 - L_6$			289.84	-223.75	157	-165	-127	140	-30	106	900	136	0.521	0.472	1.00	Yes	0.287	0.259	0.55	Yes	0.504	0.319	0.83	Yes	0.473	0.211	0.69	Yes	1.00	**5.05**
		$U_7 - L_7$			-----	-321.60	137	-160	45	-52	-30	-25	816	30	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.270	1.00	Yes	0.680	0.205	0.89	Yes	1.00	**3.93**
		$U_8 - L_8$			-----	-468.84	55	-77	348	-369	-40	-41	152	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.106	0.79	Yes	0.675	0.323	1.00	Yes	1.00	**3.61**
		$U_9 - L_9$			-----	-694.20	159	-172	572	-592	21	-24	527	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.100	0.88	Yes	0.744	0.251	1.00	Yes	1.00	**4.40**
		$U_{10} - L_{10}$			-----	-794.35	169	-188	540	-569	-36	-183	477	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.151	0.94	Yes	0.743	0.251	1.00	Yes	1.00	**4.43**
		$U_{11} - L_{11}$			-----	-811.38	186	-186	510	-527	-187	-70	199	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.102	0.92	Yes	0.759	0.233	1.00	Yes	1.00	**3.99**
		$U_{12} - L_{12}$			-----	-882.82	162	-150	515	-532	-217	-30	470	12	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.148	1.00	Yes	0.765	0.228	1.00	Yes	1.00	**4.16**
		$U_{13} - L_{13}$			-----	-747.77	212	-210	575	-556	-168	22	418	46	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.162	1.00	Yes	0.721	0.275	1.00	Yes	1.00	**3.45**
		$U_{14} - L_{14}$			-----	-1078.22	102	-100	48	-53	-101	238	1402	298	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.210	1.00	Yes	0.715	0.018	0.74	Yes	1.00	**4.75**
		$U_{15} - L_{15}$			-----	-732.74	-123	130	-554	551	-309	13	446	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.175	1.00	Yes	0.706	0.265	0.98	Yes	1.00	**5.01**
		$U_{16} - L_{16}$			-----	-708.70	-90	64	-420	440	-800	-259	45	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.172	1.00	Yes	0.760	0.186	0.95	Yes	1.00	**4.53**
		$U_{17} - L_{17}$			-----	-647.38	-127	125	-510	517	-274	-185	-172	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.131	0.93	Yes	0.753	0.240	1.00	Yes	1.00	**4.03**
		$U_{18} - L_{18}$			-----	-598.33	-98	97	-415	458	-113	-128	373	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.106	0.91	Yes	0.762	0.234	1.00	Yes	1.00	**3.75**
		$U_{19} - L_{19}$			-----	-500.83	-55	59	-238	259	-66	-32	447	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.108	0.87	Yes	0.748	0.249	1.00	Yes	1.00	**3.54**
		$U_{20} - L_{20}$			-----	-390.55	-12	18	-207	218	-171	-29	212	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.125	0.93	Yes	0.748	0.249	1.00	Yes	1.00	**3.36**
		$U_{21} - L_{21}$			-----	-340.13	23	-17	-190	212	-87	45	469	28	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.206	0.98	Yes	0.720	0.270	1.00	Yes	1.00	**3.60**
		$U_{22} - L_{22}$			-----	-329.58	-82	97	-47	49	-45	-26	853	94	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1.00	Yes	0.697	0.124	0.83	Yes	1.00	**4.12**
		$U_{23} - L_{23}$			-----	-316.44	-61	51	237	-254	33	117	186	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.130	0.85	Yes	0.670	0.324	1.00	Yes	1.00	**3.99**
		$U_{24} - L_{24}$			-----	-376.00	15	-24	225	-240	77	-2	423	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.154	0.93	Yes	0.720	0.274	1.00	Yes	1.00	**3.42**
		$U_{25} - L_{25}$			-----	-471.48	42	-42	302	-298	-84	-30	366	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.106	0.82	Yes	0.704	0.291	1.00	Yes	1.00	**3.26**
		$U_{26} - L_{26}$			-----	-569.04	70	-74	501	-528	-120	-23	370	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.130	0.89	Yes	0.725	0.270	1.00	Yes	1.00	**3.76**
		$U_{27} - L_{27}$			-----	-631.09	88	-88	544	-555	-134	2	535	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.137	0.92	Yes	0.735	0.258	1.00	Yes	1.00	**3.94**
		$U_{28} - L_{28}$			-----	-708.03	78	-75	546	-547	-151	16	567	19	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.126	0.95	Yes	0.759	0.232	1.00	Yes	1.00	**4.12**
		$U_{29} - L_{29}$			-----	-717.32	119	-124	634	-608	-115	28	471	20	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.168	0.97	Yes	0.692	0.303	1.00	Yes	1.00	**4.70**
		$U_{30} - L_{30}$			-----	-1073.39	-57	46	93	-105	-168	72	1505	204	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.205	1.00	Yes	0.712	0.019	0.74	Yes	1.00	**5.51**
		$U_{31} - L_{31}$			-----	-722.75	-113	112	-450	450	-303	-33	565	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.190	1.00	Yes	0.697	0.215	0.92	Yes	1.00	**4.55**
		$U_{32} - L_{32}$			-----	-845.88	-80	58	-446	453	-689	-277	-380	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.188	1.00	Yes	0.733	0.194	0.93	Yes	1.00	**5.04**
		$U_{33} - L_{33}$			-----	-837.24	-119	108	-413	446	-448	-343	312	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.152	1.00	Yes	0.783	0.197	0.98	Yes	1.00	**4.72**
		$U_{34} - L_{34}$			-----	-843.88	-105	121	-402	471	-285	-194	1001	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.150	0.99	Yes	0.789	0.208	1.00	Yes	1.00	**5.52**
		$U_{35} - L_{35}$			-----	-715.36	-99	121	-510	542	-195	4	420	1	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.107	0.91	Yes	0.767	0.230	1.00	Yes	1.00	**4.70**
		$U_{36} - L_{36}$			-----	-501.27	-46	60	-285	310	-59	65	686	124	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.196	0.93	Yes	0.722	0.271	1.00	Yes	1.00	**3.71**
		$U_{37} - L_{37}$			-----	-328.03	-9	11	-119	135	-31	13	744	41	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1.00	Yes	0.694	0.172	0.87	Yes	1.00	**3.99**
		$U_{38} - L_{38}$			348.05	-175.70	-233	240	155	-161	42	102	232	-73	0.626	0.374	1.00	Yes	0.344	0.206	0.55	Yes	0.395	0.109	0.51	Yes	0.372	0.307	0.68	Yes	1.00	**5.23**
		$U_{39} - L_{39}$			150.40	-330.81	-123	117	202	-227	76	23	455	-53	0.270	0.422	0.70	Yes	0.149	0.232	0.39	Yes	0.747	0.175	0.93	Yes	0.700	0.291	1.00	Yes	1.00	**4.95**
		$U_{40} - L_{40}$			-----	-343.11	-13	-1	209	-210	27	-30	296	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.107	0.89	Yes	0.726	0.269	1.00	Yes	1.00	**3.44**
		$U_{41} - L_{41}$			-----	-487.36	28	-32	240	-252	6	-32	182	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.094	0.93	Yes	0.764	0.230	1.00	Yes	1.00	**3.42**
		$U_{42} - L_{42}$			-----	-588.93	63	-72	466	-481	10	-37	470	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.103	0.90	Yes	0.750	0.246	1.00	Yes	1.00	**3.69**
		$U_{43} - L_{43}$			-----	-711.23	82	-95	553	-558	-49	-49	507	8	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.115	0.93	Yes	0.762	0.237	1.00	Yes	1.00	**3.94**
		$U_{44} - L_{44}$			-----	-674.31	117	-134	377	-521	-133	-23	593	101	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.186	1.00	Yes	0.723	0.221	0.95	Yes	1.00	**3.43**
	Structure 3	$U_0 - L_0$			-----	-589.79	-144	193	-422	493	-56	-7	-642	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.212	1.00	Yes	0.686	0.229	0.92	Yes	1.00	**2.86**
		$U_1 - L_1$			-----	-659.78	-115	126	-436	456	-122	-3	-806	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1.00	Yes	0.768	0.212	0.98	Yes	1.00	**3.75**
		$U_2 - L_2$			-----	-564.95	-109	116	-335	372	-148	-45	471	97	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.144	0.98	Yes	0.786	0.211	1.00	Yes	1.00	**3.48**
		$U_3 - L_3$			-----	-451.49	-46	59	-188	211	43	-64	195	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.097	0.95	Yes	0.779	0.214	1.00	Yes	1.00	**2.77**
		$U_4 - L_4$			-----	-348.03	-18	26	-182	200	-37	33	456	49	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.199	0.99	Yes	0.736	0.256	1.00	Yes	1.00	**3.30**
		$U_5 - L_5$			104.18	-316.17	75	-68	-147	176	-87	111	684	92	0.187	0.424	0.62	Yes	0.103	0.233	0.34	Yes	0.709	0.286	1.00	Yes	0.669	0.225	0.90	Yes	1.00	**4.14**
		$U_6 - L_6$			-----	-319.88	133	-148	42	-43	-139	-30	858	104	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.282	1.00	Yes	0.677	0.189	0.87	Yes	1.00	**4.04**
		$U_7 - L_7$			-----	-366.88	19	-31	235	-255	22	-39	199	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.110	0.86	Yes	0.703	0.291	1.00	Yes	1.00	**3.17**
		$U_8 - L_8$			-----	-515.28	71	-74	330	-336	-8	-100	312	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.138	0.89	Yes	0.707	0.287	1.00	Yes	1.00	**3.65**
		$U_9 - L_9$			-----	-655.53	109	-165	394	-504	-25	-173	115	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.104	0.89	Yes	0.763	0.234	1.00	Yes	1.00	**4.00**
		$U_{10} - L_{10}$			-----	-784.34	119	-116	383	-430	-210	-98	543	97	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.169	0.99	Yes	0.774	0.223	1.00	Yes	1.00	**4.24**
		$U_{11} - L_{11}$			-----	-649.85	168	-193	426	-473	-160	-32	430	99	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.148	0.93	Yes	0.734	0.263	1.00	Yes	1.00	**2.91**
		$U_{12} - L_{12}$			-----	-1117.42	79	-109	27	-69	-173	20	1812	465	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.186	1.00	Yes	0.775	0.020	0.80	Yes	1.00	**4.81**
		$U_{13} - L_{13}$			-----	-467.22	-68	77	-255	276	-311	-53	177	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.158	0.94	Yes	0.721	0.272	1.00	Yes	1.00	**2.88**
		$U_{14} - L_{14}$			-----	-516.25	-46	32	-184	219	-726	-343	-80	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.216	1.00	Yes	0.740	0.192	0.94	Yes	1.00	**3.51**
		$U_{15} - L_{15}$			-----	-444.03	-36	43	-199	227	-448	-226	-232	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.189	1.00	Yes	0.766	0.230	1.00	Yes	1.00	**3.26**
		$U_{16} - L_{16}$			-----	-347.22	-7	11	-206	207	-527	-260	531	54	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.231	1.00	Yes	0.735	0.264	1.00	Yes	1.00	**4.60**
		$U_{17} - L_{17}$			298.87	-----	-307	322	242	-272	10	132	-15	-146	0.538	0.454	1.00	Yes	0.296	0.250	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.95**
		$U_{18} - L_{18}$			112.96	-309.15	-105	118	219	-269	-107	13	500	48	0.203	0.489	0.70	Yes	0.112	0.269	0.39	Yes	0.676	0.246	0.93	Yes	0.654	0.344	1.00	Yes	1.00	**5.02**
		$U_{19} - L_{19}$			-----	-323.03	-49	38	247	-237	-83	-7	247	28	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.139	0.85	Yes	0.684	0.316	1.00	Yes	1.00	**3.10**
		$U_{20} - L_{20}$			-----	-373.02	19	-29	54	-119	-45	-14	298	95	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.164	1.00	Yes	0.789	0.152	0.95	Yes	1.00	**1.93**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
North Truss - Diagonals	Structure 1	$U_0 - L_1$	645.75	-----	-102	52	-18	-1	-98	-90	-18	-5	0.847	0.144	1.00	Yes	0.512	0.079	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_1 - L_2$	459.53	-----	-84	0	14	-18	-218	-142	-17	-23	0.826	0.170	1.00	Yes	0.455	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_2 - L_3$	400.41	-260.40	-119	-27	-17	-69	-411	9	65	-76	0.720	0.271	1.00	Yes	0.396	0.149	0.55	Yes	0.599	0.276	0.88	Yes	0.551	0.151	0.71	Yes					1.00	**5.81**
		$U_3 - L_4$	-----	-374.81	-24	-42	16	-63	-187	-213	-47	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.139	1.00	Yes	0.793	0.081	0.88	Yes					1.00	**3.14**
		$U_4 - L_4$	540.94	-----	-91	32	-55	-4	-203	-227	-485	-221	0.793	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.13**
		$U_4 - L_5$	684.63	-----	-200	225	-51	78	-282	-306	-324	-131	0.809	0.187	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.34**
		$U_5 - L_6$	664.90	-----	-282	246	-83	102	-153	-185	286	118	0.786	0.213	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.79**
		$U_6 - L_7$	649.73	-----	-100	304	2	135	-106	-124	310	185	0.768	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.95**
		$U_8 - L_8$	983.17	-----	-105	340	20	139	342	433	280	106	0.786	0.207	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.88**
		$U_9 - L_{10}$	1015.22	-----	-301	245	-77	86	149	368	275	207	0.812	0.181	1.00	Yes	0.503	0.102	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.95**
		$U_{10} - L_{11}$	993.46	-----	-249	174	-90	75	-78	344	232	175	0.839	0.160	1.00	Yes	0.519	0.090	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.44**
		$U_{11} - L_{12}$	841.29	-----	-271	81	-105	3	-21	273	-6	58	0.832	0.167	1.00	Yes	0.458	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.00**
		$U_{12} - L_{13}$	653.96	-----	-203	158	-84	26	-38	85	48	-103	0.797	0.197	1.00	Yes	0.502	0.110	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.47**
		$U_{13} - L_{14}$	458.26	-----	-95	29	-21	-24	-82	-14	-51	-178	0.824	0.173	1.00	Yes	0.453	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.01**
		$U_{15} - L_{14}$	225.83	-282.72	-66	-15	-9	-83	-283	-262	-697	-128	0.406	0.309	0.72	Yes	0.223	0.170	0.40	Yes	0.662	0.336	1.00	Yes	0.598	0.107	0.71	Yes					1.00	**3.81**
		$U_{16} - L_{15}$	383.42	-----	-122	85	-21	-27	-331	-297	-525	-125	0.690	0.308	1.00	Yes	0.379	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.44**
		$U_{17} - L_{16}$	516.74	-----	-138	99	-34	13	-408	-353	-109	-129	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.76**
		$U_{18} - L_{17}$	611.36	-----	-312	253	-112	76	-522	-464	-113	-119	0.723	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.90**
		$U_{19} - L_{18}$	687.22	-----	-346	256	-133	87	-439	-443	-68	-107	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.81**
		$U_{20} - L_{19}$	727.46	-----	-228	255	-94	91	-497	-330	-101	-38	0.788	0.212	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.17**
	Structure 2	$U_0 - L_1$	800.56	-----	-369	355	-115	100	-101	-190	-60	-51	0.792	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.29**
		$U_1 - L_2$	788.74	-----	-388	313	-95	71	-221	-33	-100	-29	0.780	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.26**
		$U_2 - L_3$	648.50	-----	-334	257	-86	65	-209	147	-24	88	0.767	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.46**
		$U_3 - L_4$	601.93	-----	-181	139	-37	16	-147	-48	105	61	0.802	0.196	1.00	Yes	0.441	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.66**
		$U_4 - L_5$	425.81	-----	-134	98	-3	-31	-197	35	-13	-162	0.766	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.86**
		$U_5 - L_6$	430.20	-260.05	-124	54	57	-100	-209	114	-114	-190	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.614	0.172	0.79	Yes	0.550	0.159	0.71	Yes					1.00	**5.07**
		$U_6 - L_7$	-----	-383.73	-42	-10	45	-100	-154	-117	58	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.172	1.00	Yes	0.735	0.115	0.85	Yes					1.00	**3.38**
		$U_8 - L_7$	571.00	-----	-176	122	-52	-13	-212	-446	-552	-186	0.728	0.270	1.00	Yes	0.458	0.154	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.83**
		$U_8 - L_8$	659.81	-----	-303	227	-167	51	-371	-356	-775	-275	0.715	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.25**
		$U_{10} - L_9$	790.56	-----	-311	222	-132	55	-442	-464	-473	-223	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{11} - L_{10}$	872.02	-----	-339	278	-109	130	-395	-446	127	-10	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.61**
		$U_{12} - L_{11}$	869.53	-----	-361	350	-118	154	-322	-360	222	76	0.792	0.203	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.65**
		$U_{13} - L_{12}$	751.86	-----	-429	375	-153	155	-176	-183	323	122	0.744	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.03**
		$U_{14} - L_{13}$	748.16	-----	-274	421	-23	156	-198	-157	377	186	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.71**
		$U_{14} - L_{15}$	640.44	-----	-221	350	23	73	100	208	212	-44	0.757	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.81**
		$U_{15} - L_{16}$	618.72	-----	-377	330	-64	71	-109	259	-17	21	0.731	0.260	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.16**
		$U_{16} - L_{17}$	716.57	-----	-326	344	-69	96	-267	269	-150	62	0.776	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.10**
		$U_{17} - L_{18}$	648.81	-----	-291	266	-68	81	-84	338	-22	105	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.55**
		$U_{18} - L_{19}$	654.61	-----	-294	244	-50	69	54	296	35	21	0.774	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.89**
		$U_{19} - L_{20}$	616.54	-----	-198	171	-39	7	38	178	122	-18	0.786	0.213	1.00	Yes	0.432	0.120	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.02**
		$U_{20} - L_{21}$	442.58	-----	-125	101	-9	-9	-43	134	21	-86	0.796	0.199	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.45**
		$U_{21} - L_{22}$	449.12	-220.40	-109	56	11	-76	-26	32	165	-154	0.808	0.188	1.00	Yes	0.444	0.103	0.55	Yes	0.521	0.125	0.65	Yes	0.466	0.140	0.61	Yes					1.00	**5.15**
		$U_{23} - L_{22}$	400.10	-267.76	-103	43	19	-76	-208	-266	-490	-39	0.720	0.274	1.00	Yes	0.396	0.150	0.55	Yes	0.638	0.254	0.90	Yes	0.567	0.132	0.70	Yes					1.00	**4.77**
		$U_{24} - L_{23}$	389.65	-----	-109	97	-23	-7	-237	-207	-533	-29	0.701	0.293	1.00	Yes	0.385	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.28**
		$U_{25} - L_{24}$	581.40	-----	-194	173	-32	8	-393	-336	-380	-133	0.741	0.254	1.00	Yes	0.408	0.144	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.87**
		$U_{26} - L_{25}$	654.11	-----	-276	258	-30	42	-306	-355	109	39	0.773	0.221	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.86**
		$U_{27} - L_{26}$	662.55	-----	-287	284	-45	58	-259	-283	177	69	0.783	0.214	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.87**
		$U_{28} - L_{27}$	705.99	-----	-341	352	-49	68	-240	-279	199	110	0.765	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.03**
		$U_{29} - L_{28}$	635.59	-----	-362	340	-74	74	-111	-164	207	100	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.68**
		$U_{30} - L_{29}$	625.03	-----	-216	347	37	106	-126	-131	333	129	0.739	0.257	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.35**
		$U_{30} - L_{31}$	757.50	-----	-298	423	13	73	220	327	292	0	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.60**
		$U_{31} - L_{32}$	772.37	-----	-441	392	-71	75	-181	177	-10	44	0.764	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.86**
		$U_{32} - L_{33}$	873.05	-----	-360	327	-61	95	-348	362	-139	139	0.795	0.202	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		$U_{33} - L_{34}$	860.81	-----	-358	252	-68	90	4	452	26	206	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		$U_{34} - L_{35}$	828.90	-----	-310	237	-105	41	46	227	237	-13	0.820	0.180	1.00	Yes	0.451	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.53**
		$U_{35} - L_{36}$	736.20	-----	-333	229	-105	27	-29	160	43	-104	0.797	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
		$U_{36} - L_{37}$	613.48	-----	-181	151	-33	-9	-107	40	-57	-227	0.782	0.208	1.00	Yes	0.492	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.35**
		$U_{38} - L_{37}$	-----	-369.47	-32	-12	45	-85	-152	-238	-373	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1.00	Yes	0.708	0.097	0.81	Yes					1.00	**2.83**
		$U_{39} - L_{38}$	285.01	-281.36	-82	45	34	-88	-267	-238	-685	-86	0.513	0.311	0.83	Yes	0.282	0.171	0.46	Yes	0.670	0.321	1.00	Yes	0.595	0.112	0.71	Yes					1.00	**4.15**
		$U_{40} - L_{39}$	393.55	-138.70	-131	93	11	-44	-333	-314	-400	-117	0.708	0.283	1.00	Yes	0.389	0.156	0.55	Yes	0.332	0.201	0.54	Yes	0.293	0.167	0.47	Yes					1.00	**4.20**
		$U_{41} - L_{40}$	567.56	-----	-172	127	-19	4	-380	-362	-96	-82	0.757	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.54**
		$U_{42} - L_{41}$	622.71	-----	-317	263	-49	32	-419	-414	-68	-65	0.736	0.255	1.00	Yes	0.405	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.70**
		$U_{43} - L_{42}$	750.96	-----	-388	305	-66	45	-470	-451	-6	-46	0.743	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.89**
		$U_{44} - L_{43}$	783.54	-----	-274	323	-94	80	-472	-327	55	-22	0.775	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
	Structure 3	$U_0 - L_1$	719.74	-----	-344	301	-112	94	-14	-250	-62	-53	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.93**
		$U_1 - L_2$	702.19	-----	-347	252	-99	67	-349	-328	-125	-45	0.761	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.89**
		$U_2 - L_3$	650.04	-----	-328	255	-97	63	-231	78	-48	80	0.769	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.64**
		$U_3 - L_4$	549.76	-----	-152	97	-39	5	-142	52	79	-17	0.806	0.187	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.16**
		$U_4 - L_5$	432.17	-----	-132	100	-14	-34	-187	-19	-7	-183	0.777	0.222	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.11**
		$U_5 - L_6$	391.91	-332.60	-98	1	34	-112	-219	-86	-87	-313	0.705	0.233	0.94	Yes	0.388	0.128	0.52	Yes	0.779	0.217	1.00	Yes	0.704	0.143	0.85	Yes					1.00	**5.13**
		$U_7 - L_6$	406.59	-----	-79	32	-31	-30	-208	-284	-575	-193	0.731	0.267	1.00	Yes	0.402	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.24**
		$U_8 - L_7$	594.82	-----	-193	140	-70	6	-409	-410	-521	-228	0.725	0.270	1.00	Yes	0.456	0.154	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.57**
		$U_8 - L_8$	773.78	-----	-242	101	-132	-22	-493	-509	-767	-425	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.70**
		$U_{10} - L_9$	951.65	-----	-245	174	-112	47	-539	-592	122	-205	0.804	0.191	1.00	Yes	0.498	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.48**
		$U_{11} - L_{10}$	998.07	-----	-313	243	-83	89	-482	-431	221	83	0.798	0.201	1.00	Yes	0.494	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.28**
		$U_{12} - L_{11}$	994.61	-----	-113	358	3	133	-332	-302	318	180	0.795	0.202	1.00	Yes	0.493	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.48**
		$U_{12} - L_{13}$	673.69	-----	-113	283	25	73	127	220	129	-16	0.796	0.201	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.13**
		$U_{13} - L_{14}$	653.97	-----	-305	224	-28	58	-6	269	46	76	0.773	0.223	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.99**
		$U_{14} - L_{15}$	709.30	-----	-190	211	-23	43	-173	215	104	63	0.839	0.159	1.00	Yes	0.461	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.15**
		$U_{15} - L_{16}$	588.06	-----	-94	29	-22	2	-90	168	-43	40	0.862	0.134	1.00	Yes	0.474	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.61**
		$U_{17} - L_{16}$	-----	-384.30	-18	-30	-10	-53	2	0	-329	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.118	1.00	Yes	0.813	0.067	0.89	Yes					1.00	**3.00**
		$U_{18} - L_{17}$	322.85	-328.36	-84	9	-9	-73	-247	-240	-621	-45	0.581	0.287	0.87	Yes	0.319	0.158	0.48	Yes	0.756	0.239	1.00	Yes	0.695	0.107	0.81	Yes					1.00	**5.33**
		$U_{19} - L_{18}$	409.91	-120.01	-99	23	23	-19	-441	-327	147	113	0.737	0.255	1.00	Yes	0.405	0.140	0.55	Yes	0.275	0.232	0.51	Yes	0.254	0.127	0.39	Yes					1.00	**3.68**
		$U_{20} - L_{19}$	641.64	-----	-7	33	-14	-6	-467	-379	93	107	0.842	0.156	1.00	Yes	0.508	0.086	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**

Axial AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

| | | | Vehicle | Pedestrian | Axial Force | | ZZ Axis Bending | | | | YY Axis Bending | | | | Tension | | | | | | | | Compression | | | | | | | |

Axial AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Lower Chord	Structure 1	L_0 - L_1	209.96	-136.16	679	-1240	613	-956	-381	-1402	15	58	0.321	0.673	1.00	Yes	0.189	0.403	0.60	Yes	0.247	0.477	0.73	Yes	0.245	0.372	0.62	Yes	1.00	**13.33**
		L_1 - L_2	436.75	-----	-268	-621	46	-20	-662	152	18	21	0.668	0.329	1.00	Yes	0.408	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		L_2 - L_3	666.75	-----	-843	-717	-37	57	-134	-50	10	-8	0.767	0.225	1.00	Yes	0.444	0.135	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_3 - L_4	641.50	-149.28	-938	-454	40	189	-113	167	-34	38	0.738	0.253	1.00	Yes	0.438	0.164	0.61	Yes	0.204	0.229	0.44	Yes	0.202	0.227	0.43	Yes	1.00	**3.95**
		L_4 - L_5	-----	-509.78	-814	-245	88	484	-232	93	166	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.168	0.96	Yes	0.777	0.216	1.00	Yes	1.00	**5.25**
		L_5 - L_6	-----	-749.82	-472	-387	140	581	-93	35	20	87	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.118	1	Yes	0.865	0.128	1.00	Yes	1.00	**5.76**
		L_6 - L_7	-----	-1055.59	-854	-761	145	17	97	156	190	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.132	1	Yes	0.850	0.134	0.99	Yes	1.00	**6.86**
		L_7 - L_8	-----	-1255.82	-32	582	-38	1362	41	73	157	213	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.187	1	Yes	0.795	0.180	0.98	Yes	1.00	**7.09**
		L_8 - L_9	-----	-1272.21	553	-47	1387	-103	37	-14	128	22	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.806	0.184	0.99	Yes	1.00	**7.06**
		L_9 - L_{10}	-----	-999.71	-295	-1192	13	55	37	14	34	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.108	0.93	Yes	0.805	0.187	1.00	Yes	1.00	**8.97**
		L_{10} - L_{11}	-----	-535.01	-265	-693	482	-19	-9	-3	73	10	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.112	0.94	Yes	0.815	0.183	1.00	Yes	1.00	**6.85**
		L_{11} - L_{12}	582.09	-----	-9	-631	329	-199	-423	150	-16	20	0.754	0.241	1.00	Yes	0.452	0.155	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		L_{12} - L_{13}	1072.57	-----	-607	-788	66	-99	-49	20	-20	-34	0.846	0.146	1.00	Yes	0.541	0.086	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		L_{13} - L_{14}	1340.10	-----	-570	-1388	224	-391	-160	215	-106	62	0.788	0.209	1.00	Yes	0.511	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_{14} - L_{15}	1619.15	-----	-1222	-1504	-351	-81	-282	-47	-66	-49	0.791	0.201	1.00	Yes	0.514	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		L_{15} - L_{16}	1582.60	-----	-1021	-1728	-198	-391	-161	-132	-75	15	0.773	0.220	1.00	Yes	0.496	0.128	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{16} - L_{17}	1231.70	-----	-1367	-484	-400	39	-164	100	-34	-64	0.779	0.215	1.00	Yes	0.505	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_{17} - L_{18}	918.39	-----	-933	-200	-187	-50	10	-100	-44	-1	0.800	0.193	1.00	Yes	0.512	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_{18} - L_{19}	440.07	-----	-935	322	-261	188	-210	188	4	-14	0.674	0.324	1.00	Yes	0.456	0.202	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_{19} - L_{20}	345.17	-----	-335	48	-1469	866	-3	-1	-114	-25	0.528	0.464	1.00	Yes	0.322	0.315	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.82**
	Structure 2	L_0 - L_1	199.72	-----	652	-2158	703	-1616	-544	-1888	37	128	0.243	0.749	1.00	Yes	0.144	0.470	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.53**
		L_1 - L_2	543.93	-----	218	-1194	159	-213	-551	274	75	103	0.661	0.334	1.00	Yes	0.393	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_2 - L_3	1023.84	-----	-412	-1037	-16	-148	-10	-327	125	162	0.807	0.185	1.00	Yes	0.529	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		L_3 - L_4	1312.02	-----	-498	-1589	58	-332	-507	182	43	124	0.771	0.226	1.00	Yes	0.519	0.141	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		L_4 - L_5	1730.80	-----	-1792	-1511	-240	-230	297	-100	17	-10	0.807	0.189	1.00	Yes	0.534	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		L_5 - L_6	1826.29	-----	-1963	-2254	-33	-344	-153	162	-93	58	0.784	0.210	1.00	Yes	0.526	0.128	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		L_6 - L_7	1778.58	-----	-2556	-1625	-393	-104	20	246	52	-11	0.753	0.240	1.00	Yes	0.500	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_7 - L_8	1402.88	-----	-1534	-1344	-187	229	-223	-43	-69	78	0.804	0.188	1.00	Yes	0.528	0.110	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		L_8 - L_9	1129.68	-----	-1421	-448	-138	482	-132	177	42	-120	0.790	0.208	1.00	Yes	0.532	0.130	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		L_9 - L_{10}	897.11	-587.27	-1118	-814	-85	604	-161	-78	-37	33	0.801	0.198	1.00	Yes	0.466	0.123	0.59	Yes	0.621	0.134	0.76	Yes	0.617	0.179	0.80	Yes	1.00	**7.66**
		L_{10} - L_{11}	-----	-701.77	-970	-190	11	567	-120	75	123	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.090	0.92	Yes	0.824	0.170	1.00	Yes	1.00	**6.21**
		L_{11} - L_{12}	-----	-1028.07	-1152	-109	-4	975	29	-55	30	89	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.108	0.96	Yes	0.843	0.157	1.00	Yes	1.00	**7.37**
		L_{12} - L_{13}	-----	-1444.71	-381	-240	-59	-915	-21	-179	425	204	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.127	1	Yes	0.864	0.091	0.96	Yes	1.00	**9.18**
		L_{13} - L_{14}	-----	-1502.11	-477	1324	-995	2706	-190	-257	212	218	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.172	0.94	Yes	0.756	0.236	1.00	Yes	1.00	**8.03**
		L_{14} - L_{15}	-----	-1484.24	1259	-546	2806	-839	-238	-166	12	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.175	0.93	Yes	0.747	0.245	1.00	Yes	1.00	**7.23**
		L_{15} - L_{16}	-----	-1474.28	-511	-92	-1064	205	-113	6	-196	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.105	1	Yes	0.882	0.106	0.99	Yes	1.00	**10.32**
		L_{16} - L_{17}	-----	-1173.61	7	-1055	1161	79	49	-384	9	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1	Yes	0.855	0.143	1.00	Yes	1.00	**8.74**
		L_{17} - L_{18}	-----	-811.21	-174	-885	491	175	-11	159	16	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.122	0.98	Yes	0.852	0.142	1.00	Yes	1.00	**6.16**
		L_{18} - L_{19}	-----	-634.34	-313	-754	616	78	128	-221	-10	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.114	0.97	Yes	0.845	0.145	1.00	Yes	1.00	**6.18**
		L_{19} - L_{20}	651.26	-480.86	-454	-1185	477	130	-124	163	-33	-22	0.738	0.254	1.00	Yes	0.436	0.162	0.60	Yes	0.645	0.164	0.81	Yes	0.641	0.229	0.87	Yes	1.00	**6.46**
		L_{20} - L_{21}	973.33	-348.61	-1201	-1429	364	1	31	68	1	-37	0.776	0.216	1.00	Yes	0.509	0.128	0.64	Yes	0.329	0.210	0.54	Yes	0.327	0.208	0.54	Yes	1.00	**6.95**
		L_{21} - L_{22}	939.00	-----	-1303	-1525	204	-153	37	232	-55	23	0.749	0.248	1.00	Yes	0.501	0.155	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		L_{22} - L_{23}	925.64	-----	-1170	-1592	-150	177	-185	107	21	-40	0.738	0.252	1.00	Yes	0.494	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		L_{23} - L_{24}	962.13	-311.38	-1504	-1233	-9	298	-36	9	-6	67	0.767	0.227	1.00	Yes	0.503	0.134	0.64	Yes	0.294	0.235	0.53	Yes	0.292	0.219	0.52	Yes	1.00	**6.61**
		L_{24} - L_{25}	683.41	-453.99	-1058	-763	104	452	-130	-25	96	-91	0.774	0.224	1.00	Yes	0.458	0.143	0.61	Yes	0.609	0.129	0.74	Yes	0.605	0.204	0.81	Yes	1.00	**6.63**
		L_{25} - L_{26}	-----	-624.91	-834	-707	72	585	-15	-59	12	80	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.113	0.96	Yes	0.833	0.161	1.00	Yes	1.00	**6.86**
		L_{26} - L_{27}	-----	-781.42	-1112	-216	135	484	-80	89	140	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.129	0.96	Yes	0.821	0.178	1.00	Yes	1.00	**6.69**
		L_{27} - L_{28}	-----	-1175.10	-1034	-560	60	1122	-68	-261	89	192	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.124	0.99	Yes	0.856	0.138	1.00	Yes	1.00	**9.87**
		L_{28} - L_{29}	-----	-1541.16	-176	-447	-171	-146	141	99	306	27	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.062	1	Yes	0.922	0.044	0.97	Yes	1.00	**11.14**
		L_{29} - L_{30}	-----	-1501.74	-498	1195	-735	2687	91	120	43	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.163	0.93	Yes	0.756	0.235	1.00	Yes	1.00	**7.34**
		L_{30} - L_{31}	-----	-1454.47	1242	-468	3026	-898	121	68	145	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.179	0.92	Yes	0.732	0.264	1.00	Yes	1.00	**8.23**
		L_{31} - L_{32}	-----	-1489.28	-276	-304	-769	210	86	57	-160	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.898	0.092	1	Yes	0.891	0.076	0.97	Yes	1.00	**10.70**
		L_{32} - L_{33}	-----	-1048.85	-26	-755	1010	53	355	-82	-25	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.123	1	Yes	0.860	0.138	1.00	Yes	1.00	**7.74**
		L_{33} - L_{34}	-----	-701.62	122	-977	533	90	-403	229	19	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.126	0.96	Yes	0.824	0.171	1.00	Yes	1.00	**6.10**
		L_{34} - L_{35}	876.05	-640.95	-521	-1117	671	-21	229	-289	-6	-61	0.782	0.213	1.00	Yes	0.455	0.132	0.59	Yes	0.678	0.117	0.8	Yes	0.673	0.179	0.86	Yes	1.00	**7.97**
		L_{35} - L_{36}	1127.03	-----	-509	-1354	509	-74	-152	220	-80	14	0.788	0.203	1.00	Yes	0.531	0.127	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_{36} - L_{37}	1329.51	-----	-768	-1964	303	-83	27	167	34	-5	0.762	0.231	1.00	Yes	0.501	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_{37} - L_{38}	1739.63	-----	-1078	-2794	-4	-451	-199	13	-72	53	0.736	0.258	1.00	Yes	0.489	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_{38} - L_{39}	1809.51	-----	-2338	-2017	-381	-80	-76	184	11	-59	0.776	0.219	1.00	Yes	0.521	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		L_{39} - L_{40}	1680.71	-----	-2148	-1466	-265	-389	-37	-71	-57	7	0.784	0.208	1.00	Yes	0.519	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		L_{40} - L_{41}	1335.66	-----	-1670	-959	-426	22	-154	170	0	-18	0.785	0.209	1.00	Yes	0.528	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_{41} - L_{42}	1027.33	-----	-1185	-613	-200	-95	46	-71	23	111	0.810	0.183	1.00	Yes	0.531	0.108	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		L_{42} - L_{43}	543.41	-----	-1459	418	-325	177	-83	252	142	61	0.660	0.338	1.00	Yes	0.393	0.218	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		L_{43} - L_{44}	242.06	-----	-739	104	-2940	1309	-624	-182	-97	-28	0.294	0.701	1.00	Yes	0.175	0.450	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**34.23**
	Structure 3	L_0 - L_1	282.63	-----	490	-1057	764	-1220	-213	-966	41	184	0.433	0.566	1.00	Yes	0.264	0.372	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.48**
		L_1 - L_2	456.41	-----	168	-677	157	-187	-445	267	37	61	0.699	0.296	1.00	Yes	0.472	0.188	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		L_2 - L_3	933.53	-----	-165	-766	-20	-146	5	-292	92	134	0.813	0.185	1.00	Yes	0.520	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_3 - L_4	1218.78	-----	-266	-1277	47	-310	-445	168	30	118	0.771	0.227	1.00	Yes	0.500	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_4 - L_5	1643.29	-----	-1491	-1091	-277	-139	113	-167	26	12	0.803	0.191	1.00	Yes	0.515	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		L_5 - L_6	1583.86	-----	-1191	-1668	-33	-315	-117	312	-64	133	0.774	0.223	1.00	Yes	0.503	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		L_6 - L_7	1329.44	-----	-1409	-593	-350	202	-121	183	1	-28	0.782	0.209	1.00	Yes	0.507	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		L_7 - L_8	1076.23	-----	-733	-744	-90	53	-98	67	-23	67	0.849	0.143	1.00	Yes	0.543	0.085	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_8 - L_9	635.37	-----	-606	-196	-202	334	-74	88	59	-91	0.823	0.176	1.00	Yes	0.494	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		L_9 - L_{10}	426.25	-518.08	-778	-298	-34	474	97	106	-19	29	0.552	0.225	0.78	Yes	0.321	0.136	0.46	Yes	0.796	0.139	0.94	Yes	0.789	0.206	1.00	Yes	1.00	**6.89**
		L_{10} - L_{11}	-----	-1018.96	-1100	-652	74	158	51	-132	108	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.114	0.95	Yes	0.820	0.173	1.00	Yes	1.00	**9.58**
		L_{11} - L_{12}	-----	-1256.62	-57	532	-114	1433	-90	-105	-136	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.796	0.190	0.99	Yes	1.00	**7.26**
		L_{12} - L_{13}	-----	-1246.00	555	-35	1366	-52	-137	-142	-289	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.789	0.181	0.97	Yes	1.00	**6.98**
		L_{13} - L_{14}	-----	-1041.62	-261	-857	-34	140	-631	-191	-132	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.150	1	Yes	0.838	0.135	0.98	Yes	1.00	**6.70**
		L_{14} - L_{15}	-----	-749.39	-233	-476	576	139	36	-188	-11	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.125	1	Yes	0.865	0.128	1.00	Yes	1.00	**5.87**
		L_{15} - L_{16}	-----	-518.29	-247	-783	460	139	-56	300	7	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.186	0.99	Yes	0.790	0.207	1.00	Yes	1.00	**5.43**
		L_{16} - L_{17}	623.84	-119.79	-187	-1057	216	3	-126	-25	28	-71	0.718	0.276	1.00	Yes	0.426	0.179	0.61	Yes	0.164	0.213	0.38	Yes	0.162	0.255	0.42	Yes	1.00	**3.91**
		L_{17} - L_{18}	648.63	-----	-536	-981	31	-74	11	73	13	104	0.746	0.254	1.00	Yes	0.432	0.153	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		L_{18} - L_{19}	458.84	-----	-676	-445	-30	31	-16	420	51	-75	0.702	0.293	1.00	Yes	0.428	0.194	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_{19} - L_{20}	151.26	-----	-1886	1104	-1591	1205	901	245	76	21	0.231	0.759	1.00	Yes	0.136	0.461	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.31**

Axial AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-371.75	-25	48	-50	109	-100	-32	-322	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.162	1	Yes	0.787	0.139	0.93	Yes	1.00	**1.52**
		$U_1 - L_1$			-----	-344.45	18	-13	-193	207	42	18	-291	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.150	0.91	Yes	0.729	0.264	1.00	Yes	1.00	**3.78**
		$U_2 - L_2$			77.04	-354.92	68	-75	-130	192	31	7	-229	9	0.139	0.312	0.46	Yes	0.076	0.172	0.25	Yes	0.776	0.154	0.93	Yes	0.751	0.246	1.00	Yes	1.00	**5.62**
		$U_3 - L_3$			259.53	-326.57	226	-235	-89	142	-208	-46	470	300	0.467	0.436	0.91	Yes	0.257	0.240	0.50	Yes	0.716	0.180	0.9	Yes	0.691	0.300	1.00	Yes	1.00	**7.31**
		$U_4 - L_4$			-----	-404.70	-42	31	77	-82	-81	12	265	93	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.102	1	Yes	0.856	0.104	0.97	Yes	1.00	**4.74**
		$U_5 - L_5$			-----	-428.03	20	-39	229	-251	-107	-23	-123	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.103	0.88	Yes	0.738	0.255	1.00	Yes	1.00	**3.62**
		$U_6 - L_6$			-----	-520.44	46	-58	268	-289	-85	33	77	68	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.086	0.88	Yes	0.746	0.253	1.00	Yes	1.00	**3.71**
		$U_7 - L_7$			-----	-443.85	118	-131	288	-312	-129	46	-11	75	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.121	0.87	Yes	0.685	0.308	1.00	Yes	1.00	**2.49**
		$U_8 - L_8$			-----	-1331.82	-3	-2	-191	230	-197	-69	-181	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.962	0.032	1	Yes	0.923	0.043	0.97	Yes	1.00	**5.15**
		$U_9 - L_9$			-----	-675.08	-165	189	-347	420	-224	-158	-251	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.128	0.94	Yes	0.763	0.234	1.00	Yes	1.00	**3.18**
		$U_{10} - L_{10}$			-----	-812.26	-115	107	-316	370	-205	-147	-255	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.106	0.95	Yes	0.801	0.192	1.00	Yes	1.00	**4.93**
		$U_{11} - L_{11}$			-----	-690.29	-84	133	-261	411	-174	-44	-144	2	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.093	0.93	Yes	0.803	0.191	1.00	Yes	1.00	**4.57**
		$U_{12} - L_{12}$			-----	-561.47	-39	42	-238	267	-174	3	183	181	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.094	0.91	Yes	0.770	0.228	1.00	Yes	1.00	**4.48**
		$U_{13} - L_{13}$			-----	-388.28	-6	19	-192	217	-92	86	-80	102	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.092	0.88	Yes	0.744	0.248	1.00	Yes	1.00	**3.29**
		$U_{14} - L_{14}$			-----	-340.16	-194	217	-134	142	-94	-20	-139	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.122	0.89	Yes	0.720	0.278	1.00	Yes	1.00	**4.74**
		$U_{15} - L_{15}$			223.13	-315.63	-172	169	239	-253	-115	-131	45	-155	0.401	0.368	0.77	Yes	0.221	0.203	0.43	Yes	0.707	0.155	0.87	Yes	0.668	0.323	1.00	Yes	1.00	**5.29**
		$U_{16} - L_{16}$			-----	-323.66	-48	34	237	-245	-80	-84	-102	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.151	0.89	Yes	0.685	0.313	1.00	Yes	1.00	**4.29**
		$U_{17} - L_{17}$			-----	-439.90	38	-56	211	-229	-118	-171	-128	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.133	0.96	Yes	0.759	0.232	1.00	Yes	1.00	**3.35**
		$U_{18} - L_{18}$			-----	-536.69	124	-129	432	-443	-162	-61	151	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.093	0.88	Yes	0.746	0.251	1.00	Yes	1.00	**3.71**
		$U_{19} - L_{19}$			-----	-648.57	138	-151	496	-509	-66	11	234	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.089	0.9	Yes	0.755	0.236	1.00	Yes	1.00	**4.18**
		$U_{20} - L_{20}$			-----	-585.92	166	-214	401	-481	30	4	709	93	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.221	1	Yes	0.682	0.223	0.91	Yes	1.00	**2.84**
	Structure 2	$U_0 - L_0$			-----	-633.92	-120	186	-337	450	-264	-45	-1027	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1	Yes	0.679	0.191	0.88	Yes	1.00	**2.72**
		$U_1 - L_1$			-----	-658.04	-122	131	-409	448	23	-69	-1322	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.239	1	Yes	0.705	0.190	0.90	Yes	1.00	**3.92**
		$U_2 - L_2$			-----	-612.50	-90	99	-391	425	86	40	-185	43	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.095	0.92	Yes	0.780	0.217	1.00	Yes	1.00	**4.12**
		$U_3 - L_3$			-----	-512.21	-47	54	-182	211	15	125	-86	91	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.090	0.97	Yes	0.803	0.193	1.00	Yes	1.00	**3.79**
		$U_4 - L_4$			-----	-370.43	21	-5	-149	169	-105	60	121	159	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.105	0.95	Yes	0.784	0.216	1.00	Yes	1.00	**4.09**
		$U_5 - L_5$			170.41	-356.58	117	-109	-158	188	-113	93	-129	108	0.306	0.278	0.59	Yes	0.169	0.153	0.33	Yes	0.805	0.106	0.92	Yes	0.754	0.240	1.00	Yes	1.00	**4.95**
		$U_6 - L_6$			361.36	-----	214	-224	-159	169	-135	83	195	153	0.650	0.343	1.00	Yes	0.357	0.189	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_7 - L_7$			-----	-414.61	-16	21	56	-64	-101	-22	-97	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.937	0.058	1	Yes	0.877	0.081	0.96	Yes	1.00	**4.93**
		$U_8 - L_8$			-----	-464.07	16	-35	366	-371	-134	-110	-177	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.121	0.8	Yes	0.668	0.325	1.00	Yes	1.00	**4.16**
		$U_9 - L_9$			-----	-697.17	103	-123	567	-587	-132	-102	-185	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.088	0.87	Yes	0.747	0.249	1.00	Yes	1.00	**5.10**
		$U_{10} - L_{10}$			-----	-797.32	105	-139	538	-562	-66	-42	41	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.080	0.87	Yes	0.745	0.248	1.00	Yes	1.00	**5.38**
		$U_{11} - L_{11}$			-----	-816.53	166	-171	499	-513	-67	-80	-103	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.078	0.9	Yes	0.763	0.227	1.00	Yes	1.00	**4.90**
		$U_{12} - L_{12}$			-----	-887.19	147	-160	521	-531	21	-65	28	67	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.076	0.93	Yes	0.769	0.228	1.00	Yes	1.00	**4.92**
		$U_{13} - L_{13}$			-----	-745.75	244	-242	573	-561	-84	44	70	78	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.110	0.95	Yes	0.719	0.274	1.00	Yes	1.00	**3.68**
		$U_{14} - L_{14}$			-----	-1334.26	149	-145	88	-91	-61	126	-103	55	-----	-----	-----	-----	-----	-----	-----	-----	0.976	0.016	1	Yes	0.885	0.026	0.92	Yes	1.00	**5.34**
		$U_{15} - L_{15}$			-----	-747.90	-168	170	-555	564	-82	-46	-154	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.138	0.98	Yes	0.721	0.270	1.00	Yes	1.00	**4.51**
		$U_{16} - L_{16}$			-----	-747.56	-115	104	-439	463	-157	-92	-6	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.082	0.95	Yes	0.801	0.196	1.00	Yes	1.00	**4.79**
		$U_{17} - L_{17}$			-----	-662.66	-138	142	-469	489	-173	-62	-160	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.086	0.91	Yes	0.771	0.227	1.00	Yes	1.00	**4.21**
		$U_{18} - L_{18}$			-----	-598.88	-94	101	-411	453	-158	-36	88	43	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.085	0.89	Yes	0.763	0.232	1.00	Yes	1.00	**4.21**
		$U_{19} - L_{19}$			-----	-509.54	-33	40	-226	245	-159	-11	78	64	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.085	0.86	Yes	0.761	0.236	1.00	Yes	1.00	**4.03**
		$U_{20} - L_{20}$			-----	-400.98	3	3	-178	195	-152	13	-151	23	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.101	0.93	Yes	0.768	0.222	1.00	Yes	1.00	**3.73**
	Structure 3	$U_0 - L_0$			-----	-345.18	38	-35	-184	203	-136	33	51	71	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.111	0.9	Yes	0.730	0.260	1.00	Yes	1.00	**4.03**
		$U_1 - L_1$			-----	-392.29	119	-130	-31	32	-162	-58	-129	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.883	0.099	0.99	Yes	0.830	0.166	1.00	Yes	1.00	**4.93**
		$U_2 - L_2$			-----	-322.49	-104	96	238	-247	-96	-45	-108	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.125	0.86	Yes	0.682	0.316	1.00	Yes	1.00	**4.77**
		$U_3 - L_3$			-----	-378.05	-21	16	225	-234	-78	-60	-103	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.105	0.88	Yes	0.724	0.268	1.00	Yes	1.00	**4.05**
		$U_4 - L_4$			-----	-472.50	22	-35	297	-295	-82	-29	9	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.081	0.8	Yes	0.706	0.285	1.00	Yes	1.00	**3.91**
		$U_5 - L_5$			-----	-568.93	76	-106	497	-526	-73	32	-116	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.087	0.85	Yes	0.725	0.269	1.00	Yes	1.00	**4.37**
		$U_6 - L_6$			-----	-634.38	141	-157	543	-551	-64	-105	-106	5	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.077	0.87	Yes	0.738	0.256	1.00	Yes	1.00	**4.23**
		$U_7 - L_7$			-----	-710.35	141	-138	551	-551	-116	25	129	88	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.075	0.9	Yes	0.761	0.234	1.00	Yes	1.00	**4.32**
		$U_8 - L_8$			-----	-715.71	206	-211	638	-626	-115	26	-68	49	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.121	0.92	Yes	0.690	0.305	1.00	Yes	1.00	**4.55**
		$U_9 - L_9$			-----	-1311.43	47	-59	-222	188	-94	107	-131	21	-----	-----	-----	-----	-----	-----	-----	-----	0.959	0.035	1	Yes	0.870	0.039	0.91	Yes	1.00	**5.52**
		$U_{10} - L_{10}$			-----	-776.67	-183	180	-503	509	-119	-60	65	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.119	0.99	Yes	0.749	0.244	1.00	Yes	1.00	**4.33**
		$U_{11} - L_{11}$			-----	-914.17	-130	108	-446	468	-185	-96	-287	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.120	1	Yes	0.792	0.201	1.00	Yes	1.00	**5.17**
		$U_{12} - L_{12}$			-----	-855.04	-144	147	-396	440	-163	-41	-146	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.081	0.95	Yes	0.799	0.194	1.00	Yes	1.00	**5.09**
		$U_{13} - L_{13}$			-----	-844.29	-97	118	-398	463	-204	-22	244	166	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.088	0.93	Yes	0.789	0.204	1.00	Yes	1.00	**5.92**
		$U_{14} - L_{14}$			-----	-724.45	-94	117	-459	513	-178	55	-171	77	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.071	0.88	Yes	0.776	0.218	1.00	Yes	1.00	**5.07**
		$U_{15} - L_{15}$			-----	-497.14	-42	56	-293	314	-136	76	107	144	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.087	0.81	Yes	0.716	0.275	1.00	Yes	1.00	**4.01**
		$U_{16} - L_{16}$			-----	-355.52	-155	187	-96	110	-96	16	-150	3	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.119	0.93	Yes	0.752	0.239	1.00	Yes	1.00	**4.16**
		$U_{17} - L_{17}$			356.83	-----	-233	240	139	-134	-100	-104	-132	-157	0.642	0.352	1.00	Yes	0.353	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{18} - L_{18}$			116.00	-292.72	-117	127	252	-291	-81	-34	-78	-117	0.209	0.406	0.62	Yes	0.115	0.223	0.34	Yes	0.640	0.141	0.79	Yes	0.619	0.372	1.00	Yes	1.00	**5.73**
		$U_{19} - L_{19}$			-----	-352.29	-30	18	143	-192	-166	-87	423	152	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.216	0.99	Yes	0.745	0.245	1.00	Yes	1.00	**4.14**
		$U_{20} - L_{20}$			-----	-390.83	49	-57	83	-129	-174	-56	137	44	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.117	1	Yes	0.827	0.165	1.00	Yes	1.00	**1.71**

Axial AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression												Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield									
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass								
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																						
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	667.76	-----	-44	35	5	-8	-185	-252	-47	-20	0.876	0.115	1.00	Yes	0.529	0.063	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.71**
		$U_1 - L_2$	461.59	-70.80	-93	0	12	-13	-89	-172	9	5	0.830	0.169	1.00	Yes	0.457	0.093	0.55	Yes	0.162	0.149	0.32	Yes	0.150	0.119	0.27	Yes							1.00	**4.63**
		$U_2 - L_3$	419.81	-340.52	-91	-17	2	-67	-227	-265	-281	-147	0.755	0.198	0.96	Yes	0.415	0.109	0.53	Yes	0.784	0.206	1	Yes	0.721	0.117	0.84	Yes							1.00	**6.28**
		$U_3 - L_4$	-----	-380.43	-24	-35	26	-56	-238	-202	-139	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.123	1	Yes	0.805	0.071	0.88	Yes							1.00	**3.55**
		$U_4 - L_4$	594.06	-----	-86	50	-43	-13	-59	-173	-131	-114	0.871	0.128	1.00	Yes	0.479	0.070	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.61**
		$U_4 - L_5$	719.55	-----	-187	226	-100	44	59	-72	-68	18	0.851	0.142	1.00	Yes	0.468	0.078	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.76**
		$U_5 - L_6$	652.25	-----	-275	241	-168	111	349	153	297	190	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.81**
		$U_6 - L_7$	651.43	-----	-113	303	-8	115	291	174	241	173	0.770	0.226	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.72**
		$U_8 - L_9$	1013.01	-----	-123	348	3	135	237	186	80	103	0.810	0.186	1.00	Yes	0.502	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**5.14**
		$U_9 - L_{10}$	1039.84	-----	-319	230	-77	91	206	156	84	103	0.831	0.168	1.00	Yes	0.515	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**5.34**
		$U_{10} - L_{11}$	1012.24	-----	-269	150	-77	41	-82	-141	24	-42	0.855	0.143	1.00	Yes	0.529	0.080	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**5.52**
		$U_{11} - L_{12}$	835.55	-----	-267	81	-101	-35	-300	-270	-292	-230	0.827	0.169	1.00	Yes	0.455	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.97**
		$U_{12} - L_{13}$	625.92	-----	-188	135	-56	1	-343	-314	-264	-268	0.763	0.231	1.00	Yes	0.480	0.131	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.95**
		$U_{13} - L_{14}$	444.90	-----	-88	34	-8	-26	-293	-292	-233	-288	0.800	0.197	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.33**
		$U_{15} - L_{14}$	241.53	-336.11	-57	-1	3	-77	-210	-311	-318	-280	0.434	0.191	0.63	Yes	0.239	0.105	0.35	Yes	0.787	0.203	1	Yes	0.711	0.099	0.82	Yes							1.00	**3.99**
		$U_{16} - L_{15}$	419.01	-245.70	-123	89	-1	-55	-202	-274	-200	-187	0.754	0.237	1.00	Yes	0.414	0.130	0.55	Yes	0.582	0.189	0.78	Yes	0.520	0.158	0.68	Yes							1.00	**4.82**
		$U_{17} - L_{16}$	533.14	-----	-146	105	-36	-16	-143	-218	-262	-141	0.782	0.209	1.00	Yes	0.430	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.99**
		$U_{18} - L_{17}$	635.21	-----	-316	250	-133	65	-122	-145	354	-71	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.14**
		$U_{19} - L_{18}$	729.57	-----	-354	265	-106	68	-50	-151	46	6	0.790	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.35**
		$U_{20} - L_{19}$	737.84	-----	-336	308	-126	105	-59	-141	2	33	0.799	0.195	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.46**
	Structure 2	$U_0 - L_1$	792.36	-----	-355	347	-68	77	-173	-324	-122	49	0.784	0.213	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.67**
		$U_1 - L_2$	791.83	-----	-405	304	-89	60	-60	-158	40	10	0.783	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.76**
		$U_2 - L_3$	653.70	-----	-325	251	-68	52	-209	-192	-78	-177	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.18**
		$U_3 - L_4$	576.23	-----	-173	132	-42	-4	-311	-280	-318	-216	0.768	0.225	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.10**
		$U_4 - L_5$	415.04	-----	-125	83	14	-44	-300	-259	-220	-215	0.746	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.18**
		$U_5 - L_6$	395.66	-309.87	-110	56	65	-107	-428	-245	-369	-245	0.712	0.265	0.98	Yes	0.391	0.146	0.54	Yes	0.732	0.264	1	Yes	0.656	0.141	0.80	Yes							1.00	**5.29**
		$U_6 - L_7$	-----	-373.27	-37	-10	55	-94	-306	-265	-287	-252	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1	Yes	0.715	0.107	0.83	Yes							1.00	**3.22**
		$U_8 - L_7$	612.47	-----	-176	131	-47	-18	-95	-283	-142	-223	0.781	0.215	1.00	Yes	0.492	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.66**
		$U_8 - L_9$	722.61	-----	-325	252	-137	17	-121	-188	-282	-166	0.783	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.52**
		$U_{10} - L_9$	834.90	-----	-309	240	-113	42	-59	-147	-37	-74	0.826	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.73**
		$U_{11} - L_{10}$	912.84	-----	-353	298	-173	98	114	-34	61	9	0.832	0.165	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.86**
		$U_{12} - L_{11}$	838.13	-----	-349	329	-128	134	164	70	596	153	0.763	0.229	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.19**
		$U_{13} - L_{12}$	757.61	-----	-433	378	-181	174	281	130	265	149	0.750	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.56**
		$U_{14} - L_{13}$	735.99	-----	-265	422	-27	214	286	136	486	149	0.728	0.268	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.93**
		$U_{14} - L_{15}$	648.01	-----	-226	364	-3	104	152	81	53	38	0.766	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.33**
		$U_{15} - L_{16}$	628.60	-----	-367	323	-100	105	237	30	51	68	0.743	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.80**
		$U_{16} - L_{17}$	741.24	-----	-346	345	-84	109	13	-5	95	33	0.803	0.193	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.42**
		$U_{17} - L_{18}$	679.52	-----	-300	277	-79	77	-110	-51	-21	-22	0.803	0.190	1.00	Yes	0.442	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.33**
		$U_{18} - L_{19}$	675.70	-----	-295	239	-53	31	-177	-102	-162	-110	0.799	0.199	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.62**
		$U_{19} - L_{20}$	606.74	-----	-196	163	-21	-3	-211	-179	-141	-137	0.774	0.218	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.49**
		$U_{20} - L_{21}$	433.24	-----	-116	96	1	-15	-224	-135	-158	-141	0.779	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.76**
		$U_{21} - L_{22}$	439.69	-286.38	-103	57	32	-73	-263	-249	-265	-238	0.791	0.209	1.00	Yes	0.435	0.115	0.55	Yes	0.677	0.182	0.86	Yes	0.606	0.132	0.74	Yes							1.00	**5.41**
		$U_{23} - L_{22}$	404.38	-355.33	-97	49	13	-69	-65	-218	-92	-186	0.727	0.187	0.92	Yes	0.400	0.103	0.51	Yes	0.846	0.150	1	Yes	0.752	0.124	0.88	Yes							1.00	**5.46**
		$U_{24} - L_{23}$	439.86	-----	-119	103	-4	-30	-59	-117	-178	-71	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.57**
		$U_{25} - L_{24}$	624.40	-----	-198	180	-16	-19	11	-96	-14	-55	0.796	0.196	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**5.02**
		$U_{26} - L_{25}$	690.27	-----	-286	265	-90	37	110	-26	32	5	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.79**
		$U_{27} - L_{26}$	672.61	-----	-301	287	-131	95	146	33	-33	67	0.795	0.197	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.43**
		$U_{28} - L_{27}$	667.47	-----	-307	324	-116	128	184	99	626	95	0.723	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.81**
		$U_{29} - L_{28}$	632.05	-----	-357	332	-125	119	269	115	218	111	0.747	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.52**
		$U_{30} - L_{29}$	596.03	-----	-201	341	-12	165	222	123	515	133	0.705	0.287	1.00	Yes	0.388	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.83**
		$U_{30} - L_{31}$	773.25	-----	-283	452	-24	133	125	69	62	38	0.765	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.92**
		$U_{31} - L_{32}$	785.80	-----	-450	383	-131	131	55	38	36	47	0.777	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.24**
		$U_{32} - L_{33}$	893.75	-----	-377	327	-104	116	-134	-106	8	-23	0.814	0.178	1.00	Yes	0.448	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.85**
		$U_{33} - L_{34}$	899.19	-----	-343	287	-120	73	-246	-217	-255	-159	0.819	0.181	1.00	Yes	0.451	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**5.24**
		$U_{34} - L_{35}$	823.11	-----	-301	219	-96	41	-284	-285	-201	-232	0.814	0.182	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.63**
		$U_{35} - L_{36}$	710.79	-----	-313	228	-95	24	-389	-266	-308	-256	0.770	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.25**
		$U_{36} - L_{37}$	604.97	-----	-174	138	-28	-16	-308	-337	-326	-314	0.771	0.224	1.00	Yes	0.486	0.127	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.38**
		$U_{38} - L_{37}$	-----	-391.47	-25	-16	43	-84	-119	-239	-116	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.148	1	Yes	0.750	0.096	0.85	Yes							1.00	**2.95**
		$U_{39} - L_{38}$	260.85	-341.63	-76	37	50	-97	-163	-209	-262	-167	0.469	0.199	0.67	Yes	0.258	0.110	0.37	Yes	0.814	0.182	1	Yes	0.723	0.124	0.85	Yes							1.00	**4.40**
		$U_{40} - L_{39}$	432.68	-213.79	-127	93	28	-64	-124	-184	-98	-118	0.778	0.216	1.00	Yes	0.428	0.119	0.55	Yes	0.512	0.144	0.66	Yes	0.452	0.162	0.62	Yes							1.00	**4.90**
		$U_{41} - L_{40}$	599.07	-----	-179	136	-51	-11	-61	-140	-106	-76	0.799	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.51**
		$U_{42} - L_{41}$	638.06	-----	-327	263	-136	65	-88	-83	-332	-32	0.754	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.37**
		$U_{43} - L_{42}$	807.03	-----	-394	317	-95	65	-3	-119	-5	-29	0.798	0.200	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.97**
		$U_{44} - L_{43}$	814.94	-----	-357	365	-139	122	-27	-163	34	6	0.806	0.194	1.00	Yes	0.443	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.60**
	Structure 3	$U_0 - L_1$	716.21	-----	-342	301	-68	71	-183	-262	-131	45	0.776	0.218	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.62**
		$U_1 - L_2$	724.03	-----	-360	267	-91	56	-66	-149	38	14	0.784	0.209	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.68**
		$U_2 - L_3$	643.62	-----	-324	234	-110	53	-233	-259	-193	-187	0.761	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.10**
		$U_3 - L_4$	529.67	-----	-144	92	-25	-16	-331	-278	-324	-231	0.777	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.73**
		$U_4 - L_5$	408.40	-188.00	-118	88	13	-53	-378	-305	-343	-236	0.735	0.261	1.00	Yes	0.404	0.143	0.55	Yes	0.446	0.212	0.66	Yes	0.398	0.151	0.55	Yes							1.00	**4.41**
		$U_5 - L_6$	295.07	-313.94	-75	-6	41	-93	-403	-340	-295	-311	0.531	0.235	0.77	Yes	0.292	0.129	0.43	Yes	0.736	0.256	1	Yes	0.664	0.119	0.79	Yes							1.00	**4.27**
		$U_7 - L_6$	449.80	-----	-85	36	-20	-32	-109	-268	-223	-247	0.809	0.186	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.94**
		$U_8 - L_7$	641.95	-----	-189	155	-50	-14	-156	-223	-148	-168	0.783	0.209	1.00	Yes	0.492	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.42**
		$U_8 - L_9$	860.15	-----	-261	136	-140	-45	-12	-177	-66	-126	0.851	0.147	1.00	Yes	0.468	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**5.38**
		$U_{10} - L_9$	1017.45	-----	-261	180	-138	26	99	-26	-125	-2	0.859	0.137	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**5.97**
		$U_{11} - L_{10}$	904.20	-----	-286	224	-157	92	403	242	1113	473	0.723	0.269	1.00	Yes	0.448	0.154	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.43**
		$U_{12} - L_{11}$	975.76	-----	-104	359	-10	142	419	273	272	206	0.780	0.213	1.00	Yes	0.483	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.84**
		$U_{12} - L_{13}$	673.26	-----	-117	288	10	113	186	113	95	94	0.796	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**3.75**
		$U_{13} - L_{14}$	668.52	-----	-309	222	-70	76	164	135	91	114	0.790	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.05**
		$U_{14} - L_{15}$	724.74	-----	-197	189	-19	31	-84	-133	58	-5	0.857	0.136	1.00	Yes	0.471	0.075	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.49**
		$U_{15} - L_{16}$	586.64	-----	-86	31	-24	-15	-218	-177	-159	-124	0.860	0.137	1.00	Yes	0.473	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.05**
		$U_{17} - L_{16}$	-----	-404.24	-13	-22	-6	-47	-46	-152	-139	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.074	1	Yes	0.855	0.060	0.92	Yes							1.00	**3.17**
		$U_{18} - L_{17}$	285.52	-377.95	-61	13	-17	-65	-66	-213	-189	-70	0.514	0.145	0.66	Yes	0.282	0.080	0.37	Yes	0.870	0.127	1	Yes	0.800	0.083	0.89	Yes							1.00	**5.05**
		$U_{19} - L_{18}$	419.28	-104.09	-83	25	-23	-33	1	-142	-453	-149	0.754	0.238	1.00	Yes	0.415	0.131	0.55	Yes	0.239	0.234	0.48	Yes	0.220	0.106	0.33	Yes							1.00	**4.75**
		$U_{20} - L_{19}$	655.31	-----	-74	59	-21	2	-147	-197	30	-7	0.860	0.136	1.00	Yes	0.519	0.075	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----							1.00	**4.80**

Axial AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-543.16	-84	50	338	-1090	-40	111	-89	-814	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.209	0.95	Yes	0.732	0.259	1.00	Yes	1.00	**6.34**
		$U_1 - U_2$	-----	-531.77	-105	78	-300	-766	-152	115	-134	-463	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.275	1	Yes	0.717	0.182	0.90	Yes	1.00	**3.62**
		$U_2 - U_3$	-----	-562.25	-99	285	-524	-470	-115	111	-161	-561	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1	Yes	0.758	0.125	0.89	Yes	1.00	**4.22**
		$U_3 - U_4$	472.75	-594.86	139	398	-660	-510	-221	-10	259	-349	0.542	0.216	0.76	Yes	0.372	0.148	0.52	Yes	0.809	0.187	1	Yes	0.802	0.157	0.96	Yes	1.00	**6.35**
		$U_4 - U_5$	477.11	-586.13	188	388	-842	-131	-90	-19	-392	-161	0.547	0.266	0.82	Yes	0.375	0.182	0.56	Yes	0.798	0.200	1	Yes	0.790	0.200	1.00	Yes	1.00	**6.35**
		$U_5 - U_6$	684.69	-----	276	493	-657	248	98	134	-322	-297	0.785	0.211	1.00	Yes	0.529	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.41**
		$U_6 - U_7$	902.49	-----	420	225	-282	-11	321	288	-342	96	0.863	0.136	1.00	Yes	0.603	0.094	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.43**
		$U_7 - U_8$	1021.36	-----	-110	1427	-521	1311	545	736	-20	323	0.708	0.291	1.00	Yes	0.494	0.199	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_8 - U_9$	860.47	-----	1306	-282	1296	-845	371	544	226	-496	0.705	0.286	1.00	Yes	0.482	0.194	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_9 - U_{10}$	631.58	-----	244	255	174	-895	-6	305	-117	-708	0.685	0.314	1.00	Yes	0.464	0.211	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.46**
		$U_{10} - U_{11}$	-----	-618.09	249	-174	132	-918	47	107	-73	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.188	0.99	Yes	0.789	0.206	1.00	Yes	1.00	**4.26**
		$U_{11} - U_{12}$	-----	-902.13	154	-208	-52	-810	12	102	162	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.140	1	Yes	0.846	0.134	0.99	Yes	1.00	**3.21**
		$U_{12} - U_{13}$	-----	-1249.52	-49	-268	-297	-824	81	7	108	-473	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.149	1	Yes	0.835	0.114	0.95	Yes	1.00	**3.71**
		$U_{13} - U_{14}$	-----	-1384.74	-195	-504	-523	-1435	-43	-8	10	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.195	1	Yes	0.794	0.158	0.96	Yes	1.00	**3.52**
		$U_{14} - U_{15}$	-----	-1372.81	-407	-292	-1353	-691	41	-277	-106	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.202	1	Yes	0.787	0.149	0.94	Yes	1.00	**3.45**
		$U_{15} - U_{16}$	-----	-1438.75	-199	-467	-894	-798	-114	-428	-308	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.163	1	Yes	0.825	0.099	0.93	Yes	1.00	**3.91**
		$U_{16} - U_{17}$	-----	-1392.32	-414	-226	-1229	-446	-288	-373	-145	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.798	0.136	0.94	Yes	1.00	**4.50**
		$U_{17} - U_{18}$	-----	-1100.07	-251	-62	-753	41	-114	71	-113	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.123	1	Yes	0.861	0.123	0.99	Yes	1.00	**4.84**
		$U_{18} - U_{19}$	-----	-749.23	-240	10	-697	99	362	-139	85	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.144	1	Yes	0.843	0.140	0.99	Yes	1.00	**5.20**
		$U_{19} - U_{20}$	-----	-595.04	-236	-64	-1123	305	-28	-116	-126	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.316	1	Yes	0.669	0.226	0.90	Yes	1.00	**9.49**
	Structure 2	$U_0 - U_1$	-----	-587.83	685	-453	1156	-1772	336	-64	175	-705	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.169	0.87	Yes	0.694	0.301	1.00	Yes	1.00	**8.48**
		$U_1 - U_2$	-----	-803.81	-150	-324	-203	-1128	-17	18	-45	-382	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.210	1	Yes	0.776	0.171	0.95	Yes	1.00	**4.10**
		$U_2 - U_3$	-----	-1126.21	-130	-435	-204	-1456	-33	-63	-97	-660	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.188	1	Yes	0.799	0.148	0.95	Yes	1.00	**3.89**
		$U_3 - U_4$	-----	-1347.35	-534	-548	-1025	-1623	-114	-40	-61	-478	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.225	1	Yes	0.767	0.145	0.92	Yes	1.00	**3.46**
		$U_4 - U_5$	-----	-1468.57	-586	-564	-994	-1809	-120	-89	-312	-687	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.238	1	Yes	0.754	0.150	0.91	Yes	1.00	**3.59**
		$U_5 - U_6$	-----	-1554.82	-578	-17	-1310	-1350	-195	-51	-495	-699	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.193	1	Yes	0.798	0.112	0.92	Yes	1.00	**4.04**
		$U_6 - U_7$	-----	-1389.17	-320	-209	-1283	-1369	-169	-95	40	-294	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1	Yes	0.791	0.122	0.92	Yes	1.00	**4.18**
		$U_7 - U_8$	-----	-1382.78	-347	-204	-1511	-878	-82	-180	-274	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.200	1	Yes	0.787	0.135	0.93	Yes	1.00	**4.17**
		$U_8 - U_9$	-----	-1198.00	-355	211	-1428	-279	-17	-194	-369	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1	Yes	0.813	0.152	0.97	Yes	1.00	**4.79**
		$U_9 - U_{10}$	-----	-911.66	-90	533	-1558	-120	-121	-227	-603	-514	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.205	1	Yes	0.787	0.190	0.98	Yes	1.00	**5.98**
		$U_{10} - U_{11}$	801.77	-629.11	316	596	-1433	-158	-174	-98	-975	-370	0.677	0.321	1.00	Yes	0.461	0.211	0.68	Yes	0.629	0.263	0.9	Yes	0.625	0.202	0.83	Yes	1.00	**8.43**
		$U_{11} - U_{12}$	925.78	-----	190	648	-1053	453	31	32	-475	-527	0.782	0.213	1.00	Yes	0.525	0.142	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		$U_{12} - U_{13}$	1323.84	-----	479	82	-24	-126	348	443	-91	20	0.894	0.102	1.00	Yes	0.637	0.071	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.65**
		$U_{13} - U_{14}$	1327.64	-----	-335	2920	-424	2024	659	1010	303	587	0.653	0.339	1.00	Yes	0.462	0.223	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		$U_{14} - U_{15}$	1389.60	-----	2833	-175	1953	-241	693	770	513	417	0.683	0.315	1.00	Yes	0.484	0.207	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		$U_{15} - U_{16}$	1311.52	-----	140	400	-557	-1334	173	414	253	-555	0.793	0.199	1.00	Yes	0.564	0.134	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.77**
		$U_{16} - U_{17}$	1058.69	-----	669	217	43	-1014	-32	319	498	-844	0.780	0.216	1.00	Yes	0.519	0.142	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		$U_{17} - U_{18}$	715.94	-----	470	239	233	-1165	-58	277	-123	-527	0.719	0.275	1.00	Yes	0.478	0.182	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		$U_{18} - U_{19}$	533.04	-669.74	559	139	-27	-1147	4	150	148	-804	0.535	0.312	0.85	Yes	0.351	0.200	0.56	Yes	0.796	0.201	1	Yes	0.791	0.195	0.99	Yes	1.00	**6.70**
		$U_{19} - U_{20}$	-----	-724.82	259	95	-150	-1063	-55	129	-192	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.195	1	Yes	0.800	0.170	0.97	Yes	1.00	**4.88**
		$U_{20} - U_{21}$	-----	-832.14	139	-97	-400	-976	0	20	-175	-652	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.759	0.141	0.91	Yes	1.00	**4.66**
		$U_{21} - U_{22}$	-----	-814.31	-80	-36	-665	-1185	-183	-98	-107	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.247	1	Yes	0.743	0.172	0.92	Yes	1.00	**4.31**
		$U_{22} - U_{23}$	-----	-808.41	-87	-103	-1203	-672	-106	-159	-184	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.247	1	Yes	0.738	0.174	0.92	Yes	1.00	**4.27**
		$U_{23} - U_{24}$	-----	-865.46	-92	206	-933	-369	5	-61	-490	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.203	1	Yes	0.790	0.135	0.93	Yes	1.00	**5.46**
		$U_{24} - U_{25}$	301.90	-718.41	175	319	-1105	-271	-9	-80	-429	-130	0.283	0.235	0.52	Yes	0.188	0.154	0.35	Yes	0.798	0.201	1	Yes	0.793	0.177	0.97	Yes	1.00	**5.87**
		$U_{25} - U_{26}$	675.50	-----	208	650	-1309	188	19	-38	-666	-353	0.678	0.320	1.00	Yes	0.445	0.204	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		$U_{26} - U_{27}$	728.86	-----	264	456	-875	110	-42	7	-771	-71	0.732	0.262	1.00	Yes	0.487	0.173	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		$U_{27} - U_{28}$	1052.77	-----	196	684	-1182	456	235	251	-660	-386	0.776	0.218	1.00	Yes	0.516	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.34**
		$U_{28} - U_{29}$	1430.19	-----	352	50	-691	-390	565	587	-601	260	0.865	0.129	1.00	Yes	0.615	0.088	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		$U_{29} - U_{30}$	1317.43	-----	-188	2922	-204	1921	798	1066	500	703	0.648	0.343	1.00	Yes	0.459	0.226	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{30} - U_{31}$	1374.10	-----	2872	-388	2069	-499	773	728	654	380	0.676	0.319	1.00	Yes	0.478	0.209	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		$U_{31} - U_{32}$	1219.91	-----	94	367	-793	-855	201	391	597	-628	0.824	0.168	1.00	Yes	0.587	0.115	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.20**
		$U_{32} - U_{33}$	818.90	-----	580	130	330	-1256	10	216	-93	-1001	0.692	0.299	1.00	Yes	0.465	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		$U_{33} - U_{34}$	574.39	-795.47	457	137	-191	-1404	-24	208	213	-612	0.485	0.273	0.76	Yes	0.330	0.178	0.51	Yes	0.795	0.201	1	Yes	0.790	0.198	0.99	Yes	1.00	**7.03**
		$U_{34} - U_{35}$	-----	-956.40	366	-210	-13	-1386	43	36	-108	-524	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.167	1	Yes	0.825	0.169	1.00	Yes	1.00	**4.57**
		$U_{35} - U_{36}$	-----	-1194.29	77	-477	-296	-1428	-19	81	-86	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1	Yes	0.810	0.152	0.97	Yes	1.00	**3.67**
		$U_{36} - U_{37}$	-----	-1397.46	-304	-326	-911	-1438	-23	-123	99	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.190	1	Yes	0.796	0.128	0.93	Yes	1.00	**3.60**
		$U_{37} - U_{38}$	-----	-1406.69	-212	-435	-1362	-1198	-95	-200	-219	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.801	0.121	0.93	Yes	1.00	**3.64**
		$U_{38} - U_{39}$	-----	-1601.51	-163	-632	-1212	-1339	8	-210	-430	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.168	1	Yes	0.822	0.111	0.94	Yes	1.00	**4.03**
		$U_{39} - U_{40}$	-----	-1512.53	-615	-566	-1844	-1086	11	-90	-292	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.214	1	Yes	0.777	0.153	0.93	Yes	1.00	**3.84**
		$U_{40} - U_{41}$	-----	-1392.95	-537	-520	-1551	-947	158	-158	75	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.194	1	Yes	0.793	0.138	0.94	Yes	1.00	**4.06**
		$U_{41} - U_{42}$	-----	-1188.41	-426	-124	-1361	-111	55	-27	-88	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.148	1	Yes	0.843	0.139	0.99	Yes	1.00	**5.06**
		$U_{42} - U_{43}$	-----	-880.76	-313	-43	-894	41	167	-214	-68	-418	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.139	1	Yes	0.850	0.136	0.99	Yes	1.00	**6.17**
		$U_{43} - U_{44}$	-----	-643.83	-172	-225	-1393	431	-124	-129	-98	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.217	0.99	Yes	0.760	0.236	1.00	Yes	1.00	**13.00**
	Structure 3	$U_0 - U_1$	-----	-593.19	634	-351	596	-1621	277	-45	317	-1233	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.249	0.93	Yes	0.667	0.326	1.00	Yes	1.00	**10.04**
		$U_1 - U_2$	-----	-705.47	-82	-228	-27	-767	-21	5	-67	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.189	1	Yes	0.794	0.154	0.95	Yes	1.00	**3.81**
		$U_2 - U_3$	-----	-1024.61	-53	-241	38	-843	-33	-60	-144	-684	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.802	0.137	0.94	Yes	1.00	**3.73**
		$U_3 - U_4$	-----	-1343.31	-222	-372	-471	-1349	-108	-37	-222	-556	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.213	1	Yes	0.770	0.149	0.92	Yes	1.00	**3.97**
		$U_4 - U_5$	-----	-1424.08	-441	-132	-911	-806	-93	-56	-37	-732	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.173	1	Yes	0.816	0.100	0.92	Yes	1.00	**3.94**
		$U_5 - U_6$	-----	-1369.28	-253	-374	-866	-1273	-186	-148	116	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.206	1	Yes	0.785	0.140	0.93	Yes	1.00	**3.92**
		$U_6 - U_7$	-----	-1369.29	-496	-152	-1413	-494	-119	-298	-276	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.202	1	Yes	0.785	0.156	0.95	Yes	1.00	**3.95**
		$U_7 - U_8$	-----	-1211.07	-236	32	-915	-268	-109	-317	-498	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.180	1	Yes	0.809	0.126	0.94	Yes	1.00	**4.34**
		$U_8 - U_9$	-----	-876.87	-132	254	-829	27	-215	-188	-456	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.166	1	Yes	0.823	0.138	0.97	Yes	1.00	**4.38**
		$U_9 - U_{10}$	-----	-602.50	-77	373	-998	230	3	0	-245	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.188	0.97	Yes	0.769	0.224	1.00	Yes	1.00	**6.71**
		$U_{10} - U_{11}$	705.53	-----	307	253	-551	60	133	149	-682	-10	0.765	0.233	1.00	Yes	0.518	0.156	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.57**
		$U_{11} - U_{12}$	855.94	-----	-305	1369	-630	1124	229	507	-245	230	0.701	0.292	1.00	Yes	0.480	0.198	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{12} - U_{13}$	1002.97	-----	1382	-129	1617	-843	166	533	1	-522	0.695	0.299	1.00	Yes	0.485	0.204	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_{13} - U_{14}$	825.41	-----	218	353	-135	-580	-101	373	280	-601	0.789	0.206	1.00	Yes	0.552	0.142	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		$U_{14} - U_{15}$	588.03	-----	431	203	187	-783	-56	241	153	-798	0.674	0.321	1.00	Yes	0.455	0.212	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		$U_{15} - U_{16}$	282.82	-595.08	257	109	-203	-808	-77	185	268	108	0.324	0.237	0.57	Yes	0.222	0.163	0.39	Yes	0.810	0.178	0.99	Yes	0.802	0.192	1.00	Yes	1.00	**4.97**
		$U_{16} - U_{17}$	281.53	-606.69	307	27	-611	-478	166	-76	142	-14	0.323	0.173	0.50	Yes	0.221	0.119	0.35	Yes	0.826	0.166	1	Yes	0.818	0.145	0.97	Yes	1.00	**5.03**
		$U_{17} - U_{18}$	-----	-610.42	201	-179	-502	-492	66	36	-36	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.165	1	Yes	0.823	0.119	0.95	Yes	1.00	**4.13**
		$U_{18} - U_{19}$	-----	-585.74	0	-72	-719	-174	214	-198	-5	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.790	0.171	0.97	Yes	1.00	**4.43**
		$U_{19} - U_{20}$	-----	-602.61	93	-295	-617	-113	-147	-110	77	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.175	1	Yes	0.813	0.147	0.96	Yes	1.00	**9.24**

Axial AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass				
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																			
South Truss - Lower Chord	Structure 1	L_0 - L_1			346.51	-266.26	235	-259	711	-848	263	967	-269	-987	0.530	0.466	1.00	Yes	0.312	0.279	0.60	Yes	0.483	0.354	0.84	Yes	0.479	0.254	0.74	Yes	1.00	**26.36**
		L_1 - L_2			365.87	-----	-127	-606	5	-32	-1190	262	311	-139	0.560	0.437	1.00	Yes	0.342	0.281	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_2 - L_3			628.05	-----	-750	-546	-53	42	41	-578	-180	119	0.723	0.274	1.00	Yes	0.418	0.162	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_3 - L_4			579.51	-199.19	-624	-363	-12	258	-1105	-67	265	-221	0.667	0.328	1.00	Yes	0.396	0.204	0.61	Yes	0.272	0.180	0.46	Yes	0.270	0.151	0.43	Yes	1.00	**4.27**
		L_4 - L_5			-----	-549.20	-605	324	97	462	124	-148	-72	200	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.133	0.98	Yes	0.837	0.160	1.00	Yes	1.00	**3.93**
		L_5 - L_6			-----	-750.63	-217	236	125	592	-190	-83	160	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.122	1	Yes	0.866	0.131	1.00	Yes	1.00	**3.93**
		L_6 - L_7			-----	-1176.63	-292	8	157	-28	-54	-215	-255	458	-----	-----	-----	-----	-----	-----	-----	-----	0.958	0.038	1	Yes	0.947	0.046	1.00	Yes	1.00	**4.56**
		L_7 - L_8			-----	-1241.08	-34	674	-57	1237	357	207	448	487	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.196	1	Yes	0.786	0.164	0.95	Yes	1.00	**3.62**
		L_8 - L_9			-----	-1150.53	677	-36	1105	-65	215	377	416	414	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.729	0.146	0.88	Yes	1.00	**2.65**
		L_9 - L_{10}			-----	-1055.97	338	-226	565	-414	525	-31	363	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.135	1	Yes	0.850	0.089	0.94	Yes	1.00	**6.31**
		L_{10} - L_{11}			-----	-545.95	-49	-605	499	-53	73	-695	-284	44	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.127	0.97	Yes	0.832	0.160	1.00	Yes	1.00	**7.47**
		L_{11} - L_{12}			483.77	-----	127	-665	331	-253	-1087	191	125	-80	0.626	0.366	1.00	Yes	0.376	0.231	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		L_{12} - L_{13}			1043.47	-----	-480	-616	59	-155	-10	-537	-160	120	0.823	0.172	1.00	Yes	0.527	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_{13} - L_{14}			1248.25	-----	-236	-1245	183	-528	-1061	109	146	22	0.734	0.260	1.00	Yes	0.476	0.161	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		L_{14} - L_{15}			1533.44	-----	-1552	-677	-569	-153	-221	-782	-153	158	0.749	0.242	1.00	Yes	0.487	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		L_{15} - L_{16}			1608.63	-----	-1145	-1244	-306	-374	-878	-15	101	-142	0.786	0.212	1.00	Yes	0.504	0.126	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		L_{16} - L_{17}			1214.45	-----	-1359	21	-422	54	209	-298	-127	169	0.768	0.226	1.00	Yes	0.498	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_{17} - L_{18}			1009.34	-----	-392	-34	-223	35	-86	-286	116	-88	0.879	0.112	1.00	Yes	0.563	0.068	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.20**
		L_{18} - L_{19}			513.38	-----	-484	238	-265	230	-132	302	-162	123	0.786	0.208	1.00	Yes	0.531	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		L_{19} - L_{20}			425.88	-323.32	-373	115	-906	597	367	82	133	30	0.652	0.348	1.00	Yes	0.398	0.232	0.63	Yes	0.587	0.347	0.94	Yes	0.582	0.272	0.86	Yes	1.00	**10.16**
	Structure 2	L_0 - L_1			-----	-502.14	116	-380	462	-1362	157	544	23	82	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.263	0.99	Yes	0.717	0.277	1.00	Yes	1.00	**18.14**
		L_1 - L_2			466.73	-----	345	-1255	243	-396	-1052	556	117	41	0.567	0.428	1.00	Yes	0.337	0.269	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_2 - L_3			963.77	-----	-228	-986	-42	-277	-212	-843	-74	156	0.760	0.232	1.00	Yes	0.498	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		L_3 - L_4			1241.35	-----	-291	-1492	-9	-517	-1148	236	179	2	0.729	0.266	1.00	Yes	0.491	0.168	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		L_4 - L_5			1740.89	-----	-1580	-1433	-438	-398	422	-512	-81	163	0.812	0.184	1.00	Yes	0.537	0.110	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		L_5 - L_6			1783.24	-----	-1198	-1834	-222	-502	-1036	53	190	-90	0.765	0.227	1.00	Yes	0.514	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_6 - L_7			1788.51	-----	-2199	-1331	-585	-225	-45	-804	-160	218	0.757	0.243	1.00	Yes	0.503	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_7 - L_8			1322.84	-----	-1517	-554	-310	368	-850	149	214	-143	0.758	0.237	1.00	Yes	0.498	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		L_8 - L_9			1012.92	-----	-1183	23	-123	577	-103	-1358	-86	175	0.708	0.288	1.00	Yes	0.477	0.184	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		L_9 - L_{10}			648.50	-777.72	-1110	-57	-125	847	-1166	-113	145	-131	0.579	0.318	0.90	Yes	0.337	0.193	0.53	Yes	0.822	0.155	0.98	Yes	0.817	0.178	1.00	Yes	1.00	**7.69**
		L_{10} - L_{11}			-----	-736.00	-733	458	7	568	116	-254	-76	74	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.081	0.96	Yes	0.865	0.128	1.00	Yes	1.00	**4.51**
		L_{11} - L_{12}			-----	-1036.87	-294	680	-75	1098	158	-218	47	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.121	0.98	Yes	0.850	0.150	1.00	Yes	1.00	**4.96**
		L_{12} - L_{13}			-----	-1482.84	-254	-357	56	-701	-124	131	-334	229	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.103	1	Yes	0.887	0.070	0.96	Yes	1.00	**5.09**
		L_{13} - L_{14}			-----	-1549.17	-623	1738	-884	2488	179	136	345	474	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.175	0.97	Yes	0.780	0.217	1.00	Yes	1.00	**4.26**
		L_{14} - L_{15}			-----	-1368.60	1739	-647	2294	-739	168	179	380	298	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.297	1	Yes	0.689	0.200	0.89	Yes	1.00	**2.52**
		L_{15} - L_{16}			-----	-1535.85	-524	-126	-414	-130	111	-139	281	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.926	0.071	1	Yes	0.919	0.052	0.98	Yes	1.00	**5.43**
		L_{16} - L_{17}			-----	-1040.59	594	-496	1109	-71	-89	-503	-382	81	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.230	1	Yes	0.758	0.137	0.90	Yes	1.00	**4.14**
		L_{17} - L_{18}			-----	-769.61	292	-471	525	58	-627	90	187	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1	Yes	0.808	0.084	0.90	Yes	1.00	**3.77**
		L_{18} - L_{19}			-----	-639.19	-105	-731	716	34	86	-753	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.132	0.99	Yes	0.852	0.141	1.00	Yes	1.00	**6.31**
		L_{19} - L_{20}			535.05	-408.66	-75	-983	475	87	-1322	352	148	-165	0.606	0.392	1.00	Yes	0.359	0.242	0.61	Yes	0.548	0.169	0.72	Yes	0.545	0.190	0.74	Yes	1.00	**6.12**
		L_{20} - L_{21}			989.20	-----	-1018	-1060	401	-80	450	-467	-185	70	0.789	0.205	1.00	Yes	0.517	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.32**
		L_{21} - L_{22}			831.04	-----	-723	-1448	94	-303	-1153	4	135	-101	0.663	0.335	1.00	Yes	0.443	0.214	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		L_{22} - L_{23}			838.87	-----	-1616	-618	-358	70	-202	-848	-59	206	0.669	0.327	1.00	Yes	0.447	0.207	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		L_{23} - L_{24}			916.30	-----	-1176	-898	-56	464	-877	108	163	-139	0.731	0.266	1.00	Yes	0.479	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.00**
		L_{24} - L_{25}			-----	-569.35	-1235	-44	212	535	341	-1183	-105	150	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.203	0.97	Yes	0.759	0.238	1.00	Yes	1.00	**8.69**
		L_{25} - L_{26}			-----	-638.00	-267	192	27	725	-8	-78	102	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.102	0.96	Yes	0.850	0.140	1.00	Yes	1.00	**6.24**
		L_{26} - L_{27}			-----	-864.37	-281	425	114	539	-57	66	-107	289	-----	-----	-----	-----	-----	-----	-----	-----	0.914	0.070	0.99	Yes	0.908	0.086	1.00	Yes	1.00	**4.80**
		L_{27} - L_{28}			-----	-1140.53	-230	739	-54	1303	52	-190	289	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.145	0.99	Yes	0.831	0.161	1.00	Yes	1.00	**5.29**
		L_{28} - L_{29}			-----	-1545.77	-276	-508	70	-435	-151	-15	-98	395	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.059	1	Yes	0.925	0.050	0.98	Yes	1.00	**6.77**
		L_{29} - L_{30}			-----	-1539.37	-717	1911	-813	2494	74	57	424	381	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.167	0.95	Yes	0.775	0.218	1.00	Yes	1.00	**4.73**
		L_{30} - L_{31}			-----	-1391.80	1766	-545	2214	-667	387	316	273	260	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.700	0.193	0.90	Yes	1.00	**1.72**
		L_{31} - L_{32}			-----	-1567.04	-160	-288	-271	-329	306	-378	245	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.945	0.053	1	Yes	0.937	0.033	0.98	Yes	1.00	**4.88**
		L_{32} - L_{33}			-----	-967.80	637	-290	970	-180	-411	112	-299	111	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.196	1	Yes	0.794	0.132	0.93	Yes	1.00	**3.29**
		L_{33} - L_{34}			-----	-759.48	448	-408	591	9	204	12	100	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.898	0.072	0.98	Yes	0.892	0.103	1.00	Yes	1.00	**5.50**
		L_{34} - L_{35}			715.27	-743.46	-252	-1271	830	-104	380	-1246	-216	97	0.638	0.353	1.00	Yes	0.372	0.215	0.59	Yes	0.786	0.157	0.95	Yes	0.781	0.203	0.99	Yes	1.00	**9.14**
		L_{35} - L_{36}			938.54	-----	30	-1282	549	-190	-1755	245	163	-116	0.656	0.338	1.00	Yes	0.442	0.218	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		L_{36} - L_{37}			1327.46	-----	-806	-1541	272	-279	75	-791	-200	155	0.761	0.235	1.00	Yes	0.500	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		L_{37} - L_{38}			1709.32	-----	-1540	-2224	-340	-663	-1275	122	105	-170	0.723	0.274	1.00	Yes	0.481	0.165	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_{38} - L_{39}			1750.77	-----	-2087	-1267	-623	-226	-62	-899	-100	172	0.751	0.241	1.00	Yes	0.504	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		L_{39} - L_{40}			1704.73	-----	-1629	-1488	-448	-329	-719	309	123	-129	0.795	0.202	1.00	Yes	0.526	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		L_{40} - L_{41}			1288.40	-----	-1685	-205	-473	28	189	-521	-49	267	0.757	0.239	1.00	Yes	0.510	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		L_{41} - L_{42}			1008.41	-----	-1140	159	-265	52	-342	60	267	84	0.795	0.201	1.00	Yes	0.521	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.42**
		L_{42} - L_{43}			515.93	-----	-1251	536	-285	216	695	387	115	338	0.627	0.369	1.00	Yes	0.373	0.233	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.41**
		L_{43} - L_{44}			-----	-463.17	-797	201	-633	212	-197	-57	1293	377	-----	-----	-----	-----	-----	-----	-----	-----	0.666	0.330	1	Yes	0.662	0.162	0.83	Yes	1.00	**27.97**
	Structure 3	L_0 - L_1			-----	-470.68	81	-252	294	-495	37	169	38	175	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.111	0.97	Yes	0.847	0.149	1.00	Yes	1.00	**5.88**
		L_1 - L_2			521.16	-----	225	-451	410	-463	285	-191	104	184	0.798	0.198	1.00	Yes	0.539	0.126	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		L_2 - L_3			880.74	-----	-195	-743	46	-231	229	-627	-22	164	0.767	0.224	1.00	Yes	0.491	0.136	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_3 - L_4			1135.99	-----	-153	-1250	48	-431	-1074	399	144	59	0.718	0.279	1.00	Yes	0.466	0.174	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		L_4 - L_5			1582.23	-----	-1353	-1038	-379	-257	91	-792	-32	222	0.773	0.219	1.00	Yes	0.496	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		L_5 - L_6			1499.54	-----	-743	-1526	-143	-464	-1181	87	242	-35	0.733	0.267	1.00	Yes	0.476	0.164	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		L_6 - L_7			1237.19	-----	-1359	-196	-500	239	-164	-978	-54	253	0.728	0.269	1.00	Yes	0.471	0.166	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_7 - L_8			995.55	-----	-677	-384	-107	154	-785	-115	137	-170	0.786	0.212	1.00	Yes	0.502	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		L_8 - L_9			546.38	-----	-799	218	-175	423	234	-443	-108	168	0.708	0.289	1.00	Yes	0.425	0.187	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		L_9 - L_{10}			-----	-565.03	-444	106	-64	519	-330	-65	145	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.078	0.95	Yes	0.861	0.137	1.00	Yes	1.00	**5.96**
		L_{10} - L_{11}			-----	-1176.63	-277	294	8	124	-263	88	-307	186	-----	-----	-----	-----	-----	-----	-----	-----	0.958	0.028	0.99	Yes	0.947	0.046	1.00	Yes	1.00	**7.24**
		L_{11} - L_{12}			-----	-1263.87	-24	635	-70	1276	392	65	296	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.180	1	Yes	0.800	0.169	0.97	Yes	1.00	**4.70**
		L_{12} - L_{13}			-----	-1126.71	719	-23	1324	-63	-46	218	28	157	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.273	1	Yes	0.714	0.175	0.89	Yes	1.00	**3.27**
		L_{13} - L_{14}			-----	-1023.43	5	-396	84	91	-902	-134	321	-279	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.162	1	Yes	0.824	0.062	0.89	Yes	1.00	**4.50**
		L_{14} - L_{15}			-----	-727.69	33	-390	571	110	-23	-724	-263	85	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.145	1	Yes	0.840	0.126	0.97	Yes	1.00	**5.16**
		L_{15} - L_{16}			-----	-508.73	101	-752	458	109	-1365	368	253	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.213	1	Yes	0.775	0.199	0.98	Yes	1.00	**5.19**
		L_{16} - L_{17}			653.37	-----	-484	-646	227	-75	11	-523	-170	193	0.752	0.240	1.00	Yes	0.446	0.152	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{17} - L_{18}			644.56	-----	-703	-622	-6	-116	-517	193	114	-114	0.742	0.253	1.00	Yes	0.429	0.150	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_{18} - L_{19}			444.58	-----	-758	76	-57	-12	413	328	-103	216	0.680	0.316	1.00	Yes	0.415	0.209	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_{19} - L_{20}			311.16	-163.31	-657	402	-222	21	595	162	1500	408	0.476	0.519	1.00	Yes	0.280	0.308	0.59	Yes	0.297	0.456	0.76	Yes	0.294	0.197	0.50	Yes	1.00	**39.44**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-282.17	-13	53	-98	148	194	62	-1021	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.368	1	Yes	0.597	0.189	0.79	Yes	1.00	**1.89**
		$U_1 - L_1$			-----	-263.16	7	-1	-142	154	550	214	-1361	-490	-----	-----	-----	-----	-----	-----	-----	-----	0.575	0.422	1	Yes	0.557	0.196	0.76	Yes	1.00	**3.27**
		$U_2 - L_2$			59.74	-160.04	60	-63	-42	78	709	236	-2379	-724	0.107	0.789	0.90	Yes	0.059	0.434	0.50	Yes	0.350	0.642	1	Yes	0.339	0.100	0.44	Yes	1.00	**4.02**
		$U_3 - L_3$			137.04	-----	115	-132	-24	46	636	192	-2013	-502	0.246	0.751	1.00	Yes	0.136	0.413	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		$U_4 - L_4$			-----	-205.39	78	-79	89	-94	1023	510	-1831	-509	-----	-----	-----	-----	-----	-----	-----	-----	0.452	0.543	1	Yes	0.435	0.120	0.56	Yes	1.00	**4.68**
		$U_5 - L_5$			-----	-383.60	72	-85	196	-220	936	343	221	276	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.298	1	Yes	0.662	0.223	0.89	Yes	1.00	**4.10**
		$U_6 - L_6$			-----	-400.44	81	-71	197	-207	1628	739	455	287	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.386	1	Yes	0.574	0.181	0.76	Yes	1.00	**3.68**
		$U_7 - L_7$			-----	-381.20	105	-118	257	-277	1272	306	269	137	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.361	1	Yes	0.588	0.272	0.87	Yes	1.00	**3.50**
		$U_8 - L_8$			-----	-1172.06	-112	127	-249	294	1272	265	-1145	-417	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.149	1	Yes	0.813	0.055	0.87	Yes	1.00	**4.62**
		$U_9 - L_9$			-----	-624.57	-229	260	-373	420	602	233	-1102	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.254	1	Yes	0.705	0.234	0.94	Yes	1.00	**3.04**
		$U_{10} - L_{10}$			-----	-633.66	-159	158	-255	293	617	299	-1719	-565	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.340	1	Yes	0.625	0.152	0.78	Yes	1.00	**3.45**
		$U_{11} - L_{11}$			-----	-630.89	-167	218	-336	448	628	362	-1019	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.237	1	Yes	0.734	0.208	0.95	Yes	1.00	**4.58**
		$U_{12} - L_{12}$			-----	-444.43	-129	135	-235	251	435	309	-1365	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.354	1	Yes	0.610	0.214	0.83	Yes	1.00	**3.52**
		$U_{13} - L_{13}$			-----	-309.23	-73	91	-148	176	324	187	-1072	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.366	1	Yes	0.592	0.200	0.80	Yes	1.00	**2.98**
		$U_{14} - L_{14}$			-----	-197.33	-51	59	-66	74	495	74	-2064	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.440	0.557	1	Yes	0.418	0.095	0.52	Yes	1.00	**3.96**
		$U_{15} - L_{15}$			-----	-280.79	-55	42	207	-226	157	-400	-1174	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.365	1	Yes	0.594	0.289	0.89	Yes	1.00	**6.78**
		$U_{16} - L_{16}$			-----	-321.79	49	-57	236	-246	621	24	-484	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.255	0.98	Yes	0.681	0.315	1.00	Yes	1.00	**5.24**
		$U_{17} - L_{17}$			-----	-418.10	80	-93	203	-222	504	200	37	82	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1	Yes	0.721	0.225	0.95	Yes	1.00	**3.60**
		$U_{18} - L_{18}$			-----	-535.85	172	-179	436	-449	677	171	197	44	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.183	0.97	Yes	0.745	0.254	1.00	Yes	1.00	**5.07**
		$U_{19} - L_{19}$			-----	-527.55	197	-210	391	-408	601	117	674	129	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.336	1	Yes	0.614	0.189	0.81	Yes	1.00	**3.04**
		$U_{20} - L_{20}$			-----	-483.55	245	-296	373	-444	460	60	436	57	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.358	1	Yes	0.563	0.206	0.77	Yes	1.00	**2.14**
	Structure 2	$U_0 - L_0$			-----	-623.01	-160	267	-323	468	39	7	-1038	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.251	1	Yes	0.668	0.199	0.87	Yes	1.00	**2.70**
		$U_1 - L_1$			-----	-651.82	-219	226	-457	474	628	165	-1458	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.250	1	Yes	0.699	0.201	0.90	Yes	1.00	**3.69**
		$U_2 - L_2$			-----	-519.35	-168	184	-337	371	621	295	-1404	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.304	1	Yes	0.662	0.190	0.86	Yes	1.00	**3.15**
		$U_3 - L_3$			-----	-457.15	-77	88	-205	224	545	267	-552	117	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.213	1	Yes	0.717	0.204	0.93	Yes	1.00	**3.40**
		$U_4 - L_4$			-----	-273.99	-31	42	-140	155	548	241	-981	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.370	1	Yes	0.580	0.198	0.78	Yes	1.00	**3.36**
		$U_5 - L_5$			-----	-190.32	42	-29	-69	97	281	102	-1806	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.430	0.565	1	Yes	0.403	0.124	0.53	Yes	1.00	**4.42**
		$U_6 - L_6$			252.70	-----	140	-144	-53	58	-66	-122	-1240	-128	0.454	0.543	1.00	Yes	0.250	0.299	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_7 - L_7$			-----	-211.87	77	-89	115	-130	636	78	-1796	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.512	1	Yes	0.448	0.166	0.62	Yes	1.00	**4.80**
		$U_8 - L_8$			-----	-472.64	151	-170	335	-358	420	45	-430	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.156	0.85	Yes	0.681	0.313	1.00	Yes	1.00	**4.38**
		$U_9 - L_9$			-----	-696.93	269	-277	581	-596	760	359	-423	2	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.164	0.94	Yes	0.747	0.253	1.00	Yes	1.00	**5.71**
		$U_{10} - L_{10}$			-----	-747.40	233	-234	508	-530	1171	687	82	263	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.699	0.234	0.94	Yes	1.00	**5.68**
		$U_{11} - L_{11}$			-----	-735.29	226	-220	452	-459	1174	660	95	404	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.257	1	Yes	0.687	0.203	0.90	Yes	1.00	**4.66**
		$U_{12} - L_{12}$			-----	-720.64	187	-170	415	-410	1461	636	775	451	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.299	1	Yes	0.625	0.178	0.81	Yes	1.00	**4.58**
		$U_{13} - L_{13}$			-----	-601.38	236	-233	478	-467	1376	308	593	201	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.329	1	Yes	0.580	0.229	0.81	Yes	1.00	**4.43**
		$U_{14} - L_{14}$			-----	-1109.83	-20	14	-130	113	1119	-87	-1869	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.736	0.023	0.76	Yes	1.00	**4.60**
		$U_{15} - L_{15}$			-----	-645.76	-273	276	-555	541	648	67	-1015	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.272	1	Yes	0.623	0.266	0.89	Yes	1.00	**4.59**
		$U_{16} - L_{16}$			-----	-639.82	-195	182	-423	423	673	191	-1491	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.686	0.180	0.87	Yes	1.00	**3.82**
		$U_{17} - L_{17}$			-----	-565.09	-207	207	-416	433	596	197	-1601	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.300	1	Yes	0.658	0.201	0.86	Yes	1.00	**3.64**
		$U_{18} - L_{18}$			-----	-565.59	-163	169	-437	469	621	216	-1087	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.241	1	Yes	0.721	0.240	0.97	Yes	1.00	**4.35**
		$U_{19} - L_{19}$			-----	-451.00	-94	95	-241	249	517	198	-1290	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.316	1	Yes	0.673	0.240	0.92	Yes	1.00	**3.77**
		$U_{20} - L_{20}$			-----	-295.73	-54	58	-131	147	519	190	-1249	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.387	1	Yes	0.567	0.168	0.74	Yes	1.00	**3.13**
	Structure 3	$U_{21} - L_{21}$			-----	-276.33	9	0	-178	196	132	-34	-1028	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.370	1	Yes	0.585	0.250	0.84	Yes	1.00	**5.17**
		$U_{22} - L_{22}$			-----	-213.58	-3	4	16	-16	694	153	-1884	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.481	0.514	1	Yes	0.452	0.021	0.48	Yes	1.00	**4.57**
		$U_{23} - L_{23}$			-----	-322.59	16	-24	228	-245	208	-117	-510	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.237	0.97	Yes	0.683	0.313	1.00	Yes	1.00	**5.41**
		$U_{24} - L_{24}$			-----	-369.61	54	-59	223	-232	584	205	-76	43	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.236	1	Yes	0.708	0.265	0.98	Yes	1.00	**4.33**
		$U_{25} - L_{25}$			-----	-475.96	100	-101	296	-296	589	224	-369	57	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.183	0.9	Yes	0.711	0.285	1.00	Yes	1.00	**4.44**
		$U_{26} - L_{26}$			-----	-571.06	170	-178	487	-515	708	302	-259	161	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.189	0.96	Yes	0.728	0.263	1.00	Yes	1.00	**4.91**
		$U_{27} - L_{27}$			-----	-596.40	222	-218	519	-525	1174	545	276	383	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.255	1	Yes	0.694	0.244	0.94	Yes	1.00	**4.86**
		$U_{28} - L_{28}$			-----	-616.61	157	-132	468	-451	1623	542	966	424	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.286	1	Yes	0.661	0.198	0.86	Yes	1.00	**5.17**
		$U_{29} - L_{29}$			-----	-592.01	169	-172	545	-535	1424	236	-91	108	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.334	1	Yes	0.571	0.261	0.84	Yes	1.00	**6.33**
		$U_{30} - L_{30}$			-----	-1103.48	-150	124	-179	142	969	-229	-1889	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.732	0.032	0.77	Yes	1.00	**4.28**
		$U_{31} - L_{31}$			-----	-654.48	-311	304	-480	468	497	97	-964	9	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.265	1	Yes	0.631	0.230	0.87	Yes	1.00	**3.10**
		$U_{32} - L_{32}$			-----	-848.51	-224	204	-464	462	463	164	-653	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.179	1	Yes	0.735	0.199	0.94	Yes	1.00	**4.74**
		$U_{33} - L_{33}$			-----	-763.76	-248	237	-445	451	454	216	-1021	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.714	0.199	0.92	Yes	1.00	**4.28**
		$U_{34} - L_{34}$			-----	-675.65	-238	250	-398	428	553	329	-1706	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.327	1	Yes	0.632	0.189	0.83	Yes	1.00	**3.89**
		$U_{35} - L_{35}$			-----	-579.23	-257	271	-407	448	631	372	-2146	-431	-----	-----	-----	-----	-----	-----	-----	-----	0.645	0.351	1	Yes	0.621	0.190	0.82	Yes	1.00	**3.77**
		$U_{36} - L_{36}$			-----	-475.70	-133	157	-311	337	190	137	-1146	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.302	1	Yes	0.685	0.295	0.98	Yes	1.00	**4.53**
		$U_{37} - L_{37}$			-----	-204.30	-79	94	-92	108	558	112	-1850	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.462	0.534	1	Yes	0.432	0.139	0.58	Yes	1.00	**4.29**
		$U_{38} - L_{38}$			246.11	-----	-146	153	122	-129	-60	-252	-1244	-306	0.443	0.556	1.00	Yes	0.243	0.306	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		$U_{39} - L_{39}$			-----	-317.68	-63	46	213	-236	317	-292	-670	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.280	1	Yes	0.672	0.302	0.98	Yes	1.00	**7.11**
		$U_{40} - L_{40}$			-----	-325.66	37	-45	216	-220	595	172	71	44	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.689	0.281	0.97	Yes	1.00	**4.69**
		$U_{41} - L_{41}$			-----	-460.30	88	-97	231	-244	578	193	-81	55	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.722	0.222	0.95	Yes	1.00	**3.90**
		$U_{42} - L_{42}$			-----	-581.71	171	-180	494	-502	670	172	62	61	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.173	0.96	Yes	0.741	0.257	1.00	Yes	1.00	**5.24**
		$U_{43} - L_{43}$			-----	-707.94	188	-207	533	-555	622	187	242	154	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.154	0.97	Yes	0.759	0.235	1.00	Yes	1.00	**6.39**
		$U_{44} - L_{44}$			-----	-674.50	249	-307	479	-607	540	92	492	83	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.723	0.258	0.99	Yes	1.00	**5.44**
	Structure 4	$U_0 - L_0$			-----	-540.94	-158	253	-293	394	337	44	-1109	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.282	1	Yes	0.630	0.183	0.82	Yes	1.00	**2.35**
		$U_1 - L_1$			-----	-627.31	-210	209	-465	467	618	144	-977	14	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.730	0.217	0.95	Yes	1.00	**3.99**
		$U_2 - L_2$			-----	-490.28	-165	176	-323	350	652	311	-1135	18	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.276	1	Yes	0.682	0.198	0.89	Yes	1.00	**3.01**
		$U_3 - L_3$			-----	-371.90	-73	88	-144	170	556	273	-843	83	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.296	1	Yes	0.642	0.173	0.82	Yes	1.00	**2.45**
		$U_4 - L_4$			-----	-278.58	-40	46	-173	187	591	226	-1003	32	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.370	1	Yes	0.589	0.239	0.83	Yes	1.00	**3.91**
		$U_5 - L_5$			-----	-201.43	33	-24	-112	133	193	62	-1714	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.451	0.540	1	Yes	0.426	0.170	0.60	Yes	1.00	**4.53**
		$U_6 - L_6$			-----	-196.33	60	-67	46	-51	807	245	-2025	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.438	0.556	1	Yes	0.415	0.086	0.51	Yes	1.00	**4.28**
		$U_7 - L_7$			-----	-365.39	74	-92	231	-257	436	-37	-149	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.196	0.94	Yes	0.700	0.293	1.00	Yes	1.00	**4.09**
		$U_8 - L_8$			-----	-507.48	135	-134	322	-327	918	446	-652	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.265	1	Yes	0.696	0.279	0.98	Yes	1.00	**5.12**
		$U_9 - L_9$			-----	-624.72	164	-219	370	-471	1092	469	9	255	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.244	1	Yes	0.727	0.218	0.95	Yes	1.00	**5.28**
		$U_{10} - L_{10}$			-----	-553.39	161	-154	273	-283	1568	815	1183	695	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.420	1	Yes	0.546	0.147	0.70	Yes	1.00	**2.56**
		$U_{11} - L_{11}$			-----	-488.73	214	-248	324	-370	1197	539	988	505	-----	-----	-----	-----	-----	-----	-----	-----	0.583	0.412	1	Yes	0.552	0.206	0.76	Yes	1.00	**1.82**
		$U_{12} - L_{12}$			-----	-1101.73	-13	-7	-85	58	1358	329	-2108	-407	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.203	1	Yes	0.764	0.016	0.78	Yes	1.00	**4.02**
		$U_{13} - L_{13}$			-----	-448.66	-154	168	-279	297	657	119	-687	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.245	1	Yes	0.692	0.292	0.99	Yes	1.00	**2.67**
		$U_{14} - L_{14}$			-----	-447.88	-98	96	-185	204	606	247	-1294	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.318	1	Yes	0.642	0.178	0.83	Yes	1.00	**2.86**
		$U_{15} - L_{15}$			-----	-356.96	-80	89	-141	170	521	247	-1192	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.346	1	Yes	0.616	0.173	0.79	Yes	1.00	**2.90**
		$U_{16} - L_{16}$			-----	-203.58	-84	85	-114	119	891	342	-1888	-612	-----	-----	-----	-----	-----	-----	-----	-----	0.448	0.548	1	Yes	0.431	0.151	0.59	Yes	1.00	**3.74**
		$U_{17} - L_{17}$			163.80	-----	-202	201	130	-152	428	-212	-1521	-558	0.295	0.699	1.00	Yes	0.162	0.384	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.39**
		$U_{18} - L_{18}$			93.23	-296.18	-99	107	242	-285	480	153	-828	-443	0.168	0.604	0.78	Yes	0.092	0.332	0.43	Yes	0.647	0.333	0.99	Yes	0.627	0.364	1.00	Yes	1.00	**8.58**
		$U_{19} - L_{19}$			-----	-327.30	-23	7	227	-236	432	221	78	53	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.213	0.93	Yes	0.693	0.301	1.00	Yes	1.00	**5.98**
		$U_{20} - L_{20}$			-----	-324.40	79	-92	193	-242	605	194	299	96	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.274	1	Yes	0.686	0.309	1.00	Yes	1.00	**3.55**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$			619.13	-----	-39	31	1	-10	-362	-550	55	128	0.812	0.185	1.00	Yes	0.490	0.102	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		$U_1 - L_2$			379.92	-----	-94	-3	12	-15	-659	-609	370	199	0.683	0.311	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_2 - L_3$			-----	-291.41	-109	-16	60	-33	-304	-760	583	319	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.323	1	Yes	0.617	0.139	0.76	Yes	1.00	**10.74**
		$U_3 - L_4$			-----	-323.75	-16	-47	11	-64	49	-170	-693	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.252	1	Yes	0.685	0.082	0.77	Yes	1.00	**4.34**
		$U_4 - L_4$			571.01	-----	-89	48	-33	15	-179	-41	286	145	0.837	0.157	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		$U_5 - L_5$			625.37	-----	-163	212	-56	90	-365	208	734	63	0.739	0.254	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_7 - L_6$			619.03	-----	-273	248	-41	88	-325	54	-572	32	0.732	0.259	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		$U_8 - L_7$			617.14	-----	-88	295	29	83	-133	133	-540	-322	0.730	0.266	1.00	Yes	0.401	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_9 - L_9$			954.31	-----	-94	353	12	184	-107	-565	590	285	0.763	0.232	1.00	Yes	0.473	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_9 - L_{10}$			960.78	-----	-305	222	-113	128	-463	-724	593	255	0.768	0.228	1.00	Yes	0.476	0.129	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{10} - L_{11}$			930.66	-----	-240	172	-82	95	-460	-735	181	-11	0.786	0.207	1.00	Yes	0.487	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		$U_{11} - L_{12}$			777.44	-----	-252	81	-95	48	-521	-710	167	-23	0.769	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{12} - L_{13}$			551.08	-----	-193	117	-102	43	-314	-784	-621	-293	0.672	0.321	1.00	Yes	0.423	0.184	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{13} - L_{14}$			386.07	-----	-82	23	-34	-23	-145	-366	-677	-285	0.694	0.300	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{15} - L_{14}$			253.38	-220.51	-74	-13	-3	-84	-274	-198	1036	-249	0.456	0.408	0.87	Yes	0.251	0.224	0.48	Yes	0.517	0.475	1	Yes	0.467	0.108	0.58	Yes	1.00	**6.65**
		$U_{16} - L_{15}$			328.24	-----	-119	74	-53	-1	-278	34	872	-258	0.590	0.404	1.00	Yes	0.325	0.222	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_{17} - L_{16}$			520.28	-----	-143	97	-47	23	-355	-86	-304	-104	0.763	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_{18} - L_{17}$			612.86	-----	-319	250	-132	90	-484	-52	-399	-111	0.725	0.268	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{19} - L_{18}$			688.64	-----	-332	252	-132	96	-451	-158	-455	-203	0.746	0.244	1.00	Yes	0.410	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{20} - L_{19}$			691.06	-----	-377	318	-179	144	-331	-176	-259	-140	0.748	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
	Structure 2	$U_0 - L_1$			765.56	-----	-261	311	-100	128	-570	-623	-156	5	0.757	0.238	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_1 - L_2$			708.37	-----	-381	276	-165	119	-448	-754	139	-35	0.701	0.289	1.00	Yes	0.385	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_2 - L_3$			601.19	-----	-316	253	-117	87	-335	-576	128	-25	0.711	0.283	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_3 - L_4$			541.09	-----	-172	111	-53	26	-316	-577	167	7	0.721	0.278	1.00	Yes	0.397	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_4 - L_5$			382.15	-----	-134	90	4	-18	-378	-463	243	40	0.687	0.305	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.43**
		$U_5 - L_6$			294.23	-243.64	-90	25	50	-108	-399	-499	-1127	-178	0.529	0.464	1.00	Yes	0.291	0.255	0.55	Yes	0.575	0.190	0.77	Yes	0.516	0.138	0.66	Yes	1.00	**7.80**
		$U_6 - L_7$			-----	-375.89	-8	-40	44	-100	41	-194	-546	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.720	0.114	0.84	Yes	1.00	**3.93**
		$U_8 - L_7$			599.34	-----	-187	149	-86	36	-316	-8	328	-148	0.764	0.234	1.00	Yes	0.481	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_8 - L_8$			721.41	-----	-331	244	-176	120	-149	94	-249	-128	0.781	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{10} - L_9$			831.67	-----	-312	253	-151	126	-141	166	-176	-8	0.823	0.171	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{11} - L_{10}$			877.23	-----	-343	298	-137	164	-206	241	-401	126	0.799	0.200	1.00	Yes	0.440	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{12} - L_{11}$			849.54	-----	-336	344	-132	175	-561	266	-545	53	0.774	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{13} - L_{12}$			733.74	-----	-412	379	-160	163	-498	73	-535	0	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		$U_{14} - L_{13}$			728.62	-----	-246	422	-20	131	-140	27	-499	-329	0.721	0.270	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.52**
		$U_{14} - L_{15}$			577.61	-----	-187	337	-9	164	123	-234	663	249	0.683	0.311	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{15} - L_{16}$			587.03	-----	-346	314	-171	168	201	-274	585	177	0.694	0.302	1.00	Yes	0.382	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		$U_{16} - L_{17}$			696.85	-----	-333	356	-127	153	-18	-294	373	110	0.755	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{17} - L_{18}$			649.48	-----	-288	280	-110	126	-67	-314	358	88	0.768	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{18} - L_{19}$			615.59	-----	-276	241	-83	97	-84	-612	288	75	0.728	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_{19} - L_{20}$			540.73	-----	-187	137	-43	48	-347	-663	288	79	0.689	0.302	1.00	Yes	0.379	0.173	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{20} - L_{21}$			373.64	-----	-115	93	-30	2	-113	-383	-602	-75	0.672	0.321	1.00	Yes	0.370	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{21} - L_{22}$			350.25	-----	-108	19	14	-78	-195	-674	-790	-91	0.630	0.367	1.00	Yes	0.346	0.202	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		$U_{23} - L_{22}$			396.17	-----	-110	51	-1	-52	-161	-47	476	-107	0.713	0.278	1.00	Yes	0.392	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		$U_{24} - L_{23}$			426.31	-----	-123	106	-20	19	-184	109	-254	-63	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{25} - L_{24}$			598.03	-----	-191	176	-42	50	-186	55	-299	-81	0.763	0.232	1.00	Yes	0.419	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{26} - L_{25}$			662.32	-----	-286	271	-80	98	-58	270	-252	-56	0.783	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{27} - L_{26}$			653.78	-----	-286	291	-107	126	-292	208	-340	-6	0.773	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_{28} - L_{27}$			676.69	-----	-302	341	-96	149	-513	200	-535	38	0.733	0.263	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{29} - L_{28}$			595.04	-----	-348	330	-94	107	-336	119	-540	-41	0.703	0.295	1.00	Yes	0.387	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{30} - L_{29}$			634.75	-----	-197	365	32	71	-129	170	-222	-188	0.750	0.247	1.00	Yes	0.413	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		$U_{30} - L_{31}$			723.91	-----	-256	425	-59	224	55	-513	489	213	0.716	0.274	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{31} - L_{32}$			732.55	-----	-427	368	-233	217	-61	-463	449	118	0.725	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_{32} - L_{33}$			846.04	-----	-344	338	-160	192	-232	-552	282	59	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{33} - L_{34}$			838.18	-----	-324	264	-147	163	-377	-671	236	35	0.764	0.230	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{34} - L_{35}$			780.42	-----	-295	235	-154	122	-450	-544	8	-138	0.772	0.218	1.00	Yes	0.425	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{35} - L_{36}$			694.43	-----	-317	228	-179	98	-390	-501	-453	-257	0.752	0.245	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{36} - L_{37}$			523.73	-----	-181	116	-81	26	-121	-814	-707	-248	0.668	0.328	1.00	Yes	0.420	0.188	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{38} - L_{37}$			-----	-310.06	-15	-33	16	-74	-327	-160	735	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.323	1	Yes	0.594	0.085	0.68	Yes	1.00	**3.32**
		$U_{39} - L_{38}$			345.57	-192.09	-105	40	31	-87	-141	135	841	-128	0.622	0.378	1.00	Yes	0.342	0.208	0.55	Yes	0.458	0.357	0.82	Yes	0.406	0.134	0.55	Yes	1.00	**7.63**
		$U_{40} - L_{39}$			360.82	-----	-119	82	-38	-3	-318	37	676	-202	0.649	0.348	1.00	Yes	0.357	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		$U_{41} - L_{40}$			559.75	-----	-177	124	-57	31	-320	-42	-411	-178	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{42} - L_{41}$			621.93	-----	-321	261	-122	92	-433	1	-402	-168	0.735	0.261	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_{43} - L_{42}$			768.81	-----	-377	307	-136	103	-391	-72	-376	-193	0.761	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{44} - L_{43}$			800.08	-----	-381	375	-175	156	-92	60	-211	-87	0.792	0.208	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
	Structure 3	$U_0 - L_1$			710.02	-----	-242	265	-77	101	-565	-530	-144	9	0.769	0.228	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_1 - L_2$			656.54	-----	-343	240	-159	108	-329	-643	161	-42	0.711	0.281	1.00	Yes	0.391	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_2 - L_3$			568.24	-----	-311	226	-125	86	-428	-823	129	-29	0.672	0.325	1.00	Yes	0.369	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_3 - L_4$			506.77	-----	-141	92	-41	19	-383	-469	159	-22	0.743	0.252	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_4 - L_5$			348.38	-----	-126	74	-29	-19	-265	-714	-702	-181	0.627	0.368	1.00	Yes	0.345	0.202	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		$U_5 - L_6$			-----	-302.44	-73	-15	21	-123	-357	-341	-1431	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.287	1	Yes	0.640	0.157	0.80	Yes	1.00	**8.29**
		$U_7 - L_6$			423.35	-----	-88	30	-38	-12	-196	-55	407	-124	0.761	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_8 - L_7$			560.94	-----	-182	143	-111	53	-200	11	765	-72	0.684	0.309	1.00	Yes	0.430	0.177	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_8 - L_8$			845.47	-----	-267	120	-116	23	-164	86	216	134	0.836	0.156	1.00	Yes	0.460	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		$U_{10} - L_9$			930.23	-----	-225	183	-94	82	-338	287	804	221	0.786	0.210	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		$U_{11} - L_{10}$			985.52	-----	-292	280	-82	107	-538	35	-573	-47	0.788	0.203	1.00	Yes	0.488	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		$U_{12} - L_{11}$			942.97	-----	-58	374	19	129	-287	121	-612	-246	0.754	0.245	1.00	Yes	0.467	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		$U_{12} - L_{13}$			610.98	-----	-89	291	6	156	56	-292	586	304	0.722	0.272	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{13} - L_{14}$			608.40	-----	-272	221	-101	124	-57	-284	663	263	0.719	0.275	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_{14} - L_{15}$			644.77	-----	-203	183	-52	97	-240	-667	306	97	0.762	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{15} - L_{16}$			503.35	-----	-83	30	-46	2	-374	-397	-744	-386	0.738	0.257	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_{17} - L_{16}$			-----	-331.18	-19	-40	1	-52	-374	-356	541	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.233	1	Yes	0.701	0.067	0.77	Yes	1.00	**4.50**
		$U_{18} - L_{17}$			-----	-220.60	-93	-3	-44	-49	-505	-156	1301	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.508	0.491	1	Yes	0.467	0.118	0.59	Yes	1.00	**8.13**
		$U_{19} - L_{18}$			438.78	-----	-86	15	16	-20	-337	-318	-210	-120	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		$U_{20} - L_{19}$			648.29	-----	-107	72	-30	4	-64	3	-61	12	0.850	0.142	1.00	Yes	0.514	0.078	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.51**

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL+max (kips)	LL+min (kips)	Pedestrian Load+MAX	Pedestrian Load+MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL+MAX	Lane Reduction and Impact LL+MIN	Impact & Pedestrian Load+MAX	Impact & Pedestrian Load+MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A+deduct (in²) **	A+gross (in²)	A+net (in²)	C+Nominal (kips)	Member Capacity in Compression: C+c	L (feet)	r+min (in)	KL/r+min ***	F+crit **** (ksi)	C+nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Tension Member: Inventory RF	Tension Member: Operating RF	Comp. Member: Inventory RF	Comp. Member: Operating RF
Structure 1	U_1 - U_1	-71.64	-73.93	-36.27			0.90	1.24	-40.37	-82.31	0.00	0.00	Vehicle	Vehicle	-----	-200.13	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.00	6.00
	U_1 - U_2	-90.83	-2.56	-81.31			0.90	1.24	-2.85	-90.52	0.00	0.00	Vehicle	Vehicle	-----	-235.76	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.24	5.24
	U_1 - U_3	-61.13	44.36	-107.87			0.90	1.24	49.39	-120.09	0.00	0.00	Vehicle	Vehicle	-----	-235.59	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.20	4.20
	U_1 - U_4	10.71	58.05	-124.41			0.90	1.24	64.67	-138.51	0.00	0.00	Vehicle	Vehicle	97.99	-166.15	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.21	10.21	4.16	4.16
	U_1 - U_5	12.86	58.40	-136.82			0.90	1.24	65.02	-152.32	0.00	0.00	Vehicle	Vehicle	101.24	-181.29	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.12	10.12	3.80	3.80
	U_1 - U_6	121.37	67.50	-104.15			0.90	1.24	75.14	-115.95	0.00	0.00	Vehicle	Vehicle	255.47	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	7.32	7.32	-----	-----
	U_1 - U_7	249.49	74.59	-62.11			0.90	1.24	83.04	-69.14	0.00	0.00	Vehicle	Vehicle	432.29	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	6.68	6.68	-----	-----
	U_1 - U_8	376.92	70.32	-20.89			0.90	1.24	78.28	-23.26	0.00	0.00	Vehicle	Vehicle	591.76	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	9.37	9.37	-----	-----
	U_1 - U_9	319.74	-19.69	1.17			0.90	1.20	1.26	-21.23	0.00	0.00	Vehicle	Vehicle	417.29	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	491.61	491.61	-----	-----
	U_{10} - U_{11}	128.77	-6.86	-47.32			0.90	1.20	-7.39	-51.02	0.00	0.00	Vehicle	Vehicle	157.79	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{11} - U_{12}	-70.90	68.75	-77.01			0.90	1.20	74.12	-83.03	0.00	0.00	Vehicle	Vehicle	4.19	-200.11	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	10.52	10.52	6.34	6.34
	U_{12} - U_{13}	-252.96	60.84	-106.68			0.90	1.20	65.59	-115.02	0.00	0.00	Vehicle	Vehicle	-----	-478.38	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.87	4.87
	U_{13} - U_{14}	-391.95	52.12	-158.97			0.90	1.20	56.20	-171.40	0.00	0.00	Vehicle	Vehicle	-----	-732.35	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.35	4.35
	U_{14} - U_{15}	-482.99	43.38	-175.55			0.90	1.20	46.77	-189.28	0.00	0.00	Vehicle	Vehicle	-----	-873.95	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.46	4.46
	U_{15} - U_{16}	-454.44	43.22	-197.47			0.90	1.20	-46.60	-212.92	0.00	0.00	Vehicle	Vehicle	-----	-906.57	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.96	3.96
	U_{16} - U_{17}	-502.02	33.24	-196.86			0.90	1.20	35.84	-212.26	0.00	0.00	Vehicle	Vehicle	-----	-928.56	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.89	3.89
	U_{17} - U_{18}	-467.99	15.75	-182.98			0.90	1.20	16.98	-197.29	0.00	0.00	Vehicle	Vehicle	-----	-864.86	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.36	4.36
	U_{18} - U_{19}	-368.86	14.97	-143.91			0.90	1.20	16.14	-155.16	0.00	0.00	Vehicle	Vehicle	-----	-681.22	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.88	3.88
	U_{19} - U_{20}	-251.56	7.48	-84.32			0.90	1.20	8.07	-90.92	0.00	0.00	Vehicle	Vehicle	-----	-445.22	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.69	4.69
	U_{20} - U_{21}	-117.89	-3.44	-39.20			0.90	1.20	-3.71	-42.27	0.00	0.00	Vehicle	Vehicle	-----	-208.20	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	13.24	13.24
Structure 2	U_1 - U_1	-118.23	-45.53	-37.71			0.90	1.18	-40.15	-48.48	0.00	0.00	Vehicle	Vehicle	-----	-216.72	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.92	10.92
	U_1 - U_2	-239.56	-86.19	-63.48			0.90	1.18	-67.59	-91.76	0.00	0.00	Vehicle	Vehicle	-----	-430.73	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.01	6.01
	U_1 - U_3	-350.44	-127.09	-106.30			0.90	1.18	-113.17	-135.32	0.00	0.00	Vehicle	Vehicle	-----	-631.49	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	99.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.37	5.37
	U_1 - U_4	-449.15	19.76	-141.07			0.90	1.18	21.04	-150.19	0.00	0.00	Vehicle	Vehicle	-----	-779.14	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.94	5.94
	U_1 - U_5	-483.26	28.05	-186.23			0.90	1.18	26.10	-198.28	0.00	0.00	Vehicle	Vehicle	-----	-886.90	15.10	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.06	5.06
	U_1 - U_6	-485.85	55.52	-194.51			0.90	1.18	59.11	-207.09	0.00	0.00	Vehicle	Vehicle	-----	-900.83	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.83	4.83
	U_1 - U_7	-428.85	65.79	-199.76			0.90	1.18	70.04	-212.69	0.00	0.00	Vehicle	Vehicle	-----	-834.00	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.29	4.29
	U_1 - U_8	-428.37	65.95	-200.48			0.90	1.18	70.21	-213.45	0.00	0.00	Vehicle	Vehicle	-----	-834.36	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.28	4.28
	U_1 - U_9	-335.42	74.68	-186.46			0.90	1.18	79.51	-198.52	0.00	0.00	Vehicle	Vehicle	-----	-694.12	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.98	3.98
	U_9 - U_{10}	-200.29	81.84	-154.13			0.90	1.18	87.14	-164.10	0.00	0.00	Vehicle	Vehicle	-----	-473.70	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.18	4.18
	U_{10} - U_{11}	-52.14	86.88	-113.84			0.90	1.18	92.51	-121.21	0.00	0.00	Vehicle	Vehicle	52.47	-225.35	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	10.41	10.41	5.92	5.92
	U_{11} - U_{12}	107.02	86.73	-77.48			0.90	1.18	92.35	-82.50	0.00	0.00	Vehicle	Vehicle	259.17	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	8.70	8.70	-----	-----
	U_{12} - U_{13}	259.33	85.94	-43.00			0.90	1.18	91.50	-45.78	0.00	0.00	Vehicle	Vehicle	456.07	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.62	9.62	-----	-----
	U_{13} - U_{14}	391.98	77.87	-10.82			0.90	1.18	82.90	-11.52	0.00	0.00	Vehicle	Vehicle	617.34	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	14.14	14.14	-----	-----
	U_{14} - U_{15}	439.40	45.82	-0.09			0.90	1.17	-0.09	-6.13	0.00	0.00	Vehicle	Vehicle	571.11	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{15} - U_{16}	369.66	43.91	-20.12			0.90	1.17	46.20	-21.17	0.00	0.00	Vehicle	Vehicle	540.62	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	19.54	19.54	-----	-----
	U_{16} - U_{17}	271.39	-22.33	-49.78			0.90	1.17	-23.49	-52.38	0.00	0.00	Vehicle	Vehicle	322.27	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{17} - U_{18}	171.75	-28.21	-71.36			0.90	1.17	-29.68	-75.08	0.00	0.00	Vehicle	Vehicle	184.69	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{18} - U_{19}	72.78	-60.49	-91.64			0.90	1.17	-63.64	-96.42	0.00	0.00	Vehicle	Vehicle	11.89	-30.73	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.47	7.47
	U_{19} - U_{20}	-8.11	59.63	-128.32			0.90	1.17	62.73	-135.01	0.00	0.00	Vehicle	Vehicle	71.01	-186.05	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.20	13.20	5.07	5.07
	U_{20} - U_{21}	-60.13	50.38	-141.53			0.90	1.17	53.01	-148.90	0.00	0.00	Vehicle	Vehicle	-----	-271.74	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.22	5.22
	U_{21} - U_{22}	-82.18	39.93	-162.25			0.90	1.17	42.01	-170.71	0.00	0.00	Vehicle	Vehicle	-----	-328.76	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.42	4.42
	U_{22} - U_{23}	-82.40	39.92	-166.20			0.90	1.17	41.99	-174.86	0.00	0.00	Vehicle	Vehicle	-----	-334.44	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.31	4.31
	U_{23} - U_{24}	-65.94	28.37	-165.66			0.90	1.17	29.85	-174.29	0.00	0.00	Vehicle	Vehicle	-----	-312.31	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.42	4.42
	U_{24} - U_{25}	-61.51	58.91	-143.30			0.90	1.17	62.00	-150.77	0.00	0.00	Vehicle	Vehicle	57.25	-219.34	5.50	32.31	26.8125	1066.31	131.71	10.6302	5.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.52	13.52	4.48	4.48
	U_{25} - U_{26}	55.02	66.92	-123.24			0.90	1.17	70.41	-129.67	0.00	0.00	Vehicle	Vehicle	163.06	-97.04	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	10.10	10.10	5.42	5.42
	U_{26} - U_{27}	136.02	73.55	-97.04			0.90	1.17	77.38	-102.10	0.00	0.00	Vehicle	Vehicle	277.42	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	8.14	8.14	-----	-----
	U_{27} - U_{28}	216.87	76.64	-65.45			0.90	1.17	80.63	-68.86	0.00	0.00	Vehicle	Vehicle	386.75	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	10.26	10.26	-----	-----
	U_{28} - U_{29}	293.76	78.39	-37.33			0.90	1.17	82.47	-39.27	0.00	0.00	Vehicle	Vehicle	489.10	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	11.87	11.87	-----	-----
	U_{29} - U_{30}	358.11	73.66	-10.37			0.90	1.17	77.50	-10.91	0.00	0.00	Vehicle	Vehicle	566.29	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.56	15.56	-----	-----
	U_{30} - U_{31}	339.33	-8.94	-22.16			0.90	1.18	-9.51	-23.59	0.00	0.00	Vehicle	Vehicle	428.76	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{31} - U_{32}	39.82	-27.08				0.90	1.18	42.40	-28.83	0.00	0.00	Vehicle	Vehicle	381.64	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	20.94	20.94	-----	-----
	U_{32} - U_{33}	136.17	-13.10	-49.11			0.90	1.18	-13.95	-52.29	0.00	0.00	Vehicle	Vehicle	158.89	-----	6

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.85	-1.69	-1.49			0.90	1.24	-1.66	-1.88	0.00	0.00	Vehicle	Vehicle	4.15	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
	L_1 - L_2	74.27	63.52	66.39			0.90	1.24	73.91	70.72	0.00	0.00	Vehicle	Vehicle	192.62	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.80**	**5.80**	-----	-----
	L_2 - L_3	97.77	-32.17	115.40			0.90	1.24	128.48	-35.81	0.00	0.00	Vehicle	Vehicle	294.12	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.44**	**4.44**	-----	-----
	L_3 - L_4	66.93	-46.57	142.16			0.90	1.24	158.27	-51.84	0.00	0.00	Vehicle	Vehicle	292.76	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.80**	**3.80**	-----	-----
	L_4 - L_5	-108.46	-69.92	84.70			0.90	1.24	94.30	-77.85	0.00	0.00	Vehicle	Vehicle	-----	-242.20	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.03**	**5.03**
	L_5 - L_6	-237.28	-77.16	41.26			0.90	1.24	45.94	-85.90	0.00	0.00	Vehicle	Vehicle	-----	-420.14	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.92**	**4.92**
	L_6 - L_7	-362.27	-80.63	6.55			0.90	1.24	7.29	-89.76	0.00	0.00	Vehicle	Vehicle	-----	-587.64	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.49**	**6.49**
	L_7 - L_8	-478.66	-70.15	-33.03			0.90	1.24	-36.78	-78.09	0.00	0.00	Vehicle	Vehicle	-----	-723.78	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**9.23**	**9.23**
	L_8 - L_9	-477.02	-66.70	-1.08			0.90	1.20	-1.17	-71.92	0.00	0.00	Vehicle	Vehicle	-----	-713.61	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**10.05**	**10.05**
	L_9 - L_{10}	-301.43	-36.78	-3.68			0.90	1.20	-3.97	-39.65	0.00	0.00	Vehicle	Vehicle	-----	-443.40	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**16.24**	**16.24**
	L_{10} - L_{11}	-104.46	-67.22	48.22			0.90	1.20	51.99	-72.48	0.00	0.00	Vehicle	Vehicle	-----	-230.01	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.46**	**5.46**
	L_{11} - L_{12}	97.11	60.26	63.85			0.90	1.20	68.85	64.98	0.00	0.00	Vehicle	Vehicle	215.74	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.22**	**7.22**	-----	-----
	L_{12} - L_{13}	268.74	-50.88	112.33			0.90	1.20	121.11	-54.86	0.00	0.00	Vehicle	Vehicle	506.81	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.83**	**5.83**	-----	-----
	L_{13} - L_{14}	405.66	113.99	136.05			0.90	1.20	146.69	122.91	0.00	0.00	Vehicle	Vehicle	718.05	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.15**	**6.15**	-----	-----
	L_{14} - L_{15}	502.77	-24.29	144.12			0.90	1.20	155.39	-26.19	0.00	0.00	Vehicle	Vehicle	855.61	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.90**	**6.90**	-----	-----
	L_{15} - L_{16}	469.25	-15.17	143.54			0.90	1.20	154.77	-16.36	0.00	0.00	Vehicle	Vehicle	811.22	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.14**	**7.14**	-----	-----
	L_{16} - L_{17}	365.43	-12.40	99.53			0.90	1.20	107.31	-13.37	0.00	0.00	Vehicle	Vehicle	614.56	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**7.93**	**7.93**	-----	-----
	L_{17} - L_{18}	248.67	2.75	67.73			0.90	1.20	73.02	2.96	0.00	0.00	Vehicle	Vehicle	418.21	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.69**	**8.69**	-----	-----
	L_{18} - L_{19}	112.99	-2.27	20.27			0.90	1.20	21.85	-2.45	0.00	0.00	Vehicle	Vehicle	175.29	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**17.83**	**17.83**	-----	-----
	L_{19} - L_{20}	-14.26	13.84	-17.05			0.90	1.20	14.92	-18.38	0.00	0.00	Vehicle	Vehicle	0.86	-42.43	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**34.64**	**34.64**	**22.26**	**22.26**
Structure 2	L_0 - L_1	15.26	-3.72	0.72			0.90	1.18	0.76	-3.96	0.00	0.00	Vehicle	Vehicle	20.83	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**810.79**	**810.79**	-----	-----
	L_1 - L_2	136.12	34.68	21.62			0.90	1.18	36.92	23.01	0.00	0.00	Vehicle	Vehicle	224.95	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**13.47**	**13.47**	-----	-----
	L_2 - L_3	262.92	71.97	82.22			0.90	1.18	87.54	76.63	0.00	0.00	Vehicle	Vehicle	455.60	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.15**	**8.15**	-----	-----
	L_3 - L_4	373.32	112.73	123.54			0.90	1.18	131.53	120.02	0.00	0.00	Vehicle	Vehicle	656.31	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.12**	**7.12**	-----	-----
	L_4 - L_5	456.80	77.50	152.56			0.90	1.18	162.43	82.51	0.00	0.00	Vehicle	Vehicle	805.00	-----	11.08	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.35**	**7.35**	-----	-----
	L_5 - L_6	489.63	41.66	186.82			0.90	1.18	198.91	44.35	0.00	0.00	Vehicle	Vehicle	895.09	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.55**	**6.55**	-----	-----
	L_6 - L_7	479.27	-52.79	196.21			0.90	1.18	208.91	-56.21	0.00	0.00	Vehicle	Vehicle	894.63	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**6.41**	**6.41**	-----	-----
	L_7 - L_8	330.30	-72.46	163.98			0.90	1.18	174.59	-77.15	0.00	0.00	Vehicle	Vehicle	656.36	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**5.79**	**5.79**	-----	-----
	L_8 - L_9	189.19	-78.36	126.44			0.90	1.18	134.62	-83.43	0.00	0.00	Vehicle	Vehicle	420.95	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**6.76**	**6.76**	-----	-----
	L_9 - L_{10}	39.95	-83.51	87.24			0.90	1.18	92.89	-88.91	0.00	0.00	Vehicle	Vehicle	172.69	-63.65	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**8.85**	**8.85**	**8.63**	**8.63**
	L_{10} - L_{11}	-127.23	-84.20	55.12			0.90	1.18	58.68	-89.65	0.00	0.00	Vehicle	Vehicle	-----	-281.94	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.84**	**5.84**
	L_{11} - L_{12}	-282.51	-83.50	18.77			0.90	1.18	19.99	-88.90	0.00	0.00	Vehicle	Vehicle	-----	-482.84	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.29**	**7.29**
	L_{12} - L_{13}	-426.62	-78.74	-14.90			0.90	1.18	-15.87	-83.84	0.00	0.00	Vehicle	Vehicle	-----	-663.60	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.12**	**10.12**
	L_{13} - L_{14}	-536.34	-54.24	-22.87			0.90	1.18	-24.35	-57.74	0.00	0.00	Vehicle	Vehicle	-----	-772.31	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.95**	**16.95**
	L_{14} - L_{15}	-537.64	-38.90	-0.59			0.90	1.17	-0.62	-40.92	0.00	0.00	Vehicle	Vehicle	-----	-752.14	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**23.89**	**23.89**
	L_{15} - L_{16}	-475.53	-74.11	-18.77			0.90	1.17	-19.75	-77.97	0.00	0.00	Vehicle	Vehicle	-----	-719.54	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.26**	**10.26**
	L_{16} - L_{17}	-384.21	-31.35	22.29			0.90	1.17	23.45	-32.98	0.00	0.00	Vehicle	Vehicle	-----	-542.35	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**20.11**	**20.11**
	L_{17} - L_{18}	-281.70	9.01	40.64			0.90	1.17	42.75	9.48	0.00	0.00	Vehicle	Vehicle	-----	-353.89	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
	L_{18} - L_{19}	-174.99	-69.62	69.28			0.90	1.17	72.89	-73.25	0.00	0.00	Vehicle	Vehicle	-----	-322.71	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**5.44**	**5.44**
	L_{19} - L_{20}	-76.34	52.92	90.56			0.90	1.17	95.28	55.68	0.00	0.00	Vehicle	Vehicle	24.61	-26.87	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.93**	**7.93**	-----	-----
	L_{20} - L_{21}	4.59	-53.67	117.41			0.90	1.17	123.52	-56.47	0.00	0.00	Vehicle	Vehicle	166.55	-67.43	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.77**	**7.77**	**14.50**	**14.50**
	L_{21} - L_{22}	56.15	-44.37	133.38			0.90	1.17	140.33	-46.68	0.00	0.00	Vehicle	Vehicle	255.42	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.47**	**6.47**	-----	-----
	L_{22} - L_{23}	63.16	-20.75	119.79			0.90	1.17	126.03	-21.84	0.00	0.00	Vehicle	Vehicle	245.94	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.15**	**7.15**	-----	-----
	L_{23} - L_{24}	15.68	-37.97	100.81			0.90	1.17	106.07	-39.95	0.00	0.00	Vehicle	Vehicle	158.27	-31.55	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.95**	**8.95**	**20.78**	**20.78**
	L_{24} - L_{25}	-55.90	-42.98	77.61			0.90	1.17	81.65	-45.22	0.00	0.00	Vehicle	Vehicle	33.48	-131.46	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.00**	**9.00**	**11.45**	**11.45**
	L_{25} - L_{26}	-136.32	-49.61	46.63			0.90	1.17	49.06	-52.19	0.00	0.00	Vehicle	Vehicle	-----	-245.06	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.38**	**8.38**
	L_{26} - L_{27}	-217.71	-50.41	9.53			0.90	1.17	10.03	-53.04	0.00	0.00	Vehicle	Vehicle	-----	-351.97	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.61**	**9.61**
	L_{27} - L_{28}	-296.28	-52.24	-17.10			0.90	1.17	-17.99	-54.96	0.00	0.00	Vehicle	Vehicle	-----	-456.60	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**13.67**	**13.67**
	L_{28} - L_{29}	-364.24	-48.63	-20.78			0.90	1.17	-21.86	-51.17	0.00	0.00	Vehicle	Vehicle	-----	-540.03	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**17.81**	**17.81**
	L_{29} - L_{30}	-418.31	-19.95	-34.07			0.90	1.17	-20.99	-35.84	0.00	0.00	Vehicle	Vehicle	-----	-590.39	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**30.61**	**30.61**
	L_{30} - L_{31}	-350.66	-20.75	18.31			0.90	1.18	19.49	-22.09	0.00	0.00	Vehicle	Vehicle	-----	-484.58	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**52.70**	**52.70**
	L_{31} - L_{32}	-275.63	-77.31	-7.52			0.90	1.18	-8.01	-82.32	0.00	0.00	Vehicle	Vehicle	-----	-465.33	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.14**	**12.14**
	L_{32} - L_{33}	-

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1																																													
	U_0 - L_0	-77.20	13.30	-76.21			0.90	1.24	14.81	-84.85	0.00	0.00	Vehicle	Vehicle	------	-210.67	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	3.15	3.15
	U_0 - L_1	-33.88	11.96	-51.92			0.90	1.24	13.31	-57.80	0.00	0.00	Vehicle	Vehicle	------	-119.18	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.50	5.50
	U_1 - L_2	10.41	11.27	-38.84			0.90	1.24	12.55	-43.24	0.00	0.00	Vehicle	Vehicle	29.84	-42.69	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	33.26	33.26	8.38	8.38
	U_1 - L_3	44.37	11.85	-29.68			0.90	1.24	13.19	-33.04	0.00	0.00	Vehicle	Vehicle	74.83	------	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	------	------	------	------	------	------	29.07	29.07	------	------
	U_2 - L_4	-16.71	-16.13	0.02			0.90	1.24	0.03	-17.95	0.00	0.00	Vehicle	Vehicle	------	-45.06	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	18.55	18.55
	U_2 - L_5	-109.52	-69.81	0.70			0.90	1.24	0.78	-77.72	0.00	0.00	Vehicle	Vehicle	------	-243.41	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	4.06	4.06
	U_3 - L_6	-143.61	-85.12	-2.67			0.90	1.24	-2.97	-94.77	0.00	0.00	Vehicle	Vehicle	------	-309.89	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	3.85	3.85
	U_4 - L_7	-142.76	-87.36	2.38			0.90	1.24	2.65	-97.26	0.00	0.00	Vehicle	Vehicle	------	-312.02	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	3.26	3.26
	U_5 - L_8	-391.96	-93.47	-84.12			0.90	1.24	-93.65	-104.05	0.00	0.00	Vehicle	Vehicle	------	-644.82	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	6.47	6.47
	U_6 - L_9	-223.26	8.43	-79.07			0.90	1.20	9.09	-85.25	0.00	0.00	Vehicle	Vehicle	------	-401.06	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	45.00	Pass	9.60	12.00	Pass	------	------	------	------	------	4.95	4.95
	U_{10} - L_{10}	-225.85	1.92	-71.63			0.90	1.20	2.07	-77.23	0.00	0.00	Vehicle	Vehicle	------	-394.00	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	6.69	6.69
	U_{11} - L_{11}	-198.80	-1.93	-71.10			0.90	1.20	-2.08	-76.66	0.00	0.00	Vehicle	Vehicle	------	-358.10	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.77	5.77
	U_{12} - L_{12}	-154.81	8.48	-65.30			0.90	1.20	9.14	-70.41	0.00	0.00	Vehicle	Vehicle	------	-292.78	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	5.36	5.36
	U_{13} - L_{13}	-109.06	16.68	-52.16			0.90	1.20	17.99	-56.24	0.00	0.00	Vehicle	Vehicle	------	-214.89	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.83	4.83
	U_{14} - L_{14}	-12.31	-10.17	-4.93			0.90	1.20	-5.32	-10.96	0.00	0.00	Vehicle	Vehicle	------	-30.25	0.00	16.85	16.8486	556.00	131.71	9.2805	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	30.33	30.33
	U_{15} - L_{15}	-5.62	-48.47	24.25			0.90	1.20	26.15	-52.26	0.00	0.00	Vehicle	Vehicle	26.69	-75.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	16.57	16.57	6.46	6.46
	U_{16} - L_{16}	-51.73	-56.86	16.78			0.90	1.20	18.09	-61.30	0.00	0.00	Vehicle	Vehicle	------	-146.95	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.72	4.72
	U_{17} - L_{17}	-127.32	-77.11	9.95			0.90	1.20	10.73	-83.14	0.00	0.00	Vehicle	Vehicle	------	-273.60	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	3.42	3.42
	U_{18} - L_{18}	-159.94	-88.06	9.18			0.90	1.20	9.90	-94.95	0.00	0.00	Vehicle	Vehicle	------	-331.36	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	3.85	3.85
	U_{19} - L_{19}	-191.17	-90.50	7.78			0.90	1.20	8.38	-97.58	0.00	0.00	Vehicle	Vehicle	------	-375.37	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	4.36	4.36
	U_{20} - L_{20}	-212.33	-97.45	7.78			0.90	1.20	8.39	-105.07	0.00	0.00	Vehicle	Vehicle	------	-412.62	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.52	3.52
	Structure 2																																													
	U_0 - L_0	-206.69	9.82	-93.68			0.90	1.18	10.46	-99.74	0.00	0.00	Vehicle	Vehicle	------	-398.36	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	4.37	4.37
	U_1 - L_1	-188.76	10.08	-78.96			0.90	1.18	10.74	-84.06	0.00	0.00	Vehicle	Vehicle	------	-354.67	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.75	5.75
	U_1 - L_2	-155.92	10.64	-70.10			0.90	1.18	11.33	-74.64	0.00	0.00	Vehicle	Vehicle	------	-299.72	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.61	5.61
	U_1 - L_3	-134.58	12.06	-68.79			0.90	1.18	12.84	-73.24	0.00	0.00	Vehicle	Vehicle	------	-270.16	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	4.33	4.33
	U_2 - L_4	-64.49	14.09	-57.03			0.90	1.18	15.00	-60.72	0.00	0.00	Vehicle	Vehicle	------	-162.77	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.52	4.52
	U_2 - L_5	-19.94	23.90	-46.24			0.90	1.18	25.44	-49.23	0.00	0.00	Vehicle	Vehicle	7.16	-89.92	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	17.59	17.59	6.51	6.51
	U_3 - L_6	40.08	30.38	-33.54			0.90	1.18	32.35	-35.71	0.00	0.00	Vehicle	Vehicle	94.16	------	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	------	11.98	11.98	------	------
	U_3 - L_7	-26.04	-23.17	-0.95			0.90	1.18	-1.02	-24.66	0.00	0.00	Vehicle	Vehicle	------	-65.91	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	12.75	12.75
	U_4 - L_8	-125.25	-61.26	18.13			0.90	1.18	19.31	-65.22	0.00	0.00	Vehicle	Vehicle	------	-247.60	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	6.21	6.21
	U_4 - L_9	-174.53	-76.67	5.19			0.90	1.18	5.52	-81.63	0.00	0.00	Vehicle	Vehicle	------	-333.01	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.33	6.33
	U_{10} - L_{10}	-202.66	-86.68	3.08			0.90	1.18	3.28	-92.28	0.00	0.00	Vehicle	Vehicle	------	-383.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.24	6.24
	U_{11} - L_{11}	-229.53	-92.90	2.14			0.90	1.18	2.28	-98.91	0.00	0.00	Vehicle	Vehicle	------	-426.97	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.41	5.41
	U_{12} - L_{12}	-250.85	-94.24	2.01			0.90	1.18	2.14	-100.34	0.00	0.00	Vehicle	Vehicle	------	-456.54	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.49	5.49
	U_{13} - L_{13}	-223.32	-95.69	9.57			0.90	1.18	10.19	-101.88	0.00	0.00	Vehicle	Vehicle	------	-422.76	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	4.58	4.58
	U_{14} - L_{14}	-343.31	-83.71	-68.94			0.90	1.18	-73.40	-89.12	0.00	0.00	Vehicle	Vehicle	------	-562.17	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	7.95	7.95
	U_{15} - L_{15}	-123.14	9.77	-72.24			0.90	1.17	10.28	-76.01	0.00	0.00	Vehicle	Vehicle	------	-258.89	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	7.46	7.46
	U_{16} - L_{16}	-156.70	7.60	-79.04			0.90	1.17	7.99	-83.15	0.00	0.00	Vehicle	Vehicle	------	-311.80	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.13	6.13
	U_{17} - L_{17}	-147.91	7.32	-73.36			0.90	1.17	7.70	-77.18	0.00	0.00	Vehicle	Vehicle	------	-292.62	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.16	6.16
	U_{18} - L_{18}	-142.22	9.19	-72.54			0.90	1.17	9.67	-76.32	0.00	0.00	Vehicle	Vehicle	------	-284.11	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.70	5.70
	U_{19} - L_{19}	-111.48	10.28	-71.73			0.90	1.17	10.81	-75.47	0.00	0.00	Vehicle	Vehicle	------	-243.04	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.30	5.30
	U_{20} - L_{20}	-76.55	17.33	-56.03			0.90	1.17	18.23	-58.95	0.00	0.00	Vehicle	Vehicle	------	-176.14	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	5.07	5.07
	U_{21} - L_{21}	-44.31	21.25	-49.38			0.90	1.17	22.36	-51.95	0.00	0.00	Vehicle	Vehicle	------	-125.14	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.70	5.70
	U_{22} - L_{22}	-21.25	-22.07	-15.96			0.90	1.17	-16.81	-23.22	0.00	0.00	Vehicle	Vehicle	------	-57.81	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	13.81	13.81
	U_{23} - L_{23}	-39.07	-48.64	26.34			0.90	1.17	27.71	-51.18	0.00	0.00	Vehicle	Vehicle	------	-117.32	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.89	5.89
	U_{24} - L_{24}	-74.84	-57.37	14.13			0.90	1.17	14.86	-60.36	0.00	0.00	Vehicle	Vehicle	------	-175.76	0.00	16.85	16.8486	556.00	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.98	4.98
	U_{25} - L_{25}	-103.27	-75.64	12.59			0.90	1.17	13.25	-79.58	0.00	0.00	Vehicle	Vehicle	------	-237.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.13	5.13
	U_{26} - L_{26}	-120.22	-80.34	11.88			0.90	1.17	12.50	-84.53	0.00	0.00	Vehicle	Vehicle	------	-266.17	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.41	5.41
	U_{27} - L_{27}	-123.93	-87.22	9.81			0.90	1.17	10.32	-91.76	0.00	0.00	Vehicle	Vehicle	------	-280.40	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.44	5.44
	U_{28} - L_{28}	-135.60	-94.37	8.92			0.90	1.17	9.39	-99.28	0.00	0.00	Vehicle	Vehicle	------	-305.34	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.34	5.34
	U_{29} - L_{29}	-116.87	-87.98	5.22			0.90	1.17	5.49	-92.56	0.00	0.00	Vehicle	Vehicle	------	-272.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.19	6.19
	U_{30} - L_{30}	-262.02	-74.68	-77.10			0.90	1.18	-79.51	-82.09	0.00	0.00	Vehicle	Vehicle	------	-447.34	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	9.62	9.62
	U_{31} - L_{31}	-156.38	12.30	-77.99			0.90	1.18	13.10	-83.03	0.00	0.00	Vehicle	Vehicle	------	-311.23	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.43	6.43
	U_{32} - L_{32}	-185.51	8.76	-78.69			0.90	1.18	9.33	-83.78	0.00	0.00	Vehicle	Vehicle	------	-350.07	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals	Structure 1	U$_1$ - L$_1$	87.33	-17.61	64.55			0.90	1.24	71.87	-19.60	0.00	0.00	Vehicle	Vehicle	206.95	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
		U$_1$ - L$_2$	23.35	-18.64	67.11			0.90	1.24	74.71	-20.76	0.00	0.00	Vehicle	Vehicle	127.48	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.41**	**5.41**	-----	-----
		U$_2$ - L$_3$	-37.85	-18.08	10.25			0.90	1.24	11.41	-20.13	0.00	0.00	Vehicle	-----	-----	-75.38	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----
		U$_3$ - L$_4$	-92.19	-17.50	-31.38			0.90	1.24	-19.48	-34.94	0.00	0.00	Vehicle	Vehicle	-----	-165.27	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	**6.99**	**6.99**	-----	-----
		U$_3$ - L$_4$	143.37	11.69	64.55			0.90	1.24	71.87	13.02	0.00	0.00	Vehicle	Vehicle	279.81	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
		U$_5$ - L$_5$	177.90	9.65	82.30			0.90	1.24	91.63	10.74	0.00	0.00	Vehicle	Vehicle	350.38	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.16**	**5.16**	-----	-----
		U$_5$ - L$_6$	184.42	0.90	97.59			0.90	1.24	108.64	1.00	0.00	0.00	Vehicle	Vehicle	380.98	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.29**	**4.29**	-----	-----
		U$_6$ - L$_7$	180.02	-2.42	95.07			0.90	1.24	105.85	-2.70	0.00	0.00	Vehicle	Vehicle	371.62	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.45**	**4.45**	-----	-----
		U$_8$ - L$_8$	268.98	0.81	92.66			0.90	1.20	99.90	0.87	0.00	0.00	Vehicle	Vehicle	479.54	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
		U$_8$ - L$_{10}$	278.85	-9.38	87.94			0.90	1.20	94.82	-10.11	0.00	0.00	Vehicle	Vehicle	485.77	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.21**	**7.21**	-----	-----
		U$_{10}$ - L$_{11}$	285.04	9.63	73.90			0.90	1.20	79.68	10.39	0.00	0.00	Vehicle	Vehicle	474.14	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**7.85**	**7.85**	-----	-----
		U$_{11}$ - L$_{12}$	250.60	-2.68	91.88			0.90	1.20	99.07	-2.89	0.00	0.00	Vehicle	Vehicle	454.56	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
		U$_{12}$ - L$_{13}$	189.65	-10.79	73.45			0.90	1.20	79.19	-11.63	0.00	0.00	Vehicle	Vehicle	349.49	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**5.57**	**5.57**	-----	-----
		U$_{13}$ - L$_{14}$	123.32	-23.10	70.53			0.90	1.20	76.05	-24.91	0.00	0.00	Vehicle	Vehicle	259.18	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.00**	**4.00**	-----	-----
		U$_{13}$ - L$_{14}$	-24.41	-46.62	30.89			0.90	1.20	33.30	-50.26	0.00	0.00	Vehicle	Vehicle	11.56	-97.08	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	**13.58**	**13.58**	**6.05**	**6.05**
		U$_{15}$ - L$_{15}$	48.53	-25.08	54.10			0.90	1.20	58.33	-27.04	0.00	0.00	Vehicle	Vehicle	138.93	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.50**	**6.50**	-----	-----
		U$_{15}$ - L$_{16}$	146.59	-13.60	82.47			0.90	1.20	88.92	-14.66	0.00	0.00	Vehicle	Vehicle	306.16	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.25**	**4.25**	-----	-----
		U$_{16}$ - L$_{17}$	182.46	-11.72	78.78			0.90	1.20	84.94	-12.64	0.00	0.00	Vehicle	Vehicle	347.62	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.51**	**5.51**	-----	-----
		U$_{18}$ - L$_{18}$	223.82	-9.82	91.29			0.90	1.20	98.43	-10.58	0.00	0.00	Vehicle	Vehicle	418.93	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.94**	**4.94**	-----	-----
		U$_{20}$ - L$_{19}$	232.72	-4.41	77.12			0.90	1.20	83.15	-4.75	0.00	0.00	Vehicle	Vehicle	410.63	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.74**	**5.74**	-----	-----
	Structure 2	U$_1$ - L$_1$	213.54	-10.33	64.77			0.90	1.18	68.96	-11.00	0.00	0.00	Vehicle	Vehicle	367.25	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
		U$_1$ - L$_2$	200.48	-12.31	85.42			0.90	1.18	90.94	-13.10	0.00	0.00	Vehicle	Vehicle	378.85	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
		U$_3$ - L$_3$	172.81	-13.78	88.42			0.90	1.18	94.14	-14.67	0.00	0.00	Vehicle	Vehicle	347.03	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.08**	**5.08**	-----	-----
		U$_3$ - L$_4$	147.16	-16.20	79.76			0.90	1.18	84.92	-17.25	0.00	0.00	Vehicle	Vehicle	301.70	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**5.06**	**5.06**	-----	-----
		U$_5$ - L$_5$	99.10	-21.57	67.75			0.90	1.18	72.13	-22.97	0.00	0.00	Vehicle	Vehicle	157.61	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.01	29.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.25**	**5.25**	-----	-----
		U$_5$ - L$_6$	2.96	-30.77	60.79			0.90	1.18	64.74	-32.76	0.00	0.00	Vehicle	Vehicle	88.00	-38.74	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	**6.56**	**6.56**	**10.03**	**10.03**
		U$_8$ - L$_7$	-85.74	-54.65	32.12			0.90	1.18	34.20	-58.18	0.00	0.00	Vehicle	-----	-----	-187.10	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	**4.70**	**4.70**
		U$_8$ - L$_7$	140.30	-26.76	58.69			0.90	1.18	62.49	-28.49	0.00	0.00	Vehicle	Vehicle	263.62	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.41**	**7.41**	-----	-----
		U$_8$ - L$_8$	204.22	-12.10	84.14			0.90	1.18	89.59	-12.88	0.00	0.00	Vehicle	Vehicle	381.94	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.65**	**5.65**	-----	-----
		U$_{10}$ - L$_9$	234.87	7.56	79.37			0.90	1.18	84.51	8.05	0.00	0.00	Vehicle	Vehicle	415.19	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.42**	**6.42**	-----	-----
		U$_{11}$ - L$_{10}$	263.10	-0.80	94.99			0.90	1.18	101.14	-0.85	0.00	0.00	Vehicle	Vehicle	473.51	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.75**	**5.75**	-----	-----
		U$_{12}$ - L$_{11}$	274.02	-1.77	97.98			0.90	1.18	104.32	-1.88	0.00	0.00	Vehicle	Vehicle	491.84	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
		U$_{13}$ - L$_{12}$	254.94	-10.52	88.42			0.90	1.18	94.14	-11.20	0.00	0.00	Vehicle	Vehicle	453.80	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.55**	**5.55**	-----	-----
		U$_{13}$ - L$_{13}$	217.71	-9.42	90.53			0.90	1.18	96.39	-10.03	0.00	0.00	Vehicle	Vehicle	408.32	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.81**	**5.81**	-----	-----
		U$_{15}$ - L$_{15}$	110.05	-8.06	75.65			0.90	1.17	79.59	-8.47	0.00	0.00	Vehicle	Vehicle	246.53	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
		U$_{15}$ - L$_{16}$	132.30	-10.84	78.50			0.90	1.17	82.59	-11.41	0.00	0.00	Vehicle	Vehicle	279.35	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
		U$_{17}$ - L$_{17}$	172.89	-6.43	78.31			0.90	1.17	82.39	-6.76	0.00	0.00	Vehicle	Vehicle	331.86	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
		U$_{17}$ - L$_{18}$	160.19	-9.17	90.85			0.90	1.17	95.59	-9.65	0.00	0.00	Vehicle	Vehicle	332.51	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.13**	**5.13**	-----	-----
		U$_{19}$ - L$_{19}$	152.35	-12.00	85.71			0.90	1.17	90.18	-12.62	0.00	0.00	Vehicle	Vehicle	315.28	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.53**	**5.53**	-----	-----
		U$_{19}$ - L$_{20}$	120.69	-13.73	71.78			0.90	1.17	75.51	-14.44	0.00	0.00	Vehicle	Vehicle	255.06	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.39**	**6.39**	-----	-----
		U$_{20}$ - L$_{21}$	76.08	-20.75	72.74			0.90	1.17	76.53	-21.83	0.00	0.00	Vehicle	Vehicle	198.40	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.59**	**4.59**	-----	-----
		U$_{21}$ - L$_{22}$	31.46	-29.11	54.46			0.90	1.17	57.30	-30.63	0.00	0.00	Vehicle	Vehicle	115.38	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.92**	**6.92**	-----	-----
		U$_{23}$ - L$_{23}$	24.30	-39.61	42.69			0.90	1.17	44.91	-41.67	0.00	0.00	Vehicle	Vehicle	89.97	-22.59	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	**8.98**	**8.98**	**8.33**	**8.33**
		U$_{23}$ - L$_{23}$	72.26	-28.83	61.55			0.90	1.17	64.74	-30.34	0.00	0.00	Vehicle	Vehicle	178.10	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.49**	**5.49**	-----	-----
		U$_{24}$ - L$_{24}$	112.13	-16.78	82.37			0.90	1.17	86.66	-17.65	0.00	0.00	Vehicle	Vehicle	258.43	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
		U$_{25}$ - L$_{25}$	180.76	-2.08	82.64			0.90	1.17	87.99	-2.21	0.00	0.00	Vehicle	Vehicle	349.38	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
		U$_{25}$ - L$_{26}$	162.94	-1.14	93.76			0.90	1.17	99.83	-1.22	0.00	0.00	Vehicle	Vehicle	341.60	-----	0.00	27.98	27.9777	923.26	131.71	13.3125	2.8289	42.35	31.29	-744.20	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U$_{27}$ - L$_{27}$	112.94	-16.95	72.22			0.90	1.17	76.89	-18.05	0.00	0.00	Vehicle	Vehicle	246.78	-----	3.00	23.77	20.7656	784.26	131.71	13.2708	2.1158	56.45	29.97	-605.39	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U$_{27}$ - L$_{27}$	-73.86	-61.77	16.68			0.90	1.17	17.76	-65.77	0.00	0.00	Vehicle	Vehicle	-----	-181.52	0.00	18.61	18.6095	614.11	131.71	13.8229	1.9845	62.69	29.26	-462.87	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	**4.29**	**4.29**
		U$_{28}$ - L$_{28}$	-4.37	-42.66	50.58			0.90	1.18	53.86	-45.42	0.00	0.00	Vehicle	Vehicle	64.33	-64.73	0.00	16.85	16.8486	556.00	131.71	13.6250	1.9682	62.30	29.31	-419.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	**8.02**	**8.02**	**7.01**	**7.01**
		U$_{28}$ - L$_{29}$	29.28	-23.22	61.16			0.90	1.18	65.12	-24.73	0.00	0.00	Vehicle	Vehicle	122.72	-----	0.00	16.85	16.8486	556.00	131.71	13.8750	1.9682	63.45	29.17	-417.77	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.12**	**6.12**	-----	-----
		U$_{41}$ - L$_{40}$	101.12	-17.17	78.19			0.90	1.18	83.25	-18.28	0.00	0.00	Vehicle	Vehicle	239.68	-----	0.00	22.73	22.7330	750.19	131.71	14.1250	2.0170	63.03	29.22	-564.65	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**5.72**	**5.72**	-----	-----
		U$_{42}$ - L$_{41}$	121.87	-15.07	88.18			0.90	1.18	93.89	-16.04	0.00	0.00	Vehicle	Vehicle	280.49	-----	0.00	25.63	25.6315	845.84	131.71	14.4896	2.8057	46.48	30.95	-674.19	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.63**	**5.63**	-----	-----
		U$_{43}$ - L$_{42}$	156.17	-13.70	89.31			0.90	1.18	95.09	-14.58	0.00	0.00	Vehicle	Vehicle	326.64	-----	0.00	30.63	30.6305	1010.81	131.71	15.6875	2.8427	49.67	30.65	-798.10	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.53**	**6.53**	-----	-----
		U$_{43}$ - L$_{43}$	164.27	-7.23	92.27			0.90	1.18	98.24	-7.70	0.00	0.00	Vehicle	Vehicle	341.26	-----	0.00	30.63	30.6305	1010.81	131.71	17.1250	2.8427	54.22	30.20	-786.39	16.48	0.58	11.58	0.96

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
									0.00																																								
Center Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-52.64	-50.51	-65.37			0.75	1.24	-46.86	-60.65	0.00	0.00	Vehicle	Vehicle	-----	-147.27	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	8.45	8.45
		U$_1$ - U$_2$	-61.57	-4.28	-81.51			0.75	1.24	-3.97	-75.62	0.00	0.00	Vehicle	Vehicle	-----	-178.35	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.66	6.66
		U$_2$ - U$_3$	-26.99	37.88	-121.51			0.75	1.24	35.14	-112.73	0.00	0.00	Vehicle	Vehicle	10.59	-181.64	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	19.87	19.87	4.78	4.78
		U$_3$ - U$_4$	32.92	48.91	-100.40			0.75	1.24	45.38	-93.15	0.00	0.00	Vehicle	Vehicle	101.79	-78.29	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.06	14.06	6.42	6.42
		U$_4$ - U$_5$	34.77	49.13	-121.22			0.75	1.24	45.58	-112.46	0.00	0.00	Vehicle	Vehicle	104.46	-100.99	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.96	13.96	5.34	5.34
		U$_5$ - U$_6$	124.13	57.50	-96.32			0.75	1.24	53.34	-89.36	0.00	0.00	Vehicle	Vehicle	230.71	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.25	10.25	-----	-----
		U$_6$ - U$_7$	223.19	68.09	-69.38			0.75	1.24	63.17	-64.36	0.00	0.00	Vehicle	Vehicle	372.26	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.20	9.20	-----	-----
		U$_7$ - U$_8$	331.76	58.31	-28.62			0.75	1.24	54.09	-26.55	0.00	0.00	Vehicle	Vehicle	501.61	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	14.39	14.39	-----	-----
		U$_8$ - U$_9$	267.61	-3.74	5.35			0.75	1.20	4.81	-3.36	0.00	0.00	Vehicle	Vehicle	354.15	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	139.56	139.56	-----	-----
		U$_9$ - U$_{10}$	89.12	-17.43	-50.30			0.75	1.20	-15.66	-45.19	0.00	0.00	Vehicle	Vehicle	95.49	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{10}$ - U$_{11}$	-76.81	-63.41	-79.73			0.75	1.20	-56.97	-71.63	0.00	0.00	Vehicle	Vehicle	-----	-192.97	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.27	7.27
		U$_{11}$ - U$_{12}$	-230.69	-86.62	-100.93			0.75	1.20	-77.82	-90.68	0.00	0.00	Vehicle	Vehicle	-----	-417.78	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.42	6.42
		U$_{12}$ - U$_{13}$	-341.88	-119.99	-140.72			0.75	1.20	-107.81	-126.44	0.00	0.00	Vehicle	Vehicle	-----	-608.81	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.29	6.29
		U$_{13}$ - U$_{14}$	-421.62	30.63	-154.08			0.75	1.20	27.52	-138.44	0.00	0.00	Vehicle	Vehicle	-----	-728.08	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.54	6.54
		U$_{14}$ - U$_{15}$	-422.51	-113.27	-175.34			0.75	1.20	-101.77	-157.54	0.00	0.00	Vehicle	Vehicle	-----	-754.06	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.74	5.74
		U$_{15}$ - U$_{16}$	-439.94	-120.70	-185.65			0.75	1.20	-108.45	-166.81	0.00	0.00	Vehicle	Vehicle	-----	-788.77	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.32	5.32
		U$_{16}$ - U$_{17}$	-422.43	18.08	-175.11			0.75	1.20	16.25	-157.34	0.00	0.00	Vehicle	Vehicle	-----	-753.69	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.75	5.75
		U$_{17}$ - U$_{18}$	-340.94	12.13	-130.76			0.75	1.20	10.89	-117.49	0.00	0.00	Vehicle	Vehicle	-----	-595.96	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.36	5.36
		U$_{18}$ - U$_{19}$	-247.15	7.37	-91.53			0.75	1.20	6.62	-82.24	0.00	0.00	Vehicle	Vehicle	-----	-428.21	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.23	5.23
		U$_{19}$ - U$_{20}$	-131.71	-3.85	-40.39			0.75	1.20	-3.46	-36.29	0.00	0.00	Vehicle	Vehicle	-----	-218.39	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	15.04	15.04
		U$_0$ - U$_1$	-131.51	-37.33	-29.33			0.75	1.18	-26.03	-33.12	0.00	0.00	Vehicle	Vehicle	-----	-214.02	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	15.57	15.57
		U$_1$ - U$_2$	-247.03	-85.33	-64.32			0.75	1.18	-57.07	-75.71	0.00	0.00	Vehicle	Vehicle	-----	-419.55	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.19	7.19
		U$_2$ - U$_3$	-347.15	-111.81	-106.81			0.75	1.18	-94.77	-99.20	0.00	0.00	Vehicle	Vehicle	-----	-580.26	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.36	7.36
		U$_3$ - U$_4$	-437.07	37.11	-157.03			0.75	1.18	32.93	-139.32	0.00	0.00	Vehicle	Vehicle	-----	-749.31	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.49	6.49
		U$_4$ - U$_5$	-468.70	-132.10	-167.75			0.75	1.18	-117.21	-148.84	0.00	0.00	Vehicle	Vehicle	-----	-802.81	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.84	6.84
		U$_5$ - U$_6$	-471.03	53.66	-168.32			0.75	1.18	47.61	-149.34	0.00	0.00	Vehicle	Vehicle	-----	-806.48	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.80	6.80
		U$_6$ - U$_7$	-414.41	59.95	-167.85			0.75	1.18	53.19	-148.93	0.00	0.00	Vehicle	Vehicle	-----	-732.33	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.22	6.22
		U$_7$ - U$_8$	-413.45	60.04	-176.89			0.75	1.18	53.27	-156.95	0.00	0.00	Vehicle	Vehicle	-----	-741.52	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
		U$_8$ - U$_9$	-321.98	65.26	-162.27			0.75	1.18	57.90	-143.98	0.00	0.00	Vehicle	Vehicle	-----	-605.75	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.59	5.59
		U$_9$ - U$_{10}$	-182.11	68.90	-132.30			0.75	1.18	61.13	-117.38	0.00	0.00	Vehicle	Vehicle	-----	-389.33	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.00	6.00
		U$_{10}$ - U$_{11}$	-32.58	71.94	-106.66			0.75	1.18	63.83	-94.63	0.00	0.00	Vehicle	Vehicle	40.63	-165.37	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.78	14.78	7.79	7.79
		U$_{11}$ - U$_{12}$	133.59	73.81	-78.53			0.75	1.18	65.49	-69.67	0.00	0.00	Vehicle	Vehicle	258.80	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	11.87	11.87	-----	-----
		U$_{12}$ - U$_{13}$	289.99	1.19	-44.84			0.75	1.18	1.05	-39.79	0.00	0.00	Vehicle	Vehicle	378.35	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	807.64	807.64	-----	-----
		U$_{13}$ - U$_{14}$	434.76	59.88	-17.07			0.75	1.18	53.13	-15.15	0.00	0.00	Vehicle	Vehicle	634.26	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	21.26	21.26	-----	-----
		U$_{14}$ - U$_{15}$	474.45	-12.36	-17.17			0.75	1.17	-10.83	-15.06	0.00	0.00	Vehicle	Vehicle	602.70	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{15}$ - U$_{16}$	383.28	45.05	-34.80			0.75	1.17	39.50	-30.51	0.00	0.00	Vehicle	Vehicle	549.61	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	22.51	22.51	-----	-----
		U$_{16}$ - U$_{17}$	279.57	-25.59	-54.89			0.75	1.17	-22.43	-48.12	0.00	0.00	Vehicle	Vehicle	334.28	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{17}$ - U$_{18}$	172.63	-45.82	-71.76			0.75	1.17	-40.17	-62.92	0.00	0.00	Vehicle	Vehicle	172.20	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{18}$ - U$_{19}$	74.36	-78.53	-100.52			0.75	1.17	-68.85	-88.13	0.00	0.00	Vehicle	Vehicle	7.17	-17.90	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	8.19	8.19	8.19	8.19
		U$_{19}$ - U$_{20}$	-10.01	44.13	-111.10			0.75	1.17	38.69	-97.41	0.00	0.00	Vehicle	Vehicle	37.28	-139.65	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.46	21.46	7.01	7.01
	Structure 2	U$_{20}$ - U$_{21}$	-62.06	-97.82	-121.94			0.75	1.17	-85.76	-106.91	0.00	0.00	Vehicle	Vehicle	-----	-219.65	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.25	7.25
		U$_{21}$ - U$_{22}$	-88.74	32.13	-131.51			0.75	1.17	28.17	-115.30	0.00	0.00	Vehicle	Vehicle	-----	-265.25	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.49	6.49
		U$_{22}$ - U$_{23}$	-88.92	-93.69	-143.12			0.75	1.17	-82.14	-125.48	0.00	0.00	Vehicle	Vehicle	-----	-278.71	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U$_{23}$ - U$_{24}$	-76.67	-94.01	-144.89			0.75	1.17	-82.42	-127.04	0.00	0.00	Vehicle	Vehicle	-----	-264.81	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.98	5.98
		U$_{24}$ - U$_{25}$	-37.64	46.00	-127.87			0.75	1.17	40.33	-112.11	0.00	0.00	Vehicle	Vehicle	3.50	-194.68	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.27	21.27	5.84	5.84
		U$_{25}$ - U$_{26}$	37.23	51.40	-114.11			0.75	1.17	45.06	-100.04	0.00	0.00	Vehicle	Vehicle	106.98	-81.66	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	16.18	16.18	6.84	6.84
		U$_{26}$ - U$_{27}$	128.02	56.64	-91.62			0.75	1.17	49.66	-80.33	0.00	0.00	Vehicle	Vehicle	230.98	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.85	12.85	-----	-----
		U$_{27}$ - U$_{28}$	233.68	59.94	-65.64			0.75	1.17	52.55	-57.55	0.00	0.00	Vehicle	Vehicle	372.10	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	15.42	15.42	-----	-----
		U$_{28}$ - U$_{29}$	337.65	-8.15	-41.70			0.75	1.17	-7.15	-36.56	0.00	0.00	Vehicle	Vehicle	429.66	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{29}$ - U$_{30}$	437.10	49.78	-13.96			0.75	1.17	43.64	-12.24	0.00	0.00	Vehicle	Vehicle	624.96	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	25.83	25.83	-----	-----
		U$_{30}$ - U$_{31}$	420.53	-4.24	33.44			0.75	1.18	29.67	-3.76	0.00	0.00	Vehicle	Vehicle	585.26	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	38.55	38.55	-----	-----
		U$_{31}$ - U$_{32}$	300.69	57.80	-34.35			0.75	1.18	51.28	-30.47	0.00	0.00	Vehicle	Vehicle	457.56	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.49	6.81	-2.58			0.75	1.24	6.32	-2.40	0.00	0.00	Vehicle	Vehicle	19.26	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**78.16**	**78.16**	-----	-----
		L$_1$ - L$_2$	50.81	50.38	71.51			0.75	1.24	66.34	46.74	0.00	0.00	Vehicle	Vehicle	152.30	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**6.81**	**6.81**	-----	-----
		L$_2$ - L$_3$	61.22	-27.48	115.84			0.75	1.24	107.47	-25.49	0.00	0.00	Vehicle	Vehicle	219.30	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.65**	**5.65**	-----	-----
		L$_3$ - L$_4$	25.70	61.34	127.62			0.75	1.24	118.40	56.91	0.00	0.00	Vehicle	Vehicle	187.33	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.43**	**5.43**	-----	-----
		L$_4$ - L$_5$	-118.45	-55.36	69.12			0.75	1.24	64.13	-51.36	0.00	0.00	Vehicle	Vehicle	-----	-220.76	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**7.44**	**7.44**
		L$_5$ - L$_6$	-217.80	-66.22	44.85			0.75	1.24	41.61	-61.43	0.00	0.00	Vehicle	Vehicle	-----	-363.00	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**7.19**	**7.19**
		L$_6$ - L$_7$	-320.36	-74.46	7.94			0.75	1.24	7.36	-69.08	0.00	0.00	Vehicle	Vehicle	-----	-506.26	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**9.04**	**9.04**
		L$_7$ - L$_8$	-417.18	-42.06	-32.45			0.75	1.24	-30.10	-39.02	0.00	0.00	Vehicle	Vehicle	-----	-593.07	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**20.05**	**20.05**
		L$_8$ - L$_9$	-410.79	-72.88	-5.04			0.75	1.20	-4.53	-65.48	0.00	0.00	Vehicle	Vehicle	-----	-619.16	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.04**	**12.04**
		L$_9$ - L$_{10}$	-247.75	-25.38	1.40			0.75	1.20	1.26	-22.80	0.00	0.00	Vehicle	Vehicle	-----	-351.72	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**30.59**	**30.59**
		L$_{10}$ - L$_{11}$	-65.21	-56.27	58.98			0.75	1.20	53.00	-50.56	0.00	0.00	Vehicle	Vehicle	-----	-150.50	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**8.61**	**8.61**
		L$_{11}$ - L$_{12}$	101.88	56.55	89.34			0.75	1.20	80.27	50.81	0.00	0.00	Vehicle	Vehicle	236.79	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.13**	**6.13**	-----	-----
		L$_{12}$ - L$_{13}$	264.09	52.41	130.08			0.75	1.20	116.87	47.09	0.00	0.00	Vehicle	Vehicle	495.25	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.08**	**6.08**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	100.21	128.31			0.75	1.20	115.29	90.04	0.00	0.00	Vehicle	Vehicle	635.72	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.10**	**8.10**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	-22.57	142.07			0.75	1.20	127.65	-20.28	0.00	0.00	Vehicle	Vehicle	785.18	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.60**	**8.60**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	-16.85	140.21			0.75	1.20	125.98	-15.14	0.00	0.00	Vehicle	Vehicle	761.73	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.85**	**8.85**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	-11.20	115.33			0.75	1.20	103.62	-10.06	0.00	0.00	Vehicle	Vehicle	630.49	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.06**	**8.06**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	-6.45	76.45			0.75	1.20	68.69	-5.79	0.00	0.00	Vehicle	Vehicle	464.97	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.65**	**8.65**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	-3.43	31.33			0.75	1.20	28.15	-3.08	0.00	0.00	Vehicle	Vehicle	265.65	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.59**	**11.59**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	-0.63	-5.75			0.75	1.20	-0.57	-5.16	0.00	0.00	Vehicle	Vehicle	89.93	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
	Structure 2	L$_0$ - L$_1$	24.59	-5.72	-1.09			0.75	1.18	-0.97	-5.08	0.00	0.00	Vehicle	Vehicle	30.71	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	138.59	37.84	31.73			0.75	1.18	33.57	28.15	0.00	0.00	Vehicle	Vehicle	223.81	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**14.74**	**14.74**	-----	-----
		L$_2$ - L$_3$	252.83	63.94	97.86			0.75	1.18	86.83	56.73	0.00	0.00	Vehicle	Vehicle	441.55	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.33**	**8.33**	-----	-----
		L$_3$ - L$_4$	352.30	100.79	124.25			0.75	1.18	110.24	89.43	0.00	0.00	Vehicle	Vehicle	601.30	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.68**	**8.68**	-----	-----
		L$_4$ - L$_5$	447.17	117.24	144.60			0.75	1.18	128.29	104.02	0.00	0.00	Vehicle	Vehicle	748.10	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.38**	**9.38**	-----	-----
		L$_5$ - L$_6$	477.93	123.61	175.15			0.75	1.18	155.41	109.67	0.00	0.00	Vehicle	Vehicle	823.34	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.46**	**8.46**	-----	-----
		L$_6$ - L$_7$	482.68	-55.26	176.07			0.75	1.18	156.21	-49.03	0.00	0.00	Vehicle	Vehicle	830.56	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.55**	**8.55**	-----	-----
		L$_7$ - L$_8$	336.61	-66.71	137.02			0.75	1.18	121.57	-59.19	0.00	0.00	Vehicle	Vehicle	595.63	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.27**	**8.27**	-----	-----
		L$_8$ - L$_9$	196.05	-69.54	113.87			0.75	1.18	101.03	-61.70	0.00	0.00	Vehicle	Vehicle	386.21	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**8.94**	**8.94**	-----	-----
		L$_9$ - L$_{10}$	45.60	-72.78	85.96			0.75	1.18	76.27	-64.57	0.00	0.00	Vehicle	Vehicle	158.42	-24.67	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**10.70**	**10.70**	**11.97**	**11.97**
		L$_{10}$ - L$_{11}$	-126.26	-73.37	51.47			0.75	1.18	45.67	-65.10	0.00	0.00	Vehicle	Vehicle	-----	-248.76	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.05**	**8.05**
		L$_{11}$ - L$_{12}$	-284.87	-75.01	23.46			0.75	1.18	20.81	-66.55	0.00	0.00	Vehicle	Vehicle	-----	-456.84	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.70**	**9.70**
		L$_{12}$ - L$_{13}$	-433.79	-65.10	3.91			0.75	1.18	3.47	-57.76	0.00	0.00	Vehicle	Vehicle	-----	-639.02	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**14.57**	**14.57**
		L$_{13}$ - L$_{14}$	-552.65	-29.03	-21.81			0.75	1.18	-19.35	-25.75	0.00	0.00	Vehicle	Vehicle	-----	-751.92	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**37.38**	**37.38**
		L$_{14}$ - L$_{15}$	-573.48	-42.51	21.25			0.75	1.17	18.63	-37.27	0.00	0.00	Vehicle	Vehicle	-----	-793.97	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**25.27**	**25.27**
		L$_{15}$ - L$_{16}$	-492.94	-54.43	-1.87			0.75	1.17	-1.64	-47.72	0.00	0.00	Vehicle	Vehicle	-----	-702.86	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.40**	**16.40**
		L$_{16}$ - L$_{17}$	-395.30	-14.65	28.70			0.75	1.17	25.17	-12.85	0.00	0.00	Vehicle	Vehicle	-----	-530.59	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**50.76**	**50.76**
		L$_{17}$ - L$_{18}$	-288.04	8.85	46.38			0.75	1.17	40.67	7.76	0.00	0.00	Vehicle	Vehicle	-----	-364.37	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-175.85	23.78	74.13			0.75	1.17	65.00	20.84	0.00	0.00	Vehicle	Vehicle	-----	-201.50	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{19}$ - L$_{20}$	-78.08	57.34	89.56			0.75	1.17	78.52	50.27	0.00	0.00	Vehicle	Vehicle	0.58	-36.15	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.64**	**9.64**	-----	-----
		L$_{20}$ - L$_{21}$	7.55	73.53	121.65			0.75	1.17	106.66	64.46	0.00	0.00	Vehicle	Vehicle	148.47	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.97**	**8.97**	-----	-----
		L$_{21}$ - L$_{22}$	59.07	74.74	134.33			0.75	1.17	117.77	65.52	0.00	0.00	Vehicle	Vehicle	229.89	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.69**	**7.69**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	-21.95	120.03			0.75	1.17	105.23	-19.24	0.00	0.00	Vehicle	Vehicle	230.38	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.48**	**8.48**	-----	-----
		L$_{23}$ - L$_{24}$	33.55	-47.11	107.32			0.75	1.17	94.10	-41.30	0.00	0.00	Vehicle	Vehicle	165.94	-10.08	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.89**	**9.89**	**20.53**	**20.53**
		L$_{24}$ - L$_{25}$	-45.09	-52.36	89.00			0.75	1.17	78.03	-45.90	0.00	0.00	Vehicle	Vehicle	42.83	-118.28	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.28**	**9.28**	**11.51**	**11.51**
		L$_{25}$ - L$_{26}$	-134.94	-57.47	56.35			0.75	1.17	49.41	-50.38	0.00	0.00	Vehicle	Vehicle	-----	-240.92	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.71**	**8.71**
		L$_{26}$ - L$_{27}$	-245.90	-58.93	31.21			0.75	1.17	27.36	-51.66	0.00	0.00	Vehicle	Vehicle	-----	-386.83	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.32**	**9.32**
		L$_{27}$ - L$_{28}$	-351.78	-61.58	13.19			0.75	1.17	11.56	-53.99	0.00	0.00	Vehicle	Vehicle	-----	-527.50	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**12.89**	**12.89**
		L$_{28}$ - L$_{29}$	-458.29	-57.73	-6.82			0.75	1.17	-5.98	-50.62	0.00	0.00	Vehicle	Vehicle	-----	-661.58	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.14**	**16.14**
		L$_{29}$ - L$_{30}$	-542.18	-24.33	-30.32			0.75	1.17	-21.33	-26.58	0.00	0.00	Vehicle	Vehicle	-----	-739.39	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**36.61**	**36.61**
		L$_{30}$ - L$_{31}$	-514.03	-23.58	-46.84			0.75	1.18	-20.92	-41.56	0.00	0.00	Vehicle	Vehicle	-----	-722.27	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**24.08**	**24.08**
		L$_{31}$ - L$_{32}$	-411.21	-51.45	-5.03			0.75	1.18	-4.46	-45.65	0.00	0.00	Vehicle	Vehicle	-----	-593.92	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**18.92**	**18.

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Built Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_0 - L_0	-67.60	10.87	-91.10			0.75	1.24	10.08	-84.51	0.00	0.00	Vehicle	Vehicle	-----	-197.74	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.28	3.28
	U_1 - L_1	-24.06	10.50	-52.69			0.75	1.24	9.74	-48.88	0.00	0.00	Vehicle	Vehicle	-----	-94.82	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.71	6.71
	U_2 - L_2	12.88	-3.76	-41.49			0.75	1.24	-3.49	-38.50	0.00	0.00	Vehicle	Vehicle	12.20	-33.31	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.48	9.48
	U_3 - L_3	37.35	16.65	-32.38			0.75	1.24	15.44	-30.04	0.00	0.00	Vehicle	Vehicle	68.63	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	25.28	25.28	-----	-----
	U_4 - L_4	-15.53	-23.81	3.59			0.75	1.24	3.33	-22.09	0.00	0.00	Vehicle	Vehicle	-----	-48.91	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.13	15.13
	U_5 - L_5	-92.52	-70.43	13.08			0.75	1.24	12.13	-65.34	0.00	0.00	Vehicle	Vehicle	-----	-205.22	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.09	5.09
	U_6 - L_6	-117.01	-82.34	2.23			0.75	1.24	2.07	-76.39	0.00	0.00	Vehicle	Vehicle	-----	-251.42	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	5.12	5.12
	U_7 - L_7	-127.49	-91.82	0.32			0.75	1.24	0.29	-85.19	0.00	0.00	Vehicle	Vehicle	-----	-276.47	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.91	3.91
	U_8 - L_8	-368.60	-121.93	-119.96			0.75	1.24	-111.29	-113.12	0.00	0.00	Vehicle	Vehicle	-----	-626.24	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.16	6.16
	U_9 - L_9	-214.45	5.21	-101.23			0.75	1.20	4.68	-90.96	0.00	0.00	Vehicle	Vehicle	-----	-397.03	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	4.73	4.73
	U_{10} - L_{10}	-198.57	-12.77	-80.53			0.75	1.20	-11.47	-72.36	0.00	0.00	Vehicle	Vehicle	-----	-352.20	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.52	7.52
	U_{11} - L_{11}	-171.30	-11.13	-76.99			0.75	1.20	-10.00	-69.17	0.00	0.00	Vehicle	Vehicle	-----	-312.62	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.80	6.80
	U_{12} - L_{12}	-128.27	5.99	-67.58			0.75	1.20	5.38	-60.72	0.00	0.00	Vehicle	Vehicle	-----	-245.70	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	6.66	6.66
	U_{13} - L_{13}	-96.55	16.29	-55.07			0.75	1.20	14.64	-49.48	0.00	0.00	Vehicle	Vehicle	-----	-189.84	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.74	5.74
	U_{14} - L_{14}	-11.04	-23.04	1.70			0.75	1.20	1.52	-20.70	0.00	0.00	Vehicle	Vehicle	-----	-41.27	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	16.12	16.12
	U_{15} - L_{15}	-2.54	-50.54	36.64			0.75	1.20	32.92	-45.41	0.00	0.00	Vehicle	Vehicle	39.49	-62.33	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.07	13.07	7.50	7.50
	U_{16} - L_{16}	-31.31	-55.68	27.32			0.75	1.20	24.55	-50.03	0.00	0.00	Vehicle	Vehicle	-----	-105.75	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.20	6.20
	U_{17} - L_{17}	-105.02	-77.57	9.38			0.75	1.20	8.43	-69.70	0.00	0.00	Vehicle	Vehicle	-----	-227.13	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	4.39	4.39
	U_{18} - L_{18}	-126.66	-85.89	5.13			0.75	1.20	4.61	-77.17	0.00	0.00	Vehicle	Vehicle	-----	-264.97	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.17	5.17
	U_{19} - L_{19}	-166.54	-88.52	-5.49			0.75	1.20	-4.93	-79.53	0.00	0.00	Vehicle	Vehicle	-----	-319.89	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.66	5.66
	U_{20} - L_{20}	-184.30	-104.48	-5.59			0.75	1.20	-5.03	-93.87	0.00	0.00	Vehicle	Vehicle	-----	-361.62	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.24	4.24
Structure 2	U_0 - L_0	-203.39	11.79	-85.06			0.75	1.18	10.46	-75.47	0.00	0.00	Vehicle	Vehicle	-----	-362.52	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.82	5.82
	U_1 - L_1	-176.11	12.90	-80.10			0.75	1.18	11.45	-71.07	0.00	0.00	Vehicle	Vehicle	-----	-321.34	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.98	6.98
	U_2 - L_2	-137.45	12.21	-75.48			0.75	1.18	10.83	-66.97	0.00	0.00	Vehicle	Vehicle	-----	-265.75	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.52	6.52
	U_3 - L_3	-117.61	12.67	-73.98			0.75	1.18	11.24	-65.63	0.00	0.00	Vehicle	Vehicle	-----	-238.22	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.09	5.09
	U_4 - L_4	-50.97	25.44	-59.33			0.75	1.18	22.57	-52.64	0.00	0.00	Vehicle	Vehicle	-----	-134.69	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.48	5.48
	U_5 - L_5	-13.79	25.42	-47.59			0.75	1.18	22.56	-42.23	0.00	0.00	Vehicle	Vehicle	11.40	-72.82	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	19.57	19.57	7.74	7.74
	U_6 - L_6	45.46	41.69	-37.31			0.75	1.18	36.99	-33.10	0.00	0.00	Vehicle	Vehicle	107.18	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.33	10.33	-----	-----
	U_7 - L_7	-22.33	-17.57	3.23			0.75	1.18	2.86	-15.59	0.00	0.00	Vehicle	Vehicle	-----	-49.30	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	20.41	20.41
	U_8 - L_8	-120.06	-64.12	29.85			0.75	1.18	26.48	-56.89	0.00	0.00	Vehicle	Vehicle	-----	-230.04	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.22	7.22
	U_9 - L_9	-177.00	-79.43	15.84			0.75	1.18	14.05	-70.47	0.00	0.00	Vehicle	Vehicle	-----	-321.72	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
	U_{10} - L_{10}	-205.85	-85.36	17.73			0.75	1.18	15.73	-75.74	0.00	0.00	Vehicle	Vehicle	-----	-366.07	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.56	7.56
	U_{11} - L_{11}	-239.21	-88.61	5.25			0.75	1.18	4.66	-78.62	0.00	0.00	Vehicle	Vehicle	-----	-413.18	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.69	6.69
	U_{12} - L_{12}	-257.92	-97.20	5.60			0.75	1.18	4.97	-86.24	0.00	0.00	Vehicle	Vehicle	-----	-447.41	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.31	6.31
	U_{13} - L_{13}	-243.80	-100.98	6.14			0.75	1.18	5.45	-89.60	0.00	0.00	Vehicle	Vehicle	-----	-433.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	4.98	4.98
	U_{14} - L_{14}	-420.84	-91.86	-99.57			0.75	1.18	-81.50	-88.34	0.00	0.00	Vehicle	Vehicle	-----	-661.94	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	7.14	7.14
	U_{15} - L_{15}	-158.85	9.98	-92.57			0.75	1.17	8.75	-81.16	0.00	0.00	Vehicle	Vehicle	-----	-312.00	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.55	6.55
	U_{16} - L_{16}	-174.03	7.85	-86.92			0.75	1.17	6.89	-76.21	0.00	0.00	Vehicle	Vehicle	-----	-325.30	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
	U_{17} - L_{17}	-156.46	9.02	-79.03			0.75	1.17	7.91	-69.29	0.00	0.00	Vehicle	Vehicle	-----	-293.47	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
	U_{18} - L_{18}	-142.20	10.89	-77.84			0.75	1.17	9.55	-68.25	0.00	0.00	Vehicle	Vehicle	-----	-273.59	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
	U_{19} - L_{19}	-113.66	20.78	-71.34			0.75	1.17	18.22	-62.55	0.00	0.00	Vehicle	Vehicle	-----	-229.07	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.36	6.36
	U_{20} - L_{20}	-76.52	26.70	-57.50			0.75	1.17	23.41	-50.41	0.00	0.00	Vehicle	Vehicle	-----	-165.01	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.92	5.92
	U_{21} - L_{21}	-45.78	27.44	-52.78			0.75	1.17	24.06	-46.28	0.00	0.00	Vehicle	Vehicle	-----	-119.67	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
	U_{22} - L_{22}	-17.71	-13.80	6.41			0.75	1.17	5.62	-12.09	0.00	0.00	Vehicle	Vehicle	-----	-38.75	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	26.80	26.80
	U_{23} - L_{23}	-30.66	-51.98	34.73			0.75	1.17	30.45	-45.57	0.00	0.00	Vehicle	Vehicle	-----	-99.10	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.80	6.80
	U_{24} - L_{24}	-62.03	-64.48	25.01			0.75	1.17	21.93	-56.53	0.00	0.00	Vehicle	Vehicle	-----	-154.13	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.54	5.54
	U_{25} - L_{25}	-103.10	-75.86	22.25			0.75	1.17	19.50	-66.51	0.00	0.00	Vehicle	Vehicle	-----	-220.49	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.14	6.14
	U_{26} - L_{26}	-134.31	-78.08	12.71			0.75	1.17	11.14	-68.46	0.00	0.00	Vehicle	Vehicle	-----	-263.59	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.47	6.47
	U_{27} - L_{27}	-155.93	-89.59	9.17			0.75	1.17	8.04	-78.54	0.00	0.00	Vehicle	Vehicle	-----	-304.81	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.95	5.95
	U_{28} - L_{28}	-179.28	-96.96	1.88			0.75	1.17	1.64	-85.01	0.00	0.00	Vehicle	Vehicle	-----	-343.58	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.73	5.73
	U_{29} - L_{29}	-171.45	-95.11	4.76			0.75	1.17	4.18	-83.39	0.00	0.00	Vehicle	Vehicle	-----	-331.28	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.22	6.22
	U_{30} - L_{30}	-392.76	-111.14	-107.47			0.75	1.18	-95.35	-98.61	0.00	0.00	Vehicle	Vehicle	-----	-638.78	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.68	6.68
	U_{31} - L_{31}	-203.21	10.16	-100.65			0.75	1.18	9.01	-89.30	0.00	0.00	Vehicle	Vehicle	-----	-380.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.45	5.45
	U_{32} - L_{32}	-222.46	1.96	-89.44			0.75	1.18	1.73	-79.35	0.00	0.00	Vehicle	Vehicle	-----	-392.35	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
	U_{33} - L_{33}	-211.56	6.88	-89.58			0.75	1.18	6.10	-79.48	0.00	0.00	Vehicle	Vehicle	-----	-378.35	2.42	38.13	35.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	-15.76	67.02			0.75	1.24	62.18	-14.62	0.00	0.00	Vehicle	Vehicle	150.06	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**8.57**	**8.57**	-----	-----
		U_1 - L_2	10.78	-15.20	39.80			0.75	1.24	36.93	-14.10	0.00	0.00	Vehicle	Vehicle	62.01	-4.33	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**11.29**	**11.29**	**24.54**	**24.54**
		U_2 - L_3	-44.02	-13.74	56.82			0.75	1.24	52.72	-12.75	0.00	0.00	Vehicle	Vehicle	11.31	-73.80	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.95**	**8.95**	**22.76**	**22.76**
		U_3 - L_4	-76.72	-33.89	16.16			0.75	1.24	14.99	-31.44	0.00	0.00	Vehicle	Vehicle	-----	-140.60	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.26**	**8.26**
		U_4 - L_4	118.39	-14.52	64.84			0.75	1.24	60.15	-13.47	0.00	0.00	Vehicle	Vehicle	232.11	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
		U_5 - L_5	137.53	-8.40	80.07			0.75	1.24	74.28	-7.79	0.00	0.00	Vehicle	Vehicle	275.35	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
		U_6 - L_6	157.34	1.80	82.72			0.75	1.24	76.75	1.67	0.00	0.00	Vehicle	Vehicle	304.31	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.43**	**6.43**	-----	-----
		U_7 - L_7	149.30	4.96	101.95			0.75	1.24	94.59	4.60	0.00	0.00	Vehicle	Vehicle	317.05	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
		U_8 - L_8	249.09	3.17	114.83			0.75	1.20	103.17	2.85	0.00	0.00	Vehicle	Vehicle	457.94	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
		U_9 - L_{10}	260.26	-2.57	91.91			0.75	1.20	82.58	-2.31	0.00	0.00	Vehicle	Vehicle	445.68	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.50**	**8.50**	-----	-----
		U_{10} - L_{11}	236.30	6.70	109.32			0.75	1.20	98.22	6.02	0.00	0.00	Vehicle	Vehicle	434.88	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**6.87**	**6.87**	-----	-----
		U_{11} - L_{12}	211.92	4.84	91.72			0.75	1.20	82.41	4.35	0.00	0.00	Vehicle	Vehicle	382.64	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.86**	**6.86**	-----	-----
		U_{12} - L_{13}	151.66	-22.16	81.80			0.75	1.20	73.50	-19.91	0.00	0.00	Vehicle	Vehicle	292.70	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
		U_{13} - L_{14}	108.60	-30.48	74.34			0.75	1.20	66.80	-27.39	0.00	0.00	Vehicle	Vehicle	228.02	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.78**	**4.78**	-----	-----
		U_{15} - L_{14}	-24.45	-59.45	30.64			0.75	1.20	27.53	-53.42	0.00	0.00	Vehicle	Vehicle	4.00	-101.23	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**16.42**	**16.42**	**5.69**	**5.69**
		U_{16} - L_{15}	23.99	-36.94	55.28			0.75	1.20	49.67	-33.19	0.00	0.00	Vehicle	Vehicle	95.76	-11.95	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.13**	**8.13**	**10.50**	**10.50**
		U_{17} - L_{16}	120.03	-23.19	65.03			0.75	1.20	58.43	-20.84	0.00	0.00	Vehicle	Vehicle	232.01	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.92**	**6.92**	-----	-----
		U_{18} - L_{17}	144.79	-7.39	77.34			0.75	1.20	69.49	-6.64	0.00	0.00	Vehicle	Vehicle	278.57	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.28**	**7.28**	-----	-----
		U_{19} - L_{18}	193.05	0.89	87.09			0.75	1.20	78.25	0.80	0.00	0.00	Vehicle	Vehicle	352.69	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
		U_{20} - L_{19}	193.51	6.77	76.20			0.75	1.20	68.47	6.08	0.00	0.00	Vehicle	Vehicle	340.57	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.55**	**7.55**	-----	-----
		U_0 - L_1	202.41	-13.26	77.08			0.75	1.18	68.38	-11.76	0.00	0.00	Vehicle	Vehicle	352.04	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.41**	**8.41**	-----	-----
		U_1 - L_2	190.86	-15.06	98.96			0.75	1.18	87.80	-13.36	0.00	0.00	Vehicle	Vehicle	362.26	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_2 - L_3	155.85	-14.63	92.82			0.75	1.18	82.35	-12.98	0.00	0.00	Vehicle	Vehicle	309.66	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_3 - L_4	134.05	-15.87	76.25			0.75	1.18	67.65	-14.08	0.00	0.00	Vehicle	Vehicle	262.22	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.55**	**6.55**	-----	-----
		U_4 - L_5	46.02	-38.36	73.71			0.75	1.18	65.40	-34.03	0.00	0.00	Vehicle	Vehicle	144.84	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_5 - L_6	3.45	-48.54	64.15			0.75	1.18	56.92	-43.06	0.00	0.00	Vehicle	Vehicle	78.48	-51.50	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.45**	**7.45**	**7.64**	**7.64**
		U_6 - L_7	-84.29	-71.06	34.41			0.75	1.18	30.53	-63.05	0.00	0.00	Vehicle	Vehicle	-----	-191.53	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.36**	**4.36**
		U_7 - L_7	137.30	-36.28	45.82			0.75	1.18	40.66	-32.19	0.00	0.00	Vehicle	Vehicle	231.34	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**11.46**	**11.46**	-----	-----
		U_8 - L_8	210.89	-27.41	66.23			0.75	1.18	58.76	-24.32	0.00	0.00	Vehicle	Vehicle	350.55	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.50**	**8.50**	-----	-----
		U_{10} - L_9	236.36	-16.80	76.28			0.75	1.18	67.68	-14.90	0.00	0.00	Vehicle	Vehicle	395.25	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.00**	**8.00**	-----	-----
		U_{11} - L_{10}	274.62	-13.50	87.45			0.75	1.18	77.59	-11.97	0.00	0.00	Vehicle	Vehicle	457.87	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U_{12} - L_{11}	281.06	-6.87	84.06			0.75	1.18	74.58	-6.10	0.00	0.00	Vehicle	Vehicle	462.34	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.55**	**7.55**	-----	-----
		U_{13} - L_{12}	278.12	-6.46	85.52			0.75	1.18	75.87	-5.73	0.00	0.00	Vehicle	Vehicle	460.19	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.58**	**6.58**	-----	-----
		U_{14} - L_{13}	235.45	-7.91	94.92			0.75	1.18	84.22	-7.02	0.00	0.00	Vehicle	Vehicle	415.56	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{15} - L_{15}	143.03	-5.04	93.71			0.75	1.17	82.16	-4.42	0.00	0.00	Vehicle	Vehicle	292.74	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{16} - L_{16}	171.91	-9.94	89.68			0.75	1.17	78.62	-8.71	0.00	0.00	Vehicle	Vehicle	325.69	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_{17} - L_{16}	181.04	-9.55	100.43			0.75	1.17	88.05	-8.37	0.00	0.00	Vehicle	Vehicle	349.82	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{17} - L_{18}	171.16	-10.77	92.19			0.75	1.17	80.83	-9.45	0.00	0.00	Vehicle	Vehicle	327.58	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.93**	**5.93**	-----	-----
		U_{18} - L_{19}	150.64	-12.39	85.11			0.75	1.17	74.62	-10.86	0.00	0.00	Vehicle	Vehicle	292.84	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.70**	**6.70**	-----	-----
		U_{19} - L_{20}	125.86	-22.78	86.60			0.75	1.17	75.93	-19.97	0.00	0.00	Vehicle	Vehicle	262.33	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
	Structure 2	U_{20} - L_{21}	76.05	-25.93	74.43			0.75	1.17	65.26	-22.73	0.00	0.00	Vehicle	Vehicle	183.70	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.39**	**5.39**	-----	-----
		U_{21} - L_{22}	38.34	-42.22	50.74			0.75	1.17	44.48	-37.01	0.00	0.00	Vehicle	Vehicle	107.67	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_{23} - L_{22}	18.02	-48.29	27.98			0.75	1.17	24.53	-42.34	0.00	0.00	Vehicle	Vehicle	55.32	-31.61	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**16.70**	**16.70**	**8.05**	**8.05**
		U_{24} - L_{23}	58.54	-35.13	69.82			0.75	1.17	61.22	-30.80	0.00	0.00	Vehicle	Vehicle	155.69	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.03**	**6.03**	-----	-----
		U_{25} - L_{24}	114.92	-25.76	69.65			0.75	1.17	61.06	-22.58	0.00	0.00	Vehicle	Vehicle	228.78	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.00**	**8.00**	-----	-----
		U_{26} - L_{25}	142.93	-19.21	81.02			0.75	1.17	71.03	-16.84	0.00	0.00	Vehicle	Vehicle	278.16	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.15**	**7.15**	-----	-----
		U_{27} - L_{26}	173.71	-10.12	74.40			0.75	1.17	65.23	-8.87	0.00	0.00	Vehicle	Vehicle	310.63	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.31**	**7.31**	-----	-----
		U_{28} - L_{27}	186.49	-6.44	83.63			0.75	1.17	73.32	-5.64	0.00	0.00	Vehicle	Vehicle	337.75	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_{29} - L_{28}	190.57	-5.77	88.36			0.75	1.17	77.47	-5.06	0.00	0.00	Vehicle	Vehicle	348.45	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{30} - L_{29}	161.74	-6.42	87.64			0.75	1.17	76.84	-5.62	0.00	0.00	Vehicle	Vehicle	310.16	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.36**	**6.36**	-----	-----
		U_{30} - L_{31}	191.49	-6.42	90.00			0.75	1.18	79.85	-5.70	0.00	0.00	Vehicle	Vehicle	352.74	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U_{31} - L_{32}	226.17	-10.89	79.23			0.75	1.18	70.29	-9.66	0.00	0.00	Vehicle	Vehicle	385.40	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.84**	**7.84**	-----	-----
		U_{32} - L_{33}	243.26	-2.59	103.30			0.75	1.18	91.65	-2.30	0.00	0.00	Vehicle	Vehicle	435.38	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U_{33} - L_{34}	238.98	-2.27	91.75			0.75	1.18	81.41	-2.01	0.00	0.00	Vehicle	Vehicle	416.50	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.44**	**7.44**	-----	-----
		U_{34} - L_{35}	222.10	-13.04	85.96			0.75	1.18	76.26	-11.57	0.00	0.00	Vehicle	Vehicle	387.88	-----	0.00	30.63	30.6305	1010.81	131.71

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.77	-32.43	-24.71	-8.83	2.20	0.90	1.24	-27.51	-36.10	2.20	-8.83	Vehicle	Vehicle	-----	-133.73	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	13.81	13.81
		U_1 - U_2	-86.66	-4.37	-69.20	6.00	-16.34	0.90	1.24	-4.86	-77.04	6.00	-16.34	Vehicle	Vehicle	-----	-212.81	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.21	6.21
		U_2 - U_3	-48.28	35.39	-74.72	9.44	-19.05	0.90	1.24	39.40	-83.19	9.44	-19.05	Vehicle	Vehicle	-----	-170.90	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.22	6.22
		U_3 - U_4	36.43	46.30	-63.83	12.72	-17.47	0.90	1.24	51.54	-71.06	12.72	-17.47	Vehicle	Vehicle	114.36	-45.02	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.31	12.31	8.47	8.47
		U_4 - U_5	38.78	45.41	-67.50	12.78	-17.37	0.90	1.24	50.55	-75.15	12.78	-17.37	Vehicle	Vehicle	116.13	-47.28	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.51	12.51	8.04	8.04
		U_5 - U_6	154.43	52.18	-42.71	15.13	-12.03	0.90	1.24	58.09	-47.55	15.13	-12.03	Vehicle	Vehicle	276.27	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.89	8.89	-----	-----
		U_6 - U_7	288.19	56.73	-22.62	17.11	-4.31	0.90	1.24	63.16	-25.19	17.11	-4.31	Vehicle	Vehicle	456.75	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.17	8.17	-----	-----
		U_7 - U_8	410.75	6.97	-0.57	18.24	4.35	0.90	1.24	7.76	-0.64	18.24	4.35	Pedestrian	Pedestrian	567.77	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	26.90	26.90	-----	-----
		U_8 - U_9	311.35	8.61	-1.98	19.05	0.00	0.90	1.20	9.28	-2.14	19.05	0.00	Pedestrian	Vehicle	441.58	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	22.15	22.15	-----	-----
		U_9 - U_{10}	78.25	-7.20	-28.26	5.45	0.00	0.90	1.20	-7.76	-30.47	5.45	0.00	Vehicle	Vehicle	91.63	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{10} - U_{11}	-141.75	42.14	-58.45	-7.34	0.00	0.90	1.20	45.43	-63.02	0.00	-7.34	Vehicle	Vehicle	-----	-266.20	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.23	7.23
		U_{11} - U_{12}	-338.40	38.83	-90.41	9.77	-27.96	0.90	1.20	41.86	-97.48	9.77	-27.96	Vehicle	Vehicle	-----	-566.64	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.86	4.86
		U_{12} - U_{13}	-480.50	34.00	-108.13	8.23	-34.35	0.90	1.20	36.66	-116.59	8.23	-34.35	Vehicle	Vehicle	-----	-776.21	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.64	5.64
		U_{13} - U_{14}	-571.10	28.88	-127.15	6.68	-37.24	0.90	1.20	31.14	-137.09	6.68	-37.24	Vehicle	Vehicle	-----	-920.64	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.52	5.52
		U_{14} - U_{15}	-571.52	28.74	-129.99	6.65	-37.25	0.90	1.20	30.99	-140.15	6.65	-37.25	Vehicle	Vehicle	-----	-925.17	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.39	5.39
		U_{15} - U_{16}	-582.34	22.44	-121.95	4.98	-36.14	0.90	1.20	24.20	-131.49	4.98	-36.14	Vehicle	Vehicle	-----	-927.97	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.67	5.67
		U_{16} - U_{17}	-539.92	9.80	-103.52	3.53	-31.87	0.90	1.20	10.57	-111.61	3.53	-31.87	Pedestrian	Vehicle	-----	-846.98	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.06	7.06
		U_{17} - U_{18}	-422.72	10.85	-68.29	2.26	-25.07	0.90	1.20	11.70	-73.63	2.26	-25.07	Vehicle	Vehicle	Pedestrian	-677.84	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.55	5.55
		U_{18} - U_{19}	-286.53	6.12	-45.98	1.28	-16.97	0.90	1.20	6.60	-49.58	1.28	-16.97	Vehicle	Vehicle	Pedestrian	-459.01	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.88	5.88
		U_{19} - U_{20}	-140.97	1.64	-22.90	0.55	-8.68	0.90	1.20	1.77	-24.69	0.55	-8.68	Vehicle	Vehicle	Pedestrian	-226.64	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	16.08	16.08
	Structure 2	U_0 - U_1	-147.48	-19.93	-18.69	-4.88	0.36	0.90	1.18	-19.90	-21.22	0.36	-4.88	Vehicle	Vehicle	-----	-219.32	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	23.55	23.55
		U_1 - U_2	-319.09	-4.12	-60.71	1.96	-13.36	0.90	1.18	-4.39	-64.64	1.96	-13.36	Vehicle	Vehicle	-----	-498.85	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.31	7.31
		U_2 - U_3	-460.93	-85.75	-87.10	-20.95	3.77	0.90	1.18	-91.29	-92.74	3.77	-20.95	Vehicle	Vehicle	-----	-719.76	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.65	6.65
		U_3 - U_4	-580.02	29.45	-111.84	5.92	-27.68	0.90	1.18	31.35	-119.08	5.92	-27.68	Vehicle	Vehicle	-----	-908.83	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.39	6.39
		U_4 - U_5	-616.47	38.14	-123.35	7.86	-31.35	0.90	1.18	40.60	-131.33	7.86	-31.35	Vehicle	Vehicle	-----	-972.14	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.63	6.63
		U_5 - U_6	-604.69	47.61	-134.97	9.87	-32.88	0.90	1.18	50.69	-143.70	9.87	-32.88	Vehicle	Vehicle	-----	-972.90	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.14	6.14
		U_6 - U_7	-514.75	54.39	-121.34	11.56	-31.23	0.90	1.18	57.91	-129.19	11.56	-31.23	Vehicle	Vehicle	-----	-837.13	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.40	6.40
		U_7 - U_8	-512.80	54.44	-123.94	11.57	-31.18	0.90	1.18	57.96	-131.96	11.57	-31.18	Vehicle	Vehicle	-----	-838.18	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.28	6.28
		U_8 - U_9	-373.48	60.42	-101.82	13.16	-27.41	0.90	1.18	64.33	-108.41	13.16	-27.41	Vehicle	Vehicle	-----	-626.45	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.94	6.94
		U_9 - U_{10}	-181.02	63.06	-78.92	14.25	-21.42	0.90	1.18	67.13	-84.03	14.25	-21.42	Vehicle	Vehicle	-----	-344.56	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.39	8.39
		U_{10} - U_{11}	26.21	64.99	-55.13	15.21	-14.40	0.90	1.18	69.20	-58.70	15.21	-14.40	Vehicle	Vehicle	124.03	-42.24	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.78	12.78	13.55	13.55
		U_{11} - U_{12}	237.41	63.19	-30.29	15.56	-6.85	0.90	1.18	67.28	-32.25	15.56	-6.85	Vehicle	Vehicle	396.10	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	10.01	10.01	-----	-----
		U_{12} - U_{13}	435.92	61.56	-13.88	15.82	0.56	0.90	1.18	65.54	-14.77	15.82	0.56	Vehicle	Vehicle	651.90	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	10.73	10.73	-----	-----
		U_{13} - U_{14}	595.85	3.79	-2.04	15.74	6.92	0.90	1.18	4.03	-2.17	15.74	6.92	Pedestrian	Pedestrian	800.32	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	48.97	48.97	-----	-----
		U_{14} - U_{15}	615.52	4.50	0.37	24.37	0.00	0.90	1.17	4.74	0.38	24.37	0.00	Pedestrian	Vehicle	838.02	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	32.60	32.60	-----	-----
		U_{15} - U_{16}	486.12	28.56	-17.95	14.17	3.09	0.90	1.17	30.05	-18.89	14.17	3.09	Pedestrian	Vehicle	689.44	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	17.78	17.78	-----	-----
		U_{16} - U_{17}	339.23	-0.53	-33.86	11.57	0.00	0.90	1.17	-0.56	-35.63	11.57	0.00	Pedestrian	Vehicle	455.31	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	192.06	55.12	-58.26	4.46	0.00	0.90	1.17	57.99	-61.30	4.46	0.00	Vehicle	Vehicle	325.07	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	9.90	9.90	-----	-----
		U_{18} - U_{19}	53.73	50.51	-73.57	-2.79	-12.78	0.90	1.17	53.14	-77.40	-2.79	-12.78	Vehicle	Vehicle	138.93	-30.77	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	13.41	13.41	9.06	9.06
		U_{19} - U_{20}	-59.08	44.80	-87.90	15.07	-15.68	0.90	1.17	47.13	-92.48	15.07	-15.68	Vehicle	Vehicle	-----	-197.03	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.85	6.85
	Structure 3	U_{20} - U_{21}	-125.50	37.36	-101.71	14.76	-16.53	0.90	1.17	39.31	-107.01	14.76	-16.53	Pedestrian	Vehicle	-----	-302.26	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.65	6.65
		U_{21} - U_{22}	-146.93	30.81	-100.50	14.37	-22.74	0.90	1.17	32.41	-105.74	14.37	-22.74	Pedestrian	Vehicle	-----	-328.47	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.52	6.52
		U_{22} - U_{23}	-146.70	28.83	-105.70	14.36	-22.72	0.90	1.17	30.34	-111.21	14.36	-22.72	Pedestrian	Vehicle	-----	-335.28	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.21	6.21
		U_{23} - U_{24}	-112.76	19.95	-93.81	13.87	-21.04	0.90	1.17	20.99	-98.70	13.87	-21.04	Pedestrian	Vehicle	-----	-274.90	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.34	7.34
		U_{24} - U_{25}	-36.27	43.16	-82.75	13.40	-15.02	0.90	1.17	45.41	-87.06	13.40	-15.02	Vehicle	Vehicle	11.88	-160.34	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	18.86	18.86	7.54	7.54
		U_{25} - U_{26}	80.70	46.73	-62.92	12.92	-12.15	0.90	1.17	49.16	-66.20	12.92	-12.15	Vehicle	Vehicle	168.82	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.95	13.95	-----	-----
		U_{26} - U_{27}	220.59	49.47	-43.10	12.57	-5.86	0.90	1.17	52.04	-45.34	12.57	-5.86	Vehicle	Vehicle	354.43	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	10.49	10.49	-----	-----
		U_{27} - U_{28}	363.31	49.59	-25.18	12.37	0.18	0.90	1.17	52.18	-26.49	12.37	0.18	Vehicle	Vehicle	540.13	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	13.05	13.05	-----	-----
		U_{28} - U_{29}	503.82	6.48	-11.99	12.23	3.11	0.90	1.17	6.82	-12.62	12.23	3.11	Pedestrian	Vehicle	679.74	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	40.34	40.34	-----	-----
		U_{29} - U_{30}	616.57	-1.81	-1.40	0.00	7.42	0.90	1.17	-1.47	-1.90	7.42	0.00	Pedestrian	Vehicle	809.27	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{30} - U_{31}	559.74	-3.69	-10.19	25.79	0.00	0.90	1.18	-3.93	-10.85	25.79	0.

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L$_0$- L$_1$	-2.01	0.16	1.10	-2.06	0.36	0.90	1.24	1.22	0.18	0.36	-2.06	Vehicle	Pedestrian	-----	-5.05	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	-----	-----
		L$_1$ - L$_2$	67.91	32.09	34.61	0.00	5.87	0.90	1.24	38.53	35.73	5.87	0.00	Vehicle	Vehicle	138.37	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.28**	**11.28**	-----	-----
		L$_2$ - L$_3$	78.84	-28.79	84.18	-7.39	15.48	0.90	1.24	93.71	-32.05	15.48	-7.39	Vehicle	Vehicle	224.32	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**6.29**	**6.29**	-----	-----
		L$_3$ - L$_4$	39.14	-40.03	85.45	-10.83	18.09	0.90	1.24	95.13	-44.57	18.09	-10.83	Vehicle	Vehicle	174.56	-7.06	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**6.62**	**6.62**	**13.51**	**13.51**
		L$_4$ - L$_5$	-166.38	-58.47	51.98	-16.90	10.96	0.90	1.24	57.87	-65.09	10.96	-16.90	Vehicle	Vehicle	-----	-300.92	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.13**	**5.13**
		L$_5$ - L$_6$	-301.23	-63.19	21.01	-18.93	3.23	0.90	1.24	23.38	-70.35	3.23	-18.93	Vehicle	Vehicle	-----	-483.05	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.09**	**5.09**
		L$_6$ - L$_7$	-438.94	-67.88	1.32	-21.52	-4.99	0.90	1.24	1.47	-75.57	-4.99	-21.52	Pedestrian	Vehicle	-----	-668.85	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.70**	**6.70**
		L$_7$ - L$_8$	-551.65	0.32	-16.31	0.00	-35.55	0.90	1.24	0.35	-18.15	0.00	-35.55	Vehicle	Pedestrian	-----	-786.96	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.06**	**12.06**
		L$_8$ - L$_9$	-570.53	-60.66	8.28	-37.48	0.00	0.90	1.20	8.93	-65.41	0.00	-37.48	Vehicle	Pedestrian	-----	-875.44	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.11**	**6.11**
		L$_9$ - L$_{10}$	-355.48	-31.34	-6.52	-13.03	-11.67	0.90	1.20	-7.02	-33.79	-11.67	-13.03	Pedestrian	Pedestrian	-----	-522.99	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.60**	**12.60**
		L$_{10}$ - L$_{11}$	-118.48	-37.45	34.92	-12.43	0.00	0.90	1.20	37.65	-40.38	0.00	-12.43	Vehicle	Vehicle	-----	-206.52	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.46**	**9.46**
		L$_{11}$ - L$_{12}$	103.45	43.31	53.80	0.49	0.00	0.90	1.20	58.00	46.70	0.49	0.00	Vehicle	Vehicle	209.89	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.46**	**8.46**	-----	-----
		L$_{12}$ - L$_{13}$	300.60	-32.30	97.50	-8.14	17.83	0.90	1.20	105.12	-34.82	17.83	-8.14	Vehicle	Vehicle	527.45	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.41**	**6.41**	-----	-----
		L$_{13}$ - L$_{14}$	441.19	77.75	108.75	-6.61	24.15	0.90	1.20	117.25	83.83	24.15	-6.61	Vehicle	Vehicle	725.98	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.39**	**7.39**	-----	-----
		L$_{14}$ - L$_{15}$	547.00	-17.36	115.01	-3.49	24.57	0.90	1.20	124.01	-18.72	24.57	-3.49	Vehicle	Vehicle	872.31	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.29**	**8.29**	-----	-----
		L$_{15}$ - L$_{16}$	506.09	-11.68	97.95	-2.03	20.32	0.90	1.20	105.60	-12.59	20.32	-2.03	Vehicle	Vehicle	795.20	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**10.12**	**10.12**	-----	-----
		L$_{16}$ - L$_{17}$	398.75	-14.91	75.96	-0.83	12.72	0.90	1.20	81.90	-16.08	12.72	-0.83	Vehicle	Vehicle	624.85	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.99**	**9.99**	-----	-----
		L$_{17}$ - L$_{18}$	263.81	-2.29	36.56	0.15	4.66	0.90	1.20	39.42	-2.47	4.66	0.15	Vehicle	Vehicle	394.20	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**15.72**	**15.72**	-----	-----
		L$_{18}$ - L$_{19}$	118.75	-9.57	16.86	0.71	-3.38	0.90	1.20	18.18	-10.32	0.71	-3.38	Vehicle	Vehicle	178.01	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**21.12**	**21.12**	-----	-----
		L$_{19}$ - L$_{20}$	-23.36	3.18	-5.56	1.28	-12.08	0.90	1.20	3.43	-5.99	1.28	-12.08	Pedestrian	Pedestrian	-----	-53.86	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**22.14**	**22.14**
		L$_0$- L$_1$	-36.12	0.52	3.83	-5.14	1.19	0.90	1.18	4.07	0.55	1.19	-5.14	Vehicle	Pedestrian	-----	-52.92	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L$_1$ - L$_2$	132.64	27.22	13.16	2.93	-0.06	0.90	1.18	28.98	14.01	2.93	-0.06	Vehicle	Vehicle	210.11	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**17.28**	**17.28**	-----	-----
		L$_2$ - L$_3$	303.94	47.93	63.61	10.52	-1.79	0.90	1.18	67.72	51.04	10.52	-1.79	Vehicle	Vehicle	483.16	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.92**	**9.92**	-----	-----
		L$_3$ - L$_4$	445.73	81.95	88.34	0.00	13.17	0.90	1.18	94.06	87.26	13.17	0.00	Vehicle	Vehicle	701.72	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.18**	**9.18**	-----	-----
		L$_4$ - L$_5$	567.64	-25.33	125.43	-6.10	24.81	0.90	1.18	133.54	-26.97	24.81	-6.10	Vehicle	Vehicle	911.54	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.11**	**8.11**	-----	-----
		L$_5$ - L$_6$	603.43	-40.59	133.83	-8.06	28.47	0.90	1.18	142.49	-43.22	28.47	-8.06	Vehicle	Vehicle	969.70	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.35**	**8.35**	-----	-----
		L$_6$ - L$_7$	599.28	-51.41	141.56	-10.41	30.25	0.90	1.18	150.71	-54.74	30.25	-10.41	Vehicle	Vehicle	974.99	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.08**	**8.08**	-----	-----
		L$_7$ - L$_8$	373.73	-64.12	108.07	-13.66	24.92	0.90	1.18	115.06	-68.27	24.92	-13.66	Vehicle	Vehicle	635.43	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.41**	**8.41**	-----	-----
		L$_8$ - L$_9$	195.51	-68.82	87.33	-15.12	19.51	0.90	1.18	92.98	-73.27	19.51	-15.12	Vehicle	Vehicle	375.03	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**9.73**	**9.73**	-----	-----
		L$_9$ - L$_{10}$	-13.41	-70.89	59.01	-16.11	12.45	0.90	1.18	62.82	-75.48	12.45	-16.11	Vehicle	Vehicle	64.23	-115.56	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**13.93**	**13.93**	**9.46**	**9.46**
		L$_{10}$ - L$_{11}$	-217.51	-71.50	32.98	-17.02	5.50	0.90	1.18	35.11	-76.12	5.50	-17.02	Vehicle	Vehicle	-----	-381.72	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.69**	**5.69**
		L$_{11}$ - L$_{12}$	-420.12	-70.00	13.62	-17.31	-2.05	0.90	1.18	14.50	-74.53	-2.05	-17.31	Vehicle	Vehicle	-----	-643.05	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.85**	**6.85**
		L$_{12}$ - L$_{13}$	-591.61	-71.78	-0.86	-18.75	-7.10	0.90	1.18	-0.92	-76.43	-7.10	-18.75	Pedestrian	Vehicle	-----	-868.45	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.95**	**8.95**
		L$_{13}$ - L$_{14}$	-724.42	1.08	-10.96	0.00	-35.12	0.90	1.18	1.15	-11.67	0.00	-35.12	Vehicle	Pedestrian	-----	-1002.57	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.90**	**16.90**
		L$_{14}$ - L$_{15}$	-747.19	-38.65	13.46	-36.29	0.00	0.90	1.17	14.16	-40.67	0.00	-36.29	Vehicle	Pedestrian	-----	-1071.39	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.98**	**9.98**
		L$_{15}$ - L$_{16}$	-632.29	10.24	-1.20	0.00	-31.22	0.90	1.17	10.77	-1.26	0.00	-31.22	Vehicle	Pedestrian	-----	-864.20	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**19.80**	**19.80**
		L$_{16}$ - L$_{17}$	-488.73	-43.38	17.84	-25.40	0.00	0.90	1.17	18.77	-45.64	0.00	-25.40	Vehicle	Pedestrian	-----	-727.69	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.87**	**7.87**
		L$_{17}$ - L$_{18}$	-337.06	1.82	31.49	-18.13	0.00	0.90	1.17	33.13	1.92	0.00	-18.13	Vehicle	Pedestrian	-----	-459.25	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-183.64	-46.38	54.13	-11.34	4.48	0.90	1.17	56.95	-48.80	4.48	-11.34	Vehicle	Vehicle	-----	-302.16	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**7.99**	**7.99**
		L$_{19}$ - L$_{20}$	-45.76	-41.72	66.62	-9.58	8.92	0.90	1.17	70.09	-43.90	8.92	-9.58	Vehicle	Vehicle	31.63	-116.55	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**10.34**	**10.34**	**12.03**	**12.03**
	Structure 2	L$_{20}$ - L$_{21}$	68.06	-37.08	89.91	-9.12	11.57	0.90	1.17	94.59	-39.01	11.57	-9.12	Vehicle	Vehicle	211.45	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.48**	**9.48**	-----	-----
		L$_{21}$ - L$_{22}$	134.01	-29.65	96.21	-8.81	13.61	0.90	1.17	101.23	-31.20	13.61	-8.81	Vehicle	Vehicle	305.80	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.21**	**8.21**	-----	-----
		L$_{22}$ - L$_{23}$	122.68	-14.01	87.06	-7.57	11.79	0.90	1.17	91.59	-14.74	11.79	-7.57	Vehicle	Pedestrian	276.56	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.19**	**9.19**	-----	-----
		L$_{23}$ - L$_{24}$	46.89	-36.50	75.99	-7.09	8.09	0.90	1.17	79.95	-38.41	8.09	-7.09	Vehicle	Vehicle	164.90	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.48**	**11.48**	-----	-----
		L$_{24}$ - L$_{25}$	-66.54	-40.64	56.64	-6.23	2.64	0.90	1.17	59.59	-42.76	2.64	-6.23	Vehicle	Vehicle	-----	-142.08	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**11.86**	**11.86**
		L$_{25}$ - L$_{26}$	-205.63	-43.47	33.34	-5.87	-3.61	0.90	1.17	35.07	-45.73	-3.61	-5.87	Vehicle	Vehicle	-----	-326.77	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.05**	**8.05**
		L$_{26}$ - L$_{27}$	-350.43	-44.28	18.02	-5.25	-6.72	0.90	1.17	18.96	-46.59	-5.25	-6.72	Vehicle	Vehicle	-----	-516.12	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**8.09**	**8.09**
		L$_{27}$ - L$_{28}$	-494.65	-44.11	-0.52	-5.10	-12.12	0.90	1.17	-0.55	-46.41	-5.10	-12.12	Pedestrian	Vehicle	-----	-703.37	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**11.92**	**11.92**
		L$_{28}$ - L$_{29}$	-620.83	-27.68	-4.96	-31.78	-17.19	0.90	1.17	-5.22	-29.13	-17.19	-31.78	Pedestrian	Pedestrian	-----	-886.25	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.75**	**10.75**
		L$_{29}$ - L$_{30}$	-716.91	-14.28	-15.77	0.00	-36.29	0.90	1.17	-15.03	-16.59	0.00	-36.29	Vehicle	Pedestrian	-----	-1000.73	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.10**	**15.10**
		L$_{30}$ - L$_{31}$	-850.71

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Built

Fy = 33.0 ksi Fu = 60.0 ksi E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.72	3.87	-58.70	3.44	-12.32	0.90	1.24	4.30	-65.35	3.44	-12.32	Pedestrian	Vehicle	-----	-206.79	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.84	3.84
		U$_1$ - L$_1$	-46.53	11.37	-37.57	2.93	-9.05	0.90	1.24	12.66	-41.83	2.93	-9.05	Vehicle	Vehicle	-----	-114.87	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
		U$_2$ - L$_2$	-0.10	10.29	-25.69	2.84	-5.68	0.90	1.24	11.46	-28.60	2.84	-5.68	Vehicle	Vehicle	14.77	-37.30	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	37.33	37.33	12.31	12.31
		U$_3$ - L$_3$	39.60	8.12	-11.97	2.69	-2.12	0.90	1.24	9.04	-13.33	2.69	-2.12	Vehicle	Vehicle	63.23	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	42.92	42.92	-----	-----
		U$_4$ - L$_4$	-30.20	-13.32	-4.87	-3.46	0.00	0.90	1.24	-5.43	-14.83	0.00	-3.46	Vehicle	Vehicle	-----	-58.55	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	21.55	21.55
		U$_5$ - L$_5$	-130.49	-36.03	3.73	-10.23	0.00	0.90	1.24	4.15	-40.11	0.00	-10.23	Vehicle	Vehicle	-----	-221.77	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	7.35	7.35
		U$_6$ - L$_6$	-158.18	-36.01	5.89	-13.06	0.00	0.90	1.24	6.55	-40.09	0.00	-13.06	Vehicle	Vehicle	-----	-257.76	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	8.73	8.73
		U$_7$ - L$_7$	-152.32	-36.15	11.50	-13.24	0.00	0.90	1.24	12.81	-40.25	0.00	-13.24	Vehicle	Vehicle	-----	-250.34	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	7.65	7.65
		U$_8$ - L$_8$	-455.55	-32.92	-56.61	-12.74	-18.97	0.90	1.24	-36.65	-63.02	-12.74	-18.97	Pedestrian	Vehicle	-----	-674.14	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	9.68	9.68
		U$_9$ - L$_9$	-287.55	3.10	-56.33	0.00	-18.20	0.90	1.20	3.34	-60.73	0.00	-18.20	Vehicle	Vehicle	-----	-452.77	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	5.89	5.89
		U$_{10}$ - L$_{10}$	-276.32	1.49	-55.74	0.00	-17.54	0.90	1.20	1.61	-60.10	0.00	-17.54	Vehicle	Vehicle	-----	-437.35	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	7.76	7.76
		U$_{11}$ - L$_{11}$	-232.59	-3.49	-47.41	0.00	-14.41	0.90	1.20	-3.76	-51.11	0.00	-14.41	Vehicle	Vehicle	-----	-368.81	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.00	8.00
		U$_{12}$ - L$_{12}$	-178.43	1.04	-39.24	0.00	-11.20	0.90	1.20	1.12	-42.31	0.00	-11.20	Vehicle	Vehicle	-----	-286.96	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	8.37	8.37
		U$_{13}$ - L$_{13}$	-127.74	3.13	-32.15	0.00	-7.88	0.90	1.20	3.38	-34.66	0.00	-7.88	Vehicle	Vehicle	-----	-211.12	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.29	7.29
		U$_{14}$ - L$_{14}$	-30.39	-8.72	-2.00	0.00	-3.03	0.90	1.20	-2.16	-9.40	0.00	-3.03	Vehicle	Vehicle	-----	-51.73	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	33.44	33.44
		U$_{15}$ - L$_{15}$	-28.94	-24.90	9.50	-4.54	1.55	0.90	1.20	10.24	-26.84	1.55	-4.54	Vehicle	Vehicle	-----	-72.51	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	11.71	11.71
		U$_{16}$ - L$_{16}$	-76.03	-30.36	5.79	-7.08	1.39	0.90	1.20	6.24	-32.74	1.39	-7.08	Vehicle	Vehicle	-----	-141.40	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	8.10	8.10
		U$_{17}$ - L$_{17}$	-161.89	-41.16	6.23	-10.66	1.30	0.90	1.20	6.71	-44.37	1.30	-10.66	Vehicle	Vehicle	-----	-268.14	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	5.62	5.62
		U$_{18}$ - L$_{18}$	-190.28	-40.57	5.34	-12.71	1.12	0.90	1.20	5.75	-43.75	1.12	-12.71	Vehicle	Vehicle	-----	-304.24	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	7.66	7.66
		U$_{19}$ - L$_{19}$	-228.17	-40.37	4.57	-14.98	0.97	0.90	1.20	4.93	-43.52	0.97	-14.98	Vehicle	Pedestrian	-----	-372.68	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	6.63	6.63
		U$_{20}$ - L$_{20}$	-242.83	-41.36	4.14	-15.63	0.95	0.90	1.20	4.47	-44.60	0.95	-15.63	Vehicle	Pedestrian	-----	-393.97	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	5.63	5.63
	Structure 2	U$_0$ - L$_0$	-303.03	2.28	-61.27	2.22	-15.08	0.90	1.18	2.43	-65.23	2.22	-15.08	Pedestrian	Vehicle	-----	-478.74	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	5.20	5.20
		U$_1$ - L$_1$	-268.78	10.24	-56.26	2.12	-13.67	0.90	1.18	10.90	-59.90	2.12	-13.67	Vehicle	Vehicle	-----	-427.28	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	6.74	6.74
		U$_2$ - L$_2$	-220.87	11.04	-52.58	2.34	-12.32	0.90	1.18	11.75	-55.99	2.34	-12.32	Vehicle	Vehicle	-----	-359.92	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	6.31	6.31
		U$_3$ - L$_3$	-175.23	11.83	-45.43	2.49	-10.35	0.90	1.18	12.59	-48.37	2.49	-10.35	Vehicle	Vehicle	-----	-290.68	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	5.72	5.72
		U$_4$ - L$_4$	-82.08	10.26	-33.34	2.21	-6.62	0.90	1.18	10.92	-35.49	2.21	-6.62	Vehicle	Vehicle	-----	-152.84	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	7.24	7.24
		U$_5$ - L$_5$	-19.89	9.96	-26.36	2.23	-4.16	0.90	1.18	10.60	-28.06	2.23	-4.16	Vehicle	Vehicle	-----	-62.34	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	11.43	11.43
		U$_6$ - L$_6$	60.32	21.63	-13.56	1.75	-0.47	0.90	1.18	23.03	-14.43	1.75	-0.47	Vehicle	Vehicle	108.35	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	15.95	15.95	-----	-----
		U$_7$ - L$_7$	-41.77	-5.90	-4.14	-2.49	0.00	0.90	1.18	-4.41	-6.28	0.00	-2.49	Vehicle	Pedestrian	-----	-65.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	34.06	34.06
		U$_8$ - L$_8$	-189.01	-37.43	4.82	-8.38	0.00	0.90	1.18	5.14	-39.85	0.00	-8.38	Vehicle	Vehicle	-----	-297.52	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	8.57	8.57
		U$_9$ - L$_9$	-253.99	-46.43	0.77	-10.55	0.00	0.90	1.18	0.82	-49.44	0.00	-10.55	Vehicle	Vehicle	-----	-394.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	8.84	8.84
		U$_{10}$ - L$_{10}$	-290.02	-47.12	3.54	-12.18	0.00	0.90	1.18	3.77	-50.17	0.00	-12.18	Vehicle	Vehicle	-----	-442.25	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	9.74	9.74
		U$_{11}$ - L$_{11}$	-312.18	-49.31	7.61	-12.59	0.00	0.90	1.18	8.11	-52.50	0.00	-12.59	Vehicle	Vehicle	-----	-474.07	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	8.62	8.62
		U$_{12}$ - L$_{12}$	-327.28	-46.54	10.97	-13.01	-0.93	0.90	1.18	11.67	-49.55	-0.93	-13.01	Vehicle	Vehicle	-----	-489.87	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	9.58	9.58
		U$_{13}$ - L$_{13}$	-277.21	-39.30	14.62	-11.39	0.00	0.90	1.18	15.57	-41.84	0.00	-11.39	Vehicle	Vehicle	-----	-414.77	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	9.87	9.87
		U$_{14}$ - L$_{14}$	-505.44	-30.72	-44.60	-9.95	-11.34	0.90	1.18	-32.71	-47.48	-9.95	-11.34	Vehicle	Vehicle	-----	-718.80	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	11.51	11.51
		U$_{15}$ - L$_{15}$	-232.94	2.50	-51.71	1.67	-11.17	0.90	1.17	2.62	-54.40	1.67	-11.17	Pedestrian	Vehicle	-----	-373.54	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	8.40	8.40
		U$_{16}$ - L$_{16}$	-260.12	6.03	-54.95	0.83	-12.63	0.90	1.17	6.35	-57.81	0.83	-12.63	Vehicle	Vehicle	-----	-413.31	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	7.02	7.02
		U$_{17}$ - L$_{17}$	-228.24	6.80	-53.32	0.66	-11.76	0.90	1.17	7.16	-56.10	0.66	-11.76	Vehicle	Vehicle	-----	-369.64	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	7.04	7.04
		U$_{18}$ - L$_{18}$	-209.27	8.18	-46.46	-0.03	-11.28	0.90	1.17	8.60	-48.88	-0.03	-11.28	Vehicle	Vehicle	-----	-335.60	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	7.53	7.53
		U$_{19}$ - L$_{19}$	-166.55	8.76	-42.64	-0.07	-9.53	0.90	1.17	9.21	-44.86	-0.07	-9.53	Vehicle	Vehicle	-----	-274.84	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	7.69	7.69
		U$_{20}$ - L$_{20}$	-113.95	8.75	-33.90	-0.43	-7.50	0.90	1.17	9.21	-35.66	-0.43	-7.50	Vehicle	Vehicle	-----	-194.49	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.32	7.32
		U$_{21}$ - L$_{21}$	-62.76	12.73	-25.01	0.00	-5.22	0.90	1.17	13.40	-26.32	0.00	-5.22	Vehicle	Vehicle	-----	-115.80	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	10.55	10.55
		U$_{22}$ - L$_{22}$	-38.94	-5.96	-5.39	-2.04	-2.15	0.90	1.17	-5.67	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	35.98	35.98
		U$_{23}$ - L$_{23}$	-74.43	-30.54	9.31	-6.10	0.48	0.90	1.17	9.79	-32.13	0.48	-6.10	Vehicle	Vehicle	-----	-138.53	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	8.28	8.28
		U$_{24}$ - L$_{24}$	-121.36	-35.78	9.12	-8.17	0.37	0.90	1.17	9.60	-37.64	0.37	-8.17	Vehicle	Vehicle	-----	-206.71	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	6.74	6.74
		U$_{25}$ - L$_{25}$	-169.12	-41.94	8.77	-9.94	0.43	0.90	1.17	9.23	-44.13	0.43	-9.94	Vehicle	Vehicle	-----	-277.22	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	7.75	7.75
		U$_{26}$ - L$_{26}$	-207.97	-44.81	7.94	-11.42	0.14	0.90	1.17	8.35	-47.14	0.14	-11.42	Vehicle	Vehicle	-----	-331.65	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	7.83	7.83
		U$_{27}$ - L$_{27}$	-219.96	-46.72	6.53	-11.49	0.16	0.90	1.17	6.87	-49.16	0.16	-11.49	Vehicle	Vehicle	-----	-349.85	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.20	8.20
		U$_{28}$ - L$_{28}$	-240.91	-42.88	9.40	-12.60	-0.25	0.90	1.17	9.89	-45.12	-0.25	-12.60	Vehicle	Vehicle	-----	-371.83	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	9.42	9.42
		U$_{29}$ - L$_{29}$	-202.73	-37.93	14.20	-10.35	0.00	0.90	1.17	14.94	-39.90	0.00	-10.35	Vehicle	Vehicle	-----	-315.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	12.21	12.21
		U$_{30}$ - L$_{30}$	-518.05	-31.17	-47.73	-8.23	-13.79	0.90	1.18	-33.19	-50.82	-8.23	-13.79	Vehicle	Vehicle	-----	-739.52	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	10.50	10.50
		U$_{31}$ - L$_{31}$	-318.43	6.93	-53.54	0.00	-12.95	0.90	1.18	7.38	-57.00	0.00	-12.95	Vehicle	Vehicle	-----	-488.06	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	6.52	6.52
		U$_{32}$ - L$_{32}$	-358.67	2.17	-58.20	-0.26	-14.65	0.90	1.18	2.31	-61.97	-0.26	-14.65	Vehicle	Vehicle	-----	-546.83	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	7.15	7.15
		U$_{33}$ - L$_{33}$	-325.88	3.27

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.66	-7.91	27.11	14.00	-4.60	0.90	1.24	30.18	-8.81	14.00	-4.60	Pedestrian	Pedestrian	171.39	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**11.29**	**11.29**	-----	-----
		U_1 - L_2	23.90	-17.48	46.13	-4.71	9.20	0.90	1.24	51.35	-19.46	9.20	-4.71	Vehicle	Vehicle	97.82	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.86**	**7.86**	-----	-----
		U_2 - L_3	-49.02	-14.65	16.41	-4.32	3.33	0.90	1.24	18.27	-16.30	3.33	-4.32	Vehicle	Vehicle	-----	-84.92	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**17.49**	**17.49**
		U_3 - L_4	-108.88	-13.36	-5.47	-4.20	-2.10	0.90	1.24	-6.09	-14.87	-2.10	-4.20	Pedestrian	Vehicle	-----	-160.87	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**15.30**	**15.30**
		U_4 - L_4	153.12	6.69	43.67	3.11	7.00	0.90	1.24	48.61	7.44	7.00	3.11	Vehicle	Pedestrian	262.25	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.64**	**7.64**	-----	-----
		U_5 - L_5	186.35	1.43	47.81	2.78	10.66	0.90	1.24	53.23	1.60	10.66	2.78	Vehicle	Pedestrian	311.46	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.72**	**8.72**	-----	-----
		U_6 - L_6	177.52	-10.57	39.08	1.59	12.54	0.90	1.24	43.50	-11.77	12.54	1.59	Vehicle	Vehicle	287.33	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.88**	**10.88**	-----	-----
		U_7 - L_7	173.18	-2.41	40.36	0.41	13.46	0.90	1.24	44.93	-2.68	13.46	0.41	Vehicle	Vehicle	283.54	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.63**	**10.63**	-----	-----
		U_8 - L_8	328.11	-1.42	64.65	-0.13	19.45	0.90	1.20	69.71	-1.54	19.45	-0.13	Vehicle	Vehicle	517.17	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**9.10**	**9.10**	-----	-----
		U_9 - L_{10}	339.70	-1.02	69.19	0.85	18.90	0.90	1.20	74.60	-1.10	18.90	0.85	Vehicle	Vehicle	538.59	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.35**	**8.35**	-----	-----
		U_{10} - L_{11}	313.22	3.69	61.66	1.69	16.46	0.90	1.20	66.48	3.97	16.46	1.69	Vehicle	Pedestrian	493.61	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
		U_{11} - L_{12}	270.68	4.49	50.56	1.81	13.03	0.90	1.20	54.52	4.84	13.03	1.81	Vehicle	Pedestrian	422.76	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.30**	**9.30**	-----	-----
		U_{12} - L_{13}	194.17	-1.10	46.28	0.00	10.79	0.90	1.20	49.90	-1.18	10.79	0.00	Vehicle	Vehicle	317.29	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_{13} - L_{14}	123.57	-8.32	33.15	0.00	5.96	0.90	1.20	35.74	-8.97	5.96	0.00	Vehicle	Vehicle	207.10	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.51**	**8.51**	-----	-----
		U_{14} - L_{15}	-16.32	-18.91	26.60	-2.35	1.48	0.90	1.20	28.68	-20.39	1.48	-2.35	Vehicle	Vehicle	16.06	-47.73	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**15.48**	**15.48**	**15.30**	**15.30**
		U_{15} - L_{15}	59.12	-8.13	35.15	-2.09	6.08	0.90	1.20	37.89	-8.77	6.08	-2.09	Vehicle	Vehicle	126.12	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
		U_{17} - L_{16}	172.14	-8.68	45.76	-1.86	9.93	0.90	1.20	49.34	-9.36	9.93	-1.86	Vehicle	Vehicle	287.92	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_{18} - L_{17}	210.78	-7.36	47.10	-1.53	12.51	0.90	1.20	50.78	-7.93	12.51	-1.53	Vehicle	Vehicle	340.03	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.66**	**8.66**	-----	-----
		U_{19} - L_{18}	242.64	-5.88	47.97	-1.21	13.73	0.90	1.20	51.72	-6.33	13.73	-1.21	Vehicle	Vehicle	382.66	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{20} - L_{19}	257.76	-4.82	40.46	-1.03	15.70	0.90	1.20	43.63	-5.20	15.70	-1.03	Pedestrian	Vehicle	412.22	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.63**	**7.63**	-----	-----
		U_0 - L_1	298.99	-4.01	27.30	-2.21	14.21	0.90	1.18	29.06	-4.27	14.21	-2.21	Pedestrian	Pedestrian	444.94	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.06**	**11.06**	-----	-----
		U_1 - L_2	284.21	-12.74	62.85	-2.66	14.05	0.90	1.18	66.91	-13.56	14.05	-2.66	Vehicle	Vehicle	456.46	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.37**	**7.37**	-----	-----
		U_2 - L_3	221.42	-13.59	51.89	-2.85	11.83	0.90	1.18	55.24	-14.46	11.83	-2.85	Vehicle	Vehicle	359.67	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.77**	**7.77**	-----	-----
		U_3 - L_4	178.30	-15.34	55.11	-3.23	10.08	0.90	1.18	58.67	-16.33	10.08	-3.23	Vehicle	Vehicle	308.07	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U_4 - L_5	53.50	-13.11	34.13	-2.87	5.37	0.90	1.18	36.34	-13.96	5.37	-2.87	Vehicle	Vehicle	116.79	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.30**	**10.30**	-----	-----
		U_5 - L_6	-16.51	-18.63	29.26	-2.92	2.23	0.90	1.18	31.15	-19.83	2.23	-2.92	Vehicle	Vehicle	19.03	-47.25	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**14.26**	**14.26**	**15.59**	**15.59**
		U_6 - L_7	-133.21	-33.80	12.87	-2.50	-2.48	0.90	1.18	13.70	-35.99	-2.48	-2.50	Vehicle	Vehicle	-----	-219.95	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**6.28**	**6.28**
		U_7 - L_7	208.77	-8.61	35.02	0.00	8.33	0.90	1.18	37.29	-9.17	8.33	0.00	Vehicle	Vehicle	319.87	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.58**	**10.58**	-----	-----
		U_8 - L_8	289.58	0.13	55.78	0.00	8.99	0.90	1.18	59.39	0.14	8.99	0.00	Vehicle	Vehicle	453.65	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.08**	**7.08**	-----	-----
		U_{10} - L_9	327.97	-0.04	54.26	1.53	11.09	0.90	1.18	57.77	-0.04	11.09	1.53	Vehicle	Pedestrian	501.45	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.78**	**7.78**	-----	-----
		U_{11} - L_{10}	349.25	-3.45	59.36	0.55	12.45	0.90	1.18	63.20	-3.67	12.45	0.55	Vehicle	Vehicle	536.19	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.83**	**7.83**	-----	-----
		U_{12} - L_{11}	358.20	-8.32	56.00	0.48	13.32	0.90	1.18	59.62	-8.86	13.32	0.48	Vehicle	Vehicle	543.16	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**8.16**	**8.16**	-----	-----
		U_{13} - L_{12}	307.75	-16.16	43.44	-0.24	12.26	0.90	1.18	46.25	-17.21	12.26	-0.24	Vehicle	Vehicle	460.19	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.16**	**10.16**	-----	-----
		U_{14} - L_{13}	260.20	-10.23	37.50	-1.50	11.72	0.90	1.18	39.93	-10.89	11.72	-1.50	Vehicle	Vehicle	390.17	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**12.96**	**12.96**	-----	-----
		U_{15} - L_{14}	208.42	-6.64	50.47	-2.51	11.04	0.90	1.17	53.10	-6.99	11.04	-2.51	Vehicle	Pedestrian	339.98	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.33**	**8.33**	-----	-----
		U_{16} - L_{15}	243.55	-4.78	58.73	-1.48	11.54	0.90	1.17	61.79	-5.03	11.54	-1.48	Vehicle	Vehicle	396.95	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U_{17} - L_{16}	255.86	-7.17	56.92	-0.85	11.67	0.90	1.17	59.88	-7.54	11.67	-0.85	Vehicle	Vehicle	410.47	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U_{18} - L_{17}	235.29	-8.40	54.63	-0.75	10.45	0.90	1.17	57.48	-8.83	10.45	-0.75	Vehicle	Vehicle	380.61	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.23**	**7.23**	-----	-----
		U_{19} - L_{18}	212.11	-10.25	53.82	0.01	8.95	0.90	1.17	56.62	-10.78	8.95	0.01	Vehicle	Vehicle	349.35	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
		U_{20} - L_{20}	168.24	-11.35	48.33	0.06	9.14	0.90	1.17	50.85	-11.94	9.14	0.06	Vehicle	Vehicle	284.82	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
		U_{26} - L_{21}	97.26	-11.06	36.34	0.46	6.66	0.90	1.17	38.24	-11.63	6.66	0.46	Vehicle	Vehicle	176.14	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_{21} - L_{22}	30.60	-20.58	29.72	0.58	3.66	0.90	1.17	31.27	-21.65	3.66	0.58	Vehicle	Vehicle	80.43	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**12.70**	**12.70**	-----	-----
		U_{23} - L_{22}	49.78	-13.23	26.65	-0.72	5.11	0.90	1.17	28.04	-13.92	5.11	-0.72	Vehicle	Vehicle	101.17	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**13.48**	**13.48**	-----	-----
		U_{24} - L_{23}	115.07	-12.37	40.90	-0.72	8.00	0.90	1.17	43.03	-13.02	8.00	-0.72	Vehicle	Vehicle	205.53	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.27**	**7.27**	-----	-----
		U_{25} - L_{24}	179.22	-12.03	49.00	-0.73	10.10	0.90	1.17	51.55	-12.66	10.10	-0.73	Vehicle	Vehicle	300.00	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.23**	**8.23**	-----	-----
		U_{26} - L_{25}	220.97	-10.55	51.63	-0.57	11.89	0.90	1.17	54.32	-11.10	11.89	-0.57	Vehicle	Vehicle	357.88	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.91**	**7.91**	-----	-----
		U_{27} - L_{26}	234.87	-6.97	50.32	-0.35	11.45	0.90	1.17	52.94	-7.33	11.45	-0.35	Vehicle	Vehicle	374.15	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.85**	**7.85**	-----	-----
		U_{28} - L_{27}	253.15	-7.44	48.91	-0.28	12.25	0.90	1.17	51.46	-7.83	12.25	-0.28	Vehicle	Vehicle	395.99	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.88**	**8.88**	-----	-----
		U_{29} - L_{28}	215.91	-16.09	41.43	0.00	10.20	0.90	1.17	43.58	-16.93	10.20	0.00	Vehicle	Vehicle	337.35	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
		U_{30} - L_{29}	180.73	-8.13	35.69	-0.90	8.90	0.90	1.17	37.55	-8.56	8.90	-0.90	Vehicle	Vehicle	283.76	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.52**	**12.52**	-----	-----
		U_{31} - L_{31}	294.99	-7.66	51.70	-1.64	12.90	0.90	1.18	55.04	-8.16	12.90	-1.64	Vehicle	Vehicle	455.04	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.77**	**8.77**	-----	-----
		U_{32} - L_{32}	342.70	-7.02	58.72	-0.55	13.70	0.90	1.18	62.52	-7.48	13.70	-0.55	Vehicle	Vehicle	526.79	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.96**	**6.96**	-----	-----
		U_{33} - L_{33}	363.39	-1.48	56.34	0.37	13.78	0.90	1.18	59.99	-1.58	13.78	0.37	Vehicle	Vehicle	550.39	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Location: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | ZZ Axis Moment Properties: Max. Pos. Mom. Start | Max. Pos. Mom. End | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | I_{DL} (in^4) | Shape Factor | M_p (k-in) | Formula (If Term = "Truss") F_y*S_top | M_y (k-in) | Equivalent Mom. Factor a | $C_{m(x)}$ | I_{LL+I} (in^4) | Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | YY Axis Moment Properties: Max. Neg. Mom. Start | Max. Neg. Mom. End | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula (If Term = "Truss") F_y*S_top | M_y (k-in) | Equivalent Mom. Factor a | $C_{m(y)}$ | I_{LL+I} (in^4) | Yield Axial Tension | Yield Moment Tension | Yield Total | Pass | Tension Axial Tension | Fracture Moment Tension | Fracture Total | Pass | Buckle Axial Tension | Buckle Moment Tension | Buckle Total | Pass | Compression Axial Tension | Yield Moment Tension | Yield Total | Pass |
|---|---|---|---

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Use AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

(Case I considered in Max. Tension/Compression Load)

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load		Live Load (Max)		Live Load (Min)		Pedestrian Load (Max)		Pedestrian Load (Min)	
		Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)
Structure 1	L_0-L_1	-44.17	-99.07	4.07	-8.19	-9.73	0.75				
	L_1-L_2	-131.02	-112.64	2.71	-10.83	-5.94	-7.60				
	L_2-L_3	-52.05	-79.06	3.76	-2.77	-11.52	-8.80				
	L_3-L_4	18.36	16.12	1.05	3.92	-13.11	-11.09				
	L_4-L_5	-68.34	-112.03	3.01	-5.13	-7.64	-11.66				
	L_5-L_6	8.36	-229.14	2.36	4.53	-8.74	-0.38				
	L_6-L_7	62.83	171.52	3.19	-0.40	-10.53	0.72				
	L_7-L_8	1.61	499.47	8.89	3.46	-6.57	9.56				
	L_8-L_9	439.88	-25.12	8.75	-5.12	-5.29	0.15				
	L_9-L_{10}	204.03	-117.02	4.39	-3.73	-5.20	-1.21				
	L_{10}-L_{11}	168.12	-117.13	4.10	-1.95	-3.29	-5.27				
	L_{11}-L_{12}	239.72	-217.25	3.13	-5.42	-3.70	-2.80				
	L_{12}-L_{13}	-19.73	-128.50	2.57	1.24	-6.97	-6.29				
	L_{13}-L_{14}	175.78	-425.21	5.83	-16.89	-8.15	-9.84				
	L_{14}-L_{15}	-409.28	-20.79	2.70	-2.76	-6.85	-3.10				
	L_{15}-L_{16}	-209.39	-318.68	0.97	0.13	-15.58	-10.27				
	L_{16}-L_{17}	374.46	83.94	1.76	-0.25	-14.66	0.52				
	L_{17}-L_{18}	-171.07	19.86	0.38	-0.63	-8.42	-1.34				
	L_{18}-L_{19}	-208.33	253.78	0.49	-0.91	-2.39	0.13				
	L_{19}-L_{20}	-84.78	1.02	0.36	-0.38	-8.14	3.77				
	L_{20}-L_{21}	10.35	-213.29	3.07	-9.28	-0.38	0.84				
	L_{21}-L_{22}	34.16	-247.73	3.16	-9.44	-0.38	0.84				
	L_{22}-L_{23}	-0.36	-194.33	3.01	-9.19	-4.91	-9.35				
	L_{23}-L_{24}	-287.80	-299.08	1.16	-4.19	-17.03	-11.21				
	L_{24}-L_{25}	-287.80	-299.08	1.16	-4.19	-17.03	-11.21				
	L_{25}-L_{26}	-467.54	-273.29	2.26	3.37	-25.58	-16.17				
	L_{26}-L_{27}	-310.55	-45.89	3.78	5.12	-24.54	7.20				
	L_{27}-L_{28}	-261.97	188.33	2.46	5.05	-12.85	-2.71				
	L_{28}-L_{29}	-261.97	188.33	2.46	5.05	-12.85	-2.71				
	L_{29}-L_{30}	-131.48	389.15	2.82	5.09	-11.55	0.81				
	L_{30}-L_{31}	-164.35	-140.48	4.46	-0.88	-13.52	-2.48				
	L_{31}-L_{32}	-367.47	994.41	17.09	3.30	-36.33	17.00				
	L_{32}-L_{33}	912.03	-326.86	17.67	-10.78	-0.74	0.14				
	L_{33}-L_{34}	-289.13	41.95	1.24	-0.40	-4.13	-1.24				
	L_{34}-L_{35}	515.59	-35.24	7.34	-4.96	-4.28	-5.53				
	L_{35}-L_{36}	1,018.53	-18.58	10.75	-0.70	-5.13	-3.83				
	L_{36}-L_{37}	-252.02	-29.09	4.75	2.07	-7.68	-7.73				
	L_{37}-L_{38}	-230.55	-46.37	2.88	-7.57	-6.73	8.40				
	L_{38}-L_{39}	-41.53	-186.96	2.31	2.06	-15.15	-18.23				
	L_{39}-L_{40}	-197.37	33.23	1.15	0.43	-9.15	-1.24				
	L_{40}-L_{41}	-108.53	-10.73	1.42	3.83	-16.81	-5.54				
	L_{41}-L_{42}	-108.53	-10.73	1.42	3.83	-16.81	-5.54				
	L_{42}-L_{43}	-65.47	170.47	1.82	4.21	-11.49	-2.13				
	L_{43}-L_{44}	-30.98	151.24	3.28	-1.68	-14.35	3.18				
	L_{44}-L_{45}	-19.38	193.41	2.81	-2.11	-13.95	-5.84				
	L_{45}-L_{46}	-273.03	178.20	1.51	0.84	-9.64	-0.51				
	L_{46}-L_{47}	740.88	-268.17	17.76	-11.02	-1.05	0.08				
	L_{47}-L_{48}	-140.43	-76.07	2.68	-0.52	-12.92	2.74				
	L_{48}-L_{49}	-277.39	-114.86	3.16	-0.29	-13.50	1.52				
	L_{49}-L_{50}	-147.94	-145.21	4.70	-10.65	-3.65	-3.33				
	L_{50}-L_{51}	-59.51	-97.79	3.77	-3.12	-23.00	-18.89				
	L_{51}-L_{52}	-95.37	-212.64	4.89	-10.13	-6.65	-7.46				
	L_{52}-L_{53}	-277.39	-114.86	3.16	-0.29	-13.50	1.52				
	L_{53}-L_{54}	-182.93	-415.63	3.90	2.12	-23.00	-18.89				
	L_{54}-L_{55}	-370.36	-165.17	2.65	0.64	-25.29	9.19				
	L_{55}-L_{56}	-284.74	-218.62	3.00	0.64	-25.29	9.19				
	L_{56}-L_{57}	-304.19	-21.34	1.09	-0.25	-19.72	-2.45				
	L_{57}-L_{58}	-227.31	59.39	0.84	-0.67	-12.48	3.02				
	L_{58}-L_{59}	-227.31	59.39	0.84	-0.67	-12.48	3.02				
	L_{59}-L_{60}	-43.83	-117.87	6.24	-2.39	-0.34	0.35				
	L_{60}-L_{61}	-152.35	-177.62	3.93	-7.86	-0.67	-1.39				
	L_{61}-L_{62}	-152.35	-177.62	3.93	-7.86	-0.67	-1.39				
	L_{62}-L_{63}	-55.48	-320.94	3.46	-6.46	-5.76	-6.93				
	L_{63}-L_{64}	-64.07	-371.05	1.33	-16.89	-11.68	-19.26				
	L_{64}-L_{65}	-370.76	82.43	1.26	-0.20	-20.16	0.30				
	L_{65}-L_{66}	-200.77	-149.87	2.52	-2.52	-10.08	0.16				
	L_{66}-L_{67}	-131.78	166.76	2.96	-0.37	-9.54	3.95				
	L_{67}-L_{68}	-131.78	166.76	2.96	-0.37	-9.54	3.95				
	L_{68}-L_{69}	-361.88	-172.92	10.12	-4.12	-0.29	0.11				
	L_{69}-L_{70}	-97.50	-21.66	0.84	-0.54	-6.49	-2.04				
	L_{70}-L_{71}	-189.90	5.62	0.80	-12.34	-4.55	-5.80				
	L_{71}-L_{72}	-189.90	5.62	0.80	-12.34	-4.55	-5.80				
	L_{72}-L_{73}	-38.98	-56.51	2.40	-1.10	-13.06	-8.59				
	L_{73}-L_{74}	-66.52	-29.78	0.67	-0.66	-7.74	3.06				

ZZ Axis Moments from STAAD

| Location | Member | Max. Pos. Mom. | | Max. Neg. Mom. | | S_{tot} | S_b | S_t | Z_z | I | I_{xx} | Shape Factor | M_p | Formula 1.8 Term * F.*S_{tot} | M_r | Equivalent Mom. Factor | | | |

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HF1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-k-in	Dead Load End-k-in	Live Load (Max) Start-k-in	Live Load (Max) End-k-in	Pedestrian Load (Max) Start-k-in	Pedestrian Load (Min) End-k-in	Lane Reduction & Impact Live Load Start-k-in	Lane Reduction & Impact Live Load End-k-in	Impact Pedestrian Load Max Start-k-in	Impact Pedestrian Load Max End-k-in	Max. Pos. Mom. Start k-in	Max. Pos. Mom. End k-in	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I_x (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula f & Term f * S_{bot}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(x)}$	$C_{b(x)}$
Structure 1	U_0–L_1	-56.29	86.22	0.53	-0.71	-3.39	3.80					0.00	0.00	-63.97	99.79	-132.00	178.15	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_1–L_1	-14.44	23.27	0.70	-0.70	-3.50	3.34					0.00	0.00	-6.58	18.08	-79.52	88.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_1–U_2	36.84	-35.22	1.89	-1.69	-2.34	2.58					0.00	0.00	80.71	-75.18	7.18	-0.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2–L_2	49.77	-49.19	2.01	-1.80	-1.53	1.82					0.00	0.00	108.37	-104.22	-11.53	10.02	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_2–U_3	57.71	-69.80	3.16	-3.52	-2.24	-0.03					0.00	0.00	129.88	-151.82	70.80	-91.17	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_3–L_3	62.32	-67.29	3.60	-3.87	-4.01	-0.66					0.00	0.00	139.29	-159.90	87.47	-97.84	24.8	25.80	25.67	34.66	4	1276.0	1.67	1464	1.5	1328.6
	U_4–L_4	106.28	-118.16	4.68	-4.84	-0.13	0.11					0.00	0.00	219.48	-237.58	135.98	-151.63	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3
	U_5–L_5	-10.96	6.72	5.40	-4.49	-4.10	4.92					0.00	0.00	79.56	-103.92	85.43	54.23	107.1	107.11	107.11	162.71	26	2058.9	1.52	5369	1.5	5302.3
	U_6–L_6	4.13	-16.04	5.13	-4.14	-5.23	5.65					0.00	0.00	-183.01	212.76	-256.28	292.36	33.1	33.05	32.91	54.51	14	1809.7	1.65	1929	1.5	1758.2
	U_7–L_7	-102.02	95.66	0.17	-0.23	-3.26	3.42					0.00	0.00	-129.73	120.44	-187.39	181.88	35.5	35.5	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_8–L_8	-111.13	106.65	0.39	-0.05	-3.71	4.42					0.00	0.00	-137.95	204.45	-196.89	276.19	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_9–L_9	-96.42	93.90	0.09	-0.60	-3.46	3.54					0.00	0.00	-115.35	114.40	-183.46	181.55	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5	1044.0
	U_{10}–L_{10}	-60.91	75.94	0.84	-0.82	-3.21	3.39					0.00	0.00	-65.09	94.86	-133.24	155.50	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{11}–L_{11}	-33.59	49.06	0.42	-0.42	-2.81	2.93					0.00	0.00	-20.31	36.28	-83.24	92.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{12}–L_{12}	8.32	-15.87	3.13	-3.28	-1.48	1.53					0.00	0.00	63.41	-75.84	-14.15	5.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{13}–L_{13}	47.73	-50.39	3.24	-3.34	-0.90	0.72					0.00	0.00	116.98	-121.62	46.91	-53.48	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{14}–L_{14}	61.55	-72.81	3.27	-3.44	-0.46	0.47					0.00	0.00	135.03	-152.44	72.24	-86.78	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	U_{15}–L_{15}	137.13	-138.23	0.58	-0.76	-0.64	0.60					0.00	0.00	266.86	-276.55	162.22	-164.90	33.1	33.09	33.09	53.51	4	1187.1	1.67	1766	1.5	1737.0
	U_{16}–L_{16}	157.87	-153.86	0.27	-0.11	-0.66	0.59					0.00	0.00	310.01	-302.85	194.17	-190.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{17}–L_{17}	131.38	-213.66	4.44	-5.70	-0.29	0.48					0.00	0.00	245.48	-373.59	165.97	-269.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{18}–L_{18}	-147.13	191.00	3.34	-3.56	-0.65	0.77					0.00	0.00	-162.97	237.57	-211.93	309.33	42.7	42.74	42.74	65.30	8	1711.0	1.53	2357	1.5	2312.1
	U_{19}–L_{19}	-122.87	130.77	0.60	-0.62	-4.91	4.92					0.00	0.00	-149.72	159.72	-241.28	251.77	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{20}–L_{20}	-77.97	73.75	0.74	-0.77	-5.27	5.31					0.00	0.00	-183.01	212.76	-256.28	292.36	33.1	33.05	32.91	54.51	14	1809.7	1.65	1929	1.5	1758.2
	U_{21}–L_{21}	-62.46	69.03	0.48	-0.49	-2.92	2.96					0.00	0.00	-73.24	81.63	-129.71	138.85	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
	U_{22}–L_{22}	-37.86	43.29	0.72	-0.72	-2.61	2.69					0.00	0.00	-37.26	46.87	-91.41	97.49	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{23}–L_{23}	-9.11	15.69	1.09	-1.34	-2.84	2.99					0.00	0.00	11.16	-1.78	-59.06	70.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{24}–L_{24}	14.84	-14.93	1.68	-1.71	-2.50	2.55					0.00	0.00	47.18	-47.81	-22.22	23.01	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{25}–L_{25}	33.59	-33.29	1.42	-1.40	-2.15	2.42					0.00	0.00	82.24	-81.74	-6.28	6.24	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{26}–L_{26}	88.81	-97.92	3.87	-4.03	-1.01	0.84					0.00	0.00	179.76	-194.20	98.69	-113.33	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
	U_{27}–L_{27}	153.08	-153.02	3.11	-3.00	-0.34	0.27					0.00	0.00	283.75	-288.21	190.47	-194.87	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{28}–L_{28}	140.09	-147.00	4.87	-5.15	-0.20	-0.06					0.00	0.00	263.00	-276.56	178.86	-192.08	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{29}–L_{29}	148.96	-153.44	4.78	-4.95	-0.12	0.18					0.00	0.00	272.96	-281.67	191.69	-196.92	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{30}–L_{30}	143.67	-139.95	4.36	-4.27	-0.21	0.03					0.00	0.00	263.47	-254.98	184.61	-177.77	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{31}–L_{31}	185.41	-182.32	5.82	-5.56	-0.54	0.53					0.00	0.00	337.65	-329.66	232.11	-228.41	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{32}–L_{32}	72.60	71.13	7.74	-7.79	-0.14	0.15					0.00	0.00	198.96	191.31	-28.47	-73.50	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{33}–L_{33}	-128.28	129.98	0.55	-0.49	-5.14	4.77					0.00	0.00	-157.72	160.99	-251.10	247.26	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{34}–L_{34}	-89.34	88.53	0.33	-0.30	-4.00	3.77					0.00	0.00	-126.45	130.59	-203.72	208.45	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{35}–L_{35}	-125.94	122.64	0.56	-0.52	-5.50	5.42					0.00	0.00	-154.61	150.86	-254.01	248.29	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{36}–L_{36}	-109.69	106.91	0.73	-0.72	-5.52	5.72					0.00	0.00	9.23	-9.08	-192.58	-179.63	22.7	22.72	22.72	34.74	3	1022.1	1.67	1090	1.5	1044.0
	U_{37}–L_{37}	-75.31	73.75	0.74	-0.77	-5.27	5.31					0.00	0.00	-183.01	212.76	-256.28	292.36	33.1	33.05	32.91	54.51	14	1809.7	1.65	1929	1.5	1758.2
	U_{38}–L_{38}	-43.25	43.74	0.79	-0.70	-3.12	3.17					0.00	0.00	-43.21	49.37	-157.48	108.86	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{39}–L_{39}	29.76	-34.59	1.41	-1.40	-2.71	2.77					0.00	0.00	-21.70	32.64	-84.41	93.49	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{40}–L_{40}	-4.28	1.60	1.58	-1.58	-1.75	1.79					0.00	0.00	24.26	-23.52	-30.38	31.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{41}–L_{41}	38.83	-38.53	3.04	-3.04	-0.98	1.01					0.00	0.00	87.33	-86.94	17.64	-17.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{42}–L_{42}	37.81	-39.35	-11.99	9.99	0.72	0.00					0.00	0.00	109.69	-117.70	44.94	-54.72	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{43}–L_{43}	52.68	-51.36	4.12	-4.08	-0.74	0.71					0.00	0.00	149.16	-146.74	69.40	-68.09	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1
	U_{44}–L_{44}	107.15	-104.64	5.60	-5.47	-0.26	0.24					0.00	0.00	227.63	-223.50	112.92	-110.45	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3
	U_{45}–L_{45}	108.60	-105.79	6.27	-6.46	-0.79	0.76					0.00	0.00	241.54	-243.54	125.70	-125.04	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{46}–L_{46}	79.14	78.70	5.75	-5.93	-0.19	0.21					0.00	0.00	198.46	197.31	-31.39	-73.50	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{47}–L_{47}	-114.56	114.55	0.29	-0.96	-3.28	3.32					0.00	0.00	-252.10	246.65	142.66	-143.69	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{48}–L_{48}	-13.74	5.73	4.42	-4.30	-1.33	1.37					0.00	0.00	-130.92	120.37	-203.72	208.45	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{49}–L_{49}	-121.12	118.67	0.59	-0.55	-4.59	4.33					0.00	0.00	-147.60	145.07	-233.74	226.11	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{50}–L_{50}	-92.37	86.40	0.47	-0.65	-4.16	4.05					0.00	0.00	-112.22	101.54	-189.22	179.64	43.2	43.24	43.16	70.66	10	1515.6	1.63	2332	1.5	2140.4
	U_{51}–L_{51}	-63.43	70.59	0.59	-0.51	-4.19	4.21					0.00	0.00	-72.74	83.28	-128.21	140.26	20.80	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
	U_{52}–L_{52}	-32.66	38.67	0.78	-0.67	-2.13	2.31					0.00	0.00	29.44	33.87	-77.76	88.65	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{53}–L_{53}	-16.10	17.75	0.74	-0.74	-1.24	1.29					0.00	0.00	12.74	-12.07	-41.53	49.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{54}–L_{54}	4.46	-6.40	2.50	-2.70	-1.79	1.57					0.00	0.00	31.89	-34.45	-22.91	20.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{55}–L_{55}	24.61	-25.50	3.05	-3.05	-0.97	1.00					0.00	0.00	57.25	-58.70	17.64	-17.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{56}–L_{56}	47.22	-50.55	3.16	-3.28	-0.58	0.59					0.00	0.00	40.21	-41.94	-7.41	7.49	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{57}–L_{57}	52.77	-54.32	4.48	-4.73	-0.26	0.26					0.00	0.00	148.43	-156.13	-22.82	7.15	107.1	107.13	107.11	162.71	26	2058.9	1.52	5369	1.5	5302.3
	U_{58}–L_{58}	-104.86	-112.00	6.38	-6.30	-0.83	0.79					0.00	0.00	242.23	-230.31	122.51	-132.63	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{59}–L_{59}	-108.12	-132.79	4.49	-6.19	-0.42	0.69					0.00	0.00	57.38	-79.09	-0.34	8.75	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{60}–L_{60}	-124.18	120.15	0.53	-0.51	-5.26	5.03					0.00	0.00	-150.47	147.00	-255.10	252.04	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{61}–L_{61}	-109.22	116.95	0.43	-0.41	-4.96	4.93					0.00	0.00	-134.69	145.16	-225.40	234.91	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{62}–L_{62}	-92.87	89.54	0.59	-0.59	-4.73	4.70					0.00	0.00	-112.74	109.13	-196.13	189.62	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{63}–L_{63}	-48.65	58.79	0.56	-0.50	-3.62	3.67					0.00	0.00	-57.21	71.23	-110.45	120.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{64}–L_{64}	-19.55	22.09	0.77	-0.77	-2.37	2.45					0.00	0.00	-8.01	19.37	-79.52	88.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{65}–L_{65}	9.99	-11.91	3.71	-4.17	-0.07	0.11					0.00	0.00	47.90	-53.97	-0.87	1.47	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{66}–L_{66}	135.46	-154.10	5.10	-5.56	-0.17	0.16					0.00	0.00	266.91	-293.90	173.17	-197.73	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0
	U_{67}–L_{67}	52.77	-74.32	4.48	-5.73	-5.26	5.98					0.00	0.00	148.43	-196.13	-22.82	7.15	107.1	107.13	107.11	162.71	26	2058.9	1.52	5369	1.5	5302.3
	U_0–L_{14}	99.11	-131.50	3.94	-4.88	-0.43	0.05					0.00	0.00	50.94	-60.60	-5.50	0.58	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{14}–L_{28}	95.00	-87.91	3.71	-4.17	-0.07	-0.11					0.00	0.00	47.90	-53.97	-0.87	1.47	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{28}–L_{42}	135.46	-154.10	5.10	-5.56	-0.17	0.16					0.00	0.00	66.01	-71.98	-2.25	2.01	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{42}–L_{56}	5.87	-8.62	4.46	-4.17	-1.06	0.94					0.00	0.00	59.98	-55.71	-14.11	12.53	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{56}–L_{70}	20.19	-40.81	2.83	-4.49	-1.45	-0.45					0.00	0.00	37.83	-60.24	-19.34	6.03	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00

M_2 Information — YY Axis Moments from STAAD

Location	Member	Dead Load Start-k-in	Dead Load End-k-in	Live Load (Max) Start-k-in	Live Load (Max) End-k-in	Pedestrian Load (Max) Start-k-in	Pedestrian Load (Min) End-k-in	Lane Reduction & Impact Live Load Start-k-in	Lane Reduction & Impact Live Load End-k-in	Impact Pedestrian Load Max Start-k-in	Impact Pedestrian Load Max End-k-in	Max. Pos. Mom. Start k-in	Max. Pos. Mom. End k-in	S_{top} (in^3)	S_{bot} (in^3)	Z_y (in^3)	I_{yy} (in^4)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	Formula f & Term f * S_{bot}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(y)}$	$C_{b(y)}$
Structure 1	U_0–L_1	-11.64	-3.66	-104.74	-49.64	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_1–L_1	4.77	-1.16	-24.33	-3.73	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	L_1–U_2	20.35	5.75	-0.97	19.52	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_2–L_2	-13.61	3.05	1.76	1.39	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	L_2–U_3	-33.49	-8.28	-22.79	8.54	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_3–L_3	44.47	-4.89	18.69	23.99	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	L_3–U_4	-68.79	-34.92	6.61	28.57	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_4–L_4	111.15	4.22	-31.74	-1.55	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_5–L_5	163.12	42.48	50.69	17.86	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	L_5–U_6	-20.16	-2.51	-16.10	-24.88	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_6–L_6	-21.53	-2.12	-113.42	-71.09	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	L_6–U_7	-29.24	4.77	-67.71	-48.45	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_7–L_7	-50.38	-20.18	-4.39	-1.03	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_8–L_8	-53.24	-23.93	-63.48	-45.90	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_9–L_9	-48.23	-12.70	-76.60	-60.97	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{10}–L_{10}	-53.57	-23.66	-34.50	-5.67	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{11}–L_{11}	7.01	-11.81	26.01	20.57	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{12}–L_{12}	32.70	-8.16	31.29	11.97	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{13}–L_{13}	82.96	17.71	-1.04	8.06	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{14}–L_{14}	297.72	90.47	-269.71	85.30	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{14}–L_{28}	95.00	-87.91	3.71	-4.17	-0.07	-0.11					0.00	0.00	47.90	-53.97	-0.87	1.47	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{28}–L_{42}	135.46	-154.10	5.10	-5.56	-0.17	0.16					0.00	0.00	66.01	-71.98	-2.25	2.01	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{42}–L_{56}	5.87	-8.62	4.46	-4.17	-1.06	0.94					0.00	0.00	59.98	-55.71	-14.11	12.53	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00
	U_{56}–L_{70}	20.19	-40.81	2.83	-4.49	-1.45	-0.45					0.00	0.00	37.83	-60.24	-19.34	6.03	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0	0.00

Tension

Location	Member	Yield Start-k-in	Yield Moment Portion	Yield Total	Pass	Fracture Axial	Fracture Moment	Fracture Total	Pass
Structure 1	U_0–L_1	—	—	—	—	—	—	—	—
	U_1–L_1	—	—	—	—	—	—	—	—
	L_1–U_2	—	—	—	—	—	—	—	—
	U_2–L_2	—	—	—	—	—	—	—	—
	L_2–U_3	—	—	—	—	—	—	—	—
	U_3–L_3	—	—	—	—	—	—	—	—
	L_3–U_4	—	—	—	—	—	—	—	—
	U_4–L_4	—	—	—	—	—	—	—	—
	U_5–L_5	—	—	—	—	—	—	—	—
	L_5–U_6	—	—	—	—	—	—	—	—
	U_6–L_6	—	—	—	—	—	—	—	—
	L_6–U_7	—	—	—	—	—	—	—	—
	U_7–L_7	—	—	—	—	—	—	—	—
	U_8–L_8	—	—	—	—	—	—	—	—

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.44	7.53	0.21	-9.16	-1.60	0.78	2.83	-2.19	-21.38	10.41
	L_1-L_2	-3.41	-8.42	0.28	-0.11	-1.33	0.12	3.77	-1.50	-17.75	1.60
	L_2-L_3	-7.69	13.41	1.22	-0.12	-1.14	-0.45	5.00	-1.60	-13.26	-5.95
	L_3-L_4	7.93	-13.37	0.32	0.08	-0.92	-0.87	4.25	1.07	-12.24	-11.61
	L_4-L_5	-14.61	18.52	0.14	0.51	-1.06	-0.47	1.84	0.61	-20.79	-5.53
	L_5-U_6	-37.44	76.90	0.33	0.80	-2.95	1.39	4.03	13.82	-69.94	18.53
	U_6-U_7	-77.69	73.41	1.32	-0.12	-2.75	1.35	4.11	-1.50	-35.54	17.49
	U_7-L_8	-8.75	101.59	0.67	0.55	-1.78	3.25	8.91	7.40	-23.82	-43.41
	L_8-L_9	-5.11	118.70	1.39	0.82	-1.20	2.27	16.75	168.04	-15.58	-19.38
	L_9-L_{10}	-77.69	73.41	1.32	-0.12	-2.75	1.35	4.11	-1.50	-35.54	17.49
	L_{10}-U_{11}	-43.88	73.22	0.39	0.84	-2.25	0.56	4.99	10.80	-29.06	7.28
	U_{11}-U_{12}	-75.22	72.27	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{12}-L_{13}	-65.20	48.77	0.17	-0.35	-2.05	0.98	2.20	-4.50	-26.58	12.64
	L_{13}-L_{14}	-24.90	8.63	0.31	-0.58	-1.23	0.35	4.04	-7.52	-15.90	4.48
	L_{14}-L_{15}	-0.81	-22.83	0.28	-0.11	-1.33	0.12	3.77	-1.50	-17.75	1.60
	L_{15}-U_{16}	-25.30	9.99	0.44	-0.71	-1.54	0.96	5.68	-9.19	-19.93	12.39
	U_{16}-U_{17}	-37.91	19.09	0.31	-0.58	-1.23	0.35	4.04	-7.52	-15.90	4.48
	U_{17}-L_{18}	-101.94	74.32	0.42	-0.42	-3.81	2.55	5.46	-5.41	-49.32	32.93
	L_{18}-L_{19}	-115.87	80.00	0.38	-0.75	-4.24	2.92	4.90	-6.44	-54.91	37.77
	L_{19}-U_{20}	-75.88	78.94	0.17	-0.16	-3.31	2.86	2.13	-2.91	-42.80	36.94
	U_{20}-U_{21}	-109.41	98.91	0.39	-0.40	-4.09	3.28	4.92	-5.10	-52.27	41.86
	U_{21}-L_{22}	-89.79	78.04	0.26	-0.56	-3.72	3.06	3.26	-5.50	-48.30	39.98
	L_{22}-L_{23}	-90.87	71.82	0.56	-0.49	-3.76	2.84	7.18	-6.20	-48.63	36.25
	L_{23}-U_{24}	-53.45	43.14	0.24	-0.34	-2.14	1.39	3.04	-3.66	-28.54	14.77
	U_{24}-U_{25}	-20.35	9.86	0.39	-0.57	-1.68	1.32	4.96	-7.32	-21.43	16.89
	U_{25}-L_{26}	-1.38	-11.28	0.14	-0.06	-0.74	0.48	1.82	-2.68	-9.56	10.48
	L_{26}-L_{27}	6.85	-23.87	0.76	-1.17	-1.19	0.14	5.54	-12.42	-24.67	9.61
	L_{27}-U_{28}	-44.41	35.31	0.43	-0.97	-1.93	0.75	5.54	-12.42	-24.67	9.61
	U_{28}-U_{29}	-96.57	69.69	0.33	-0.80	-3.46	2.34	1.68	-10.71	-42.62	28.22
	U_{29}-L_{30}	-85.40	67.30	0.27	-0.55	-3.32	1.58	3.41	-7.05	-42.47	20.23
	L_{30}-L_{31}	-42.73	33.41	0.22	-0.34	-1.91	1.27	2.65	-4.52	-25.12	13.46
	L_{31}-U_{32}	-109.84	116.34	0.46	0.19	-3.84	3.16	5.93	2.44	-49.10	40.41
	U_{32}-U_{33}	-141.98	130.02	0.63	0.31	-4.90	3.60	8.02	-3.94	-62.62	47.03
	U_{33}-L_{34}	-82.73	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{34}-L_{35}	-11.96	79.20	1.01	0.28	-2.61	3.13	12.73	3.52	-32.94	39.53
	L_{35}-U_{36}	-77.27	72.27	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{36}-U_{37}	-66.19	89.97	0.40	-0.26	-3.65	2.95	3.60	-3.22	-46.02	37.21
	U_{37}-L_{38}	-58.07	72.69	0.36	-0.40	-3.46	2.34	4.52	-5.06	-43.66	29.48
	L_{38}-L_{39}	-37.84	37.59	0.35	-0.36	-2.40	1.30	4.47	-4.55	-30.34	16.43
	L_{39}-U_{40}	-29.07	23.72	0.28	-0.29	-1.90	1.03	3.56	-3.62	-24.13	13.06
	U_{40}-U_{41}	-10.03	3.77	0.47	-0.78	-1.42	0.28	5.97	-9.80	-17.95	3.04
	U_{41}-L_{42}	-8.78	2.44	0.27	-0.51	-1.39	0.27	3.51	-5.76	-17.58	3.00
	L_{42}-L_{43}	-19.43	19.57	0.49	-0.80	-1.57	1.17	6.17	-10.06	-19.81	14.62
	L_{43}-U_{44}	-42.73	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	U_{44}-U_{45}	-46.51	58.29	0.48	-0.54	-3.91	2.48	6.07	-6.77	-44.20	31.45
	U_{45}-L_{46}	-54.32	68.37	0.40	-0.49	-3.62	2.96	5.01	-6.16	-45.73	37.35
	L_{46}-L_{47}	-49.49	72.12	0.28	-0.17	-4.62	3.86	3.57	-2.18	-58.28	48.71
	L_{47}-U_{48}	-35.84	53.55	0.27	0.27	-2.70	3.24	16.19	3.44	-34.52	43.43
	U_{48}-U_{49}	-26.26	85.09	0.50	-0.20	-3.42	2.83	6.40	-2.56	-43.68	36.16
	U_{49}-L_{50}	-78.38	71.14	0.46	-0.02	-3.35	2.09	5.81	-0.31	-42.85	26.68
	L_{50}-L_{51}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{51}-U_{52}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{52}-U_{53}	-77.06	73.96	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{53}-L_{54}	-78.38	71.14	0.46	-0.02	-3.35	2.09	5.81	-0.31	-42.85	26.68
	L_{54}-L_{55}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{55}-U_{56}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{56}-U_{57}	-13.29	3.86	0.47	-0.78	-1.42	0.28	5.97	-9.80	-17.95	3.04
	U_{57}-L_{58}	-33.71	19.61	0.42	-0.37	-2.19	1.43	5.37	-4.75	-27.92	18.31
	L_{58}-L_{59}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{59}-U_{60}	-78.83	60.14	0.06	-0.51	-4.46	2.92	7.21	-6.46	-57.03	37.36
	U_{60}-U_{61}	-68.12	83.30	0.23	-0.22	-4.55	3.27	3.01	-2.85	-58.80	42.27
	U_{61}-L_{62}	-90.42	64.48	0.28	-0.26	-3.54	2.37	3.60	-3.30	-45.76	30.72
	L_{62}-L_{63}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	L_{63}-U_{64}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{64}-U_{65}	-1.49	-18.99	0.48	-0.87	-1.27	-0.06	6.17	-11.22	-16.44	-0.78
	U_{65}-L_{66}	-33.89	37.99	0.14	-0.59	-2.05	1.51	5.81	-7.56	-26.52	19.01
	L_{66}-L_{67}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{67}-U_{68}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{68}-U_{69}	-73.27	65.81	0.29	0.55	-3.28	1.65	5.37	2.29	-42.40	21.89
	U_{69}-L_{70}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{70}-L_{71}	-38.99	50.41	0.75	0.14	-2.26	2.28	4.70	-1.70	-49.06	40.49
	L_{71}-U_{72}	-75.78	19.68	0.15	0.04	-1.49	-0.26	2.14	-7.27	-19.88	-3.47
	U_{72}-U_{73}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{73}-L_{74}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{74}-L_{75}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{75}-U_{76}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{76}-U_{77}	-77.06	73.96	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{77}-L_{78}	-78.38	71.14	0.46	-0.02	-3.35	2.09	5.81	-0.31	-42.85	26.68
	L_{78}-L_{79}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{79}-U_{80}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{80}-U_{81}	-13.29	3.86	0.47	-0.78	-1.42	0.28	5.97	-9.80	-17.95	3.04
	U_{81}-L_{82}	-33.71	19.61	0.42	-0.37	-2.19	1.43	5.37	-4.75	-27.92	18.31
	L_{82}-L_{83}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{83}-U_{84}	-78.83	60.14	0.06	-0.51	-4.46	2.92	7.21	-6.46	-57.03	37.36
	U_{84}-U_{85}	-68.12	83.30	0.23	-0.22	-4.55	3.27	3.01	-2.85	-58.80	42.27
	U_{85}-L_{86}	-90.42	64.48	0.28	-0.26	-3.54	2.37	3.60	-3.30	-45.76	30.72
	L_{86}-L_{87}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	L_{87}-U_{88}	-1.49	-18.99	0.48	-0.87	-1.27	-0.06	6.17	-11.22	-16.44	-0.78
	U_{88}-U_{89}	-33.89	37.99	0.14	-0.59	-2.05	1.51	5.81	-7.56	-26.52	19.01
	L_{90}-L_{91}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{91}-U_{92}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{92}-U_{93}	-73.27	65.81	0.29	0.55	-3.28	1.65	5.37	2.29	-42.40	21.89
	U_{93}-L_{94}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{94}-L_{95}	-38.99	50.41	0.75	0.14	-2.26	2.28	4.70	-1.70	-49.06	40.49
	L_{95}-U_{96}	-75.78	19.68	0.15	0.04	-1.49	-0.26	2.14	-7.27	-19.88	-3.47
	U_{96}-U_{97}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{97}-L_{98}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{98}-L_{99}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{99}-U_{100}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{100}-U_{101}	-77.06	73.96	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{101}-L_{102}	-78.38	71.14	0.46	-0.02	-3.35	2.09	5.81	-0.31	-42.85	26.68
	L_{102}-L_{103}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{103}-U_{104}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{104}-U_{105}	-13.29	3.86	0.47	-0.78	-1.42	0.28	5.97	-9.80	-17.95	3.04
	U_{105}-L_{106}	-33.71	19.61	0.42	-0.37	-2.19	1.43	5.37	-4.75	-27.92	18.31
	L_{106}-L_{107}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{107}-U_{108}	-78.83	60.14	0.06	-0.51	-4.46	2.92	7.21	-6.46	-57.03	37.36
	U_{108}-U_{109}	-68.12	83.30	0.23	-0.22	-4.55	3.27	3.01	-2.85	-58.80	42.27
	U_{109}-L_{110}	-90.42	64.48	0.28	-0.26	-3.54	2.37	3.60	-3.30	-45.76	30.72
	L_{110}-L_{111}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	L_{111}-U_{112}	-1.49	-18.99	0.48	-0.87	-1.27	-0.06	6.17	-11.22	-16.44	-0.78
	U_{112}-U_{113}	-33.89	37.99	0.14	-0.59	-2.05	1.51	5.81	-7.56	-26.52	19.01
	L_{114}-L_{115}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{115}-U_{116}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{116}-U_{117}	-73.27	65.81	0.29	0.55	-3.28	1.65	5.37	2.29	-42.40	21.89
	U_{117}-L_{118}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{118}-L_{119}	-38.99	50.41	0.75	0.14	-2.26	2.28	4.70	-1.70	-49.06	40.49
	L_{119}-U_{120}	-75.78	19.68	0.15	0.04	-1.49	-0.26	2.14	-7.27	-19.88	-3.47
	U_{120}-U_{121}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{121}-L_{122}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{122}-L_{123}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{123}-U_{124}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{124}-U_{125}	-77.06	73.96	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{125}-L_{126}	-78.38	71.14	0.46	-0.02	-3.35	2.09	5.81	-0.31	-42.85	26.68
	L_{126}-L_{127}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{127}-U_{128}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{128}-U_{129}	-13.29	3.86	0.47	-0.78	-1.42	0.28	5.97	-9.80	-17.95	3.04
	U_{129}-L_{130}	-33.71	19.61	0.42	-0.37	-2.19	1.43	5.37	-4.75	-27.92	18.31
	L_{130}-L_{131}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{131}-U_{132}	-78.83	60.14	0.06	-0.51	-4.46	2.92	7.21	-6.46	-57.03	37.36
	U_{132}-U_{133}	-68.12	83.30	0.23	-0.22	-4.55	3.27	3.01	-2.85	-58.80	42.27
	U_{133}-L_{134}	-90.42	64.48	0.28	-0.26	-3.54	2.37	3.60	-3.30	-45.76	30.72
	L_{134}-L_{135}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	L_{135}-U_{136}	-1.49	-18.99	0.48	-0.87	-1.27	-0.06	6.17	-11.22	-16.44	-0.78
	U_{136}-U_{137}	-33.89	37.99	0.14	-0.59	-2.05	1.51	5.81	-7.56	-26.52	19.01
	L_{138}-L_{139}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{139}-U_{140}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{140}-U_{141}	-73.27	65.81	0.29	0.55	-3.28	1.65	5.37	2.29	-42.40	21.89
	U_{141}-L_{142}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{142}-L_{143}	-38.99	50.41	0.75	0.14	-2.26	2.28	4.70	-1.70	-49.06	40.49
	L_{143}-U_{144}	-75.78	19.68	0.15	0.04	-1.49	-0.26	2.14	-7.27	-19.88	-3.47
	U_{144}-U_{145}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{145}-L_{146}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{146}-L_{147}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{147}-U_{148}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{148}-U_{149}	-77.06	73.96	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{149}-L_{150}	-78.38	71.14	0.46	-0.02	-3.35	2.09	5.81	-0.31	-42.85	26.68
	L_{150}-L_{151}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{151}-U_{152}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{152}-U_{153}	-13.29	3.86	0.47	-0.78	-1.42	0.28	5.97	-9.80	-17.95	3.04
	U_{153}-L_{154}	-33.71	19.61	0.42	-0.37	-2.19	1.43	5.37	-4.75	-27.92	18.31
	L_{154}-L_{155}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{155}-U_{156}	-78.83	60.14	0.06	-0.51	-4.46	2.92	7.21	-6.46	-57.03	37.36
	U_{156}-U_{157}	-68.12	83.30	0.23	-0.22	-4.55	3.27	3.01	-2.85	-58.80	42.27
	U_{157}-L_{158}	-90.42	64.48	0.28	-0.26	-3.54	2.37	3.60	-3.30	-45.76	30.72
	L_{158}-L_{159}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	L_{159}-U_{160}	-1.49	-18.99	0.48	-0.87	-1.27	-0.06	6.17	-11.22	-16.44	-0.78
	U_{160}-U_{161}	-33.89	37.99	0.14	-0.59	-2.05	1.51	5.81	-7.56	-26.52	19.01
	L_{162}-L_{163}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{163}-U_{164}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{164}-U_{165}	-73.27	65.81	0.29	0.55	-3.28	1.65	5.37	2.29	-42.40	21.89
	U_{165}-L_{166}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{166}-L_{167}	-38.99	50.41	0.75	0.14	-2.26	2.28	4.70	-1.70	-49.06	40.49
	L_{167}-U_{168}	-75.78	19.68	0.15	0.04	-1.49	-0.26	2.14	-7.27	-19.88	-3.47
	U_{168}-U_{169}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{169}-L_{170}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{170}-L_{171}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{171}-U_{172}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{172}-U_{173}	-77.06	73.96	0.31	0.80	-2.71	1.31	4.00	2.66	-34.33	8.06
	U_{173}-L_{174}	-78.38	71.14	0.46	-0.02	-3.35	2.09	5.81	-0.31	-42.85	26.68
	L_{174}-L_{175}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{175}-U_{176}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{176}-U_{177}	-13.29	3.86	0.47	-0.78	-1.42	0.28	5.97	-9.80	-17.95	3.04
	U_{177}-L_{178}	-33.71	19.61	0.42	-0.37	-2.19	1.43	5.37	-4.75	-27.92	18.31
	L_{178}-L_{179}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{179}-U_{180}	-78.83	60.14	0.06	-0.51	-4.46	2.92	7.21	-6.46	-57.03	37.36
	U_{180}-U_{181}	-68.12	83.30	0.23	-0.22	-4.55	3.27	3.01	-2.85	-58.80	42.27
	U_{181}-L_{182}	-90.42	64.48	0.28	-0.26	-3.54	2.37	3.60	-3.30	-45.76	30.72
	L_{182}-L_{183}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	L_{183}-U_{184}	-1.49	-18.99	0.48	-0.87	-1.27	-0.06	6.17	-11.22	-16.44	-0.78
	U_{184}-U_{185}	-33.89	37.99	0.14	-0.59	-2.05	1.51	5.81	-7.56	-26.52	19.01
	L_{186}-L_{187}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{187}-U_{188}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{188}-U_{189}	-73.27	65.81	0.29	0.55	-3.28	1.65	5.37	2.29	-42.40	21.89
	U_{189}-L_{190}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{190}-L_{191}	-38.99	50.41	0.75	0.14	-2.26	2.28	4.70	-1.70	-49.06	40.49
	L_{191}-U_{192}	-75.78	19.68	0.15	0.04	-1.49	-0.26	2.14	-7.27	-19.88	-3.47
	U_{192}-U_{193}	-53.53	18.27	0.26	-0.24	-2.04	1.37	3.38	-3.12	-26.37	17.75
	U_{193}-L_{194}	-61.82	22.38	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	L_{194}-L_{195}	-42.08	134.41	0.24	0.25	-3.14	1.39	3.04	-3.66	-28.54	14.77
	L_{195}-U_{196}	-76.64	55.13	0.19	0.17	-3.47	2.34	2.41	2.17	-44.32	29.90
	U_{196}-U_{197}	-77.06	73.96	0.31	0.80

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
See Guidelines for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) Start (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-U_1	-75.12	-0.70	7.51	-6.39	-14.32	-6.59	83.58	-71.16	-189.47	-73.41
	U_1-U_2	-45.81	-20.16	5.32	-0.76	-13.04	-5.40	60.00	-58.19	-161.81	-71.24
	U_2-U_3	-112.19	86.51	1.10	2.71	-12.64	-8.11	12.24	30.13	-140.69	-90.24
	U_3-U_4	-15.68	66.14	1.77	2.85	-12.64	-8.11	19.69	39.71	-139.93	-90.24
	U_4-U_5	-9.16	61.58	1.78	2.57	-18.27	-4.61	13.85	117.19	-276.39	-13.29
	U_5-U_6	42.76	120.09	1.99	2.51	-14.66	-1.94	22.18	27.95	-163.17	-21.55
	U_6-U_7	93.72	43.54	2.96	2.51	-14.66	-3.94	22.82	18.55	-143.39	-43.85
	U_7-U_8	-47.40	525.96	1.03	2.96	-20.81	16.53	11.49	32.98	-231.70	184.07
	U_8-U_9	474.61	-124.72	2.64	-11.03	-5.14	0.47	794.46	-316.10	619.34	-154.95
	U_9-U_{10}	46.76	20.63	2.44	-1.98	-5.84	-3.76	26.30	-21.30	-62.98	-40.49
	U_{10}-U_{11}	64.53	-138.68	3.10	-6.52	-4.81	-6.21	33.42	-70.34	-48.83	-87.27
	U_{11}-U_{12}	27.83	-140.42	2.71	-3.05	-8.20	-6.76	29.26	-32.83	-88.41	-72.90
	U_{12}-U_{13}	-106.18	-154.99	3.37	-0.40	-12.07	-9.00	36.37	-4.35	-130.18	-99.74
	U_{13}-U_{14}	-137.97	-302.09	3.16	-1.45	-12.07	-11.20	36.37	-161.41	-162.79	-413.39
	U_{14}-U_{15}	-245.66	-182.98	1.33	-6.99	-26.93	-12.03	14.35	-75.41	-290.31	-129.73
	U_{15}-U_{16}	-123.52	-326.70	3.50	-10.03	-25.18	-9.29	37.76	-162.04	-271.52	-100.13
	U_{16}-U_{17}	-269.82	-144.58	0.63	0.08	-27.25	-8.88	6.77	0.83	-293.77	-95.73
	U_{17}-U_{18}	-144.16	-67.25	0.65	-2.29	-27.25	-8.88	7.05	-13.16	-294.26	-95.73
	U_{18}-U_{19}	-170.39	-20.48	0.51	-0.06	-15.16	-0.99	5.48	-0.63	-163.48	-10.24
	U_{19}-U_{20}	-186.12	24.46	1.88	-12.02	-12.70	-0.72	20.24	-129.53	-136.95	-7.72
	U_{20}-U_{21}	-139.59	209.21	1.64	-6.02	-3.60	0.08	20.24	-38.98	-136.95	-7.72
	U_{21}-U_{22}	-70.88	-181.00	1.66	-3.29	-7.55	-7.80	17.68	-35.07	-80.43	-83.00
	U_{22}-U_{23}	-52.60	-253.22	3.73	-2.64	-12.44	-13.43	36.37	-52.64	-162.79	-172.82
	U_{23}-U_{24}	-327.18	-325.33	1.05	2.25	-23.62	-17.41	11.21	-23.93	-251.43	-185.32
	U_{24}-U_{25}	-338.53	-367.29	2.08	-4.41	-23.62	-17.41	20.27	-23.27	-300.33	-184.96
	U_{25}-U_{26}	-396.09	-197.74	2.21	4.25	-32.94	-6.70	23.56	45.29	-350.66	-71.35
	U_{26}-U_{27}	-344.15	-179.39	3.29	2.87	-24.51	-21.09	35.02	30.58	-260.95	-224.33
	U_{27}-U_{28}	-229.10	-291.71	2.41	-2.62	-24.51	-21.09	24.82	-34.59	-252.27	-181.86
	U_{28}-U_{29}	-350.17	-90.75	2.80	3.64	-22.00	-8.07	29.84	38.71	-250.17	-85.51
	U_{29}-U_{30}	-229.73	-261.73	3.28	2.76	-22.00	-8.07	34.10	-30.34	-250.17	-85.51
	U_{30}-U_{31}	-167.07	-39.82	3.68	3.52	-19.20	-6.11	38.16	37.45	-204.46	-65.00
	U_{31}-U_{32}	-109.77	170.72	3.20	2.85	-19.67	-2.52	34.10	30.34	-204.46	-65.00
	U_{32}-U_{33}	-261.00	1265.93	2.28	1.23	-27.73	-22.51	24.29	13.06	-299.21	-239.62
	U_{33}-U_{34}	-1192.75	-92.80	29.50	-22.79	-1.77	-1.19	1942.45	-114.39	1326.69	-89.00
	U_{34}-U_{35}	-25.30	11.62	2.37	0.56	-18.74	-7.86	24.97	5.89	-197.13	-62.67
	U_{35}-U_{36}	-24.93	24.93	2.36	0.56	-18.74	-7.86	24.97	5.89	-197.13	-62.67
	U_{36}-U_{37}	-150.58	33.05	3.85	-4.21	-11.35	-6.02	40.93	-44.34	-119.40	-63.29
	U_{37}-U_{38}	-147.30	4.36	4.09	-6.82	-9.84	-11.25	48.27	-71.80	-103.51	-118.31
	U_{38}-U_{39}	-51.66	0.16	1.42	-4.23	-9.84	-11.25	16.72	-23.63	-103.51	-118.31
	U_{39}-U_{40}	-31.67	-34.01	3.14	-3.48	-17.05	-7.93	33.08	-36.57	-179.40	-83.42
	U_{40}-U_{41}	-86.04	-71.79	1.91	-1.51	-13.47	-9.39	16.72	-7.63	-141.30	-98.64
	U_{41}-U_{42}	-60.95	-86.97	2.88	-14.93	-28.13	-10.35	30.30	-157.11	-295.93	-108.93
	U_{42}-U_{43}	-21.85	-21.85	2.52	-2.52	-7.65	-7.65	18.22	-18.22	-79.76	-79.76
	U_{43}-U_{44}	-32.99	-28.66	2.37	3.03	-22.78	-8.64	24.91	31.89	-239.69	-101.39
	U_{44}-U_{45}	-15.12	113.76	2.34	3.06	-22.00	-2.98	24.60	32.24	-231.46	-31.31
	U_{45}-U_{46}	-2.69	209.81	1.93	2.42	-20.06	-3.13	20.25	23.47	-211.03	-32.96
	U_{46}-U_{47}	-2.69	209.81	1.93	2.42	-20.06	-3.13	20.25	23.47	-211.03	-32.96
	U_{47}-U_{48}	-67.67	-2.64	2.60	1.98	-26.38	-8.57	21.12	20.82	-276.50	-90.12
	U_{48}-U_{49}	-122.28	-1156.50	1.54	2.86	-29.38	24.40	46.01	-72.10	-81.42	-75.09
	U_{49}-U_{50}	-1153.78	-196.80	25.53	-17.19	-1.13	2.34	271.83	-182.97	-12.00	-24.96
	U_{50}-U_{51}	-65.67	-2.64	2.60	1.98	-26.38	-8.57	21.12	20.82	-276.50	-90.12
	U_{51}-U_{52}	178.87	-59.61	4.32	-6.77	-7.65	-7.05	46.01	-72.10	-81.42	-75.09
	U_{52}-U_{53}	178.87	-59.61	4.32	-6.77	-7.65	-7.05	37.99	-18.74	-81.42	-75.09
	U_{53}-U_{54}	68.77	-178.57	3.85	3.07	-12.19	-11.38	41.01	32.73	-129.74	-121.13
	U_{54}-U_{55}	-65.67	-2.64	2.60	1.98	-26.38	-8.57	21.12	20.82	-276.50	-90.12
	U_{55}-U_{56}	-236.40	-153.09	2.97	2.30	-18.19	-23.92	31.66	24.47	-193.68	-254.72
	U_{56}-U_{57}	-98.63	-313.14	3.59	-16.74	-48.81	-12.02	38.22	-178.20	-432.40	-127.97
	U_{57}-U_{58}	-139.47	-362.96	3.59	-16.74	-48.81	-12.02	38.22	-178.20	-432.40	-127.97
	U_{58}-U_{59}	-350.27	-386.72	2.29	0.63	-39.68	-16.90	24.33	6.65	-422.47	-179.90
	U_{59}-U_{60}	-350.27	-386.72	2.29	0.63	-39.68	-16.90	24.33	6.65	-422.47	-179.90
	U_{60}-U_{61}	-278.82	-117.63	1.54	-0.41	-31.18	-5.79	16.41	-4.32	-331.97	-51.52
	U_{61}-U_{62}	-282.35	-37.53	1.07	-1.07	-18.61	-5.79	16.41	-4.32	-331.97	-51.52
	U_{62}-U_{63}	-186.18	-74.10	1.97	-9.18	-15.28	-1.28	21.92	-97.70	-182.79	-13.65
	U_{63}-U_{64}	-139.59	-187.78	3.12	-9.03	-15.63	-3.23	98.32	-97.32	-170.72	-34.86
	U_{64}-U_{65}	-47.42	-119.54	2.24	-0.47	-15.63	-3.23	10.16	-27.36	-173.85	-118.43
	U_{65}-U_{66}	-52.50	-128.95	4.52	-10.45	-7.15	-8.21	48.69	-112.63	-77.04	-88.50
	U_{66}-U_{67}	-277.57	-111.68	1.68	-1.51	-18.77	-8.53	18.10	-16.26	-202.34	-91.94
	U_{67}-U_{68}	-166.87	-240.33	1.71	-1.63	-19.17	-13.54	12.86	-17.54	-206.72	-145.97
	U_{68}-U_{69}	-287.50	-127.73	1.72	-1.65	-28.64	-7.27	35.35	-167.34	-309.76	-75.17
	U_{69}-U_{70}	-141.30	-113.93	1.00	1.82	-21.20	-5.82	10.78	19.66	-228.52	-62.78
	U_{70}-U_{71}	-140.41	-22.73	1.51	2.35	-17.10	-3.33	16.23	25.33	-184.38	-35.85
	U_{71}-U_{72}	-141.54	56.98	1.69	2.02	-15.40	-1.18	18.22	29.76	-166.68	-12.69
	U_{72}-U_{73}	3.07	40.55	2.12	1.54	-10.75	-2.76	22.89	16.62	-115.91	-29.70
	U_{73}-U_{74}	-136.80	470.88	2.94	2.54	-15.12	10.96	10.14	27.36	-172.85	118.43
	U_{74}-U_{75}	497.19	-34.44	18.83	-20.48	-0.65	0.08	209.68	-227.80	-0.92	0.90
	U_{75}-U_{76}	113.01	44.44	4.14	-2.77	-5.41	-4.37	46.10	-30.82	-60.21	-70.94
	U_{76}-U_{77}	59.30	15.07	2.65	1.65	-9.31	-7.21	29.45	18.36	-103.61	-80.29
	U_{77}-U_{78}	86.04	-19.79	4.49	-7.90	-14.07	-7.99	50.03	24.82	-156.66	-89.99
	U_{78}-U_{79}	80.24	-119.59	2.63	0.54	-18.20	-6.91	29.30	5.99	-202.61	-76.88
	U_{79}-U_{80}	24.67	-27.08	2.18	-3.31	-19.50	-5.64	24.90	-36.82	-217.12	-82.80
	U_{80}-U_{81}	29.36	-160.66	1.78	-1.66	-15.39	-2.20	12.91	-18.49	-170.90	-22.24

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) Start (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 2	U_0-U_1	-140.41	22.73	1.51	2.35	-17.10	-3.33	16.23	25.33	-184.38	-35.85
	U_1-U_2	-141.54	56.98	1.69	2.02	-15.40	-1.18	18.22	29.76	-166.68	-12.69
	U_2-U_3	3.07	40.55	2.12	1.54	-10.75	-2.76	22.89	16.62	-115.91	-29.70
	U_3-U_4	-136.80	470.88	2.94	2.54	-15.12	10.96	10.14	27.36	-172.85	118.43
	U_4-U_5	497.19	-34.44	18.83	-20.48	-0.65	0.08	209.68	-227.80	-0.92	0.90
	U_5-U_6	41.01	105.92	1.96	-1.04	-9.28	-4.39	21.84	-11.53	-103.31	-48.92
	U_6-U_7	113.01	44.44	4.14	-2.77	-5.41	-4.37	46.10	-30.82	-60.21	-70.94
	U_7-U_8	59.30	15.07	2.65	1.65	-9.31	-7.21	29.45	18.36	-103.61	-80.29
	U_8-U_9	86.04	-19.79	4.49	-7.90	-14.07	-7.99	50.03	24.82	-156.66	-89.99
	U_9-U_{10}	80.24	-119.59	2.63	0.54	-18.20	-6.91	29.30	5.99	-202.61	-76.88
	U_{10}-U_{11}	24.67	-27.08	2.18	-3.31	-19.50	-5.64	24.90	-36.82	-217.12	-82.80
	U_{11}-U_{12}	29.36	-160.66	1.78	-1.66	-15.39	-2.20	12.91	-18.49	-170.90	-22.24

ZZ Axis Moment Properties

Location	Member	Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F$_y$*Z$_{xx}$	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(a)}$	Equivalent Mom. Factor $C_{b(b)}$
Structure 1	U_0-U_1	-189.47	-73.41	1.42	4206	0.9988004	2974.3	0.323	0.773	0.73
	U_1-U_2	-161.81	-71.24	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_2-U_3	-140.69	-90.24	1.42	4206	0.9988004	2974.3	0.439	0.78	0.78
	U_3-U_4	-139.93	-90.24	1.42	4206	0.9988004	2974.3	0.439	0.78	0.78
	U_4-U_5	-276.39	-13.29	1.42	4206	0.9988004	2974.3	0.048	0.58	0.58
	U_5-U_6	-163.17	-21.55	1.42	4206	0.9988004	2974.3	0.439	0.78	0.78
	U_6-U_7	-143.39	-43.85	1.42	4206	0.9988004	2974.3	0.439	0.78	0.78
	U_7-U_8	-231.70	184.07	1.42	4206	0.9988004	2974.3	0.048	0.58	0.58
	U_8-U_9	619.34	-154.95	1.40	4465	0.9987310	3184.1	-0.144	0.54	0.54
	U_9-U_{10}	-62.98	-40.49	1.40	4465	0.9987310	3184.1	-0.010	0.60	0.60
	U_{10}-U_{11}	-48.83	-87.27	1.40	4465	0.9987310	3184.1	-0.010	0.60	0.60
	U_{11}-U_{12}	-88.41	-72.90	1.40	4465	0.9987310	3184.1	-0.010	0.60	0.60
	U_{12}-U_{13}	-130.18	-99.74	1.40	4465	0.9987310	3184.1	-0.010	0.60	0.60
	U_{13}-U_{14}	-162.79	-413.39	1.40	4465	0.9987310	3184.1	-0.010	0.60	0.60
	U_{14}-U_{15}	-290.31	-129.73	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{15}-U_{16}	-271.52	-100.13	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{16}-U_{17}	-293.77	-95.73	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{17}-U_{18}	-294.26	-95.73	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{18}-U_{19}	-163.48	-10.24	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{19}-U_{20}	-215.65	-136.61	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{20}-U_{21}	-269.70	-38.98	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{21}-U_{22}	-80.43	-83.00	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{22}-U_{23}	-162.79	-172.82	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{23}-U_{24}	-410.79	-391.81	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{24}-U_{25}	-422.17	-393.39	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{25}-U_{26}	-484.32	-198.18	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{26}-U_{27}	-401.88	-193.46	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{27}-U_{28}	-290.63	-339.45	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{28}-U_{29}	-416.42	-67.65	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{29}-U_{30}	-290.63	-339.45	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{30}-U_{31}	-197.58	-192.45	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{31}-U_{32}	-88.36	261.38	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{32}-U_{33}	-307.72	1662.69	1.42	4206	0.9988004	2974.3	0.427	0.77	0.77
	U_{33}-U_{34}	-1942.45	-114.39	1.42	6028	0.9987285	4241.5	0.040	0.62	0.62
	U_{34}-U_{35}	-24.97	5.89	1.40	4465	0.9987310	3184.1	-0.144	0.54	0.54
	U_{35}-U_{36}	-24.97	5.89	1.40	4465	0.9987310	3184.1	-0.144	0.54	0.54
	U_{36}-U_{37}	-119.40	-63.29	1.40	4465	0.9987310	3184.1	-0.010	0.60	0.60
	U_{37}-U_{38}	-103.51	-118.31	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{38}-U_{39}	-103.51	-118.31	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{39}-U_{40}	-179.40	-83.42	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{40}-U_{41}	-141.30	-98.64	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{41}-U_{42}	-295.93	-108.93	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{42}-U_{43}	-79.76	-79.76	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{43}-U_{44}	-239.69	-101.39	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{44}-U_{45}	-231.46	-31.31	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{45}-U_{46}	-211.03	-32.96	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{46}-U_{47}	-211.03	-32.96	1.40	4465	0.9987310	3184.1	-0.096	0.56	0.56
	U_{47}-U_{48}	-276.50	-90.12	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{48}-U_{49}	-81.42	-75.09	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{49}-U_{50}	-12.00	-24.96	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{50}-U_{51}	-276.50	-90.12	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{51}-U_{52}	-81.42	-75.09	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{52}-U_{53}	-81.42	-75.09	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{53}-U_{54}	-129.74	-121.13	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{54}-U_{55}	-276.50	-90.12	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{55}-U_{56}	-193.68	-254.72	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{56}-U_{57}	-432.40	-127.97	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{57}-U_{58}	-432.40	-127.97	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{58}-U_{59}	-422.47	-179.90	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{59}-U_{60}	-422.47	-179.90	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{60}-U_{61}	-331.97	-51.52	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{61}-U_{62}	-331.97	-51.52	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{62}-U_{63}	-182.79	-13.65	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{63}-U_{64}	-170.72	-34.86	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{64}-U_{65}	-173.85	-118.43	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{65}-U_{66}	-77.04	-88.50	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{66}-U_{67}	-202.34	-91.94	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{67}-U_{68}	-206.72	-145.97	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{68}-U_{69}	-309.76	-75.17	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{69}-U_{70}	-228.52	-62.78	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{70}-U_{71}	-184.38	-35.85	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{71}-U_{72}	-166.68	-12.69	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{72}-U_{73}	-115.91	-29.70	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{73}-U_{74}	-172.85	118.43	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{74}-U_{75}	-0.92	0.90	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{75}-U_{76}	-60.21	-70.94	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{76}-U_{77}	-103.61	-80.29	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{77}-U_{78}	-156.66	-89.99	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{78}-U_{79}	-202.61	-76.88	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{79}-U_{80}	-217.12	-82.80	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83
	U_{80}-U_{81}	-170.90	-22.24	1.42	4206	0.9988004	2974.3	0.583	0.83	0.83

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) Start (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-U_1	-1.08	-32.45	47.16	-12.71	0.00	0.00	0.00	0.00	41.73	-19.70
	U_1-U_2	17.52	-6.16	-16.17	-7.64	0.00	0.00	0.00	0.00	82.28	15.61
	U_2-U_3	-13.34	0.29	14.78	0.99	0.00	0.00	0.00	0.00	43.40	-50.01
	U_3-U_4	-16.24	-4.38	3.35	-2.82	0.00	0.00	0.00	0.00	43.40	-18.19
	U_4-U_5	-20.52	5.12	-70.43	-158.51	0.00	0.00	0.00	0.00	-81.81	-43.71
	U_5-U_6	-21.01	-7.46	-2.85	-28.30	0.00	0.00	0.00	0.00	-209.85	-70.87
	U_6-U_7	-8.51	-2.29	-28.21	-48.27	0.00	0.00	0.00	0.00	-262.09	-30.39
	U_7-U_8	9.92	-32.96	4.94	-3.28	0.00	0.00	0.00	0.00	-229.08	216.27
	U_8-U_9	-0.26	17.30	-3.81	-4.30	0.00	0.00	0.00	0.00	31.16	206.88
	U_9-U_{10}	6.63	6.79	1.13	9.73	0.00	0.00	0.00	0.00	166.06	310.27
	U_{10}-U_{11}	15.08	-11.29	9.43	-1.05	0.00	0.00	0.00	0.00	262.82	40.33
	U_{11}-U_{12}	8.33	-23.95	10.36	17.37	0.00	0.00	0.00	0.00	216.34	33.04
	U_{12}-U_{13}	-6.13	-28.99	4.75	8.23	0.00	0.00	0.00	0.00	167.88	-117.27
	U_{13}-U_{14}	-22.16	-54.97	13.25	-17.79	0.00	0.00	0.00	0.00	11.04

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-15.54	-73.33	4.60	-8.88	-0.77	0.78	63.38	-76.64	-8.52	8.68
	L_1-L_2	39.76	-87.96	3.42	-9.37	-7.79	-7.88	36.07	-104.29	-86.73	-87.67
	L_2-L_3	53.09	-62.20	1.82	-12.07	-8.49	-8.58	12.18	20.36	-139.60	-140.58
	L_3-L_4	-11.34	11.55	1.76	-12.07	-16.15	-8.21	19.54	-134.39	-179.83	-91.41
	L_4-L_5	-49.11	208.03	2.47	-13.67	1.87	25.27	-30.99	306.20	-276.69	207.14
	L_5-L_6	-0.46	181.07	1.71	-4.00	-8.99	-1.74	19.02	-44.57	-111.23	-139.39
	L_6-L_7	41.44	84.73	1.42	-0.03	-11.47	1.63	24.70	-1.41	-129.89	11.42
	L_7-L_8	-25.11	448.74	0.84	2.82	-8.91	11.67	9.34	31.40	-99.14	129.90
	L_8-L_9	425.89	-36.02	10.55	-3.19	-5.10	0.24	113.73	-34.42	-1.09	2.54
	L_9-L_{10}	150.02	-126.53	2.71	-6.79	-6.71	-2.07	39.83	-73.20	-72.39	-22.35
	L_{10}-L_{11}	120.44	-115.99	3.39	-1.37	-4.29	-5.65	36.59	-14.79	-47.38	-60.90
	L_{11}-L_{12}	108.58	-108.12	3.71	-0.72	-3.04	-5.32	40.03	-29.49	-42.70	-55.26
	L_0-L_{12}	-45.24	-121.26	2.36	0.46	-8.15	-9.37	25.46	-4.92	-97.82	-101.03
	L_{12}-L_{13}	96.32	-264.98	1.26	-15.37	-10.49	-5.90	78.27	-165.73	-113.14	-64.15
	L_{13}-L_{14}	-52.24	-68.39	1.37	-4.27	-10.61	-0.27	31.16	-29.35	-160.47	-5.36
	L_{14}-L_{15}	-191.89	-319.35	0.69	0.31	-18.23	7.62	7.42	3.33	-196.50	-82.15
	L_{15}-L_{16}	-339.58	44.88	3.29	-6.27	-15.07	-2.04	63.37	-2.63	-167.40	-7.35
	L_{16}-L_{17}	-154.50	-31.26	3.01	-6.19	-10.04	-5.21	3.33	-2.06	-108.27	-2.24
	L_{17}-L_{18}	-215.80	145.76	2.45	-0.47	-8.48	2.80	4.68	-12.72	-133.11	-40.57
	L_{18}-L_{19}	-386.32	49.67	0.39	-0.20	-8.68	4.00	3.74	-2.10	-93.63	-43.19
	L_{19}-L_{20}	-2.68	-185.02	3.59	-9.76	-0.54	1.08	38.18	-103.88	-5.72	11.54
	L_{20}-L_{21}	33.75	-249.23	6.97	-12.65	-0.10	0.00	48.56	-153.89	-40.29	-66.57
	L_{21}-L_{22}	-4.23	-180.72	4.88	-9.26	-6.77	-7.29	51.90	-88.54	-72.12	-77.64
	L_{22}-L_{23}	-3.36	-244.42	3.13	-13.26	-10.34	-9.13	37.34	-141.20	-110.64	-109.68
	L_{23}-L_{24}	-252.89	-295.03	4.16	-14.46	-18.37	-9.80	44.29	-153.97	-195.59	-104.36
	L_{24}-L_{25}	-47.39	-41.37	1.26	-3.92	-5.01	-2.73	13.50	-19.05	-239.57	-213.78
	L_{25}-L_{26}	-475.08	-292.18	2.86	-24.70	-16.54		30.47	-30.36	-263.01	-176.06
	L_{26}-L_{27}	-280.47	-64.51	2.33	-6.12	-27.43	-1.96	24.85	-43.81	-292.02	-20.83
	L_{27}-L_{28}	-292.36	219.14	2.34	-0.31	-25.29	-1.96	31.16	-25.29	-160.47	3.36
	L_{28}-L_{29}	-225.83	141.30	2.01	3.93	-13.39	-2.14	21.40	-41.80	-142.60	-22.81
	L_{29}-L_{30}	-203.50	259.15	3.24	2.37	-13.22	1.52	20.53	-27.16	-127.20	20.39
	L_{30}-L_{31}	-160.03	387.16	2.09	4.33	-12.70	1.36	22.22	46.12	-135.21	14.43
	L_{31}-L_{32}	-202.71	-204.45	3.39	0.09	-15.30	-7.82	36.06	1.00	-162.94	-80.30
	L_{32}-L_{33}	-379.76	-103.16	5.01	-15.36	-23.98	-12.06	47.54	-52.17	-241.96	-129.23
	L_{33}-L_{34}	-1072.48	-412.35	23.27	-16.93	-1.37	-5.10	244.52	-178.10	-14.36	-1.02
	L_{34}-L_{35}	337.46	-41.37	7.26	-2.02	-17.48	4.78	20.77	-17.46	-193.86	-90.24
	L_{35}-L_{36}	-475.57	-49.03	8.83	-8.89	-5.81	-5.33	92.87	-104.00	-61.15	-56.07
	L_{36}-L_{37}	-326.59	-41.37	7.26	-2.02	-17.48	4.78	20.77	-17.46	-193.86	-90.24
	L_{37}-L_{38}	-226.51	-41.81	4.52	-6.72	-8.33	-6.86	51.74	-70.71	-87.59	-22.93
	L_{38}-L_{39}	-214.45	-56.43	3.98	-9.18	-8.72	-7.26	41.84	-96.62	-91.69	-76.39
	L_{39}-L_{40}	-203.50	259.15	3.24	2.37	-13.22	1.52	39.82	-27.16	-127.20	20.39
	L_{40}-L_{41}	-49.27	-202.49	2.36	-15.03	-17.74	-16.39	24.80	-158.19	-186.68	-172.41
	L_{41}-L_{42}	-197.12	-84.33	2.36	-5.03	-8.25	-8.25	24.80	-44.33	-186.68	-172.41
	L_{42}-L_{43}	-111.92	0.86	1.51	3.28	-19.21	-3.99	15.84	34.50	-202.09	-41.53
	L_{43}-L_{44}	-79.76	103.16	1.51	4.63	-19.21	-3.99	15.84	34.50	-202.09	-41.53
	L_{44}-L_{45}	-60.78	179.81	1.61	3.74	-12.89	-0.16	16.93	39.36	-139.41	-1.68
	L_{45}-L_{46}	-81.80	265.56	2.77	1.63	-14.97	2.32	29.11	17.12	-157.48	24.39
	L_{46}-L_{47}	-99.81	279.28	2.51	-1.04	-15.85	-8.72	26.44	-10.90	-166.78	-91.70
	L_{47}-L_{48}	-231.96	1004.43	1.61	-0.72	-13.68	-3.99	21.11	-7.02	-138.83	-41.53
	L_{48}-L_{49}	1026.29	-362.30	22.18	-13.94	-1.43	1.49	235.95	-148.38	-15.23	15.90
	L_{49}-L_{50}	-226.76	-125.36	1.58	-1.03	-16.18	-4.14	16.78	-10.96	-178.68	-64.08
	L_{50}-L_{51}	-219.56	-149.28	1.60	-0.80	-16.18	-4.14	16.78	-10.96	-178.68	-64.08
	L_{51}-L_{52}	-278.05	-132.91	4.83	-11.24	-5.31	-2.55	51.40	-119.71	-56.51	-27.17
	L_{52}-L_{53}	-178.84	-124.31	4.83	-11.24	-5.31	-2.55	51.40	-119.71	-56.51	-27.17
	L_{53}-L_{54}	-222.98	-242.01	5.20	-8.75	-9.23	-5.77	54.33	-83.18	-88.27	-61.45
	L_{54}-L_{55}	-292.82	-292.82	2.66	-12.15	-13.32	-13.32	41.47	-108.13	-296.68	-139.17
	L_{55}-L_{56}	-167.98	-470.72	3.90	-13.16	-27.77	-13.07	41.47	-108.13	-296.68	-139.17
	L_{56}-L_{57}	-445.06	-93.48	2.60	-25.40	-9.16		26.49	6.42	-270.43	-97.52
	L_{57}-L_{58}	-391.79	-319.55	2.60	-25.40	-9.16		16.33	-6.24	-240.73	-86.55
	L_{58}-L_{59}	-392.27	38.30	1.21	-0.33	-19.60	-3.51	12.53	-3.50	-208.70	-37.38
	L_{59}-L_{60}	-297.04	199.10	0.96	-0.40	-12.43	2.44	10.17	-4.26	-132.34	26.02
	L_{60}-L_{61}	-24.53	-109.42	4.59	-8.59	-0.33	0.51	49.45	-92.60	-3.55	5.53
	L_{61}-L_{62}	-139.90	-177.77	4.17	-8.34	-1.69	-1.34	44.97	-89.94	-18.17	-14.47
	L_{62}-L_{63}	-70.66	-275.56	4.26	-9.16	-7.52	-6.27	47.96	-255.64	-4.26	-9.16
	L_{63}-L_{64}	-47.68	-343.07	3.43	-19.33	-15.69	-16.86	36.97	-208.45	-169.16	-181.82
	L_{64}-L_{65}	-341.10	86.20	1.29	-20.00	0.77		15.16	13.88	-220.96	8.31
	L_{65}-L_{66}	-201.09	-319.55	2.60	-25.40	-9.16		16.33	-6.24	-240.73	-86.55
	L_{66}-L_{67}	-201.09	152.50	1.17	1.79	-9.70	-0.27	12.56	19.30	-104.62	-2.93
	L_{67}-L_{68}	-148.24	148.96	2.16	0.04	-10.09	0.13	23.24	0.42	-108.74	1.41
	L_{68}-L_{69}	-428.31	-26.46	12.67	-6.75	-0.03	0.06	141.05	-75.16	-0.36	0.67
	L_{69}-L_{70}	-70.66	-275.56	4.26	-9.16	-7.52	-6.27	52.33	-56.29	-85.82	-30.33
	L_{70}-L_{71}	-194.48	-211.11	6.05	-11.61	-6.57	-5.55	67.33	-129.20	-70.88	-106.34
	L_{71}-L_{72}	-145.48	-80.88	1.55	-5.53	-14.31	-7.21	17.27	-5.87	-199.03	-89.25
	L_{72}-L_{73}	-74.64	-5.53	0.60	-0.55	-9.43	4.24	6.63	-6.16	-105.03	47.25

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 2	L_{73}-L_{74}	-49.11	208.03	2.47	-13.67	1.87	25.27	-30.99	306.20	-276.69	207.14
	L_{74}-L_{75}	-0.46	181.07	1.71	-4.00	-8.99	-1.74	19.02	-44.57	-111.23	-139.39
	L_{75}-L_{76}	41.44	84.73	1.42	-0.03	-11.47	1.63	24.70	-1.41	-129.89	11.42
	L_{76}-L_{77}	-25.11	448.74	0.84	2.82	-8.91	11.67	9.34	31.40	-99.14	129.90
	L_{77}-L_{78}	425.89	-36.02	10.55	-3.19	-5.10	0.24	113.73	-34.42	-1.09	2.54
	L_{78}-L_{79}	150.02	-126.53	2.71	-6.79	-6.71	-2.07	39.83	-73.20	-72.39	-22.35
	L_{79}-L_{80}	120.44	-115.99	3.39	-1.37	-4.29	-5.65	36.59	-14.79	-47.38	-60.90
	L_{80}-L_{81}	108.58	-108.12	3.71	-0.72	-3.04	-5.32	40.03	-29.49	-42.70	-55.26
	L_{81}-L_{82}	-45.24	-121.26	2.36	0.46	-8.15	-9.37	25.46	-4.92	-97.82	-101.03
	L_{82}-L_{83}	96.32	-264.98	1.26	-15.37	-10.49	-5.90	78.27	-165.73	-113.14	-64.15
	L_{83}-L_{84}	-52.24	-68.39	1.37	-4.27	-10.61	-0.27	31.16	-29.35	-160.47	-5.36
	L_{84}-L_{85}	-191.89	-319.35	0.69	0.31	-18.23	7.62	7.42	3.33	-196.50	-82.15
	L_{85}-L_{86}	-339.58	44.88	3.29	-6.27	-15.07	-2.04	63.37	-2.63	-167.40	-7.35
	L_{86}-L_{87}	-154.50	-31.26	3.01	-6.19	-10.04	-5.21	3.33	-2.06	-108.27	-2.24
	L_{87}-L_{88}	-215.80	145.76	2.45	-0.47	-8.48	2.80	4.68	-12.72	-133.11	-40.57
	L_{88}-L_{89}	-386.32	49.67	0.39	-0.20	-8.68	4.00	3.74	-2.10	-93.63	-43.19
	L_{89}-L_{90}	-2.68	-185.02	3.59	-9.76	-0.54	1.08	38.18	-103.88	-5.72	11.54
	L_{90}-L_{91}	33.75	-249.23	6.97	-12.65	-0.10	0.00	48.56	-153.89	-40.29	-66.57
	L_{91}-L_{92}	-4.23	-180.72	4.88	-9.26	-6.77	-7.29	51.90	-88.54	-72.12	-77.64
	L_{92}-L_{93}	-3.36	-244.42	3.13	-13.26	-10.34	-9.13	37.34	-141.20	-110.64	-109.68
	L_{93}-L_{94}	-252.89	-295.03	4.16	-14.46	-18.37	-9.80	44.29	-153.97	-195.59	-104.36
	L_{94}-L_{95}	-47.39	-41.37	1.26	-3.92	-5.01	-2.73	13.50	-19.05	-239.57	-213.78
	L_{95}-L_{96}	-475.08	-292.18	2.86	-24.70	-16.54		30.47	-30.36	-263.01	-176.06
	L_{96}-L_{97}	-280.47	-64.51	2.33	-6.12	-27.43	-1.96	24.85	-43.81	-292.02	-20.83
	L_{97}-L_{98}	-292.36	219.14	2.34	-0.31	-25.29	-1.96	31.16	-25.29	-160.47	3.36
	L_{98}-L_{99}	-225.83	141.30	2.01	3.93	-13.39	-2.14	21.40	-41.80	-142.60	-22.81
	L_{99}-L_{100}	-203.50	259.15	3.24	2.37	-13.22	1.52	20.53	-27.16	-127.20	20.39
	L_{100}-L_{101}	-160.03	387.16	2.09	4.33	-12.70	1.36	22.22	46.12	-135.21	14.43
	L_{101}-L_{102}	-202.71	-204.45	3.39	0.09	-15.30	-7.82	36.06	1.00	-162.94	-80.30
	L_{102}-L_{103}	-379.76	-103.16	5.01	-15.36	-23.98	-12.06	47.54	-52.17	-241.96	-129.23
	L_{103}-L_{104}	-1072.48	-412.35	23.27	-16.93	-1.37	-5.10	244.52	-178.10	-14.36	-1.02
	L_{104}-L_{105}	337.46	-41.37	7.26	-2.02	-17.48	4.78	20.77	-17.46	-193.86	-90.24
	L_{105}-L_{106}	-475.57	-49.03	8.83	-8.89	-5.81	-5.33	92.87	-104.00	-61.15	-56.07
	L_{106}-L_{107}	-326.59	-41.37	7.26	-2.02	-17.48	4.78	20.77	-17.46	-193.86	-90.24
	L_{107}-L_{108}	-226.51	-41.81	4.52	-6.72	-8.33	-6.86	51.74	-70.71	-87.59	-22.93
	L_{108}-L_{109}	-214.45	-56.43	3.98	-9.18	-8.72	-7.26	41.84	-96.62	-91.69	-76.39
	L_{109}-L_{110}	-203.50	259.15	3.24	2.37	-13.22	1.52	39.82	-27.16	-127.20	20.39
	L_{110}-L_{111}	-49.27	-202.49	2.36	-15.03	-17.74	-16.39	24.80	-158.19	-186.68	-172.41
	L_{111}-L_{112}	-197.12	-84.33	2.36	-5.03	-8.25	-8.25	24.80	-44.33	-186.68	-172.41
	L_{112}-L_{113}	-111.92	0.86	1.51	3.28	-19.21	-3.99	15.84	34.50	-202.09	-41.53
	L_{113}-L_{114}	-79.76	103.16	1.51	4.63	-19.21	-3.99	15.84	34.50	-202.09	-41.53
	L_{114}-L_{115}	-60.78	179.81	1.61	3.74	-12.89	-0.16	16.93	39.36	-139.41	-1.68
	L_{115}-L_{116}	-81.80	265.56	2.77	1.63	-14.97	2.32	29.11	17.12	-157.48	24.39
	L_{116}-L_{117}	-99.81	279.28	2.51	-1.04	-15.85	-8.72	26.44	-10.90	-166.78	-91.70
	L_{117}-L_{118}	-231.96	1004.43	1.61	-0.72	-13.68	-3.99	21.11	-7.02	-138.83	-41.53
	L_{118}-L_{119}	1026.29	-362.30	22.18	-13.94	-1.43	1.49	235.95	-148.38	-15.23	15.90
	L_{119}-L_{120}	-226.76	-125.36	1.58	-1.03	-16.18	-4.14	16.78	-10.96	-178.68	-64.08
	L_{120}-L_{121}	-219.56	-149.28	1.60	-0.80	-16.18	-4.14	16.78	-10.96	-178.68	-64.08
	L_{121}-L_{122}	-278.05	-132.91	4.83	-11.24	-5.31	-2.55	51.40	-119.71	-56.51	-27.17
	L_{122}-L_{123}	-178.84	-124.31	4.83	-11.24	-5.31	-2.55	51.40	-119.71	-56.51	-27.17
	L_{123}-L_{124}	-222.98	-242.01	5.20	-8.75	-9.23	-5.77	54.33	-83.18	-88.27	-61.45
	L_{124}-L_{125}	-292.82	-292.82	2.66	-12.15	-13.32	-13.32	41.47	-108.13	-296.68	-139.17
	L_{125}-L_{126}	-167.98	-470.72	3.90	-13.16	-27.77	-13.07	41.47	-108.13	-296.68	-139.17
	L_{126}-L_{127}	-445.06	-93.48	2.60	-25.40	-9.16		26.49	6.42	-270.43	-97.52
	L_{127}-L_{128}	-391.79	-319.55	2.60	-25.40	-9.16		16.33	-6.24	-240.73	-86.55
	L_{128}-L_{129}	-392.27	38.30	1.21	-0.33	-19.60	-3.51	12.53	-3.50	-208.70	-37.38
	L_{129}-L_{130}	-297.04	199.10	0.96	-0.40	-12.43	2.44	10.17	-4.26	-132.34	26.02
	L_{130}-L_{131}	-24.53	-109.42	4.59	-8.59	-0.33	0.51	49.45	-92.60	-3.55	5.53
	L_{131}-L_{132}	-139.90	-177.77	4.17	-8.34	-1.69	-1.34	44.97	-89.94	-18.17	-14.47
	L_{132}-L_{133}	-70.66	-275.56	4.26	-9.16	-7.52	-6.27	47.96	-255.64	-4.26	-9.16
	L_{133}-L_{134}	-47.68	-343.07	3.43	-19.33	-15.69	-16.86	36.97	-208.45	-169.16	-181.82
	L_{134}-L_{135}	-341.10	86.20	1.29	-20.00	0.77		15.16	13.88	-220.96	8.31
	L_{135}-L_{136}	-201.09	-319.55	2.60	-25.40	-9.16		16.33	-6.24	-240.73	-86.55
	L_{136}-L_{137}	-201.09	152.50	1.17	1.79	-9.70	-0.27	12.56	19.30	-104.62	-2.93
	L_{137}-L_{138}	-148.24	148.96	2.16	0.04	-10.09	0.13	23.24	0.42	-108.74	1.41
	L_{138}-L_{139}	-428.31	-26.46	12.67	-6.75	-0.03	0.06	141.05	-75.16	-0.36	0.67
	L_{139}-L_{140}	-70.66	-275.56	4.26	-9.16	-7.52	-6.27	52.33	-56.29	-85.82	-30.33
	L_{140}-L_{141}	-194.48	-211.11	6.05	-11.61	-6.57	-5.55	67.33	-129.20	-70.88	-106.34
	L_{141}-L_{142}	-145.48	-80.88	1.55	-5.53	-14.31	-7.21	17.27	-5.87	-199.03	-89.25
	L_{142}-L_{143}	-74.64	-5.53	0.60	-0.55	-9.43	4.24	6.63	-6.16	-105.03	47.25

Location	Member	ZZ Axis Moments from STAAD: Start (k-in)	End (k-in)	Max. Pos. Mom. Start (k-in)	End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{top}	M_z (k-in)	Equivalent Mom. Factor a	$C_{m(x)}$	$C_{m(y)}$
Structure 3	L_0-L_1	-23.74	-87.24	1.53	5.60	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900394	2755.4	-0.252	0.50	0.50
	L_1-L_2	4.19	-18.70	-66.50	-228.33	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.405	0.44
	L_2-L_3	-27.27	-2.72	-2.96	-20.42	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.405	0.44
	L_3-L_4	-15.14	-9.80	-10.65	18.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_4-L_5	-14.63	-5.41	-29.65	23.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_5-L_6	-6.45	61.58	23.39	-4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-L_7	8.24	-2.80	-33.19	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-L_8	39.53	-20.33	-22.23	17.18	104.6	104.58	95.61	136.57	4040	1278.1	1.31	4320	0.99924582	4476.0	-0.526	0.39
	L_8-L_9	24.12	-290.33	-149.39	210.18	104.6	104.58	95.61	136.57	4040	1278.1	1.31	4320	0.99924582	4476.0	-0.526	0.39
	L_9-L_{10}	-0.76	6.11	-7.86	7.85	104.6	104.58	95.61	136.57	4040	1278.1	1.31	4320	0.99924582	4476.0	-0.526	0.39
	L_{10}-L_{11}	-14.70	-10.77	12.08	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{11}-L_{12}	-5.98	-4.27	2.40	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_0-L_{12}	0.91	-11.68	11.42	-0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{12}-L_{13}	-2.27	-0.96	-6.83	-2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{13}-L_{14}	-13.25	-13.26	-3.97	15.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	-24.80	-15.46	8.14	4.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-30.51	-19.87	4.50	29.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{16}-L_{17}	0.99	-5.91	-24.42	27.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{17}-L_{18}	-1.22	-2.66	-5.36	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	0.41	1.80	-18.18	17.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	3.31	2.05	2.19	-1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	-1.01	0.95	-2.32	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	-5.48	-2.58	0.09	-2.10	-1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	-3.32	-3.76	-10.14	0.03	5.48	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{23}-L_{24}	-21.38	-74.24	0.75	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	0.55	-3.53	-63.56	57.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{25}-L_{26}	-16.58	-4.13	37.84	-16.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{26}-L_{27}	-11.20	-44.92	-44.92	33.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	-19.22	-12.47	23.90	20.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1~L_1	-29.84	49.00	0.65	-0.71	4.79	4.67	7.21	-7.85	-53.28	51.98
	U_2~L_2	-9.06	15.16	0.55	-0.59	-3.91	3.54	6.15	-6.58	-33.55	39.40
	U_3~L_3	3.14	16.07	0.51	-0.63	-3.38	3.80	26.11	-24.06	-32.76	34.09
	U_4~L_4	33.43	-34.38	2.35	-2.16	-2.94	3.11	77.39	-75.95	0.86	0.28
	U_5~L_5	41.60	-62.42	2.78	-2.58	-3.01	2.55	94.26	-92.44	-16.62	16.41
	U_6~L_6	45.52	-51.05	3.23	-3.53	-6.75	0.52	95.97	-39.27	-8.29	5.77
	U_7~L_7	45.52	-55.55	3.63	-4.00	-6.49	1.25	92.66	-44.92	-3.47	2.75
	U_8~L_8	41.24	-91.91	4.89	-5.10	-0.03	0.03	54.41	-56.80	-0.29	0.32
	U_9~L_9	-20.53	21.18	5.90	-6.95	-4.93	5.52	68.75	-77.32	-54.87	65.90
	U_{10}~L_{10}	-135.19	155.91	6.23	-7.22	-52.00	57.66	0.00	0.00	-172.02	198.35
	U_{11}~L_{11}	-88.41	88.14	0.26	0.31	-3.65	3.77	2.83	3.35	-39.40	40.59
	U_{12}~L_{12}	-91.02	123.95	0.80	0.25	-3.65	4.66	4.33	2.46	-40.23	40.22
	U_{13}~L_{13}	-79.50	78.32	1.06	-0.73	-3.75	3.73	11.40	-7.82	-40.44	42.17
	U_{14}~L_{14}	-49.20	60.09	1.29	-1.20	-3.58	3.65	13.92	-12.96	-38.62	39.37
	U_{15}~L_{15}	-29.72	34.60	1.80	-1.78	-2.82	2.93	19.42	-18.14	-35.46	36.03
	U_{16}~L_{16}	-1.46	-2.70	3.25	-3.36	-2.29	2.32	35.06	-36.27	-24.73	29.04
	U_{17}~L_{17}	34.16	-36.07	3.29	-3.61	-1.61	1.36	89.36	-90.26	-11.73	14.69
	U_{18}~L_{18}	46.21	-55.82	3.21	-3.33	-0.61	0.31	34.64	-35.95	-5.52	-1.93
	U_{19}~L_{19}	110.34	-114.53	0.56	-0.66	-0.37	1.39	39.90	-41.04	-4.66	-0.07
	U_{20}~L_{20}	-121.24	-131.08	5.78	-6.39	-0.29	-0.27	62.27	-62.40	-4.15	-2.89
	U_{21}~L_{21}	-134.20	-173.18	5.71	-6.44	-0.46	0.08	61.53	-69.38	-4.92	0.81
	U_{22}~L_{22}	-114.26	188.30	5.76	-0.86	-4.01	4.37	3.92	-3.04	-37.36	0.00
	U_{23}~L_{23}	-124.38	133.15	0.72	-0.77	-5.45	5.26	7.69	-8.21	-58.06	55.97
	U_{24}~L_{24}	-66.00	82.15	0.48	-0.51	-3.09	3.11	5.15	-5.43	-32.91	33.11
	U_{25}~L_{25}	-66.00	62.15	0.48	-0.51	-3.09	3.11	5.15	-5.43	-32.91	33.11
	U_{26}~L_{26}	-7.09	12.30	1.84	-1.71	-2.95	3.06	19.60	-18.20	-31.47	32.60
	U_{27}~L_{27}	15.85	-15.58	2.23	-2.34	-2.86	2.86	23.72	-24.56	-30.49	30.46
	U_{28}~L_{28}	38.85	-44.93	2.09	-2.22	-24.32	-14.70	22.22	-24.32	-14.70	19.92
	U_{29}~L_{29}	86.89	-96.05	4.38	-4.28	-1.68	1.56	46.67	-49.53	-17.85	16.62
	U_{30}~L_{30}	-155.08	-144.43	5.54	-6.19	-1.87	1.20	59.00	-59.00	-17.53	10.62
	U_{31}~L_{31}	141.21	-149.39	4.76	-4.94	-1.66	0.74	50.69	-52.62	-11.28	7.83
	U_{32}~L_{32}	192.53	-192.81	4.52	-4.65	-0.55	0.10	48.12	-49.52	-5.69	1.03
	U_{33}~L_{33}	147.39	-146.79	4.63	-4.82	-0.55	0.22	64.37	-66.71	-5.69	1.03
	U_{34}~L_{34}	203.50	-203.15	5.05	-5.82	-0.40	0.42	64.37	-61.95	-4.23	4.51
	U_{35}~L_{35}	80.02	-39.44	0.51	-0.61	-0.36	0.36	68.25	-69.40	-8.80	79.55
	U_{36}~L_{36}	-159.87	162.82	0.64	-0.68	-6.44	6.08	6.77	-7.11	-67.79	63.98
	U_{37}~L_{37}	141.13	-139.56	0.64	-0.68	-6.44	6.08	6.77	-7.11	-67.79	63.98
	U_{38}~L_{38}	-130.37	-127.18	0.61	-0.60	-5.89	5.79	6.44	-6.29	-61.98	60.91
	U_{39}~L_{39}	-113.07	114.60	0.93	-0.69	-5.76	5.53	9.82	-7.25	-60.55	62.29
	U_{40}~L_{40}	-74.77	67.64	1.01	-0.98	-5.36	5.15	12.58	-11.96	-54.12	54.11
	U_{41}~L_{41}	-44.77	46.58	1.20	-1.14	-3.24	3.24	12.58	-11.96	-34.12	34.11
	U_{42}~L_{42}	-30.30	31.79	1.20	-1.14	-3.24	3.24	16.39	-14.79	-34.12	34.11
	U_{43}~L_{43}	-3.79	4.34	1.91	-1.99	-2.17	2.28	20.13	-20.93	-22.80	23.97
	U_{44}~L_{44}	22.64	-25.70	3.32	-3.47	-1.53	1.32	33.71	-34.74	-22.80	23.97
	U_{45}~L_{45}	39.36	-42.12	3.14	-3.25	-1.53	1.32	33.01	-34.14	-16.12	19.00
	U_{46}~L_{46}	88.55	-87.48	3.92	-3.87	-1.20	0.98	41.28	-40.68	-12.63	10.91
	U_{47}~L_{47}	-111.68	96.20	0.14	-0.16	-0.03	0.03	41.28	-40.68	-12.63	10.91
	U_{48}~L_{48}	138.22	-138.56	6.29	-6.41	-0.68	0.41	66.14	-67.44	-7.10	4.36
	U_{49}~L_{49}	139.45	-139.56	6.29	-6.41	-0.68	0.41	66.14	-67.44	-7.10	4.36
	U_{50}~L_{50}	179.84	-177.26	6.53	-6.39	-0.32	0.28	69.74	-67.25	-3.39	2.56
	U_{51}~L_{51}	-1.78	5.97	6.52	-6.52	-0.32	0.28	72.62	-70.37	-3.39	2.56
	U_{52}~L_{52}	-167.09	167.27	0.58	-0.65	-6.60	5.40	6.20	-6.88	-59.63	57.48
	U_{53}~L_{53}	-116.04	109.89	0.41	-0.42	-4.73	4.53	4.33	-4.42	-50.33	49.31
	U_{54}~L_{54}	-124.03	131.52	0.45	-0.46	-5.25	5.03	4.81	-4.91	-55.92	54.79
	U_{55}~L_{55}	-119.83	124.38	0.72	-0.53	-4.59	4.53	7.67	-5.69	-48.91	48.18
	U_{56}~L_{56}	-79.38	74.30	1.22	-0.97	-4.47	4.34	11.18	-9.07	-46.46	46.00
	U_{57}~L_{57}	-79.51	88.86	1.20	-1.10	-4.48	4.36	11.18	-9.07	-46.46	46.00
	U_{58}~L_{58}	-43.96	51.93	1.22	-1.30	-2.90	2.94	13.03	-13.82	-24.43	27.06
	U_{59}~L_{59}	-29.91	31.03	2.66	-2.74	-2.67	2.67	27.25	-28.39	-24.70	26.87
	U_{60}~L_{60}	-5.57	1.81	2.88	-3.09	-2.33	2.13	30.70	-32.89	-24.82	22.67
	U_{61}~L_{61}	18.24	-20.05	3.29	-3.51	-1.34	1.13	31.99	-33.18	-19.34	19.00
	U_{62}~L_{62}	55.25	-61.09	3.01	-3.12	-0.68	0.39	31.99	-33.18	-9.79	-2.64
	U_{63}~L_{63}	107.52	-107.52	0.50	-0.56	-0.31	1.24	37.42	-38.87	-4.04	-0.07
	U_{64}~L_{64}	137.13	-150.74	5.96	-6.99	-0.62	0.63	63.49	-63.81	-4.57	0.65
	U_{65}~L_{65}	165.72	-206.83	5.65	-6.40	-0.45	0.61	60.11	-68.15	-4.91	0.44
	U_{66}~L_{66}	-82.72	143.90	2.37	-2.49	-0.44	0.33	0.00	0.00	-115.06	180.81
	U_{67}~L_{67}	-109.81	112.89	0.41	-0.43	-5.59	5.53	4.39	-4.68	-62.25	59.62
	U_{68}~L_{68}	-109.81	112.89	0.41	-0.43	-5.59	5.53	4.70	-4.68	-62.25	59.62
	U_{69}~L_{69}	-38.40	48.11	0.36	-0.36	-3.20	3.16	3.91	-2.81	-34.47	34.11
	U_{70}~L_{70}	-38.40	48.11	0.36	-0.36	-3.20	3.16	3.91	-2.81	-34.47	34.11
	U_{71}~L_{71}	-2.78	8.39	1.83	-1.92	-3.31	3.41	19.74	-20.65	-39.69	39.72
	U_{72}~L_{72}	25.87	-28.68	2.40	-2.59	-2.20	2.27	25.87	-27.91	-23.67	24.46
	U_{73}~L_{73}	25.87	-28.68	2.40	-2.59	-2.20	2.27	25.87	-27.91	-23.67	24.46
	U_{74}~L_{74}	75.39	-76.96	3.70	-3.78	-1.39	1.20	39.86	-40.70	-14.98	13.92
	U_{75}~L_{75}	75.39	-76.96	3.70	-3.78	-1.39	1.20	39.86	-40.70	-14.98	13.92
	U_{76}~L_{76}	92.27	-95.87	3.69	-4.14	-0.48	0.36	39.86	-44.59	-9.01	3.85
	U_{77}~L_{77}	142.63	-166.10	5.32	-5.86	-0.08	0.11	57.36	-63.16	-0.89	1.15
	U_{78}~L_{78}	37.52	-58.80	4.57	-5.85	-4.43	7.24	50.63	-65.10	-71.09	80.60
	U_{79}~L_{79}	-81.19	89.90	0.02	-0.03	-4.54	4.66	0.27	-0.29	-50.54	51.85
	U_{80}~L_{80}	-48.49	45.44	0.27	0.35	-3.39	3.62	3.03	3.93	-37.75	40.28
	U_{81}~L_{81}	-38.99	42.96	0.42	-0.38	-3.10	3.22	4.72	-4.23	-34.52	35.87
	U_{82}~L_{82}	-38.90	40.31	1.28	-1.01	-3.13	3.00	14.19	-11.24	-34.88	33.43
	U_{83}~L_{83}	-37.48	38.73	2.65	-2.88	-2.94	2.89	29.55	-32.03	-32.68	32.22
	U_{84}~L_{84}	-10.29	11.13	3.20	-3.69	-1.40	1.41	35.60	-41.04	-15.54	15.72
	U_{85}~L_{85}	3.53	-11.97	4.12	-3.89	-0.58	0.56	45.69	-43.30	-6.43	9.23
	U_{86}~L_{86}	44.79	-53.89	4.09	-5.53	-0.42	-0.11	45.53	-61.58	-4.71	1.27

M_z Information

ZZ Axis Moment Properties

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y/S_{bot}	M_y (k-in)
Structure 1	U_1~L_1	-29.42	53.49	-1595.66	131.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_2~L_2	-3.79	11.15	-68.61	70.92	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_3~L_3	29.16	-24.64	-30.68	42.38	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_4~L_4	77.39	-75.95	0.86	0.28	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_5~L_5	94.26	-92.44	-16.62	16.41	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_6~L_6	95.97	-39.27	-8.29	5.77	15.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_7~L_7	92.66	-44.92	-3.47	2.75	4.00	19.37	20.80	29.87	3	907.0	1.54	986	1.5	958.8
	U_8~L_8	54.41	-56.80	-0.29	0.32	0.00	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_9~L_9	68.75	-77.32	-54.87	65.90	0.00	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_{10}~L_{10}	0.00	0.00	-172.02	198.35	-243.35	277.51	33.5	33.05	32.91	54.51	14	1439.8	1.65	1799
	U_{11}~L_{11}	2.83	3.35	-39.40	40.59	0.00	0.00	0.00	0.00	-111.22	118.95	-166.15	167.36	35.5	35.52
	U_{12}~L_{12}	4.33	2.46	-40.23	40.22	0.00	0.00	0.00	0.00	-107.19	114.61	-173.33	226.46	42.74	42.74
	U_{13}~L_{13}	11.40	-7.82	-40.44	42.17	0.00	0.00	0.00	0.00	-88.54	91.65	-150.93	164.04	21.1	21.09
	U_{14}~L_{14}	13.92	-12.96	-38.62	39.37	0.00	0.00	0.00	0.00	-45.87	61.27	-114.17	129.29	17.2	17.24
	U_{15}~L_{15}	19.42	-18.14	-35.46	36.03	0.00	0.00	0.00	0.00	-13.39	-20.09	-19.14	33.59	15.4	15.42
	U_{16}~L_{16}	35.06	-36.27	-24.73	29.04	0.00	0.00	0.00	0.00	43.69	-50.66	-34.05	29.04	15.4	15.42
	U_{17}~L_{17}	89.36	-90.26	-11.73	14.69	0.00	0.00	0.00	0.00	89.36	-90.26	21.87	-28.45	15.4	15.42
	U_{18}~L_{18}	34.64	-35.95	-5.52	-1.93	0.00	0.00	0.00	0.00	105.11	-119.30	51.60	-68.25	19.4	19.37
	U_{19}~L_{19}	39.90	-41.04	-4.66	-0.07	0.00	0.00	0.00	0.00	231.31	-228.24	138.24	-143.66	19.3	19.37
	U_{20}~L_{20}	62.27	-62.40	-4.15	-2.89	0.00	0.00	0.00	0.00	-238.56	-231.53	152.22	-174.17	42.7	42.74
	U_{21}~L_{21}	61.53	-69.38	-4.92	0.81	0.00	0.00	0.00	0.00	-254.45	-315.33	168.07	-224.08	42.7	42.74
	U_{22}~L_{22}	3.92	-3.04	-37.36	0.00	0.00	0.00	0.00	0.00	-138.06	209.92	-237.78	209.92	46.71	46.71
	U_{23}~L_{23}	7.69	-8.21	-58.06	55.97	0.00	0.00	0.00	0.00	-151.69	162.43	-237.18	245.86	46.7	46.71
	U_{24}~L_{24}	5.15	-5.43	-32.91	33.11	0.00	0.00	0.00	0.00	-66.10	73.74	-115.59	123.84	21.5	21.54
	U_{25}~L_{25}	5.15	-5.43	-32.91	33.11	0.00	0.00	0.00	0.00	-66.10	73.74	-115.59	123.84	21.5	21.54
	U_{26}~L_{26}	19.60	-18.20	-31.47	32.60	0.00	0.00	0.00	0.00	16.32	7.67	-49.99	58.37	15.4	15.42
	U_{27}~L_{27}	23.72	-24.56	-30.49	30.46	0.00	0.00	0.00	0.00	51.44	-52.70	-19.04	19.34	15.4	15.42
	U_{28}~L_{28}	22.22	-24.32	-14.70	19.92	0.00	0.00	0.00	0.00	79.39	-80.02	-11.34	-37.70	15.4	15.42
	U_{29}~L_{29}	46.67	-49.53	-17.85	16.62	0.00	0.00	0.00	0.00	173.63	-184.04	89.75	-103.25	20.8	20.80
	U_{30}~L_{30}	59.00	-59.00	-17.53	10.62	0.00	0.00	0.00	0.00	273.30	-287.74	110.39	-126.64	20.7	20.67
	U_{31}~L_{31}	50.69	-52.62	-11.28	7.83	0.00	0.00	0.00	0.00	249.47	-262.61	168.91	-184.04	43.0	43.01
	U_{32}~L_{32}	48.12	-49.52	-5.69	1.03	0.00	0.00	0.00	0.00	258.25	-260.43	188.03	-194.71	43.0	43.01
	U_{33}~L_{33}	64.37	-66.71	-5.69	1.03	0.00	0.00	0.00	0.00	258.50	-260.03	188.03	-194.71	43.0	43.24
	U_{34}~L_{34}	64.37	-61.95	-4.23	4.51	0.00	0.00	0.00	0.00	349.23	-344.64	259.06	-258.23	39.2	39.17
	U_{35}~L_{35}	68.25	-69.40	-8.80	79.55	0.00	0.00	0.00	0.00	169.74	-167.79	-27.39	27.39	39.2	39.17
	U_{36}~L_{36}	6.77	-7.11	-67.79	63.98	0.00	0.00	0.00	0.00	6.39	5.03	-29.63	29.63	39.2	39.11
	U_{37}~L_{37}	6.77	-7.11	-67.79	63.98	0.00	0.00	0.00	0.00	3.47	3.95	-29.63	29.63	39.2	39.11
	U_{38}~L_{38}	6.44	-6.29	-61.98	60.91	0.00	0.00	0.00	0.00	-161.11	-157.15	-292.05	244.51	42.7	42.74
	U_{39}~L_{39}	9.82	-7.25	-60.55	62.29	0.00	0.00	0.00	0.00	-134.23	-139.56	-229.71	230.09	39.8	39.83
	U_{40}~L_{40}	12.58	-11.96	-54.12	54.11	0.00	0.00	0.00	0.00	-89.52	-93.00	-165.74	165.74	39.8	39.83
	U_{41}~L_{41}	12.58	-11.96	-34.12	34.11	0.00	0.00	0.00	0.00	-41.84	-45.00	-102.66	104.89	17.2	17.24
	U_{42}~L_{42}	16.39	-14.79	-34.12	34.11	0.00	0.00	0.00	0.00	-18.09	-21.54	-54.20	54.20	17.2	17.24
	U_{43}~L_{43}	20.13	-20.93	-22.80	23.97	0.00	0.00	0.00	0.00	21.36	-21.57	-34.44	36.79	15.4	15.42
	U_{44}~L_{44}	33.71	-34.74	-22.80	23.97	0.00	0.00	0.00	0.00	21.36	-21.57	-34.44	36.79	15.4	15.42
	U_{45}~L_{45}	33.01	-34.14	-16.12	19.00	0.00	0.00	0.00	0.00	94.71	-89.14	-30.84	36.69	17.2	17.24
	U_{46}~L_{46}	41.28	-40.68	-12.63	10.91	0.00	0.00	0.00	0.00	140.19	-140.62	70.11	-74.32	18.7	18.71
	U_{47}~L_{47}	41.28	-40.68	-12.63	10.91	0.00	0.00	0.00	0.00	140.19	-140.62	70.11	-74.32	18.7	18.71
	U_{48}~L_{48}	66.14	-67.44	-7.10	4.36	0.00	0.00	0.00	0.00	265.66	-268.32	170.45	-174.99	42.7	42.74
	U_{49}~L_{49}	66.14	-67.44	-7.10	4.36	0.00	0.00	0.00	0.00	265.66	-268.32	170.45	-174.99	42.7	42.74
	U_{50}~L_{50}	69.74	-67.25	-3.39	2.56	0.00	0.00	0.00	0.00	516.61	-516.36	221.54	-225.09	39.2	39.17
	U_{51}~L_{51}	72.62	-70.37	-3.39	2.56	0.00	0.00	0.00	0.00	516.61	-516.36	221.54	-225.09	39.2	39.17
	U_{52}~L_{52}	6.20	-6.88	-59.63	57.48	0.00	0.00	0.00	0.00	-209.11	-208.51	-294.68	292.18	39.2	39.17
	U_{53}~L_{53}	4.33	-4.42	-50.33	49.31	0.00	0.00	0.00	0.00	-93.22	-197.11	-216.27	206.96	43.2	43.24
	U_{54}~L_{54}	4.81	-4.91	-55.92	54.79	0.00	0.00	0.00	0.00	-145.82	-154.31	-219.37	224.33	43.0	43.01
	U_{55}~L_{55}	7.67	-5.69	-48.91	48.18	0.00	0.00	0.00	0.00	-145.82	-154.31	-219.37	224.33	43.0	43.01
	U_{56}~L_{56}	11.18	-9.07	-46.46	46.00	0.00	0.00	0.00	0.00	-86.76	-100.28	-160.40	160.80	20.80	20.67
	U_{57}~L_{57}	11.18	-9.07	-46.46	46.00	0.00	0.00	0.00	0.00	-86.76	-100.28	-160.40	160.80	20.80	20.67
	U_{58}~L_{58}	13.03	-13.82	-24.43	27.06	0.00	0.00	0.00	0.00	-40.07	-49.55	-88.78	102.70	15.4	15.42
	U_{59}~L_{59}	27.25	-28.39	-24.70	26.87	0.00	0.00	0.00	0.00	-21.04	-21.67	-52.25	52.25	15.4	15.42
	U_{60}~L_{60}	30.70	-32.89	-24.82	22.67	0.00	0.00	0.00	0.00	32.66	-40.41	-15.94	32.66	15.4	15.42
	U_{61}~L_{61}	31.99	-33.18	-19.34	19.00	0.00	0.00	0.00	0.00	97.42	-94.17	-13.34	19.42	15.4	15.42
	U_{62}~L_{62}	31.99	-33.18	-9.79	-2.64	0.00	0.00	0.00	0.00	-113.42	-122.54	62.48	-73.97	21.5	21.54
	U_{63}~L_{63}	37.42	-38.87	-4.04	-0.07	0.00	0.00	0.00	0.00	-200.80	-278.91	169.72	-187.31	46.7	46.71
	U_{64}~L_{64}	63.49	-63.81	-4.57	0.65	0.00	0.00	0.00	0.00	-200.80	-278.91	169.72	-187.31	46.7	46.71
	U_{65}~L_{65}	60.11	-68.15	-4.91	0.44	0.00	0.00	0.00	0.00	-293.58	-357.47	209.18	-260.50	46.7	46.71
	U_{66}~L_{66}	0.00	0.00	-115.06	180.81	-225.60	225.60	0.00	0.00	-115.06	-180.81	-225.60	225.60	42.74	42.74
	U_{67}~L_{67}	4.39	-4.68	-62.25	59.62	0.00	0.00	0.00	0.00	-131.85	-140.68	-215.88	224.27	42.7	42.74
	U_{68}~L_{68}	4.70	-4.68	-62.25	59.62	0.00	0.00	0.00	0.00	-131.85	-140.68	-215.88	224.27	42.7	42.74
	U_{69}~L_{69}	3.91	-2.81	-34.47	34.11	0.00	0.00	0.00	0.00	-44.84	-58.88	-94.13	106.89	19.4	19.37
	U_{70}~L_{70}	3.91	-2.81	-34.47	34.11	0.00	0.00	0.00	0.00	-44.84	-58.88	-94.13	106.89	19.4	19.37
	U_{71}~L_{71}	19.74	-20.65	-39.69	39.72	0.00	0.00	0.00	0.00	22.06	-19.54	-50.06	58.65	15.4	15.42
	U_{72}~L_{72}	25.87	-27.91	-23.67	24.46	0.00	0.00	0.00	0.00	67.25	-73.57	2.86	-5.47	15.4	15.42
	U_{73}~L_{73}	25.87	-27.91	-23.67	24.46	0.00	0.00	0.00	0.00	113.39	-124.11	36.49	-44.54	15.4	15.42
	U_{74}~L_{74}	39.86	-40.70	-14.98	13.92	0.00	0.00	0.00	0.00	154.97	-152.96	83.68	-91.95	21.1	21.09
	U_{75}~L_{75}	39.86	-40.70	-14.98	13.92	0.00	0.00	0.00	0.00	154.97	-152.96	83.68	-91.95	21.1	21.09
	U_{76}~L_{76}	39.86	-44.59	-9.01	3.85	0.00	0.00	0.00	0.00	171.68	-182.60	112.18	-119.62	35.5	35.52
	U_{77}~L_{77}	57.36	-63.16	-0.89	1.15	0.00	0.00	0.00	0.00	259.99	-298.03	184.26	-214.43	33.1	33.05
	U_{78}~L_{78}	50.63	-65.10	-71.09	80.60	0.00	0.00	0.00	0.00	115.37	-161.14	-43.07	-28.34	107.1	107.13
	U_{79}~L_{79}	0.27	-0.29	-50.54	51.85	0.00	0.00	0.00	0.00	-105.20	-116.49	-171.25

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: **4F1**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Section 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-In	Dead Load End-In	Live Load (Max) Start-In	Live Load (Max) End-In	Pedestrian Load (Max) Start-In	Pedestrian Load (Min) End-In	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In
Structure 1	U_0-L_1	-12.55	3.37	0.32	-9.18	-2.64	1.11				
	U_1-L_1	-1.68	-7.06	0.22	-0.05	-1.44	-0.06				
	U_1-L_2	-4.77	11.66	0.23	-0.08	-1.09	-0.24				
	U_2-L_2	-9.78	-11.75	0.34	-0.48	-1.00	-0.69				
	U_2-L_3	-10.32	17.09	0.38	-2.61	-0.85	-1.06				
	L_0-L_1	-26.82	-58.45	0.51	-0.34	-2.84	1.18				
	L_1-L_2	-59.36	-59.36	2.13	-0.23	-4.41	-2.13				
	L_2-L_3	-83.38	-83.38	0.69	0.99	-1.94	3.49				
	L_3-L_4	-9.60	109.51	1.34	1.02	-1.64	2.86				
	L_4-L_5	-74.77	114.61	3.26	0.36	-3.34	1.47				
	L_5-L_6	-56.82	54.75	0.32	0.54	-2.53	1.02				
	L_6-L_7	-56.82	54.75	0.32	0.54	-2.53	1.02				
	L_7-L_8	-74.77	114.61	3.26	0.36	-3.34	1.47				
	L_8-L_9	-9.60	109.51	1.34	1.02	-1.64	2.86				
	L_9-L_{10}	-83.38	-83.38	0.69	0.99	-1.94	3.49				
	L_{10}-L_{11}	-59.36	-59.36	2.13	-0.23	-4.41	-2.13				
	L_{11}-L_{12}	-26.82	-58.45	0.51	-0.34	-2.84	1.18				
	L_{12}-U_{13}	-10.32	17.09	0.38	-2.61	-0.85	-1.06				
	L_{12}-U_{12}	-9.78	-11.75	0.34	-0.48	-1.00	-0.69				
	L_{11}-U_{12}	-4.77	11.66	0.23	-0.08	-1.09	-0.24				
	L_{11}-U_{11}	-1.68	-7.06	0.22	-0.05	-1.44	-0.06				
	L_{12}-U_{11}	-12.55	3.37	0.32	-9.18	-2.64	1.11				
Structure 2	U_0-L_1	-49.28	58.13	0.29	-0.25	-3.84	2.31				
	U_1-L_1	-66.38	61.33	0.40	-0.24	-4.09	2.76				
	U_1-L_2	-105.04	88.64	0.33	0.02	-4.60	3.42				
	U_2-L_2	-82.69	87.74	0.62	-0.56	-4.85	3.70				
	U_2-L_3	-88.97	71.76	0.59	-0.24	-4.88	34.11				
	L_0-L_1	-81.28	63.04	0.64	-0.52	-3.99	2.84				
	L_1-L_2	-82.69	87.74	0.62	-0.56	-4.85	3.70				
	L_2-L_3	-17.30	7.21	0.65	-0.91	-1.76	1.29				
	L_3-L_4	-10.62	-11.45	0.98	-1.18	-1.96	10.34				
	L_4-L_5	7.42	-23.91	1.02	-1.41	-1.34	0.17				
	L_5-L_6	-44.31	35.87	0.79	-1.16	-2.05	0.33				
	L_6-L_7	-56.38	68.64	0.72	-1.07	-13.97	-34.11				
	L_7-L_8	-88.54	73.82	0.48	-0.81	-3.21	1.44				
	L_8-L_9	-90.48	69.64	0.32	-0.49	-3.49	2.32				
	L_9-L_{10}	-108.36	115.66	0.61	-0.33	-3.74	2.53				
	L_{10}-L_{11}	-154.28	139.69	0.40	-0.14	-5.05	3.61				
	L_{11}-L_{12}	-24.74	100.39	0.54	0.46	-3.28	3.53				
	L_{12}-U_{13}	-24.74	100.39	0.54	0.46	-3.28	3.53				
	L_{12}-U_{12}	-98.29	3.79	0.52	-0.32	-4.94	3.65				
	L_{11}-U_{12}	-74.15	99.51	0.35	-0.40	-4.13	3.65				
	L_{11}-U_{11}	-55.45	68.85	0.46	-0.60	-3.89	2.20				
	L_{12}-U_{11}	-32.97	39.97	0.53	-0.77	-2.49	1.80				
	U_0-L_1	-10.33	4.39	0.66	-0.91	-1.52	0.29				
	U_1-L_1	-6.26	3.09	0.40	-0.53	-0.93	0.18				
	U_1-L_2	-17.07	16.15	0.76	-0.98	-1.56	1.32				
	U_2-L_2	-12.27	12.27	0.66	-0.92	-1.32	0.86				
	U_2-L_3	-55.66	65.11	0.73	-1.02	-3.48	2.36				
	L_0-L_1	-69.18	80.37	0.52	-0.49	-3.71	2.43				
	L_1-L_2	-55.66	65.11	0.73	-1.02	-3.48	2.36				
	L_2-L_3	-106.02	102.50	0.26	-0.29	-4.85	3.98				
	L_3-L_4	-53.07	53.07	0.44	0.01	-3.61	2.51				
	L_4-L_5	-47.57	127.97	1.21	0.46	-3.29	4.04				
	L_5-L_6	-89.45	99.26	0.61	0.56	-3.88	2.56				
	L_6-L_7	-86.48	82.53	0.39	-0.58	-1.93					
	L_7-L_8	-83.53	83.53	0.39	-0.16	-3.27	2.21				
	L_8-L_9	-90.13	67.65	0.61	-0.56	-3.44	2.12				
	L_9-L_{10}	-90.13	67.65	0.56	-0.91	-3.44	2.12				
	L_{10}-L_{11}	-86.48	82.53	0.39	-0.58	-1.93					
	L_{11}-L_{12}	-47.57	127.97	1.21	0.46	-3.29	4.04				
	L_{12}-U_{13}	-89.45	99.26	0.61	0.56	-3.88	2.56				
	L_{12}-U_{12}	-53.07	53.07	0.44	0.01	-3.61	2.51				
	L_{11}-U_{12}	-106.02	102.50	0.26	-0.29	-4.85	3.98				
	L_{11}-U_{11}	-55.66	65.11	0.73	-1.02	-3.48	2.36				
	L_{12}-U_{11}	-69.18	80.37	0.52	-0.49	-3.71	2.43				
	U_0-L_1	-10.33	4.39	0.66	-0.91	-1.52	0.29				
	U_1-L_1	-6.26	3.09	0.40	-0.53	-0.93	0.18				
	U_1-L_2	-17.07	16.15	0.76	-0.98	-1.56	1.32				
	U_2-L_2	-12.27	12.27	0.66	-0.92	-1.32	0.86				
	U_2-L_3	-55.66	65.11	0.73	-1.02	-3.48	2.36				
	L_0-L_1	-49.18	80.37	0.52	-0.49	-3.71	2.43				
	L_1-L_2	-55.66	65.11	0.73	-1.02	-3.48	2.36				
	L_2-L_3	-106.02	102.50	0.26	-0.29	-4.85	3.98				
	L_3-L_4	-53.07	53.07	0.44	0.01	-3.61	2.51				
	L_4-L_5	-47.57	127.97	1.21	0.46	-3.29	4.04				
	L_5-L_6	-89.45	99.26	0.61	0.56	-3.88	2.56				
	L_6-L_7	-86.48	82.53	0.39	-0.58	-1.93					
	L_7-L_8	-83.53	83.53	0.39	-0.16	-3.27	2.21				
	L_8-L_9	-90.13	67.65	0.61	-0.56	-3.44	2.12				
	L_9-L_{10}	-90.13	67.65	0.56	-0.91	-3.44	2.12				
	L_{10}-L_{11}	-86.48	82.53	0.39	-0.58	-1.93					
	L_{11}-L_{12}	-47.57	127.97	1.21	0.46	-3.29	4.04				
	L_{12}-U_{13}	-89.45	99.26	0.61	0.56	-3.88	2.56				
	L_{12}-U_{12}	-53.07	53.07	0.44	0.01	-3.61	2.51				
	L_{11}-U_{12}	-106.02	102.50	0.26	-0.29	-4.85	3.98				
	L_{11}-U_{11}	-55.66	65.11	0.73	-1.02	-3.48	2.36				
	L_{12}-U_{11}	-69.18	80.37	0.52	-0.49	-3.71	2.43				
Structure 3	U_0-L_1	-10.17	69.10	0.37	-0.30	-5.60	3.34				
	U_1-L_1	-86.86	56.37	0.34	-0.26	-4.10	2.58				
	U_1-L_2	-84.89	52.05	0.41	-0.35	-4.13	2.70				
	U_2-L_2	-26.09	12.76	0.25	-0.52	-2.15	1.52				
	U_2-L_3	-10.98	4.27	0.56	-0.91	-1.58	0.96				
	L_0-L_1	-9.08	-18.28	0.74	-0.96	-1.34	0.03				
	L_1-L_2	-10.98	4.27	0.56	-0.91	-1.58	0.96				
	L_2-L_3	-50.46	39.07	0.56	0.85	-2.60	0.76				
	L_3-L_4	-59.57	20.60	0.26	0.40	-2.85	0.52				
	L_4-L_5	-76.74	31.99	0.39	-0.24	-4.17	2.34				
	L_5-L_6	-77.37	67.15	0.14	0.32	-3.50	1.61				
	L_6-L_7	-77.37	67.15	0.14	0.32	-3.50	1.61				
	L_7-L_8	-76.74	31.99	0.39	-0.24	-4.17	2.34				
	L_8-L_9	-59.57	20.60	0.26	0.40	-2.85	0.52				
	L_9-L_{10}	-50.46	39.07	0.56	0.85	-2.60	0.76				
	L_{10}-L_{11}	-9.08	-18.28	0.74	-0.96	-1.34	0.03				
	L_{11}-L_{12}	-10.98	4.27	0.56	-0.91	-1.58	0.96				
	L_{12}-U_{13}	-26.09	12.76	0.25	-0.52	-2.15	1.52				
	L_{12}-U_{12}	-84.89	52.05	0.41	-0.35	-4.13	2.70				
	L_{11}-U_{12}	-86.86	56.37	0.34	-0.26	-4.10	2.58				
	L_{11}-U_{11}	-54.59	58.66	0.23	-0.31	-4.38	2.48				
	L_{12}-U_{11}	-10.17	69.10	0.37	-0.30	-5.60	3.34				
	U_0-L_1	-8.16	17.57	0.31	-0.29	-1.52	-0.32				
	U_1-L_1	-5.84	22.05	0.21	-0.20	-1.08	-0.22				
	U_1-L_2	-9.12	8.77	0.30	-0.12	-1.62	-0.09				
	U_2-L_2	-6.52	6.52	0.25	-0.12	-1.20	-0.12				
	U_2-L_3	-23.22	7.61	0.48	-0.09	-2.05	1.14				

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start-In	Max. Pos. Mom. End-In	Max. Neg. Mom. Start-In	Max. Neg. Mom. End-In	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	$I_{t/1}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_u (k-in)	Equivalent Mom. Factor a	$C_{m/1}$	$C_{m/2}$
Structure 1	U_0-L_1	-11.72	1.79	-54.48	20.48	15.6	15.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.376	0.45	0.45
	U_1-L_1	-1.44	1.61	-6.96	-2.71	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.435	0.77	0.77
	U_1-L_2	-4.47	1.61	-12.09	-15.76	-14.39	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.071	0.63	0.63
	U_2-L_2	-17.56	-22.21	-1.79	-25.23	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.071	0.63	0.63
	U_2-L_3	-10.81	-27.94	-0.66	-29.89	-27.54	15.4	15.42	23.71	2	907.0	1.54	1396	1.5	958.8	-0.542	0.38	0.38
	L_0-L_1	-5.70	-3.82	-37.55	-38.98	15.6	15.63	15.58	25.56	5	1183.7	1.51	1753	1.5	1737.0	-0.816	0.27	0.27
	L_1-L_2	-19.36	-19.36	-2.13	-0.23	-4.41	-2.13	15.42	23.71	2	1183.7	1.51	1753	1.5	1737.0	-0.219	0.51	0.51
	L_2-L_3	-38.04	-38.83	0.69	0.99	-1.94	3.49				1183.7	1.51	1753	1.5	1737.0	-0.219	0.51	0.51
	L_3-L_4	-9.60	109.51	1.34	1.02	-1.64	2.86				2014.7	-0.186	0.53	0.53	1939.2	0.103	0.41	0.41
	L_4-L_5	-74.77	114.61	3.26	0.36	-3.34	1.47				2241.1	1.51	2241	1.5	2214.7	-0.091	0.53	0.53
	L_5-L_6	-56.82	54.75	0.32	0.54	-2.53	1.02				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_6-L_7	-56.82	54.75	0.32	0.54	-2.53	1.02				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_7-L_8	-74.77	114.61	3.26	0.36	-3.34	1.47				2241.1	1.51	2241	1.5	2214.7	-0.091	0.53	0.53
	L_8-L_9	-9.60	109.51	1.34	1.02	-1.64	2.86				2014.7	-0.186	0.53	0.53	1939.2	0.103	0.41	0.41
	L_9-L_{10}	-83.38	-83.38	0.69	0.99	-1.94	3.49				1183.7	1.51	1753	1.5	1737.0	-0.219	0.51	0.51
	L_{10}-L_{11}	-59.36	-59.36	2.13	-0.23	-4.41	-2.13				1183.7	1.51	1753	1.5	1737.0	-0.219	0.51	0.51
	L_{11}-L_{12}	-26.82	-58.45	0.51	-0.34	-2.84	1.18				1183.7	1.51	1753	1.5	1737.0	-0.816	0.27	0.27
	L_{12}-U_{13}	-10.32	17.09	0.38	-2.61	-0.85	-1.06				1183.7	1.51	1753	1.5	1737.0	-0.816	0.27	0.27
	L_{12}-U_{12}	-9.78	-11.75	0.34	-0.48	-1.00	-0.69				1183.7	1.51	1753	1.5	1737.0	-0.219	0.51	0.51
	L_{11}-U_{12}	-4.77	11.66	0.23	-0.08	-1.09	-0.24				2014.7	-0.186	0.53	0.53	1939.2	0.103	0.41	0.41
	L_{11}-U_{11}	-1.68	-7.06	0.22	-0.05	-1.44	-0.06				2241.1	1.51	2241	1.5	2214.7	-0.091	0.53	0.53
	L_{12}-U_{11}	-12.55	3.37	0.32	-9.18	-2.64	1.11				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
Structure 2	U_0-L_1	-49.28	58.13	0.29	-0.25	-3.84	2.31				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_1-L_1	-66.38	61.33	0.40	-0.24	-4.09	2.76				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_1-L_2	-105.04	88.64	0.33	0.02	-4.60	3.42				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_2-L_2	-82.69	87.74	0.62	-0.56	-4.85	3.70				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_2-L_3	-88.97	71.76	0.59	-0.24	-4.88	34.11				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_0-L_1	-81.28	63.04	0.64	-0.52	-3.99	2.84				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_1-L_2	-82.69	87.74	0.62	-0.56	-4.85	3.70				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_2-L_3	-17.30	7.21	0.65	-0.91	-1.76	1.29				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_3-L_4	-10.62	-11.45	0.98	-1.18	-1.96	10.34				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_4-L_5	7.42	-23.91	1.02	-1.41	-1.34	0.17				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_5-L_6	-44.31	35.87	0.79	-1.16	-2.05	0.33				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_6-L_7	-56.38	68.64	0.72	-1.07	-13.97	-34.11				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_7-L_8	-88.54	73.82	0.48	-0.81	-3.21	1.44				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_8-L_9	-90.48	69.64	0.32	-0.49	-3.49	2.32				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_9-L_{10}	-108.36	115.66	0.61	-0.33	-3.74	2.53				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{10}-L_{11}	-154.28	139.69	0.40	-0.14	-5.05	3.61				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{11}-L_{12}	-24.74	100.39	0.54	0.46	-3.28	3.53				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{12}-U_{13}	-24.74	100.39	0.54	0.46	-3.28	3.53				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{12}-U_{12}	-98.29	3.79	0.52	-0.32	-4.94	3.65				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{11}-U_{12}	-74.15	99.51	0.35	-0.40	-4.13	3.65				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{11}-U_{11}	-55.45	68.85	0.46	-0.60	-3.89	2.20				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{12}-U_{11}	-32.97	39.97	0.53	-0.77	-2.49	1.80				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_0-L_1	-10.33	4.39	0.66	-0.91	-1.52	0.29				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_1-L_1	-6.26	3.09	0.40	-0.53	-0.93	0.18				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_1-L_2	-17.07	16.15	0.76	-0.98	-1.56	1.32				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_2-L_2	-12.27	12.27	0.66	-0.92	-1.32	0.86				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_2-L_3	-55.66	65.11	0.73	-1.02	-3.48	2.36				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_0-L_1	-49.18	80.37	0.52	-0.49	-3.71	2.43				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_1-L_2	-55.66	65.11	0.73	-1.02	-3.48	2.36				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_2-L_3	-106.02	102.50	0.26	-0.29	-4.85	3.98				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_3-L_4	-53.07	53.07	0.44	0.01	-3.61	2.51				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_4-L_5	-47.57	127.97	1.21	0.46	-3.29	4.04				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_5-L_6	-89.45	99.26	0.61	0.56	-3.88	2.56				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_6-L_7	-86.48	82.53	0.39	-0.58	-1.93					1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_7-L_8	-83.53	83.53	0.39	-0.16	-3.27	2.21				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_8-L_9	-90.13	67.65	0.61	-0.56	-3.44	2.12				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_9-L_{10}	-90.13	67.65	0.56	-0.91	-3.44	2.12				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{10}-L_{11}	-86.48	82.53	0.39	-0.58	-1.93					1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{11}-L_{12}	-47.57	127.97	1.21	0.46	-3.29	4.04				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{12}-U_{13}	-89.45	99.26	0.61	0.56	-3.88	2.56				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{12}-U_{12}	-53.07	53.07	0.44	0.01	-3.61	2.51				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{11}-U_{12}	-106.02	102.50	0.26	-0.29	-4.85	3.98				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{11}-U_{11}	-55.66	65.11	0.73	-1.02	-3.48	2.36				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_{12}-U_{11}	-69.18	80.37	0.52	-0.49	-3.71	2.43				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_0-L_1	-10.17	69.10	0.37	-0.30	-5.60	3.34				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_1-L_1	-86.86	56.37	0.34	-0.26	-4.10	2.58				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_1-L_2	-84.89	52.05	0.41	-0.35	-4.13	2.70				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_2-L_2	-26.09	12.76	0.25	-0.52	-2.15	1.52				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	U_2-L_3	-10.98	4.27	0.56	-0.91	-1.58	0.96				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_0-L_1	-9.08	-18.28	0.74	-0.96	-1.34	0.03				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_1-L_2	-10.98	4.27	0.56	-0.91	-1.58	0.96				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_2-L_3	-50.46	39.07	0.56	0.85	-2.60	0.76				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_3-L_4	-59.57	20.60	0.26	0.40	-2.85	0.52				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_4-L_5	-76.74	31.99	0.39	-0.24	-4.17	2.34				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_5-L_6	-77.37	67.15	0.14	0.32	-3.50	1.61				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_6-L_7	-77.37	67.15	0.14	0.32	-3.50	1.61				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_7-L_8	-76.74	31.99	0.39	-0.24	-4.17	2.34				1968.6	-0.781	0.29	0.29	40.82	-63.16	0.75	0.85
	L_8-L_9	-59.57	20.60	0.26	0.40	-2.85	0.52				1968.6	-0.781

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{top} (in^3) | S_b (in^3) | S_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor f | M_p (k-in) | Formula I.8 Term = F_y*S_top | M_n (k-in) | Equivalent Mem. Factor: a | $C_{b(a)}$ | $C_{b(min)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | YY Axis Moment Properties: Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_Y (in^3) | I_{YY} (in^4) | Shape Factor f | M_p (k-in) | P_{crit} (kip) | Formula I.8 Term = F_y*S_top | M_n (k-in) | Equivalent Mem. Factor: a | $C_{b(a)}$ | $C_{b(min)}$ | Yield: Axial Action | Yield: Moment Region | Yield: Total | Pass | Tension: Axial Action | Tension: Moment Region | Tension: Total | Pass | Fracture: Axial Action | Fracture: Moment Region | Fracture: Total | Pass | Buckle: Axial Action | Buckle: Moment Region | Buckle: Total | Pass | Compression: Axial Action | Compression: Moment Region | Compression: Total | Pass |
|---|---|---|---

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Mxx, Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Start (k-ft)	Impact Pedestrian Load End (k-ft)
Structure 1	L_0-L_1	-19.48	-91.71	2.99	-4.12	-0.53	0.56	0.30	-0.64	-0.11	0.13
	L_1-L_2	30.33	-116.64	1.30	-5.43	-3.34	-3.82	0.00	0.00	-0.22	-0.91
	L_2-L_3	20.01	-78.07	1.30	-7.27	-6.70	-7.64	0.00	0.00	-1.04	-4.27
	L_3-L_4	-55.05	-14.64	1.00	3.17	-7.27	-5.15	0.23	0.86	1.19	-1.34
	L_4-L_5	-50.77	-24.04	2.58	1.30	-6.72	-4.85	0.00	0.00	-0.92	-3.85
	L_5-L_6	-2.22	-269.06	1.88	3.55	-4.06	-0.08	0.53	1.32	-0.84	0.05
	L_6-L_7	-2.28	-58.33	2.28	-0.64	-0.08	0.53	0.30	1.32	-0.84	0.05
	L_7-L_8	-38.40	-570.96	0.60	-1.49	-3.04	-4.12	0.00	0.00	-0.35	0.65
	L_8-L_9	555.48	-39.07	8.16	-0.74	-1.09	0.26	3.40	-0.27	0.00	0.00
	L_9-L_{10}	538.26	-153.68	3.02	-3.28	-1.95	-0.39	0.70	-0.36	0.00	0.00
	L_{10}-L_{11}	164.35	-164.49	2.27	1.28	-2.09	-3.11	1.00	-0.73	0.00	0.00
	L_{11}-L_{12}	179.34	-221.21	3.19	1.28	-2.09	-3.11	1.00	-0.73	0.00	0.00
	L_{12}-L_{13}	-57.28	-170.48	1.66	0.83	-5.05	-4.91	0.43	0.20	-0.57	-3.87
	L_{13}-L_{14}	70.09	-469.84	2.08	-6.23	-4.79	-7.92	0.35	0.23	-0.43	-2.28
	L_{14}-L_{15}	-488.80	-137.87	2.08	-2.86	-4.79	-3.30	-0.92	0.23	-0.43	-2.28
	L_{15}-L_{16}	-272.90	-394.23	0.82	0.19	-7.57	-5.11	0.13	-0.03	-1.43	-1.04
	L_{16}-L_{17}	-389.66	-77.21	0.00	-0.06	-7.75	-7.37	0.00	-0.07	-1.26	-0.12
	L_{17}-L_{18}	-202.42	-20.75	0.27	-0.30	-4.20	0.27	0.06	-0.07	-0.96	0.07
	L_{18}-L_{19}	-240.36	-179.73	0.41	-0.03	-4.00	1.90	0.06	-0.06	-1.10	0.57
	L_{19}-L_{20}	-190.79	100.10	0.28	-0.22	-3.91	2.02	0.06	-0.06	-1.21	0.50
	L_{20}-L_{21}	26.57	-260.07	2.06	-6.26	-0.32	0.68	0.35	-1.06	-0.06	0.13
	L_{21}-L_{22}	201.83	-347.22	2.06	-6.26	-0.32	0.68	0.35	-1.06	-0.06	0.13
	L_{22}-L_{23}	7.20	-277.30	1.50	-3.30	-3.48	-4.83	0.23	-1.18	-0.13	0.17
	L_{23}-L_{24}	16.12	-479.17	1.50	-3.30	-4.61	-6.44	0.23	-1.18	-0.13	0.17
	L_{24}-L_{25}	-367.44	-421.31	0.48	-1.19	-11.49	-9.22	0.04	0.32	-1.24	-1.22
	L_{25}-L_{26}	-215.67	-644.44	0.48	-1.19	-11.49	-9.22	0.04	0.32	-1.24	-1.22
	L_{26}-L_{27}	-419.34	-397.03	2.58	2.79	-16.29	-10.13	0.47	0.59	2.41	-2.01
	L_{27}-L_{28}	-394.51	-7.27	2.27	4.21	-12.07	-3.73	0.46	0.90	-1.94	-0.96
	L_{28}-L_{29}	-324.22	-260.75	2.85	2.85	-3.61	-3.61	0.00	0.00	-0.96	-0.96
	L_{29}-L_{30}	-299.55	-262.64	2.06	3.52	-4.50	-5.11	0.41	0.52	-1.43	-0.05
	L_{30}-L_{31}	-324.84	-262.64	3.48	2.31	-4.50	-5.11	0.41	0.52	-1.43	-0.05
	L_{31}-L_{32}	-188.92	-585.38	2.09	4.07	-4.94	0.40	0.44	1.14	-1.12	0.55
	L_{32}-L_{33}	-132.48	-278.84	2.90	-2.62	0.40	-1.80	0.55	-1.25	-0.98	0.04
	L_{33}-L_{34}	474.14	-1260.86	1.81	-2.87	-0.32	-0.32	0.00	0.00	-0.08	-0.08
	L_{34}-L_{35}	1356.39	-488.30	12.11	-4.17	-3.43	-2.36	3.05	-1.83	0.00	0.00
	L_{35}-L_{36}	396.67	-1.83	0.00	0.00	-0.08	-0.08	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	579.91	-109.27	4.33	-1.97	-2.59	-2.76	2.03	-0.54	0.00	0.00
	L_{37}-L_{38}	1.70	-841.98	0.00	0.00	-0.08	-0.08	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	275.71	-101.87	3.49	-1.60	-4.90	-4.02	1.05	-0.58	-0.11	-0.49
	L_{39}-L_{40}	209.90	-114.91	2.01	2.35	-3.82	-5.72	0.42	0.64	-0.29	-1.04
	L_{40}-L_{41}	16.69	-364.67	1.30	-3.33	-6.70	-7.51	0.00	0.00	-1.04	-4.27
	L_{41}-L_{42}	-33.76	-318.83	1.69	1.37	-8.41	-11.42	0.43	0.76	-0.99	-2.03
	L_{42}-L_{43}	329.05	-28.69	2.58	1.30	-6.72	-4.85	0.00	0.00	-0.92	-3.85
	L_{43}-L_{44}	-183.34	-53.25	1.39	3.00	-8.11	-4.91	0.42	0.44	-1.14	-0.56
	L_{44}-L_{45}	1.70	-841.98	0.00	0.00	-0.08	-0.08	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	-100.89	310.38	1.55	3.14	-5.75	-0.57	0.38	0.41	-0.87	0.56
	L_{46}-L_{47}	-92.99	309.46	2.68	0.92	-7.18	1.40	0.46	0.11	-0.75	0.35
	L_{47}-L_{48}	70.09	841.98	0.00	0.00	-0.08	-0.08	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	-16.76	-426.70	3.10	0.49	-5.05	-3.73	0.04	-1.43	-0.34	-0.13
	L_{49}-L_{50}	-532.10	-131.99	2.68	0.92	-7.18	1.40	0.46	0.11	-0.75	0.35
	L_{50}-L_{51}	1421.12	-463.08	11.49	-2.76	-2.91	1.79	5.23	-1.81	0.00	0.00
	L_{51}-L_{52}	-236.11	-179.35	2.10	-0.84	-5.60	-1.94	0.00	0.00	-0.15	-0.40
	L_{52}-L_{53}	541.24	-195.24	3.10	0.49	-5.05	-3.73	0.04	-1.43	-0.34	-0.13
	L_{53}-L_{54}	350.83	-204.00	3.08	-6.63	-1.58	-3.89	0.84	-0.46	0.00	0.00
	L_{54}-L_{55}	243.13	-341.87	2.17	2.37	-3.80	-4.95	0.50	0.46	-0.15	-1.37
	L_{55}-L_{56}	541.24	-195.24	3.10	0.49	-5.05	-3.73	0.04	-1.43	-0.34	-0.13
	L_{56}-L_{57}	-365.13	-645.03	2.88	1.79	-13.51	-10.99	0.68	0.27	-2.07	-2.23
	L_{57}-L_{58}	-620.56	-212.20	2.15	0.43	-14.89	-6.33	0.38	0.06	-2.14	-1.36
	L_{58}-L_{59}	-434.76	-330.92	2.15	0.43	-14.89	-6.33	0.38	0.06	-2.14	-1.36
	L_{59}-L_{60}	-460.63	-26.73	1.11	-0.06	-9.57	-2.11	0.11	-0.10	-1.32	-0.27
	L_{60}-L_{61}	-332.59	-186.75	0.85	-0.16	-5.64	1.24	0.10	-0.13	-1.17	0.34
	L_{61}-L_{62}	-332.59	-186.75	0.85	-0.16	-5.64	1.24	0.10	-0.13	-1.17	0.34
	L_{62}-L_{63}	61.32	-104.62	2.65	-6.96	-0.26	-0.32	0.37	-0.94	-0.06	0.04
	L_{63}-L_{64}	196.04	-240.64	2.81	-5.26	-0.83	-2.00	0.67	-1.12	-0.10	0.04
	L_{64}-L_{65}	23.99	-188.51	2.81	-5.26	-0.83	-2.00	0.67	-1.12	-0.10	0.04
	L_{65}-L_{66}	40.44	-374.13	1.63	-5.35	-2.94	-6.12	0.00	0.00	-1.11	-4.27
	L_{66}-L_{67}	40.44	-374.13	1.63	-5.35	-2.94	-6.12	0.00	0.00	-1.11	-4.27
	L_{67}-L_{68}	-121.41	-479.36	2.29	-1.53	-6.79	-10.46	0.00	0.00	-1.04	-2.51
	L_{68}-L_{69}	-476.93	-95.74	2.29	-1.53	-6.79	-10.46	0.00	0.00	-1.04	-2.51
	L_{69}-L_{70}	-241.33	-199.01	1.34	1.39	-4.96	0.96	0.23	0.47	-1.20	0.19
	L_{70}-L_{71}	-241.33	-199.01	1.34	1.39	-4.96	0.96	0.23	0.47	-1.20	0.19
	L_{71}-L_{72}	-127.20	-162.45	1.83	-1.25	-3.62	1.14	0.45	-0.34	-0.85	0.67
	L_{72}-L_{73}	-127.20	-162.45	1.83	-1.25	-3.62	1.14	0.45	-0.34	-0.85	0.67
	L_{73}-L_{74}	606.99	-34.77	0.00	0.00	-0.26	-1.23	0.00	0.00	-0.30	0.00
	L_{74}-L_{75}	606.99	-34.77	0.00	0.00	-0.26	-1.23	0.00	0.00	-0.30	0.00
	L_{75}-L_{76}	88.27	-47.34	0.00	0.00	-0.26	-1.51	0.00	0.00	-0.30	0.00
	L_{76}-L_{77}	88.27	-47.34	0.00	0.00	-0.26	-1.51	0.00	0.00	-0.30	0.00
	L_{77}-L_{78}	217.39	-65.08	1.95	2.43	-2.74	-3.87	0.67	0.69	-0.05	-0.55
	L_{78}-L_{79}	217.39	-65.08	1.95	2.43	-2.74	-3.87	0.67	0.69	-0.05	-0.55
	L_{79}-L_{80}	-112.38	-133.88	1.57	0.64	-6.47	-3.65	0.49	-0.22	-1.38	0.22
	L_{80}-L_{81}	-112.38	-133.88	1.57	0.64	-6.47	-3.65	0.49	-0.22	-1.38	0.22
	L_{81}-L_{82}	-120.88	38.04	0.54	0.54	-2.40	1.60	0.19	-0.18	-0.88	0.72

| Location | Member | ZZ Axis Moments from STAAD: Mx Mov. Mom. Start (k-ft) | Mx Mov. Mom. End (k-ft) | S_{xx} (in^3) | S_{fc} (in^3) | Z_z (in^3) | I (in^4) | I_{xx} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{xx} | M_r (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Dead Load (Max) (k-ft) | Live Load (Max) (k-ft) | Live Load (Min) (k-ft) | Pedestrian Load (Max) (k-ft) | Pedestrian Load (Min) (k-ft) | Lane Reduction & Impact Live Load (Max) (k-ft) | Lane Reduction & Impact Live Load (Min) (k-ft) | Impact Pedestrian Load (Max) (k-ft) | Impact Pedestrian Load (Min) (k-ft) | YY Axis Moments from STAAD: My Mov. Mom. Start (k-ft) | My Mov. Mom. End (k-ft) | S_{xx} (in^3) | S_{fc} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F$_y$/S_{xx} | M_n (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Axial Stress | Moment Fraction | Total | Pass | Axial Stress | Moment Fraction | Total | Pass | Axial Stress | Moment Fraction | Total | Pass |
|---|---|---|---|---|---|---|---|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	I_{xy} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_2	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}
Structure 1	U_0–L_1	-15.70	54.51	0.36	-0.36	-2.72	2.57	0.03	-0.13	-0.04	0.43	4.81	-4.81	-38.35	39.65	0.34	-1.55	-0.48	5.10	-13.72	62.60	-87.67	122.41	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.553	0.38	0.38
	U_1–L_1	-27.61	29.28	0.75	-0.69	-2.47	2.33	0.20	-0.18	-0.12	0.57	10.01	-9.18	-32.56	31.04	2.40	-2.14	-0.82	6.19	-22.69	26.13	-76.72	78.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	U_1–L_2	9.61	-5.24	0.69	-0.70	0.81	-1.44	1.80	0.20	-0.23	-0.26	9.26	-10.80	-19.18	20.82	-2.24	2.36	-3.72	4.21	27.53	-20.91	-10.24	24.45	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	U_2–L_2	40.61	-41.50	0.97	-0.92	-1.00	1.11	-0.21	-0.06	0.10	12.93	-12.25	-13.39	14.76	1.99	-2.46	-0.70	1.25	69.61	-69.87	35.39	-34.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	U_2–L_3	56.81	-57.80	1.38	-1.30	-0.33	0.37	0.00	0.00	0.00	18.48	-17.75	-4.18	3.70	0.41	-3.70	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	L_1–L_2	64.44	-72.22	1.58	-1.77	-0.16	0.12	0.42	-0.47	0.00	21.08	-23.69	-2.62	1.66	5.02	-5.65	0.00	0.00	0.00	11.18	-124.63	81.01	-91.74	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.892	0.24	0.24
	L_2–L_3	62.46	-64.15	1.79	-1.65	-0.38	0.38	0.39	-0.41	-0.09	21.94	-24.05	-5.25	4.70	5.81	-6.90	-0.14	0.00	0.00	-12.47	-121.92	89.01	-114.49	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.996	0.20	0.20
	L_3–L_4	109.00	-121.30	1.90	-1.56	-0.60	0.65	0.74	-0.81	0.00	0.00	0.00	8.67	8.50	-8.76	0.00	0.00	0.00	0.00	174.65	-191.71	131.23	-148.49	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	-0.911	0.24	0.24
	L_4–L_5	-42.62	47.12	2.26	-2.73	-2.75	3.30	0.77	-0.93	-0.77	0.93	30.25	-36.43	-36.67	43.43	5.24	-11.11	-8.29	11.14	-4.07	0.56	16.52	-20.58	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	-0.911	0.24	0.24
	L_5–L_6	-161.01	205.10	0.13	-0.13	-2.95	3.13	0.00	0.00	-0.94	1.08	12.72	-17.76	-38.13	40.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	-0.911	0.24	0.24
	L_6–L_7	-123.92	126.16	0.04	-0.11	-2.21	2.52	0.00	0.00	-0.65	0.66	0.50	-1.37	-28.56	32.64	0.00	0.00	0.00	0.00	-7.75	7.94	-160.43	182.22	-198.21	206.44	35.5	35.52	54.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.969	0.22	0.22
	L_7–L_8	-127.70	170.40	0.01	-0.21	-2.30	2.66	0.00	0.00	-0.68	0.85	3.72	-7.45	-30.34	32.73	0.00	0.00	0.00	0.00	-4.12	10.22	-169.75	225.08	-225.40	263.68	42.74	42.74	65.30	70.13	14	1309.7	1.65	2155	1.5	2115.6	-0.783	0.29	0.29
	L_8–L_9	-106.29	107.56	0.15	-0.08	-2.00	2.09	0.00	0.00	-0.52	0.55	1.98	-1.00	-25.52	28.99	0.00	0.00	0.00	0.00	-6.68	6.60	-135.60	138.53	-111.87	174.91	21.1	21.09	21.09	35.46	10	1134.0	1.67	1170	1.5	1044.0	-0.983	0.21	0.21
	L_9–L_{10}	-66.48	79.89	0.31	-0.25	-1.82	1.93	0.00	0.00	-0.30	0.40	3.96	-3.20	-23.53	24.91	0.00	0.00	0.00	0.00	-4.24	4.82	-81.27	99.70	-117.02	136.23	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.899	0.26	0.26
	L_{10}–L_{11}	-31.84	36.19	-0.78	0.78	-1.00	1.11	-0.13	0.15	0.19	0.00	0.00	0.00	-18.73	20.78	-0.28	0.00	0.00	0.00	0.00	0.00	-28.08	34.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	L_{11}–L_{12}	17.16	-23.69	1.62	-1.74	-0.68	0.64	0.27	-0.30	-0.10	0.11	21.00	-22.51	-8.79	8.28	3.18	-3.58	-1.20	1.31	-81.61	80.66	-90.04	10.89	-20.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.826	0.27	0.27
	L_{12}–L_{13}	60.46	-64.15	1.79	-1.65	-0.38	0.38	0.39	-0.41	-0.09	21.94	-24.05	-5.25	4.70	5.81	-6.90	-0.14	0.00	0.00	-12.47	-121.92	89.01	-114.49	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.892	0.24	0.24
	L_{13}–L_{14}	74.44	-85.11	1.76	-1.83	-0.28	0.29	0.43	-0.46	0.00	0.00	0.00	0.00	22.77	-23.73	-3.66	3.73	5.15	-5.53	-0.72	0.73	126.38	-141.49	82.51	-105.79	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.893	0.24	0.24
	L_{14}–L_{15}	-157.77	162.63	2.71	-2.79	-3.26	3.39	0.83	-0.94	-0.87	0.98	-13.32	-1.01	1.01	0.00	250.66	-258.33	196.66	-264.54	33.7	35.09	35.09	22.31	33.51	1187.1	1.65	1766	1.5	1737.2	-0.959	0.22	0.22
	L_{15}–L_{16}	-164.37	-173.76	2.63	-2.69	-0.33	0.32	0.91	-0.95	-0.97	0.97	34.60	-34.78	-4.31	4.14	10.97	-11.39	-0.89	0.83	257.89	-271.10	256.98	223.14	42.7	42.74	42.74	65.30	8	1389.6	1.53	2135	1.5	2115.6	-0.991	0.22	0.22
	L_{16}–L_{17}	-194.92	-205.55	2.34	-2.73	-0.22	0.29	1.06	-1.17	-4.06	0.97	30.21	-35.36	-2.86	3.73	12.73	-14.04	-0.77	0.88	-292.81	-302.19	248.69	259.38	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.831	0.27	0.27
	L_{17}–L_{18}	-113.48	104.38	2.32	-2.16	-0.11	0.11	-0.29	0.31	0.70	-0.70	0.00	0.00	-3.50	8.63	-166.74	284.28	85.30	-231.73	31.1	30.70	30.70	21.12	33.51	1187.1	1.65	1766	1.5	1737.2	-0.959	0.22	0.22
	L_{18}–L_{19}	-201.32	204.79	0.69	-0.66	-3.69	3.66	0.15	-0.14	-0.81	0.88	8.87	-8.43	-40.11	41.70	1.81	-1.68	-10.88	10.92	-250.16	250.26	-322.93	326.93	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.988	0.20	0.20
	L_{19}–L_{20}	-79.54	78.71	0.73	-0.73	-3.38	3.38	0.00	0.00	-0.74	0.74	0.00	0.00	-24.64	24.64	0.00	0.00	0.00	0.00	-3.50	3.50	-63.63	63.63	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.941	0.22	0.22
	L_{20}–L_{21}	-79.54	88.71	0.47	-0.48	-1.87	1.94	0.10	-0.10	-0.37	0.41	5.94	-6.15	-23.89	24.75	1.18	-1.21	-4.46	4.87	-65.68	102.33	-134.47	147.49	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.912	0.24	0.24
	L_{21}–L_{22}	-47.01	54.09	0.63	-0.63	-1.61	1.67	0.00	0.00	-0.32	0.35	2.54	-2.54	-22.12	23.10	1.18	-1.21	-3.61	3.94	-39.00	39.00	-77.79	77.79	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.942	0.24	0.24
	L_{22}–L_{23}	-4.04	12.92	0.73	-0.65	-1.40	1.54	0.13	-0.13	-0.17	0.21	9.33	-8.32	-17.87	19.70	1.51	-1.60	-2.09	2.50	-6.22	6.44	-29.14	41.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	L_{23}–L_{24}	27.52	-27.99	1.08	-1.11	-1.62	1.68	0.10	-0.12	-0.04	0.05	13.75	-14.21	-13.04	13.85	1.22	-1.39	-0.43	0.60	53.65	-54.85	18.82	18.38	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.976	0.21	0.21
	L_{24}–L_{25}	59.94	-69.31	1.79	-1.77	-0.20	0.20	0.44	-0.47	-0.03	0.03	18.30	-17.22	-4.73	4.97	2.54	-3.58	-0.77	0.90	67.62	-77.71	84.38	66.5	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	L_{25}–L_{26}	130.31	-141.80	2.28	-2.39	-0.26	0.25	0.47	-0.50	0.00	0.00	29.14	-30.52	-3.50	2.54	5.58	-5.94	0.00	0.00	207.29	-224.02	165.12	-181.03	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.935	0.23	0.23
	L_{26}–L_{27}	216.98	-221.45	1.70	-1.25	-0.18	0.00	0.72	-0.73	0.00	0.00	45.54	-45.54	0.00	0.00	337.42	-341.83	270.97	-284.53	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.935	0.23	0.23
	L_{27}–L_{28}	193.18	-200.19	2.72	-2.86	-0.19	0.29	0.67	-0.68	0.00	0.00	34.79	-36.56	-2.44	3.58	8.02	-8.10	0.00	0.00	296.35	-307.77	247.96	-255.60	43.6	43.61	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.963	0.21	0.21
	L_{28}–L_{29}	-194.78	-194.55	2.57	-2.62	0.65	-0.65	0.00	0.00	32.82	-33.45	-4.41	5.37	7.81	-7.82	0.00	0.00	0.00	0.00	295.88	-296.41	247.48	245.94	43.3	43.24	43.16	70.66	14	1479.6	1.60	2266	1.5	2129.0	-0.998	0.20	0.20
	L_{29}–L_{30}	177.10	-170.02	2.49	-2.42	-0.13	0.03	0.61	-0.62	-0.12	0.15	32.38	-31.62	-5.03	4.24	7.16	-7.23	-0.27	0.32	270.63	-262.25	226.97	227.36	43.3	43.24	43.16	70.66	14	1479.6	1.60	2266	1.5	2129.0	-0.998	0.20	0.20
	L_{30}–L_{31}	231.65	-230.62	2.41	-2.27	-0.95	0.96	0.77	-0.77	0.00	0.00	30.75	-28.95	-12.15	12.21	9.20	-9.19	0.00	0.00	341.12	-337.44	285.35	283.93	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.989	0.21	0.21
	L_{31}–L_{32}	24.62	-29.23	0.87	-0.92	-0.18	0.18	0.76	-0.79	-0.11	0.13	18.78	-19.99	-9.51	9.11	-0.11	-0.11	-0.10	0.16	78.99	-91.53	77.74	112.72	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.989	0.21	0.21
	L_{32}–L_{33}	-225.23	219.22	0.30	-0.36	-3.65	3.40	0.02	0.03	-0.83	0.81	3.84	-4.51	-46.04	42.89	0.19	0.27	-0.92	0.76	-281.06	279.61	-346.16	340.74	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.984	0.21	0.21
	L_{33}–L_{34}	-182.78	181.59	0.51	-0.49	-3.49	3.77	0.07	-0.08	-0.77	0.89	-6.64	-6.14	-46.60	46.03	0.58	-0.68	-0.88	0.98	-229.24	228.08	-298.17	297.99	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.999	0.20	0.20
	L_{34}–L_{35}	-159.35	160.90	0.61	-0.62	-3.41	3.64	0.05	-0.09	-0.74	0.76	7.73	-7.76	-45.73	45.91	0.58	-1.10	-0.84	0.97	-197.07	202.97	-263.18	281.63	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.993	0.20	0.20
	L_{35}–L_{36}	-135.46	136.21	0.62	-0.62	-3.41	3.64	0.05	-0.09	-0.74	0.76	7.73	-7.76	-45.73	45.91	0.58	-1.10	-0.84	0.97	-197.07	202.97	-263.18	281.63	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.993	0.20	0.20
	L_{36}–L_{37}	-89.51	83.36	0.47	-0.47	-1.62	1.72	0.00	-0.01	-0.34	0.37	5.87	-5.92	-20.45	21.23	0.02	-0.12	-4.02	4.24	-69.73	74.87	-103.95	110.61	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.940	0.22	0.22
	L_{37}–L_{38}	-37.52	42.64	0.47	-0.47	-1.62	1.72	0.00	-0.01	-0.34	0.37	5.87	-5.92	-20.45	21.23	0.02	-0.12	-4.02	4.24	-69.73	74.87	-103.95	110.61	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.940	0.22	0.22
	L_{38}–L_{39}	-4.56	-5.01	0.99	-1.08	-0.84	0.88	0.13	-0.14	-0.07	0.09	12.52	-13.69	-10.62	11.25	1.52	-1.73	-0.89	1.06	24.20	-28.55	-9.02	21.75	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.911	0.24	0.24
	L_{39}–L_{40}	28.49	-55.09	1.84	-1.91	-0.93	0.53	0.40	-0.41	-0.05	0.05	23.22	-24.11	-6.77	6.67	4.75	-4.93	-0.61	0.61	122.18	-127.66	83.29	-87.64	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.957	0.22	0.22
	L_{40}–L_{41}	70.77	-74.69	1.84	-1.91	-0.93	0.53	0.40	-0.41	-0.05	0.05	23.22	-24.11	-6.77	6.67	4.75	-4.93	-0.61	0.61	122.18	-127.66	83.29	-87.64	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.957	0.22	0.22
	L_{41}–L_{42}	104.65	-105.00	2.23	-2.20	-0.50	0.48	0.52	-0.51	-0.06	0.06	28.18	-27.71	-8.31	6.07	6.19	-6.12	-0.66	0.70	172.58	-172.32	127.84	-128.60	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-0.999	0.20	0.20
	L_{42}–L_{43}	118.91	-119.15	2.30	-2.26	-0.50	0.48	0.52	-0.51	-0.06	0.06	28.18	-27.71	-8.31	6.07	6.19	-6.12	-0.66	0.70	172.58	-172.32	127.84	-128.60	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-0.999	0.20	0.20
	L_{43}–L_{44}	189.58	-191.05	3.42	-3.47	-0.50	0.48	0.80	-0.81	-0.06	0.06	43.22	-43.80	-6.29	6.10	9.58	-9.77	-0.72	0.65	302.63	-305.30	238.28	-240.44	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.951	0.20	0.20
	L_{44}–L_{45}	153.03	-157.73	3.42	-3.47	-0.50	0.48	0.80	-0.81	-0.06	0.06	43.22	-43.80	-6.29	6.10	9.58	-9.77	-0.72	0.65	302.63	-305.30	238.28	-240.44	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.951	0.20	0.20
	L_{45}–L_{46}	207.01	-210.59	2.66	-2.52	-1.00	1.01	0.81	-0.81	0.00	0.00	33.57	-31.79	-12.64	12.71	9.72	-9.71	0.00	0.00	298.63	312.75	-315.09	252.68	-257.24	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.993	0.20	0.20
	L_{46}–L_{47}	134.98	-136.86	2.66	-2.62	-1.00	1.01	0.81	-0.81	0.00	0.00	33.57	-31.79	-12.64	12.71	9.72	-9.71	0.00	0.00	298.63	312.75	-315.09	252.68	-257.24	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.993	0.20	0.20
	L_{47}–L_{48}	-251.15	245.11	0.32	-0.32	-3.25	3.05	0.00	0.00	0.00	0.00	0.82	-0.82	-41.84	41.84	0.00	0.00	0.00	0.00	-5.83	5.68	-321.11	313.39	-380.47	369.25	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.975	0.21	0.21
	L_{48}–L_{49}	-185.39	176.08	0.28	-0.49	-2.83	2.93	0.05	-0.10	-0.66	0.69	3.55	-6.20	-36.20	37.43	0.56	-1.25	-7.94	8.27	212.75	-315.09	252.68	-257.24	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.993	0.20	0.20
	L_{49}–L_{50}	-138.68	138.87	0.26	-0.26	-2.62	2.62	0.00	0.00	0.00	0.00	0.00	0.00	-36.95	36.95	0.00	0.00	0.00	0.00	-7.72	7.72	-240.20	250.00	-289.12	300.19	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.963	0.21	0.21
	L_{50}–L_{51}	-185.34	192.19	0.04	0.01	-2.90	3.03	0.00	0.00	-0.64	0.64	0.56	0.10	-36.95	36.95	0.00	0.00	0.00	0.00	-7.63	7.72	-240.20	250.00	-289.12	300.19	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.963	0.21	0.21
	L_{51}–L_{52}	-202.36	206.29	0.00	-0.01	-3.22	3.25	0.00	0.00	-0.71	0.71	0.00	0.00	-41.00	41.00	0.00	0.00	0.00	0.00	-8.42	8.42	-266.56	277.50	-320.91	333.09	47.7	47.71	47.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.963	0.21	0.21
	L_{52}–L_{53}	-116.39	129.36	0.24	-0.15	-2.16	2.26	0.00	0.00	-0.42	0.45	3.08	-1.92	-27.53	28.87	0.00	0.00	0.00	0.00	-4.99	5.40	-147.31	165.68	-187.11	205.73	26.8	26.84	26.84	41.44	6	1029.6	1.60	1143	1.5	1029.6	-0.933	0.24	0.24
	L_{53}–L_{54}	-52.79	62.48	0.43	-0.47	-1.16	1.25	0.00	0.00	-0.24	0.27	5.91	-5.95	-14.86	16.48	0.00	0.00	0.00	0.00	-2.18	2.58	-61.47	73.48	-86.79	43.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.983	0.21	0.21
	L_{54}–L_{55}	-19.17	20.05	1.74	-1.79	-0.67	0.67	0.22	-0.23	-0.13	0.14	20.37	-21.94	-9.43	8.59	2.66	-3.02	-1.67	1.73	50.96	-61.73	12.62	-22.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.825	0.27	0.27
	L_{55}–L_{56}	18.83	-25.55	1.59	-1.72	-0.74	0.67	0.22	-0.25	-0.14	0.14	20.37	-21.94	-9.43	8.59	2.66	-3.02	-1.67	1.73	50.96	-61.73	12.62	-22.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.825	0.27	0.27
	L_{56}–L_{57}	95.02	-96.90	1.75	-1.83	-0.45	0.45	0.37	-0.40	-0.10	0.10	22.40	-23.34	-5.71	5.77	4.48	-4.75	-1.16	1.16	146.14	-156.32	109.60	-118.47	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.935	0.23	0.23
	L_{57}–L_{58}	189.59	-202.30	2.72	-2.73	-0.55	0.53	0.78	-0.81	-0.12	0.11	34.80	-34.52	-7.00	6.80	9.40	-9.72	-1.40	1.34	291.71	-308.25	237.37	-254.15	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.946	0.22	0.22
	L_{58}–L_{59}	214.89	-210.10	2.21	-2.84	-0.38	0.42	0.72	-0.93	-0.06	0.10	28.20	-26.25	-4.62	3.39	5.59	-5.11	-0.67	0.67	216.01	-208.26	213.10	-344.12	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.783	0.28	0.28
	L_{59}–L_{60}	180.48	-209.68	2.05	-2.18	-0.67	0.79	0.93	-1.09	0.00	0.00	26.46	-28.17	-8.62	10.18	11.17	-13.03	0.00	0.00	269.02	-309.20	223.42	247.86	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	-0.870	0.25	0.25
	L_{60}–L_{61}	24.90	-48.24	1.89	-2.41	-3.22	3.64	0.79	-1.01	-0.77	0.88	25.26	-32.14	-42.89	49.67	9.43	-12.11	-8.24	10.36	-77.48	-121.54	-23.46	-0.75	107.1	107.13	107.11	162.71	26	2098.9	1.52	3269	1.5	3262.3	-0.637	0.35	0.35
	L_{61}–L_{62}	-121.66	132.24	0.09	-0.08	-2.60	2.70	0.00	0.00	-0.72	0.78	1.20	-1.07	-34.72	36.00	0.00	0.00	0.00	-8.66	9.37	-156.59	170.52	-263.29	218.72	18.5

Moment (Start) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Start (k-ft)	Impact Pedestrian Load End (k-ft)
Structure 1	U_0-L_1	3.65	-1.42	0.17	-0.09	1.36	0.65	0.15	0.01	0.03	-0.02
	U_1-L_1	-11.48	-3.33	0.30	-0.12	-0.87	0.02	0.08	-0.04	-0.25	0.07
	U_1-L_2	-10.23	-11.78	0.00	-0.07	-0.19	0.09	-0.03	-0.13	-0.05	0.30
	U_1-L_3	9.81	-15.01	0.26	0.07	-0.47	-0.47	0.08	-0.01	-0.12	3.50
	L_1-L_2	-16.21	25.06	0.19	0.10	-0.12	-0.17	-0.01	-0.01	-0.01	-0.01
	L_2-L_3	-34.06	79.08	0.29	0.35	-1.37	1.04	0.06	-0.21	-0.33	0.22
	L_3-L_4	-31.90	79.08	0.29	0.35	-1.37	1.04	0.06	-0.21	-0.33	0.22
	L_4-L_5	-16.21	25.06	0.19	0.10	-0.12	-0.17	-0.01	-0.01	-0.01	-0.01
	U_5-L_5	9.81	-15.01	0.26	0.07	-0.47	-0.47	0.08	-0.01	-0.12	3.50
	U_5-L_6	-10.23	-11.78	0.00	-0.07	-0.19	0.09	-0.03	-0.13	-0.05	0.30
	U_6-L_6	-11.48	-3.33	0.30	-0.12	-0.87	0.02	0.08	-0.04	-0.25	0.07
	U_6-L_7	3.65	-1.42	0.17	-0.09	1.36	0.65	0.15	0.01	0.03	-0.02
	U_0-L_1	-22.27	139.07	0.29	0.40	-1.50	1.36	0.06	-0.24	-0.33	0.22
	U_1-L_1	-22.13	-19.59	0.57	0.38	-1.64	-11.66	0.20	-0.96	-0.47	-2.95
	U_1-L_2	-20.03	-21.13	0.00	-0.13	-0.35	4.34	-1.26	-8.81	-2.55	1.66
	L_1-L_2	-30.99	100.63	0.47	0.27	-1.29	-0.47	-0.16	-0.02	-0.37	0.47
	L_2-L_3	-53.85	139.07	0.29	0.40	-1.50	1.36	0.06	-0.24	-0.33	0.22
	L_3-L_4	-51.69	139.07	0.29	0.40	-1.50	1.36	0.06	-0.24	-0.33	0.22
	L_4-L_5	-30.99	100.63	0.47	0.27	-1.29	-0.47	-0.16	-0.02	-0.37	0.47
	U_5-L_5	-20.03	-21.13	0.00	-0.13	-0.35	4.34	-1.26	-8.81	-2.55	1.66
	U_5-L_6	-22.13	-19.59	0.57	0.38	-1.64	-11.66	0.20	-0.96	-0.47	-2.95
	U_6-L_6	-22.27	139.07	0.29	0.40	-1.50	1.36	0.06	-0.24	-0.33	0.22
	U_0-L_1	-74.43	69.78	0.29	0.45	-1.65	0.58	0.06	0.14	-0.38	0.21
	U_1-L_1	-74.29	39.24	0.57	0.43	-1.79	-2.61	0.20	-0.53	-0.52	0.46
	U_1-L_2	-69.90	47.85	0.07	0.00	-0.32	0.71	0.00	0.00	0.31	-0.21
	L_1-L_2	-27.40	6.37	0.07	-0.29	-0.72	0.02	0.00	0.00	-0.15	0.03
	L_2-L_3	-0.38	-32.04	0.07	-0.29	-0.72	0.02	0.00	0.00	-0.15	0.03
	L_3-L_4	-31.05	12.71	0.20	-0.17	-0.91	0.61	0.05	-0.04	-0.19	0.11
	L_4-L_5	-46.66	27.26	0.13	-0.17	-1.15	0.71	-0.04	-0.28	-0.24	0.13
	U_5-L_5	-118.88	85.32	0.28	-0.26	-2.05	1.59	0.06	-0.05	-0.55	0.42
	U_5-L_6	-119.21	87.78	0.29	-0.23	-2.05	1.59	0.06	-0.05	-0.55	0.42
	U_6-L_6	-146.00	120.15	0.15	-0.16	-1.92	1.63	0.04	-0.04	-0.77	0.62
	U_6-L_7	-86.84	116.71	0.33	-0.22	-2.72	1.94	0.01	-0.04	-0.36	-0.13
	U_0-L_1	-154.13	114.46	0.47	-0.29	-3.79	1.97	0.12	-0.10	-0.69	0.53
	U_1-L_1	-118.22	92.25	0.56	-0.49	-2.47	1.75	0.11	-0.10	-0.52	0.43
	U_1-L_2	-58.56	58.37	0.32	-0.32	-1.30	1.07	0.06	-0.06	-0.26	0.20
	L_1-L_2	-24.32	8.80	0.33	-0.28	-1.61	0.63	0.07	-0.06	-0.18	-0.11
	L_2-L_3	-1.48	-12.42	0.40	-0.27	-1.92	0.40	0.08	-0.05	-0.10	-0.32
	L_3-L_4	13.33	-37.03	0.46	-0.76	-0.92	0.06	-0.04	-0.03	-0.09	-0.89
	L_4-L_5	-66.01	54.01	0.06	-0.34	-1.22	0.52	0.00	0.00	-0.23	0.00
	U_5-L_5	-133.76	104.35	0.01	-0.43	-1.52	0.52	0.00	0.00	-0.23	0.00
	U_5-L_6	-116.18	105.67	0.31	0.20	-1.55	1.25	0.04	0.11	-0.41	0.24
	U_6-L_6	-138.38	134.05	0.23	0.13	-1.70	0.97	0.10	0.07	-0.47	0.24
	U_6-L_7	-131.93	151.03	0.48	0.25	-2.00	1.80	0.05	0.08	-0.54	0.30
	U_0-L_1	-175.29	162.92	0.78	0.56	-2.15	1.63	0.04	-0.02	-0.64	0.56
	U_1-L_1	-64.32	165.11	0.89	0.69	-0.26	0.20	0.03	-0.01	-0.03	0.03
	U_1-L_2	-45.28	135.72	0.52	0.09	-1.75	2.21	0.18	-0.02	-0.36	0.69
	L_1-L_2	-143.91	98.29	0.24	0.09	-0.98	0.61	0.06	-0.01	-0.24	0.17
	L_2-L_3	-112.48	130.84	0.25	-0.30	-2.57	2.21	0.07	0.50	0.49	3.17
	L_3-L_4	-83.68	84.68	0.34	-0.34	-2.21	1.56	0.06	0.06	-0.37	0.27
	L_4-L_5	-91.76	54.22	0.30	-0.28	-1.49	0.63	0.03	0.05	-0.37	0.25
	U_5-L_5	-14.01	1.02	0.29	-0.57	-0.72	0.14	0.00	0.04	-0.11	0.03
	U_5-L_6	-18.16	6.24	0.29	-0.57	-0.72	0.14	0.00	0.04	-0.11	0.03
	U_6-L_6	-32.82	30.90	0.29	-0.27	-1.00	0.79	0.03	0.00	-0.20	0.17
	U_6-L_7	-63.39	59.42	0.31	-0.31	-1.33	0.97	0.03	0.00	-0.23	0.20
Structure 2	U_0-L_1	-83.39	100.03	0.33	-0.37	-2.03	1.62	0.06	0.03	-0.39	0.44
	U_1-L_1	-98.58	117.15	0.34	-0.12	-2.08	1.62	0.05	0.02	-0.49	0.25
	U_1-L_2	-59.51	77.26	0.26	-0.12	-1.26	1.00	0.03	0.01	-0.25	0.12
	L_1-L_2	-126.17	124.51	0.77	-0.60	-2.02	1.86	0.00	0.00	-0.52	0.49
	L_2-L_3	-29.24	132.38	0.77	-0.60	-2.02	1.86	0.00	0.00	-0.52	0.49
	L_3-L_4	-82.40	185.99	0.63	-0.15	-1.88	2.32	0.17	0.01	-0.44	0.60
	L_4-L_5	-138.48	148.08	0.47	-0.41	-2.12	1.70	0.08	0.08	-0.37	0.29
	U_5-L_5	-138.42	160.32	0.31	-0.28	-1.72	1.24	0.06	0.01	-0.45	0.24
	U_5-L_6	-128.98	123.04	0.31	-0.22	-2.18	1.45	0.04	0.09	-0.43	0.23
	U_6-L_6	-128.48	138.47	0.48	-0.22	-2.18	1.70	0.04	0.09	-0.43	0.23
	U_6-L_7	-128.43	95.01	0.13	0.15	-2.06	1.03	0.00	0.00	-0.41	0.16
	U_0-L_1	-89.89	89.89	0.29	-0.29	-1.65	0.58	0.06	0.14	-0.38	0.21
	U_1-L_1	-8.89	-32.25	0.43	-0.72	-0.56	-0.09	0.06	-0.04	-0.11	0.03
	U_1-L_2	-4.65	-13.30	0.40	-0.53	-0.19	0.49	0.07	-0.06	-0.11	0.03
	L_1-L_2	-29.38	13.46	0.31	-0.28	-1.46	0.64	-0.04	-0.57	0.48	-0.28
	L_2-L_3	-71.40	53.68	0.11	0.03	-1.26	0.86	0.00	0.00	-0.32	0.23
	L_3-L_4	-81.44	41.31	0.35	-0.61	-1.65	0.31	0.03	0.14	-0.42	0.12
	L_4-L_5	-135.94	107.53	0.41	-0.37	-2.06	1.72	0.08	-0.08	-0.55	0.45
	U_5-L_5	-65.25	88.28	0.21	-0.13	-3.49	2.19	0.01	-0.03	-0.12	0.37
	U_5-L_6	-138.22	96.74	0.33	-0.27	-2.59	1.81	0.05	-0.05	-0.75	0.56
	U_6-L_6	-113.90	82.77	0.33	-0.27	-2.59	1.81	0.05	-0.05	-0.75	0.56
	U_6-L_7	-43.91	24.73	0.23	-0.19	-1.25	0.68	0.05	-0.04	-0.30	0.20
	U_0-L_1	-89.89	89.89	0.29	-0.29	-1.65	0.58	0.06	0.14	-0.38	0.21
	U_1-L_1	-2.65	-25.30	0.24	-0.55	-0.63	-0.06	0.04	-0.03	-0.09	-0.00
	U_1-L_2	-29.38	13.46	0.31	-0.28	-1.46	0.64	-0.04	-0.57	0.48	-0.28
	L_1-L_2	-49.48	-12.52	0.28	-0.10	-0.67	-0.09	-0.03	-0.14	-0.55	0.34
	L_2-L_3	-34.24	14.49	0.19	-0.10	-0.68	0.48	0.07	-0.05	-0.20	-0.13
Structure 3	U_0-L_1	-89.38	90.65	0.29	-0.29	-1.65	0.58	0.06	0.14	-0.38	0.21
	U_1-L_1	-89.38	90.65	0.29	-0.29	-1.65	0.58	0.06	0.14	-0.38	0.21
	U_1-L_2	-18.98	22.49	0.12	0.36	-0.82	-0.23	0.04	0.01	-0.18	-0.04
	L_1-L_2	-29.38	13.46	0.31	-0.28	-1.46	0.64	-0.04	-0.57	0.48	-0.28
	L_2-L_3	-71.40	53.68	0.11	0.03	-1.26	0.86	0.00	0.00	-0.32	0.23
	L_3-L_4	-81.44	41.31	0.35	-0.61	-1.65	0.31	0.03	0.14	-0.42	0.12
	L_4-L_5	-135.94	107.53	0.41	-0.37	-2.06	1.72	0.08	-0.08	-0.55	0.45
	U_5-L_5	-65.25	88.28	0.21	-0.13	-3.49	2.19	0.01	-0.03	-0.12	0.37
	U_5-L_6	-138.22	96.74	0.33	-0.27	-2.59	1.81	0.05	-0.05	-0.75	0.56
	U_6-L_6	-113.90	82.77	0.33	-0.27	-2.59	1.81	0.05	-0.05	-0.75	0.56
	U_6-L_7	-43.91	24.73	0.23	-0.19	-1.25	0.68	0.05	-0.04	-0.30	0.20
	U_0-L_1	-89.89	89.89	0.29	-0.29	-1.65	0.58	0.06	0.14	-0.38	0.21
	U_1-L_1	-8.89	-32.25	0.43	-0.72	-0.56	-0.09	0.06	-0.04	-0.11	0.03
	U_1-L_2	-4.65	-13.30	0.40	-0.53	-0.19	0.49	0.07	-0.06	-0.11	0.03
	L_1-L_2	-29.38	13.46	0.31	-0.28	-1.46	0.64	-0.04	-0.57	0.48	-0.28
	L_2-L_3	-71.40	53.68	0.11	0.03	-1.26	0.86	0.00	0.00	-0.32	0.23
	L_3-L_4	-81.44	41.31	0.35	-0.61	-1.65	0.31	0.03	0.14	-0.42	0.12
	L_4-L_5	-135.94	107.53	0.41	-0.37	-2.06	1.72	0.08	-0.08	-0.55	0.45
	U_5-L_5	-65.25	88.28	0.21	-0.13	-3.49	2.19	0.01	-0.03	-0.12	0.37
	U_5-L_6	-138.22	96.74	0.33	-0.27	-2.59	1.81	0.05	-0.05	-0.75	0.56
	U_6-L_6	-113.90	82.77	0.33	-0.27	-2.59	1.81	0.05	-0.05	-0.75	0.56
	U_6-L_7	-43.91	24.73	0.23	-0.19	-1.25	0.68	0.05	-0.04	-0.30	0.20

YY Axis Moments from STAAD

Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)	Equivalent Mom. Factor C_m	$C_{m(x)}$	$C_{m(y)}$
U_0-L_1	0.00	0.00	857	1.5	773.7	-0.814	0.27	0.27						
U_1-L_1	0.00	0.00	792	1.5	763.3	0.135	0.65	0.65						
U_1-L_2	0.00	0.00	792	1.5	763.3	-0.161	0.61	0.61						
U_1-L_3	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53						
L_1-L_2	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53						
L_2-L_3	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53						
L_3-L_4	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53						
L_4-L_5	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53						
U_5-L_5	0.00	0.00	792	1.5	763.3	-0.161	0.61	0.61						
U_5-L_6	0.00	0.00	792	1.5	763.3	-0.135	0.65	0.65						
U_6-L_6	0.00	0.00	857	1.5	773.7	-0.814	0.27	0.27						
U_6-L_7	0.00	0.00	857	1.5	773.7	-0.814	0.27	0.27						
U_0-L_1	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_1	-24.33	-7.06	1,696	857	1,553	-24.33	-8.13	0.53	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_2	-21.71	-25.00	1,696	857	1,553	-21.71	-23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_3	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_1-L_2	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_2-L_3	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_3-L_4	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_4-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_6	27.08	-27.08	1,696	857	1,553	84.92	28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_6	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_7	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_0-L_1	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_1	-24.33	-7.06	1,696	857	1,553	-24.33	-8.13	0.53	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_2	-21.71	-25.00	1,696	857	1,553	-21.71	-23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_1-L_2	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_2-L_3	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_3-L_4	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_4-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_6	27.08	-27.08	1,696	857	1,553	84.92	28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_6	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_7	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65

M_7 Information

Max. Pos. Mom.

Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)	Equivalent Mom. Factor C_m	$C_{m(x)}$	$C_{m(y)}$
U_0-L_1	0.00	0.00	857	1.5	773.7	-0.814	0.27	0.27					
U_1-L_1	0.00	0.00	792	1.5	763.3	0.135	0.65	0.65					
U_1-L_2	0.00	0.00	792	1.5	763.3	-0.161	0.61	0.61					
U_1-L_3	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53					
L_1-L_2	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53					
L_2-L_3	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53					
L_3-L_4	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53					
L_4-L_5	0.00	0.00	792	1.5	763.3	-0.168	0.53	0.53					
U_5-L_5	0.00	0.00	792	1.5	763.3	-0.161	0.61	0.61					
U_5-L_6	0.00	0.00	792	1.5	763.3	-0.135	0.65	0.65					
U_6-L_6	0.00	0.00	857	1.5	773.7	-0.814	0.27	0.27					
U_6-L_7	0.00	0.00	857	1.5	773.7	-0.814	0.27	0.27					
U_0-L_1	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_1	-24.33	-7.06	1,696	857	1,553	-24.33	-8.13	0.53	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_2	-21.71	-25.00	1,696	857	1,553	-21.71	-23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_3	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_1-L_2	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_2-L_3	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_3-L_4	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_4-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_6	27.08	-27.08	1,696	857	1,553	84.92	28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_6	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_7	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_0-L_1	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_1	-24.33	-7.06	1,696	857	1,553	-24.33	-8.13	0.53	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_1-L_2	-21.71	-25.00	1,696	857	1,553	-21.71	-23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_1-L_2	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_2-L_3	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_3-L_4	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
L_4-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_5	21.71	25.00	1,696	857	1,553	21.71	23.62	2.33	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_5-L_6	27.08	-27.08	1,696	857	1,553	84.92	28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_6	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65
U_6-L_7	-27.08	27.08	1,696	857	1,553	-84.92	-28.02	0.00	0.17	-12.49	-3.76	-1.09	-0.56	0.65

Max. Neg. Mom.

Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)	Equivalent Mom. Factor C_m	$C_{m(x)}$	$C_{m(y)}$
U_0-L_1	-3.65	1.42	857	1.5	773.7	-0.814	0.27	0.27					
U_1-L_1	11.48	3.33	792	1.5	763.3	0.135	0.65	0.65					
U_1-L_2	10.23	11.78	792	1.5	763.3	-0.161	0.61	0.61					
U_1-L_3	-9.81	15.01	792	1.5	763.3	-0.168	0.53	0.53					
L_1-L_2	16.21	25.06	792	1.5	763.3	-0.168	0.53	0.53					
L_2-L_3	34.06	79.08	792	1.5	763.3	-0.168	0.53	0.53					
L_3-L_4	31.90	79.08	792	1.5	763.3	-0.168	0.53	0.53					
L_4-L_5	16.21	25.06	792	1.5	763.3	-0.168	0.53	0.53					
U_5-L_5	-9.81	15.01	792	1.5	763.3	-0.161	0.61	0.61					
U_5-L_6	10.23	11.78	792	1.5	763.3	-0.135

Moment (Start) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-572.86	93	-674	-712	-397	-74	-8	387	-452	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.212	1.00	Yes	0.772	0.169	0.95	Yes	1.00	**4.48**
		$U_1 - U_2$	-----	-544.46	-17	-88	-530	-524	-277	26	-498	32	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.253	1.00	Yes	0.734	0.126	0.87	Yes	1.00	**3.62**
		$U_2 - U_3$	126.46	-580.23	-126	247	-818	-273	8	25	-49	240	0.145	0.235	0.38	Yes	0.098	0.153	0.26	Yes	0.790	0.208	1.00	Yes	0.782	0.194	0.98	Yes	1.00	**3.21**
		$U_3 - U_4$	293.95	-585.86	54	275	-797	-354	12	35	74	52	0.337	0.202	0.54	Yes	0.231	0.139	0.37	Yes	0.797	0.198	1.00	Yes	0.790	0.189	0.98	Yes	1.00	**3.33**
		$U_4 - U_5$	267.29	-570.31	86	233	-945	-196	25	-26	51	-49	0.306	0.233	0.54	Yes	0.210	0.160	0.38	Yes	0.776	0.209	0.99	Yes	0.769	0.225	1.00	Yes	1.00	**2.96**
		$U_5 - U_6$	602.87	-528.97	220	433	-1011	162	-131	-57	360	39	0.691	0.301	1.00	Yes	0.466	0.197	0.67	Yes	0.720	0.273	1.00	Yes	0.713	0.240	0.96	Yes	1.00	**4.56**
		$U_6 - U_7$	815.34	-84.51	356	220	-727	-251	-277	-107	441	-143	0.780	0.215	1.00	Yes	0.545	0.148	0.70	Yes	0.096	0.253	0.35	Yes	0.095	0.154	0.25	Yes	1.00	**4.55**
		$U_7 - U_8$	954.35	-----	52	1039	-1401	1905	-435	7	255	-142	0.661	0.333	1.00	Yes	0.461	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_8 - U_9$	438.30	-----	2949	-3092	580	-3	-260	740	-968	-156	0.359	0.637	1.00	Yes	0.246	0.434	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.83**
		$U_9 - U_{10}$	59.05	-580.43	527	-343	-638	-738	-31	614	-566	1032	0.064	0.331	0.40	Yes	0.043	0.222	0.27	Yes	0.747	0.246	1.00	Yes	0.741	0.165	0.91	Yes	1.00	**11.28**
		$U_{10} - U_{11}$	402.26	-646.02	391	-24	-180	-743	-9	97	130	227	0.436	0.203	0.64	Yes	0.291	0.130	0.43	Yes	0.832	0.165	1.00	Yes	0.824	0.166	1.00	Yes	1.00	**5.13**
		$U_{11} - U_{12}$	-----	-866.77	265	-89	-354	-645	83	400	118	697	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.176	1.00	Yes	0.813	0.107	0.93	Yes	1.00	**3.60**
		$U_{12} - U_{13}$	-----	-1211.74	16	-236	-607	-765	334	214	482	434	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1.00	Yes	0.809	0.106	0.92	Yes	1.00	**3.15**
		$U_{13} - U_{14}$	-----	-1351.24	-140	-376	-930	-1131	217	174	311	574	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.775	0.125	0.90	Yes	1.00	**2.94**
		$U_{14} - U_{15}$	-----	-1316.24	-278	-253	-1429	-729	216	31	616	194	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.235	1.00	Yes	0.755	0.158	0.92	Yes	1.00	**2.48**
		$U_{15} - U_{16}$	-----	-1371.31	-157	-433	-1087	-954	86	37	451	203	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.202	1.00	Yes	0.786	0.120	0.91	Yes	1.00	**2.60**
		$U_{16} - U_{17}$	-----	-1329.60	-339	-192	-1559	-572	158	-49	632	91	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.229	1.00	Yes	0.762	0.172	0.94	Yes	1.00	**2.81**
		$U_{17} - U_{18}$	-----	-1036.76	-213	-71	-956	-31	-1	-62	420	15	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.173	1.00	Yes	0.811	0.156	0.97	Yes	1.00	**2.76**
		$U_{18} - U_{19}$	-----	-702.48	-198	-71	-904	-198	23	-119	410	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.202	1.00	Yes	0.790	0.182	0.98	Yes	1.00	**3.18**
		$U_{19} - U_{20}$	-----	-537.73	-212	-420	-1927	867	35	-810	478	-526	-----	-----	-----	-----	-----	-----	-----	-----	0.611	0.268	0.88	Yes	0.605	0.388	1.00	Yes	1.00	**7.00**
	Structure 2	$U_0 - U_1$	-----	-648.78	731	-1366	-1022	-1321	-70	-116	914	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.224	1.00	Yes	0.766	0.232	1.00	Yes	1.00	**7.86**
		$U_1 - U_2$	-----	-844.34	82	-579	-457	-824	-148	-367	-220	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.172	1.00	Yes	0.815	0.125	0.94	Yes	1.00	**4.47**
		$U_2 - U_3$	-----	-1166.14	158	-794	-780	-1193	-42	136	-229	538	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.164	1.00	Yes	0.828	0.122	0.95	Yes	1.00	**4.04**
		$U_3 - U_4$	-----	-1299.88	-409	-398	-1571	-1316	321	476	430	678	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.252	1.00	Yes	0.740	0.140	0.89	Yes	1.00	**3.67**
		$U_4 - U_5$	-----	-1463.79	-430	-429	-1725	-1541	466	166	381	298	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1.00	Yes	0.752	0.143	0.90	Yes	1.00	**3.24**
		$U_5 - U_6$	-----	-1501.95	-425	-2	-2050	-812	187	-213	235	427	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1.00	Yes	0.771	0.170	0.95	Yes	1.00	**3.23**
		$U_6 - U_7$	-----	-1372.20	-286	-105	-1535	-1438	-134	-185	274	166	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.207	1.00	Yes	0.781	0.137	0.92	Yes	1.00	**2.95**
		$U_7 - U_8$	-----	-1323.36	-207	-195	-1949	-934	-100	-178	177	45	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1.00	Yes	0.754	0.174	0.93	Yes	1.00	**2.76**
		$U_8 - U_9$	-----	-1166.85	-294	87	-1526	-494	-84	-192	385	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1.00	Yes	0.791	0.162	0.96	Yes	1.00	**2.83**
		$U_9 - U_{10}$	100.45	-939.89	-104	309	-1446	-229	-129	-147	255	-5	0.074	0.204	0.28	Yes	0.050	0.138	0.19	Yes	0.816	0.181	1.00	Yes	0.811	0.176	0.99	Yes	1.00	**3.19**
		$U_{10} - U_{11}$	454.32	-751.87	145	347	-1502	-407	-166	-160	456	-42	0.384	0.268	0.66	Yes	0.261	0.174	0.44	Yes	0.752	0.242	1.00	Yes	0.747	0.212	0.96	Yes	1.00	**4.34**
		$U_{11} - U_{12}$	800.79	-451.97	225	526	-1727	20	-339	-124	583	83	0.676	0.315	1.00	Yes	0.454	0.210	0.67	Yes	0.452	0.211	0.67	Yes	0.449	0.244	0.70	Yes	1.00	**5.51**
		$U_{12} - U_{13}$	1097.76	-43.48	444	138	-1515	-753	-412	-376	632	-200	0.741	0.251	1.00	Yes	0.528	0.171	0.70	Yes	0.035	0.301	0.34	Yes	0.035	0.191	0.23	Yes	1.00	**6.39**
		$U_{13} - U_{14}$	1247.28	-----	77	1823	-2636	3485	-810	-413	162	-637	0.613	0.378	1.00	Yes	0.434	0.248	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		$U_{14} - U_{15}$	569.55	-----	6668	-4751	1088	180	-1013	150	-1367	-466	0.280	0.711	1.00	Yes	0.198	0.466	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.43**
		$U_{15} - U_{16}$	1119.84	-----	503	249	-2209	-478	-461	377	-566	815	0.677	0.320	1.00	Yes	0.482	0.216	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.64**
		$U_{16} - U_{17}$	-----	-779.11	1945	-1267	-1599	-2182	544	96	777	828	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.315	1.00	Yes	0.675	0.274	0.95	Yes	1.00	**16.62**
		$U_{17} - U_{18}$	-----	-615.27	685	-580	-1026	-891	81	658	5	1069	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.269	1.00	Yes	0.727	0.174	0.91	Yes	1.00	**8.59**
		$U_{18} - U_{19}$	-----	-697.77	618	-569	-636	-853	288	202	418	470	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.165	1.00	Yes	0.824	0.145	0.97	Yes	1.00	**6.32**
		$U_{19} - U_{20}$	304.69	-688.96	308	211	-763	-749	23	16	92	505	0.286	0.190	0.48	Yes	0.189	0.125	0.32	Yes	0.765	0.225	1.00	Yes	0.760	0.122	0.89	Yes	1.00	**3.87**
	Structure 3	$U_0 - U_1$	-----	-876.45	-104	174	-914	-139	-30	-155	312	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.166	1.00	Yes	0.822	0.152	0.98	Yes	1.00	**2.52**
		$U_1 - U_2$	194.37	-843.74	185	-24	-1020	-568	-25	-60	280	295	0.151	0.180	0.34	Yes	0.106	0.116	0.23	Yes	0.776	0.217	1.00	Yes	0.770	0.148	0.92	Yes	1.00	**3.95**
		$U_2 - U_3$	64.08	-801.30	-41	2	-934	-1048	-1	67	119	402	0.050	0.196	0.25	Yes	0.035	0.132	0.17	Yes	0.737	0.259	1.00	Yes	0.731	0.152	0.89	Yes	1.00	**3.13**
		$U_3 - U_4$	55.35	-783.67	54	-47	-1346	-679	62	-3	408	105	0.043	0.240	0.29	Yes	0.030	0.161	0.20	Yes	0.720	0.278	1.00	Yes	0.715	0.195	0.92	Yes	1.00	**2.98**
		$U_4 - U_5$	43.27	-839.00	92	-61	-1178	-480	-35	2	365	112	0.034	0.210	0.25	Yes	0.023	0.136	0.16	Yes	0.771	0.225	1.00	Yes	0.766	0.171	0.94	Yes	1.00	**3.32**
		$U_5 - U_6$	258.28	-708.20	168	261	-1143	-505	-54	-86	407	-94	0.242	0.238	0.49	Yes	0.161	0.156	0.32	Yes	0.786	0.208	1.00	Yes	0.781	0.183	0.97	Yes	1.00	**3.49**
		$U_6 - U_7$	467.76	-658.16	185	434	-1273	-119	-153	-75	337	-18	0.470	0.265	0.74	Yes	0.308	0.169	0.48	Yes	0.782	0.188	0.97	Yes	0.777	0.216	1.00	Yes	1.00	**4.33**
		$U_7 - U_8$	682.23	-490.00	327	382	-1414	-3	-226	-71	487	-80	0.685	0.311	1.00	Yes	0.456	0.206	0.67	Yes	0.582	0.200	0.79	Yes	0.579	0.240	0.82	Yes	1.00	**5.02**
		$U_8 - U_9$	983.35	-317.09	302	542	-1753	224	-351	-12	491	71	0.725	0.272	1.00	Yes	0.482	0.179	0.67	Yes	0.277	0.261	0.54	Yes	0.275	0.220	0.50	Yes	1.00	**6.69**
		$U_9 - U_{10}$	1179.46	-----	468	168	-2015	-1017	-362	-247	654	-137	0.713	0.284	1.00	Yes	0.507	0.191	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		$U_{10} - U_{11}$	1239.47	-----	211	1641	-2899	3659	-688	-344	271	-374	0.609	0.386	1.00	Yes	0.431	0.253	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		$U_{11} - U_{12}$	149.06	-283.03	8970	-8351	598	-334	-1014	959	-1	190	0.073	0.900	0.98	Yes	0.052	0.589	0.65	Yes	0.165	0.633	0.80	Yes	0.164	0.831	1.00	Yes	1.00	**23.61**
		$U_{12} - U_{13}$	907.46	-68.52	311	142	-2192	-655	-278	420	-379	1084	0.613	0.379	1.00	Yes	0.437	0.259	0.70	Yes	0.055	0.246	0.31	Yes	0.054	0.276	0.34	Yes	1.00	**10.54**
		$U_{13} - U_{14}$	-----	-766.96	1185	-1402	-1083	-1507	582	420	565	875	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.225	1.00	Yes	0.762	0.213	0.98	Yes	1.00	**13.89**
		$U_{14} - U_{15}$	869.65	-723.85	467	352	-858	-920	-32	212	235	1045	0.735	0.257	1.00	Yes	0.500	0.171	0.68	Yes	0.724	0.254	0.98	Yes	0.719	0.130	0.85	Yes	1.00	**7.25**
		$U_{15} - U_{16}$	385.37	-909.47	369	84	-677	-1134	187	158	479	603	0.283	0.203	0.49	Yes	0.191	0.137	0.33	Yes	0.789	0.209	1.00	Yes	0.785	0.138	0.93	Yes	1.00	**4.71**
		$U_{16} - U_{17}$	167.93	-1163.76	183	-127	-1025	-1056	98	88	263	623	0.097	0.164	0.27	Yes	0.068	0.109	0.18	Yes	0.795	0.200	1.00	Yes	0.789	0.112	0.91	Yes	1.00	**4.36**
		$U_{17} - U_{18}$	12.28	-1369.46	-34	60	-1414	-1444	79	-6	400	370	0.006	0.157	0.17	Yes	0.004	0.107	0.12	Yes	0.785	0.209	1.00	Yes	0.780	0.129	0.91	Yes	1.00	**4.35**
		$U_{18} - U_{19}$	-----	-1264.93	89	-179	-1861	-1199	51	17	348	302	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.267	1.00	Yes	0.720	0.166	0.89	Yes	1.00	**3.32**
		$U_{19} - U_{20}$	-----	-1460.70	77	-307	-1726	-1506	133	-35	744	252	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1.00	Yes	0.750	0.143	0.90	Yes	1.00	**3.48**
		$U_{20} - U_{21}$	-----	-1430.59	-220	-338	-2195	-1157	33	-31	486	196	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.255	1.00	Yes	0.734	0.182	0.92	Yes	1.00	**3.41**
		$U_{21} - U_{22}$	-----	-1265.48	-254	-338	-2163	-1204	46	-117	582	28	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.272	1.00	Yes	0.721	0.193	0.92	Yes	1.00	**3.32**
		$U_{22} - U_{23}$	-----	-1081.26	-157	-127	-1843	-380	-68	-104	417	15	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1.00	Yes	0.767	0.188	0.96	Yes	1.00	**3.65**
		$U_{23} - U_{24}$	-----	-791.35	-138	-58	-1305	-301	-42	-98	381	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.225	1.00	Yes	0.764	0.198	0.97	Yes	1.00	**3.91**
		$U_{24} - U_{25}$	-----	-522.25	8	-245	-2253	379	-64	47	433	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.351	0.98	Yes	0.617	0.382	1.00	Yes	1.00	**7.89**
		$U_0 - U_1$	-----	-623.99	727	-1457	-365	-1286	-43	46	616	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.224	0.94	Yes	0.702	0.293	1.00	Yes	1.00	**7.27**
		$U_1 - U_2$	-----	-743.81	131	-615	-214	-603	-119	-408	-211	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.153	1.00	Yes	0.837	0.124	0.97	Yes	1.00	**3.66**
		$U_2 - U_3$	-----	-1074.46	148	-806	-361	-668	-23	328	-287	509	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.145	1.00	Yes	0.841	0.131	0.98	Yes	1.00	**3.45**
		$U_3 - U_4$	-----	-1363.14	-157	-434	-998	-1057	262	339	383	723	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1.00	Yes	0.781	0.117	0.90	Yes	1.00	**3.94**
		$U_4 - U_5$	-----	-1384.63	-370	-131	-1238	-508	499	150	496	245	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1.00	Yes	0.794	0.137	0.94	Yes	1.00	**3.46**
		$U_5 - U_6$	-----	-1363.24	-181	-272	-1096	-1155	139	-153	178	375	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.204	1.00	Yes	0.782	0.127	0.91	Yes	1.00	**2.97**
		$U_6 - U_7$	-----	-1326.86	-380	-107	-1651	-524	-85	-184	403	66	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.228	1.00	Yes	0.761	0.182	0.95	Yes	1.00	**2.67**
		$U_7 - U_8$	-----	-1187.70	-166	-3	-1019	-523	-59	-176	295	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.193	1.00	Yes	0.793	0.141	0.94	Yes	1.00	**2.86**
		$U_8 - U_9$	-----	-876.45	-104	174	-914	-139	-30	-155	312	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.166	1.00	Yes	0.822	0.152	0.98	Yes	1.00	**2.52**
		$U_9 - U_{10}$	143.80	-618.18	-80	224	-917	28	-97	-104	249	-48	0.156	0.245	0.41	Yes	0.104	0.157	0.27	Yes	0.796	0.201	1.00	Yes	0.789	0.205	1.00	Yes	1.00	**2.99**
		$U_{10} - U_{11}$	650.18	-468.81	297	222	-925	1	-229	-137	511	-188	0.705	0.289	1.00	Yes	0.478	0.194	0.68	Yes	0.604	0.180	0.79	Yes	0.598	0.207	0.81	Yes	1.00	**5.64**
		$U_{11} - U_{12}$	864.09	-----	-12	922	-1341	1392	-428	-99	316	-249	0.708	0.286	1.00	Yes	0.484	0.195	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		$U_{12} - U_{13}$	482.22	-----	3923	-3266	422	148	-438	584	-686	-291	0.334	0.664	1.00	Yes	0.233	0.453	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.70**
		$U_{13} - U_{14}$	881.81	-----	241	444	-491	-4	-345	-230	-319	335	0.843	0.152	1.00	Yes	0.589	0.104	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_{14} - U_{15}$	-----	-608.20	581	-395	-320	-756	204	-70	182	131	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1.00	Yes	0.820	0.180	1.00	Yes	1.00	**7.23**
		$U_{15} - U_{16}$	464.30	-564.60	360	252	-532	-564	-76	126	-14	486	0.532	0.216	0.75	Yes	0.365	0.148	0.52	Yes	0.768	0.227	1.00	Yes	0.761	0.134	0.90	Yes	1.00	**4.41**
		$U_{16} - U_{17}$	394.87	-571.12	382	121	-660	-443	80	74	440	216	0.453	0.231	0.69	Yes	0.311	0.158	0.47	Yes	0.777	0.216	1.00	Yes	0.770	0.157	0.93	Yes	1.00	**3.66**
		$U_{17} - U_{18}$	178.11	-554.54	286	-78	-647	-548	-38	71	292	222	0.204	0.203	0.41	Yes	0.138	0.133	0.28	Yes	0.755	0.244	1.00	Yes	0.748	0.154	0.91	Yes	1.00	**2.75**
		$U_{18} - U_{19}$	62.56	-519.22	134	-45	-810	-375	-12	25	460	13	0.072	0.270	0.35	Yes	0.049	0.185	0.24	Yes	0.706	0.292	1.00	Yes	0.700	0.193	0.90	Yes	1.00	**2.58**
		$U_{19} - U_{20}$	28.96	-513.93	155	-277	-1250	399	-107	97	376	-240	0.033	0.361	0.40	Yes	0.023	0.247	0.28	Yes	0.699	0.241	0.95	Yes	0.693	0.297	1.00	Yes	1.00	**4.42**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-51.70	1620	-2681	-360	181	-549	-2019	-19	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.094	0.904	1.00	Yes	0.093	0.805	0.90	Yes	1.00	**23.73**
		L_1 - L_2	449.11	-----	343	-836	-208	-631	-248	-180	274	-108	0.687	0.310	1.00	Yes	0.419	0.207	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_2 - L_3	682.95	-27.83	-20	22	-764	-612	-32	23	-184	0	0.786	0.214	1.00	Yes	0.455	0.128	0.59	Yes	0.038	0.245	0.29	Yes	0.038	0.185	0.23	Yes	1.00	**3.33**
		L_3 - L_4	700.12	-113.83	78	224	-655	-553	52	69	204	78	0.805	0.191	1.00	Yes	0.478	0.123	0.61	Yes	0.156	0.223	0.38	Yes	0.154	0.158	0.32	Yes	1.00	**2.98**
		L_4 - L_5	267.28	-478.05	88	581	-1022	498	50	35	-203	213	0.346	0.308	0.66	Yes	0.208	0.202	0.42	Yes	0.735	0.209	0.95	Yes	0.728	0.270	1.00	Yes	1.00	**3.33**
		L_5 - L_6	-----	-728.45	165	594	-560	273	72	127	261	109	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.147	1.00	Yes	0.840	0.131	0.98	Yes	1.00	**3.76**
		L_6 - L_7	-----	-1044.63	192	182	-979	284	117	-108	-69	349	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.059	0.91	Yes	0.841	0.154	1.00	Yes	1.00	**4.92**
		L_7 - L_8	-----	-1220.50	93	951	-670	1618	52	182	392	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.208	1.00	Yes	0.773	0.214	0.99	Yes	1.00	**5.89**
		L_8 - L_9	-----	-1229.05	1530	-46	540	-16	-180	3	-170	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1.00	Yes	0.778	0.203	0.99	Yes	1.00	**6.51**
		L_9 - L_{10}	-----	-1007.98	1147	-902	-779	-396	-163	70	917	282	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.135	0.96	Yes	0.811	0.180	1.00	Yes	1.00	**11.95**
		L_{10} - L_{11}	168.40	-559.87	529	-5	-38	-551	139	49	120	79	0.218	0.170	0.39	Yes	0.127	0.103	0.23	Yes	0.861	0.096	0.96	Yes	0.853	0.146	1.00	Yes	1.00	**4.50**
		L_{11} - L_{12}	548.60	-----	555	-949	-3	-505	-210	-196	94	26	0.710	0.288	1.00	Yes	0.426	0.189	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_{12} - L_{13}	1087.57	-----	177	-69	-576	-663	14	38	76	171	0.858	0.138	1.00	Yes	0.549	0.082	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		L_{13} - L_{14}	1266.93	-----	609	-1654	-303	-1195	-102	-203	261	66	0.745	0.250	1.00	Yes	0.483	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		L_{14} - L_{15}	1488.64	-----	-364	-27	-2102	-307	-117	-66	-228	95	0.727	0.269	1.00	Yes	0.473	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		L_{15} - L_{16}	1608.72	-----	-192	-403	-1573	-1272	-89	-40	115	-339	0.786	0.213	1.00	Yes	0.505	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_{16} - L_{17}	1122.63	-----	-428	90	-1632	149	-90	-55	-499	136	0.710	0.284	1.00	Yes	0.461	0.175	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{17} - L_{18}	878.15	-----	-185	-36	-1050	-106	-58	8	146	-212	0.765	0.230	1.00	Yes	0.489	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_{18} - L_{19}	327.91	-----	-218	298	-1237	581	-34	-33	-567	239	0.502	0.489	1.00	Yes	0.339	0.309	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		L_{19} - L_{20}	195.35	-282.07	-56	-70	-1633	700	-18	-4	830	186	0.299	0.662	0.97	Yes	0.182	0.439	0.63	Yes	0.512	0.435	0.95	Yes	0.508	0.490	1.00	Yes	1.00	**11.03**
	Structure 2	L_0 - L_1	41.94	-95.04	1150	-3717	-129	35	-334	-1158	-19	-64	0.051	0.947	1.00	Yes	0.030	0.604	0.64	Yes	0.137	0.651	0.79	Yes	0.136	0.756	0.90	Yes	1.00	**22.31**
		L_1 - L_2	553.75	-----	695	-1348	-92	-901	-293	-277	-187	201	0.673	0.323	1.00	Yes	0.400	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		L_2 - L_3	1010.55	-----	323	-1146	-480	-1166	-119	13	62	275	0.796	0.198	1.00	Yes	0.522	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_3 - L_4	1302.20	-----	248	-1593	-608	-1635	-175	-114	421	181	0.765	0.225	1.00	Yes	0.515	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_4 - L_5	1736.67	-----	-270	-765	-1905	-1396	64	-82	-84	63	0.810	0.186	1.00	Yes	0.536	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		L_5 - L_6	1819.01	-----	-148	-397	-1598	-2234	110	-15	306	38	0.780	0.217	1.00	Yes	0.524	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_6 - L_7	1782.73	-----	-447	-116	-2422	-1502	-161	45	-33	465	0.755	0.242	1.00	Yes	0.501	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		L_7 - L_8	1321.03	-----	-222	274	-2005	-529	-131	8	156	-119	0.757	0.234	1.00	Yes	0.498	0.137	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_8 - L_9	1076.44	-268.78	-92	534	-1563	321	-26	16	-270	325	0.753	0.241	1.00	Yes	0.507	0.151	0.66	Yes	0.223	0.126	0.35	Yes	0.221	0.211	0.44	Yes	1.00	**4.75**
		L_9 - L_{10}	782.10	-647.00	-93	752	-1631	174	20	97	305	-164	0.698	0.298	1.00	Yes	0.406	0.185	0.60	Yes	0.684	0.163	0.85	Yes	0.679	0.261	0.95	Yes	1.00	**6.05**
		L_{10} - L_{11}	165.95	-671.59	84	527	-1187	451	55	1	-359	227	0.166	0.256	0.43	Yes	0.097	0.160	0.26	Yes	0.794	0.086	0.89	Yes	0.789	0.208	1.00	Yes	1.00	**4.34**
		L_{11} - L_{12}	-----	-1006.82	88	973	-1232	580	82	237	295	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.142	0.98	Yes	0.826	0.168	1.00	Yes	1.00	**5.53**
		L_{12} - L_{13}	-----	-1315.59	303	-285	-1782	-470	178	-141	-371	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.205	1.00	Yes	0.787	0.177	0.97	Yes	1.00	**6.98**
		L_{13} - L_{14}	-----	-1337.26	-225	1284	-2558	3650	-93	-66	460	73	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.228	0.91	Yes	0.673	0.319	1.00	Yes	1.00	**8.53**
		L_{14} - L_{15}	-----	-1255.06	4217	-2274	1059	-401	-374	-97	-423	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.255	0.90	Yes	0.632	0.368	1.00	Yes	1.00	**10.45**
		L_{15} - L_{16}	-----	-1346.56	27	201	-1902	-112	-426	-284	160	192	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.173	0.99	Yes	0.805	0.189	1.00	Yes	1.00	**7.19**
		L_{16} - L_{17}	-----	-1006.50	2095	-1009	-179	-1116	-12	-1050	-72	38	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.218	0.96	Yes	0.733	0.258	1.00	Yes	1.00	**11.82**
		L_{17} - L_{18}	487.40	-176.97	1978	-2734	-873	-1317	-1011	-707	449	156	0.435	0.559	1.00	Yes	0.253	0.345	0.60	Yes	0.187	0.353	0.54	Yes	0.186	0.437	0.63	Yes	1.00	**15.36**
		L_{18} - L_{19}	178.26	-635.25	661	113	-170	-576	-3	34	182	258	0.202	0.167	0.37	Yes	0.117	0.099	0.22	Yes	0.852	0.139	1.00	Yes	0.847	0.128	0.98	Yes	1.00	**4.28**
		L_{19} - L_{20}	646.63	-----	584	-808	-365	-989	-33	-260	463	-14	0.733	0.262	1.00	Yes	0.433	0.165	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		L_{20} - L_{21}	941.19	-421.54	521	33	-1046	-1375	-91	-95	100	373	0.751	0.241	1.00	Yes	0.492	0.144	0.64	Yes	0.398	0.222	0.63	Yes	0.395	0.201	0.60	Yes	1.00	**5.82**
		L_{21} - L_{22}	901.83	-202.69	226	-90	-1076	-1602	-89	-29	393	86	0.719	0.276	1.00	Yes	0.481	0.174	0.66	Yes	0.191	0.254	0.45	Yes	0.190	0.234	0.43	Yes	1.00	**4.54**
		L_{22} - L_{23}	814.49	-44.78	-23	49	-2141	-541	-1	-22	-82	305	0.650	0.345	1.00	Yes	0.434	0.216	0.66	Yes	0.042	0.275	0.32	Yes	0.042	0.312	0.36	Yes	1.00	**4.47**
		L_{23} - L_{24}	869.47	-299.41	5	373	-1837	-573	10	78	350	-73	0.693	0.306	1.00	Yes	0.455	0.182	0.64	Yes	0.283	0.272	0.56	Yes	0.281	0.268	0.55	Yes	1.00	**6.16**
		L_{24} - L_{25}	552.66	-419.02	228	347	-1535	-186	59	0	-330	491	0.626	0.371	1.00	Yes	0.370	0.235	0.61	Yes	0.562	0.217	0.78	Yes	0.558	0.296	0.86	Yes	1.00	**5.89**
		L_{25} - L_{26}	193.62	-571.69	88	627	-1182	23	34	114	245	-228	0.219	0.266	0.49	Yes	0.127	0.158	0.29	Yes	0.767	0.175	0.95	Yes	0.762	0.228	1.00	Yes	1.00	**5.81**
		L_{26} - L_{27}	-----	-716.81	299	370	-1521	525	157	54	-456	187	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.126	0.89	Yes	0.753	0.243	1.00	Yes	1.00	**6.29**
		L_{27} - L_{28}	-----	-1050.14	198	1050	-1875	1041	256	528	309	-374	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.221	1.00	Yes	0.765	0.231	1.00	Yes	1.00	**9.31**
		L_{28} - L_{29}	-----	-1138.61	436	-597	-2307	-1209	440	-153	-559	237	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.304	1.00	Yes	0.681	0.229	0.92	Yes	1.00	**10.00**
		L_{29} - L_{30}	-----	-1145.61	-241	1255	-3712	4821	-411	-862	876	587	-----	-----	-----	-----	-----	-----	-----	-----	0.582	0.289	0.88	Yes	0.576	0.421	1.00	Yes	1.00	**12.92**
		L_{30} - L_{31}	-----	-940.03	5935	-3433	670	-326	730	982	-59	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.477	0.378	0.86	Yes	0.473	0.518	1.00	Yes	1.00	**16.86**
		L_{31} - L_{32}	-----	-1277.03	194	-173	-2031	-489	-338	106	516	225	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.228	1.00	Yes	0.764	0.202	0.97	Yes	1.00	**8.59**
		L_{32} - L_{33}	135.49	-849.13	2180	-2126	-861	-1169	1151	-1139	119	220	0.094	0.405	0.50	Yes	0.063	0.246	0.31	Yes	0.702	0.199	0.91	Yes	0.696	0.297	1.00	Yes	1.00	**18.19**
		L_{33} - L_{34}	500.60	-----	1162	-2386	-561	-876	-356	-468	561	123	0.500	0.493	1.00	Yes	0.293	0.309	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.42**
		L_{34} - L_{35}	873.05	-664.20	680	61	-665	-1059	-43	65	177	402	0.779	0.218	1.00	Yes	0.454	0.134	0.59	Yes	0.702	0.175	0.88	Yes	0.697	0.169	0.87	Yes	1.00	**7.94**
		L_{35} - L_{36}	1087.86	-----	624	-1313	-557	-1041	-36	-229	580	100	0.761	0.232	1.00	Yes	0.513	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		L_{36} - L_{37}	1366.08	-38.60	243	2	-1101	-1626	-103	12	-18	381	0.783	0.211	1.00	Yes	0.515	0.125	0.64	Yes	0.026	0.214	0.25	Yes	0.026	0.180	0.21	Yes	1.00	**4.89**
		L_{37} - L_{38}	1826.68	-----	100	-357	-2230	-2177	-2	-45	347	-99	0.773	0.217	1.00	Yes	0.514	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		L_{38} - L_{39}	1743.10	-----	-257	-160	-2630	-995	-56	5	-199	188	0.748	0.246	1.00	Yes	0.502	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_{39} - L_{40}	1686.69	-----	-147	-382	-1971	-1541	-26	-40	135	-375	0.786	0.212	1.00	Yes	0.521	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_{40} - L_{41}	1247.06	-----	-310	-47	-1942	-220	-60	-10	-412	244	0.733	0.260	1.00	Yes	0.493	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_{41} - L_{42}	978.50	-----	-131	-123	-1395	-68	-32	-32	237	-53	0.771	0.227	1.00	Yes	0.506	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		L_{42} - L_{43}	495.80	-----	-211	9	-1564	384	-66	-69	-453	232	0.602	0.393	1.00	Yes	0.358	0.251	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_{43} - L_{44}	219.53	-50.93	-71	-12	-2561	612	-156	-45	1254	366	0.267	0.727	1.00	Yes	0.159	0.461	0.62	Yes	0.073	0.471	0.55	Yes	0.073	0.521	0.60	Yes	1.00	**13.71**
	Structure 3	L_0 - L_1	185.57	-272.46	941	-1693	-14	-81	-140	-635	-9	-40	0.284	0.640	0.93	Yes	0.173	0.427	0.61	Yes	0.495	0.361	0.86	Yes	0.491	0.508	1.00	Yes	1.00	**12.39**
		L_1 - L_2	367.40	-----	753	-1339	104	-428	-73	-97	-38	152	0.562	0.433	1.00	Yes	0.380	0.269	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		L_2 - L_3	850.48	-----	405	-833	-353	-673	-31	-24	368	713	0.741	0.252	1.00	Yes	0.474	0.154	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.80**
		L_3 - L_4	1209.03	-----	429	-1395	-525	-1134	-269	-153	333	173	0.764	0.234	1.00	Yes	0.496	0.144	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_4 - L_5	1623.57	-----	-330	-217	-1545	-1131	80	119	94	255	0.793	0.204	1.00	Yes	0.509	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		L_5 - L_6	1542.47	-----	6	-1615	-867	-1775	-209	-237	345	141	0.754	0.238	1.00	Yes	0.490	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		L_6 - L_7	1240.58	-----	-403	238	-1764	126	-183	17	-117	283	0.730	0.267	1.00	Yes	0.473	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_7 - L_8	1030.48	-----	-90	105	-867	-438	-30	38	205	-14	0.813	0.178	1.00	Yes	0.520	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		L_8 - L_9	553.10	-124.27	-171	339	-839	204	-16	46	-211	325	0.716	0.279	1.00	Yes	0.430	0.182	0.62	Yes	0.191	0.134	0.33	Yes	0.189	0.222	0.42	Yes	1.00	**3.41**
		L_9 - L_{10}	200.20	-504.42	-7	472	-866	95	69	135	351	105	0.259	0.291	0.55	Yes	0.151	0.175	0.33	Yes	0.775	0.173	0.95	Yes	0.769	0.229	1.00	Yes	1.00	**5.04**
		L_{10} - L_{11}	-----	-982.98	206	170	-1312	606	127	-164	-395	178	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.096	0.90	Yes	0.791	0.206	1.00	Yes	1.00	**7.58**
		L_{11} - L_{12}	-----	-1229.00	126	1074	-876	1572	-101	-26	559	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.211	1.00	Yes	0.778	0.208	0.99	Yes	1.00	**8.51**
		L_{12} - L_{13}	-----	-1134.12	2122	-697	424	-5	-246	28	-191	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.268	1.00	Yes	0.718	0.281	1.00	Yes	1.00	**9.41**
		L_{13} - L_{14}	-----	-887.12	1564	-1793	-1693	-702	-1067	-677	1140	353	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.248	0.98	Yes	0.714	0.282	1.00	Yes	1.00	**18.59**
		L_{14} - L_{15}	-----	-745.72	568	166	12	-228	149	-6	-1	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.122	1.00	Yes	0.860	0.126	0.99	Yes	1.00	**3.59**
		L_{15} - L_{16}	459.11	-----	739	-1259	-215	-587	-379	-254	39	39	0.595	0.401	1.00	Yes	0.357	0.262	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		L_{16} - L_{17}	663.07	-286.71	379	44	-843	-397	90	-40	116	172	0.763	0.231	1.00	Yes	0.453	0.150	0.61	Yes	0.392	0.172	0.57	Yes	0.388	0.204	0.60	Yes	1.00	**4.03**
		L_{17} - L_{18}	651.57	-118.02	92	-8	-856	-584	6	8	228	-39	0.750	0.243	1.00	Yes	0.434	0.146	0.58	Yes	0.161	0.262	0.43	Yes	0.160	0.207	0.37	Yes	1.00	**3.42**
		L_{18} - L_{19}	425.40	-21.31	47	1	-900	51	20	-101	-154	333	0.651	0.342	1.00	Yes	0.397	0.228	0.63	Yes	0.039	0.201	0.24	Yes	0.038	0.270	0.31	Yes	1.00	**3.45**
		L_{19} - L_{20}	55.64	-33.03	78	-195	-1978	698	-1	0	1483	403	0.085	0.912	1.00	Yes	0.050	0.550	0.60	Yes	0.060	0.657	0.72	Yes	0.059	0.594	0.66	Yes	1.00	**14.06**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-321.48	-55	87	-191	245	-35	-11	-408	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.229	0.95	Yes	0.680	0.313	1.00	Yes	1.00	**2.00**
		$U_1 - L_1$			20.17	-322.88	26	-15	-244	245	0	-2	-140	-14	0.036	0.354	0.40	Yes	0.020	0.195	0.22	Yes	0.705	0.115	0.83	Yes	0.683	0.313	1.00	Yes	1.00	**3.71**
		$U_2 - L_2$			98.85	-280.56	84	-94	-273	314	61	29	-328	-25	0.178	0.496	0.68	Yes	0.098	0.273	0.38	Yes	0.613	0.193	0.81	Yes	0.594	0.401	1.00	Yes	1.00	**5.23**
		$U_3 - L_3$			193.31	-282.09	308	-278	-274	309	224	186	50	36	0.348	0.460	0.81	Yes	0.191	0.253	0.45	Yes	0.618	0.169	0.79	Yes	0.597	0.395	1.00	Yes	1.00	**7.91**
		$U_4 - L_4$			-----	-214.89	426	-415	-59	44	-365	-112	-249	69	-----	-----	-----	-----	-----	-----	-----	-----	0.472	0.238	0.72	Yes	0.455	0.545	1.00	Yes	1.00	**8.28**
		$U_5 - L_5$			-----	-423.33	228	-261	63	-92	101	-72	8	33	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.101	0.87	Yes	0.730	0.264	1.00	Yes	1.00	**2.78**
		$U_6 - L_6$			-----	-519.39	262	-283	85	-88	296	36	77	69	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.116	0.91	Yes	0.745	0.247	1.00	Yes	1.00	**2.70**
		$U_7 - L_7$			-----	-439.31	301	-322	134	-150	215	28	-157	13	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.141	0.88	Yes	0.678	0.317	1.00	Yes	1.00	**2.01**
		$U_8 - L_8$			-----	-1190.97	458	-559	-373	439	967	282	231	121	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.138	1.00	Yes	0.826	0.104	0.93	Yes	1.00	**5.04**
		$U_9 - L_9$			-----	-655.83	-171	201	-412	457	-420	-174	-403	-278	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.153	0.94	Yes	0.741	0.254	1.00	Yes	1.00	**3.30**
		$U_{10} - L_{10}$			-----	-712.18	-121	108	-361	364	-601	-323	-1099	-697	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.256	1.00	Yes	0.703	0.189	0.90	Yes	1.00	**4.17**
		$U_{11} - L_{11}$			-----	-655.48	-119	207	-393	500	-463	-276	-663	-492	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.196	0.99	Yes	0.763	0.232	1.00	Yes	1.00	**3.98**
		$U_{12} - L_{12}$			-----	-520.81	-90	95	-328	330	-346	-203	-143	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.157	0.91	Yes	0.715	0.282	1.00	Yes	1.00	**3.49**
		$U_{13} - L_{13}$			-----	-359.31	-37	57	-240	268	-184	6	-107	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.132	0.86	Yes	0.688	0.306	1.00	Yes	1.00	**2.98**
		$U_{14} - L_{14}$			-----	-170.90	215	-223	-469	496	119	36	101	272	-----	-----	-----	-----	-----	-----	-----	-----	0.381	0.210	0.60	Yes	0.362	0.633	1.00	Yes	1.00	**10.87**
		$U_{15} - L_{15}$			143.85	-309.35	245	-266	-100	94	343	-80	80	52	0.259	0.439	0.70	Yes	0.142	0.242	0.39	Yes	0.693	0.166	0.86	Yes	0.655	0.340	1.00	Yes	1.00	**4.45**
		$U_{16} - L_{16}$			8.35	-323.43	237	-246	13	-27	258	-154	47	-51	0.015	0.389	0.41	Yes	0.008	0.214	0.23	Yes	0.729	0.134	0.87	Yes	0.684	0.314	1.00	Yes	1.00	**3.21**
		$U_{17} - L_{17}$			-----	-437.41	218	-240	60	-75	214	-142	-122	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.122	0.95	Yes	0.755	0.244	1.00	Yes	1.00	**2.52**
		$U_{18} - L_{18}$			-----	-538.49	424	-439	144	-151	277	-168	-133	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.100	0.89	Yes	0.749	0.249	1.00	Yes	1.00	**2.68**
		$U_{19} - L_{19}$			-----	-643.26	533	-520	171	-169	214	-111	-116	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.106	0.91	Yes	0.749	0.247	1.00	Yes	1.00	**3.11**
		$U_{20} - L_{20}$			-----	-577.85	336	-490	160	-260	663	87	33	4	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1.00	Yes	0.673	0.227	0.90	Yes	1.00	**2.21**
	Structure 2	$U_0 - L_0$			-----	-638.47	-168	218	-436	524	-38	-6	-945	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.230	1.00	Yes	0.684	0.222	0.91	Yes	1.00	**2.85**
		$U_1 - L_1$			-----	-719.18	-116	125	-513	525	-106	-6	-597	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.133	0.96	Yes	0.771	0.223	1.00	Yes	1.00	**4.34**
		$U_2 - L_2$			-----	-582.54	-105	115	-496	496	-107	-38	-297	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.111	0.90	Yes	0.742	0.254	1.00	Yes	1.00	**3.91**
		$U_3 - L_3$			-----	-488.17	-55	63	-241	251	77	-46	-100	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.093	0.93	Yes	0.766	0.229	1.00	Yes	1.00	**3.29**
		$U_4 - L_4$			-----	-342.07	-10	26	-209	211	-53	43	16	2	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.092	0.87	Yes	0.724	0.270	1.00	Yes	1.00	**3.27**
		$U_5 - L_5$			125.39	-318.70	93	-81	-228	248	-128	94	-112	-40	0.226	0.353	0.58	Yes	0.124	0.194	0.32	Yes	0.720	0.152	0.88	Yes	0.674	0.316	1.00	Yes	1.00	**4.57**
		$U_6 - L_6$			336.06	-261.35	208	-211	-261	267	170	159	95	6	0.604	0.391	1.00	Yes	0.332	0.215	0.55	Yes	0.588	0.149	0.74	Yes	0.553	0.341	0.90	Yes	1.00	**6.75**
		$U_7 - L_7$			-----	-281.82	289	-312	-77	87	511	116	-30	114	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.254	0.90	Yes	0.596	0.398	1.00	Yes	1.00	**7.73**
		$U_8 - L_8$			-----	-466.21	346	-367	55	-77	150	-138	-40	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.106	0.79	Yes	0.672	0.321	1.00	Yes	1.00	**3.58**
		$U_9 - L_9$			-----	-693.15	572	-591	152	-179	525	-39	-155	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.142	0.92	Yes	0.743	0.251	1.00	Yes	1.00	**4.39**
		$U_{10} - L_{10}$			-----	-796.04	541	-570	168	-195	479	-103	14	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.116	0.91	Yes	0.744	0.252	1.00	Yes	1.00	**4.44**
		$U_{11} - L_{11}$			-----	-817.70	514	-531	186	-187	203	-149	-172	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.104	0.93	Yes	0.765	0.235	1.00	Yes	1.00	**4.04**
		$U_{12} - L_{12}$			-----	-885.99	530	-538	156	-134	186	-62	-154	6	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.101	0.96	Yes	0.768	0.231	1.00	Yes	1.00	**4.29**
		$U_{13} - L_{13}$			-----	-748.25	575	-557	210	-207	418	46	-162	20	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.162	1.00	Yes	0.721	0.275	1.00	Yes	1.00	**3.46**
		$U_{14} - L_{14}$			-----	-1215.69	785	-749	-583	542	602	297	57	285	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.110	1.00	Yes	0.806	0.139	0.95	Yes	1.00	**6.64**
		$U_{15} - L_{15}$			-----	-710.43	-117	125	-637	605	-300	13	-491	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.200	1.00	Yes	0.685	0.305	0.99	Yes	1.00	**5.57**
		$U_{16} - L_{16}$			-----	-696.92	-89	63	-522	504	-803	-260	-818	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1.00	Yes	0.747	0.221	0.97	Yes	1.00	**4.56**
		$U_{17} - L_{17}$			-----	-633.77	-124	122	-561	551	-275	-184	-682	-442	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.197	0.98	Yes	0.738	0.260	1.00	Yes	1.00	**4.40**
		$U_{18} - L_{18}$			-----	-576.39	-95	95	-500	512	-114	-127	-314	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.128	0.90	Yes	0.734	0.262	1.00	Yes	1.00	**3.95**
		$U_{19} - L_{19}$			-----	-476.03	-57	61	-294	293	-66	-33	-43	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.100	0.82	Yes	0.711	0.283	1.00	Yes	1.00	**3.37**
		$U_{20} - L_{20}$			-----	-375.68	-9	15	-241	244	-179	-30	-139	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.120	0.89	Yes	0.720	0.279	1.00	Yes	1.00	**3.60**
		$U_{21} - L_{21}$			53.41	-315.57	26	-21	-243	256	-88	48	-28	-39	0.096	0.353	0.45	Yes	0.053	0.194	0.25	Yes	0.713	0.112	0.83	Yes	0.668	0.327	1.00	Yes	1.00	**3.82**
		$U_{22} - L_{22}$			-----	-306.45	238	-238	-267	274	657	198	484	250	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.255	0.95	Yes	0.648	0.350	1.00	Yes	1.00	**9.24**
		$U_{23} - L_{23}$			92.48	-315.40	236	-253	-60	50	185	-63	33	116	0.166	0.377	0.55	Yes	0.091	0.207	0.30	Yes	0.713	0.129	0.85	Yes	0.667	0.323	1.00	Yes	1.00	**3.98**
		$U_{24} - L_{24}$			-----	-373.90	234	-247	6	-25	211	-67	161	68	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.105	0.88	Yes	0.716	0.282	1.00	Yes	1.00	**3.52**
		$U_{25} - L_{25}$			-----	-471.89	302	-298	42	-42	367	-44	-84	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.107	0.82	Yes	0.705	0.291	1.00	Yes	1.00	**3.26**
		$U_{26} - L_{26}$			-----	-568.53	500	-528	70	-74	369	-48	-120	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.130	0.89	Yes	0.724	0.270	1.00	Yes	1.00	**3.75**
		$U_{27} - L_{27}$			-----	-634.26	547	-558	87	-88	539	-2	-134	2	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.138	0.93	Yes	0.738	0.259	1.00	Yes	1.00	**3.97**
		$U_{28} - L_{28}$			-----	-709.71	547	-548	78	-75	569	19	-152	16	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.127	0.95	Yes	0.761	0.232	1.00	Yes	1.00	**4.13**
		$U_{29} - L_{29}$			-----	-718.26	634	-609	119	-124	472	20	-115	28	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.169	0.97	Yes	0.692	0.304	1.00	Yes	1.00	**4.71**
		$U_{30} - L_{30}$			-----	-1214.57	855	-840	-771	696	652	-48	329	363	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.112	1.00	Yes	0.805	0.151	0.96	Yes	1.00	**8.19**
		$U_{31} - L_{31}$			-----	-746.40	-108	108	-541	516	-309	-31	-215	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.161	1.00	Yes	0.720	0.259	0.98	Yes	1.00	**5.03**
		$U_{32} - L_{32}$			-----	-783.82	-81	59	-465	448	-686	-276	-991	-439	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.241	1.00	Yes	0.679	0.199	0.88	Yes	1.00	**4.98**
		$U_{33} - L_{33}$			-----	-816.20	-118	106	-496	494	-450	-342	-518	-471	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.171	1.00	Yes	0.763	0.219	0.99	Yes	1.00	**5.03**
		$U_{34} - L_{34}$			-----	-811.16	-105	121	-516	538	-273	-190	-22	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.099	0.91	Yes	0.758	0.238	1.00	Yes	1.00	**5.30**
		$U_{35} - L_{35}$			-----	-699.91	-96	119	-580	581	-215	2	-243	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.096	0.88	Yes	0.750	0.246	1.00	Yes	1.00	**5.03**
		$U_{36} - L_{36}$			-----	-474.09	-45	59	-347	358	-63	64	38	3	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.093	0.79	Yes	0.683	0.313	1.00	Yes	1.00	**3.80**
		$U_{37} - L_{37}$			-----	-243.63	68	-72	-342	376	-98	80	263	187	-----	-----	-----	-----	-----	-----	-----	-----	0.550	0.223	0.78	Yes	0.515	0.481	1.00	Yes	1.00	**8.49**
		$U_{38} - L_{38}$			345.91	-174.20	154	-160	-232	238	231	-73	42	101	0.622	0.371	1.00	Yes	0.342	0.204	0.55	Yes	0.392	0.109	0.51	Yes	0.369	0.305	0.68	Yes	1.00	**5.20**
		$U_{39} - L_{39}$			140.70	-327.19	218	-240	-146	122	185	-107	116	144	0.253	0.360	0.62	Yes	0.139	0.198	0.34	Yes	0.739	0.117	0.86	Yes	0.692	0.307	1.00	Yes	1.00	**5.11**
		$U_{40} - L_{40}$			17.59	-342.04	208	-210	-12	-1	295	-84	27	-30	0.032	0.353	0.39	Yes	0.017	0.194	0.22	Yes	0.776	0.106	0.89	Yes	0.724	0.268	1.00	Yes	1.00	**3.43**
		$U_{41} - L_{41}$			-----	-486.34	240	-252	29	-33	181	-133	6	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.229	1.00	Yes	1.00	**3.41**
		$U_{42} - L_{42}$			-----	-583.63	479	-489	61	-70	176	-179	11	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.082	0.87	Yes	0.744	0.250	1.00	Yes	1.00	**3.82**
		$U_{43} - L_{43}$			-----	-710.74	553	-557	82	-95	506	8	-49	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.115	0.93	Yes	0.762	0.236	1.00	Yes	1.00	**3.93**
		$U_{44} - L_{44}$			-----	-630.75	386	-511	118	-135	1003	170	-129	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.239	1.00	Yes	0.676	0.217	0.90	Yes	1.00	**3.30**
	Structure 3	$U_0 - L_0$			-----	-589.79	-144	192	-422	493	-57	-7	-642	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.212	1.00	Yes	0.686	0.229	0.92	Yes	1.00	**2.86**
		$U_1 - L_1$			-----	-659.49	-112	124	-487	494	-124	-3	19	127	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.081	0.91	Yes	0.768	0.229	1.00	Yes	1.00	**4.13**
		$U_2 - L_2$			-----	-542.22	-110	117	-413	424	-150	-46	-50	13	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.089	0.89	Yes	0.754	0.240	1.00	Yes	1.00	**3.36**
		$U_3 - L_3$			-----	-439.13	-45	57	-219	232	45	-64	-154	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.121	0.95	Yes	0.758	0.235	1.00	Yes	1.00	**3.09**
		$U_4 - L_4$			-----	-320.85	-11	25	-237	243	-26	51	-84	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.109	0.84	Yes	0.679	0.311	1.00	Yes	1.00	**3.42**
		$U_5 - L_5$			108.68	-315.79	78	-71	-237	256	-96	111	125	7	0.195	0.363	0.56	Yes	0.108	0.200	0.31	Yes	0.708	0.144	0.86	Yes	0.668	0.327	1.00	Yes	1.00	**4.30**
		$U_6 - L_6$			-----	-221.10	387	-409	-296	308	99	12	-270	136	-----	-----	-----	-----	-----	-----	-----	-----	0.493	0.215	0.71	Yes	0.468	0.523	1.00	Yes	1.00	**10.81**
		$U_7 - L_7$			-----	-367.68	236	-256	9	-27	200	-102	24	5	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.110	0.86	Yes	0.704	0.292	1.00	Yes	1.00	**3.18**
		$U_8 - L_8$			-----	-516.79	331	-337	71	-73	313	-73	-8	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.139	0.89	Yes	0.709	0.288	1.00	Yes	1.00	**3.67**
		$U_9 - L_9$			-----	-648.35	424	-522	97	-168	-181	-304	-44	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.132	0.91	Yes	0.755	0.242	1.00	Yes	1.00	**4.45**
		$U_{10} - L_{10}$			-----	-781.34	399	-437	119	-136	179	-72	-123	-152	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.103	0.92	Yes	0.771	0.227	1.00	Yes	1.00	**4.42**
		$U_{11} - L_{11}$			-----	-648.81	425	-472	168	-193	429	99	-160	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.148	0.93	Yes	0.733	0.262	1.00	Yes	1.00	**2.90**
		$U_{12} - L_{12}$			-----	-1182.71	529	-685	-472	517	777	342	187	153	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.144	1.00	Yes	0.820	0.128	0.95	Yes	1.00	**5.91**
		$U_{13} - L_{13}$			-----	-449.66	-66	75	-293	303	-342	-39	-409	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.187	0.94	Yes	0.694	0.299	1.00	Yes	1.00	**3.22**
		$U_{14} - L_{14}$			-----	-511.52	-44	29	-250	262	-662	-322	-711	-427	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.224	1.00	Yes	0.734	0.229	0.97	Yes	1.00	**3.65**
		$U_{15} - L_{15}$			-----	-420.32	-34	42	-227	244	-475	-234	-607	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1.00	Yes	0.725	0.248	0.98	Yes	1.00	**3.70**
		$U_{16} - L_{16}$			-----	-132.15	71	-53	-559	545	-847	-420	-449	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.291	0.413	0.71	Yes	0.280	0.714	1.00	Yes	1.00	**10.53**
		$U_{17} - L_{17}$			224.06	-264.38	213	-240	-341	335	-22	-134	155	167	0.403	0.484	0.89	Yes	0.222	0.266	0.49	Yes	0.579	0.146	0.73	Yes	0.559	0.436	1.00	Yes	1.00	**7.17**
		$U_{18} - L_{18}$			76.34	-297.61	238	-284	-109	106	142	-94	132	41	0.137	0.404	0.55	Yes	0.076	0.222	0.30	Yes	0.650	0.159	0.81	Yes	0.630	0.363	1.00	Yes	1.00	**5.14**
		$U_{19} - L_{19}$			39.51	-321.67	246	-236	-49	38	246	27	-83	-8	0.071	0.386	0.46	Yes	0.039	0.212	0.26	Yes	0.703	0.138	0.85	Yes	0.681	0.315	1.00	Yes	1.00	**3.08**
		$U_{20} - L_{20}$			-----	-319.08	108	-183	-16	-66	631	202	-601	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.283	1.00	Yes	0.675	0.234	0.91	Yes	1.00	**1.67**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	506.85	-----	-15	-2	-147	67	-4	14	-618	-119	0.665	0.328	1.00	Yes	0.402	0.181	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_1 - L_2$	416.23	-76.85	15	-19	-96	-3	-14	-22	-421	-350	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	0.176	0.239	0.42	Yes	0.163	0.123	0.29	Yes	1.00	**3.97**
		$U_2 - L_3$	87.34	-290.19	57	-32	-186	-84	48	33	9	-109	0.157	0.269	0.43	Yes	0.086	0.148	0.24	Yes	0.668	0.328	1.00	Yes	0.614	0.238	0.86	Yes	1.00	**9.21**
		$U_3 - L_4$	-----	-359.88	40	-10	-74	-97	64	65	261	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.172	1.00	Yes	0.761	0.124	0.89	Yes	1.00	**5.28**
		$U_4 - L_4$	532.22	-----	-10	57	-119	-3	31	-15	-384	-398	0.780	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_4 - L_5$	663.69	-----	-28	150	-235	187	201	74	-442	-373	0.785	0.214	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_5 - L_6$	642.83	-----	-77	118	-307	237	345	159	-297	-225	0.760	0.237	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_6 - L_7$	640.18	-----	23	160	-103	299	375	176	-147	-141	0.757	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.95**
		$U_8 - L_8$	983.68	-----	108	221	-106	340	132	-13	343	433	0.786	0.207	1.00	Yes	0.487	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_9 - L_{10}$	970.44	-----	-75	86	-329	208	118	144	361	544	0.776	0.216	1.00	Yes	0.481	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_{10} - L_{11}$	953.47	-----	-47	174	-296	148	158	200	175	390	0.805	0.188	1.00	Yes	0.499	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		$U_{11} - L_{12}$	835.00	-----	-71	52	-269	80	25	125	-20	271	0.826	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		$U_{12} - L_{13}$	637.65	-----	-74	41	-216	126	-154	-98	-37	155	0.777	0.219	1.00	Yes	0.489	0.123	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{13} - L_{14}$	458.90	-----	-17	-18	-95	29	-177	-183	-82	-13	0.825	0.174	1.00	Yes	0.454	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{15} - L_{14}$	146.03	-300.03	41	-106	-83	-38	-369	-129	-461	-327	0.263	0.269	0.54	Yes	0.144	0.148	0.30	Yes	0.703	0.295	1.00	Yes	0.635	0.135	0.78	Yes	1.00	**4.11**
		$U_{16} - L_{15}$	374.94	-81.48	-3	-36	-139	79	-317	-155	-498	-341	0.674	0.322	1.00	Yes	0.371	0.177	0.55	Yes	0.193	0.247	0.44	Yes	0.172	0.178	0.36	Yes	1.00	**4.11**
		$U_{17} - L_{16}$	504.10	-----	-34	14	-141	93	-110	-130	-476	-371	0.739	0.254	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_{18} - L_{17}$	581.69	-----	-110	75	-333	230	-108	-115	-648	-534	0.688	0.306	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**
		$U_{19} - L_{18}$	662.89	-----	-132	87	-358	247	-66	-106	-574	-478	0.718	0.278	1.00	Yes	0.395	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_{20} - L_{19}$	657.25	-----	-90	94	-281	260	-150	-71	-822	-333	0.712	0.279	1.00	Yes	0.392	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
	Structure 2	$U_0 - L_1$	657.45	-----	-115	100	-430	359	-59	-48	-981	123	0.650	0.346	1.00	Yes	0.358	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_1 - L_2$	757.01	-----	-96	72	-394	298	-100	-29	-406	-281	0.749	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_2 - L_3$	648.50	-----	-86	65	-334	257	-24	88	-209	147	0.767	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_3 - L_4$	597.97	-----	-37	15	-193	122	105	61	-125	79	0.797	0.202	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_4 - L_5$	425.81	-51.42	-2	-24	-134	98	-133	-140	-197	35	0.766	0.228	1.00	Yes	0.421	0.126	0.55	Yes	0.127	0.113	0.24	Yes	0.109	0.171	0.29	Yes	1.00	**3.86**
		$U_5 - L_6$	419.79	-206.70	59	-88	-121	53	-301	-192	-205	107	0.755	0.242	1.00	Yes	0.415	0.133	0.55	Yes	0.488	0.200	0.69	Yes	0.437	0.155	0.60	Yes	1.00	**4.94**
		$U_6 - L_7$	47.02	-381.11	54	-100	-62	-23	-86	-303	-144	-54	0.077	0.194	0.28	Yes	0.042	0.106	0.15	Yes	0.816	0.180	1.00	Yes	0.730	0.115	0.85	Yes	1.00	**3.56**
		$U_8 - L_7$	556.61	-----	-25	-28	-205	103	-272	-207	-393	-493	0.710	0.284	1.00	Yes	0.447	0.162	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_8 - L_8$	686.55	-----	-118	40	-326	223	-130	-160	-498	-424	0.744	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{10} - L_9$	758.02	-----	-93	125	-339	196	5	-60	-582	-546	0.750	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{11} - L_{10}$	838.39	-----	-100	146	-354	260	161	25	-585	-516	0.764	0.230	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		$U_{12} - L_{11}$	856.60	-----	-109	163	-373	345	290	121	-415	-399	0.780	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{13} - L_{12}$	740.50	-----	-150	153	-457	374	353	137	-351	-273	0.733	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{14} - L_{13}$	770.40	-----	-1	187	-283	433	142	107	-212	-168	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{14} - L_{15}$	641.20	-----	64	125	-222	350	143	-64	100	208	0.758	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		$U_{15} - L_{16}$	620.48	-----	-64	71	-378	330	-56	16	-109	260	0.734	0.261	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{16} - L_{17}$	698.06	-----	-57	98	-350	331	-171	117	-184	349	0.756	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{17} - L_{18}$	650.24	-----	-68	81	-292	266	-22	105	-84	339	0.769	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{18} - L_{19}$	653.83	-----	-50	69	-294	243	35	21	54	296	0.773	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{19} - L_{20}$	583.37	-----	-16	23	-213	142	-34	-32	143	282	0.744	0.248	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{20} - L_{21}$	443.79	-----	-5	-6	-125	101	-115	-78	-43	135	0.798	0.199	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{21} - L_{22}$	424.53	-164.17	27	-61	-133	29	-169	-198	0	165	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	0.388	0.181	0.57	Yes	0.347	0.170	0.52	Yes	1.00	**5.15**
		$U_{23} - L_{22}$	369.87	-282.32	56	-97	-131	24	-195	-31	-435	-333	0.665	0.293	0.96	Yes	0.366	0.161	0.53	Yes	0.672	0.320	1.00	Yes	0.597	0.167	0.77	Yes	1.00	**5.79**
		$U_{24} - L_{23}$	411.59	-54.91	5	-24	-122	98	-239	-60	-325	-245	0.740	0.251	1.00	Yes	0.407	0.138	0.55	Yes	0.131	0.152	0.29	Yes	0.116	0.157	0.28	Yes	1.00	**3.77**
		$U_{25} - L_{24}$	579.36	-----	-15	29	-194	172	65	3	-391	-335	0.739	0.253	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{26} - L_{25}$	626.16	-----	-28	39	-299	245	116	44	-461	-396	0.740	0.253	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{27} - L_{26}$	644.37	-----	-46	58	-298	275	175	68	-349	-296	0.762	0.232	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_{28} - L_{27}$	682.88	-----	-46	65	-368	338	206	115	-416	-369	0.740	0.257	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{29} - L_{28}$	618.24	-----	-72	83	-383	338	266	131	-272	-190	0.731	0.266	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{30} - L_{29}$	621.05	-----	39	106	-222	349	338	130	-195	-169	0.734	0.259	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{30} - L_{31}$	756.73	-----	71	147	-298	423	210	2	220	327	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{31} - L_{32}$	738.40	-----	-69	74	-468	379	-9	44	58	317	0.731	0.265	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_{32} - L_{33}$	871.08	-----	-61	95	-360	326	-138	133	-347	361	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_{33} - L_{34}$	859.02	-----	-67	91	-357	251	27	201	4	451	0.783	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_{34} - L_{35}$	798.05	-----	-61	80	-340	209	79	93	139	310	0.790	0.204	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{35} - L_{36}$	735.93	-----	-87	83	-332	229	-14	-5	-29	160	0.797	0.196	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_{36} - L_{37}$	595.65	-----	-27	-3	-213	119	-196	-221	-99	125	0.759	0.235	1.00	Yes	0.478	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{38} - L_{37}$	-----	-376.07	67	-98	-42	-24	-183	-84	-259	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1.00	Yes	0.720	0.112	0.84	Yes	1.00	**3.28**
		$U_{39} - L_{38}$	367.11	-320.07	89	-125	-105	61	-300	-111	-301	-272	0.660	0.247	0.91	Yes	0.363	0.136	0.50	Yes	0.763	0.231	1.00	Yes	0.677	0.159	0.84	Yes	1.00	**5.32**
		$U_{40} - L_{39}$	403.58	-100.72	13	-37	-134	96	-224	-127	-339	-320	0.726	0.269	1.00	Yes	0.399	0.148	0.55	Yes	0.241	0.192	0.44	Yes	0.213	0.171	0.39	Yes	1.00	**4.32**
		$U_{41} - L_{40}$	539.07	-----	-18	2	-181	115	-94	-79	-536	-411	0.719	0.277	1.00	Yes	0.395	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{42} - L_{41}$	607.88	-----	-50	33	-325	258	-68	-65	-500	-446	0.719	0.274	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{43} - L_{42}$	711.51	-----	-64	44	-407	278	-4	-45	-672	-567	0.704	0.290	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{44} - L_{43}$	729.34	-----	-91	86	-316	326	-11	-12	-801	-430	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
	Structure 3	$U_0 - L_1$	626.15	-----	-113	95	-407	309	-62	-53	-664	-35	0.678	0.318	1.00	Yes	0.373	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_1 - L_2$	718.43	-----	-99	67	-358	245	-126	-45	-207	25	0.778	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_2 - L_3$	639.38	-----	-94	60	-363	241	-49	80	-128	189	0.756	0.240	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_3 - L_4$	548.97	-----	-30	11	-152	97	75	50	-141	52	0.805	0.187	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_4 - L_5$	419.03	-87.93	-7	-29	-139	81	-111	-173	-221	72	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	0.208	0.129	0.34	Yes	0.186	0.178	0.37	Yes	1.00	**4.06**
		$U_5 - L_6$	325.14	-318.20	46	-113	-131	-31	-337	-350	-69	23	0.585	0.268	0.86	Yes	0.322	0.148	0.47	Yes	0.746	0.253	1.00	Yes	0.673	0.167	0.85	Yes	1.00	**6.02**
		$U_7 - L_6$	389.67	-92.59	4	-58	-119	-3	-321	-202	-488	-438	0.701	0.293	1.00	Yes	0.385	0.161	0.55	Yes	0.215	0.265	0.48	Yes	0.196	0.152	0.35	Yes	1.00	**4.79**
		$U_8 - L_7$	606.43	-----	-61	13	-197	142	-323	-215	-415	-417	0.739	0.253	1.00	Yes	0.465	0.144	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		$U_8 - L_8$	769.94	-----	-63	80	-273	78	-98	-143	-681	-601	0.762	0.229	1.00	Yes	0.419	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{10} - L_9$	893.60	-----	-42	135	-297	117	110	6	-768	-725	0.755	0.238	1.00	Yes	0.467	0.135	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{11} - L_{10}$	944.68	-----	-74	126	-339	212	361	192	-718	-590	0.755	0.243	1.00	Yes	0.468	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{12} - L_{11}$	974.11	-----	88	179	-122	350	221	156	-474	-357	0.779	0.217	1.00	Yes	0.482	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		$U_{12} - L_{13}$	674.54	-----	63	141	-114	283	36	-89	127	221	0.797	0.201	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{13} - L_{14}$	653.69	-----	-26	59	-305	223	-32	53	-6	269	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{14} - L_{15}$	693.22	-----	1	137	-229	175	-19	111	-105	245	0.820	0.175	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{15} - L_{16}$	544.69	-----	3	72	-136	4	135	203	135	252	0.799	0.197	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{17} - L_{16}$	43.44	-322.84	61	1	-106	-103	199	192	-333	-248	0.078	0.232	0.32	Yes	0.043	0.128	0.18	Yes	0.738	0.253	1.00	Yes	0.683	0.136	0.82	Yes	1.00	**7.80**
		$U_{18} - L_{17}$	367.61	-267.44	57	-30	-133	-20	268	178	-518	-362	0.661	0.320	0.99	Yes	0.364	0.176	0.54	Yes	0.616	0.375	1.00	Yes	0.566	0.170	0.74	Yes	1.00	**7.15**
		$U_{19} - L_{18}$	378.59	-130.11	26	-19	-114	-6	160	124	-579	-438	0.681	0.313	1.00	Yes	0.374	0.172	0.55	Yes	0.298	0.310	0.61	Yes	0.275	0.145	0.43	Yes	1.00	**3.99**
		$U_{20} - L_{19}$	280.43	-----	191	-16	-203	92	1363	58	-1552	-469	0.368	0.628	1.00	Yes	0.222	0.346	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.63**

Moment (Start) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Tension	Max. Comp.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
							Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$			-----	-483.60	481	-488	-1183	-503	36	-200	366	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.342	1	Yes	0.652	0.281	0.94	Yes	1.00	**5.27**
		$U_1 - U_2$			-----	-548.51	-39	-75	-753	-468	168	25	-41	17	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.245	1	Yes	0.740	0.179	0.92	Yes	1.00	**4.77**
		$U_2 - U_3$			138.60	-592.29	-85	261	-841	-334	-5	-89	134	-86	0.159	0.223	0.39	Yes	0.107	0.145	0.26	Yes	0.806	0.187	1	Yes	0.799	0.200	1.00	Yes	1.00	**3.80**
		$U_3 - U_4$			333.37	-553.66	106	270	-1042	-154	-101	-83	44	-73	0.382	0.265	0.65	Yes	0.262	0.182	0.45	Yes	0.753	0.207	0.97	Yes	0.747	0.248	1.00	Yes	1.00	**4.93**
		$U_4 - U_5$			286.24	-549.51	93	231	-1088	-192	-164	-23	-158	-132	0.328	0.286	0.62	Yes	0.225	0.196	0.43	Yes	0.748	0.244	1	Yes	0.741	0.259	1.00	Yes	1.00	**4.07**
		$U_5 - U_6$			542.11	-476.46	214	356	-1109	2	-332	-27	-203	-283	0.621	0.320	0.95	Yes	0.419	0.209	0.63	Yes	0.648	0.344	1	Yes	0.643	0.264	0.91	Yes	1.00	**5.49**
		$U_6 - U_7$			763.99	-192.67	291	196	-954	-272	-315	97	-472	-163	0.731	0.268	1.00	Yes	0.511	0.184	0.70	Yes	0.219	0.294	0.52	Yes	0.217	0.203	0.42	Yes	1.00	**5.77**
		$U_7 - U_8$			885.72	-----	35	961	-2008	2230	-159	450	-200	146	0.614	0.384	1.00	Yes	0.428	0.262	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		$U_8 - U_9$			444.59	-----	3358	-2552	588	-59	26	533	-41	98	0.364	0.628	1.00	Yes	0.249	0.428	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.46**
		$U_9 - U_{10}$			-----	-586.29	469	-305	-918	-602	260	407	175	453	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.245	1	Yes	0.748	0.206	0.96	Yes	1.00	**11.95**
		$U_{10} - U_{11}$			-----	-652.89	342	-723	-300	-699	360	-32	316	152	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.142	0.99	Yes	0.833	0.162	1.00	Yes	1.00	**5.94**
		$U_{11} - U_{12}$			-----	-899.44	230	-400	-548	-665	261	-94	274	179	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.145	1	Yes	0.844	0.110	0.96	Yes	1.00	**5.09**
		$U_{12} - U_{13}$			-----	-1171.15	71	-226	-886	-700	249	-274	412	29	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.203	1	Yes	0.782	0.122	0.91	Yes	1.00	**4.42**
		$U_{13} - U_{14}$			-----	-1378.22	-97	-344	-1252	-1118	148	76	212	40	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.790	0.138	0.93	Yes	1.00	**4.61**
		$U_{14} - U_{15}$			-----	-1293.24	-252	-594	-1690	-851	147	-216	198	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.242	1	Yes	0.741	0.186	0.93	Yes	1.00	**3.63**
		$U_{15} - U_{16}$			-----	-1392.51	25	-1222	-1496	-917	-69	-352	105	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.184	1	Yes	0.798	0.165	0.97	Yes	1.00	**3.78**
		$U_{16} - U_{17}$			-----	-1306.99	-318	-184	-1765	-650	53	-177	-109	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.239	1	Yes	0.749	0.195	0.95	Yes	1.00	**3.71**
		$U_{17} - U_{18}$			-----	-974.67	-169	-102	-1128	-197	-158	-233	-139	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.218	1	Yes	0.763	0.184	0.95	Yes	1.00	**3.48**
		$U_{18} - U_{19}$			-----	-692.58	-197	-29	-959	-73	-194	-172	-38	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.779	0.193	0.98	Yes	1.00	**3.47**
		$U_{19} - U_{20}$			-----	-545.74	-33	-1305	-1655	-48	-129	-667	554	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.376	1	Yes	0.614	0.333	0.95	Yes	1.00	**7.94**
	Structure 2	$U_0 - U_1$			-----	-574.13	1270	-1302	-1874	-746	181	77	860	51	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.282	0.97	Yes	0.678	0.318	1.00	Yes	1.00	**9.36**
		$U_1 - U_2$			-----	-818.99	24	-466	-621	-781	193	305	476	288	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.199	1	Yes	0.790	0.119	0.91	Yes	1.00	**5.06**
		$U_2 - U_3$			-----	-1123.10	310	-609	-1002	-1309	676	-43	392	100	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.195	1	Yes	0.797	0.133	0.94	Yes	1.00	**5.21**
		$U_3 - U_4$			-----	-1322.47	-365	-293	-1787	-1426	121	-297	271	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1	Yes	0.753	0.159	0.92	Yes	1.00	**4.16**
		$U_4 - U_5$			-----	-1410.93	-318	-753	-2055	-1474	-12	-560	192	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.262	1	Yes	0.724	0.170	0.90	Yes	1.00	**4.14**
		$U_5 - U_6$			-----	-1459.44	-381	0	-2504	-662	-112	-299	28	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.243	1	Yes	0.749	0.208	0.96	Yes	1.00	**4.36**
		$U_6 - U_7$			-----	-1334.02	-260	-70	-1841	-1432	-89	-264	-16	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.226	1	Yes	0.760	0.164	0.93	Yes	1.00	**4.11**
		$U_7 - U_8$			-----	-1250.79	-178	-227	-2349	-802	-168	-208	-170	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.274	1	Yes	0.712	0.209	0.93	Yes	1.00	**3.50**
		$U_8 - U_9$			-----	-1144.92	-305	77	-1717	-551	-209	-183	-93	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.208	1	Yes	0.777	0.183	0.96	Yes	1.00	**3.88**
		$U_9 - U_{10}$			105.82	-894.52	-100	273	-1744	-400	-267	-126	-202	-163	0.078	0.241	0.32	Yes	0.053	0.163	0.22	Yes	0.776	0.218	1	Yes	0.772	0.212	0.99	Yes	1.00	**4.31**
		$U_{10} - U_{11}$			435.84	-751.27	69	332	-1749	-435	-132	-66	-163	-190	0.368	0.270	0.64	Yes	0.251	0.174	0.43	Yes	0.751	0.239	1	Yes	0.747	0.247	1.00	Yes	1.00	**5.76**
		$U_{11} - U_{12}$			773.57	-464.56	170	500	-2061	-24	-327	-155	-144	-455	0.653	0.346	1.00	Yes	0.439	0.231	0.68	Yes	0.464	0.229	0.7	Yes	0.462	0.291	0.76	Yes	1.00	**7.05**
		$U_{12} - U_{13}$			397.69	-406.72	644	-2263	-3249	-2266	-1145	323	-943	-596	0.269	0.518	0.79	Yes	0.191	0.352	0.55	Yes	0.325	0.665	1	Yes	0.323	0.409	0.74	Yes	1.00	**15.15**
		$U_{13} - U_{14}$			1150.12	-----	-72	1790	-3590	4284	-177	412	-530	-87	0.566	0.433	1.00	Yes	0.400	0.283	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.47**
		$U_{14} - U_{15}$			379.54	-----	8153	-6753	1142	-82	-16	735	-334	82	0.187	0.805	1.00	Yes	0.132	0.527	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.85**
		$U_{15} - U_{16}$			1023.23	-----	299	171	-2653	-1006	609	838	372	869	0.619	0.375	1.00	Yes	0.440	0.252	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.22**
		$U_{16} - U_{17}$			-----	-774.83	1877	-1290	-2286	-1912	726	245	922	365	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.319	1	Yes	0.672	0.287	0.96	Yes	1.00	**18.19**
		$U_{17} - U_{18}$			-----	-634.36	749	-562	-1434	-821	146	-194	161	234	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.234	0.99	Yes	0.749	0.243	1.00	Yes	1.00	**10.50**
		$U_{18} - U_{19}$			-----	-690.43	623	-636	-733	-1051	76	-216	202	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.134	0.96	Yes	0.815	0.178	1.00	Yes	1.00	**6.87**
		$U_{19} - U_{20}$			244.66	-661.70	286	150	-1076	-685	3	132	169	100	0.229	0.195	0.43	Yes	0.152	0.128	0.29	Yes	0.735	0.260	1	Yes	0.730	0.172	0.91	Yes	1.00	**5.12**
		$U_{20} - U_{21}$			-----	-822.28	188	-298	-1286	-623	114	-354	166	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.238	1	Yes	0.750	0.186	0.94	Yes	1.00	**5.34**
		$U_{21} - U_{22}$			51.91	-799.94	-13	16	-1331	-932	-16	-51	70	-14	0.040	0.200	0.25	Yes	0.029	0.133	0.17	Yes	0.735	0.258	1	Yes	0.730	0.193	0.93	Yes	1.00	**4.57**
		$U_{22} - U_{23}$			-----	-761.76	77	-922	-1603	-674	-4	-208	38	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.295	1	Yes	0.695	0.232	0.93	Yes	1.00	**3.96**
		$U_{23} - U_{24}$			-----	-775.39	114	-966	-1409	-487	-201	-314	-38	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.279	1	Yes	0.708	0.204	0.92	Yes	1.00	**4.09**
		$U_{24} - U_{25}$			175.65	-673.18	96	215	-1378	-527	-221	-37	-153	-127	0.165	0.250	0.42	Yes	0.109	0.165	0.28	Yes	0.747	0.250	1	Yes	0.743	0.221	0.97	Yes	1.00	**4.28**
		$U_{25} - U_{26}$			348.40	-617.63	144	362	-1561	-61	-253	30	-158	-71	0.350	0.302	0.66	Yes	0.229	0.192	0.43	Yes	0.734	0.202	0.94	Yes	0.729	0.265	1.00	Yes	1.00	**5.12**
		$U_{26} - U_{27}$			622.99	-572.09	226	414	-1881	-132	-171	32	-171	-163	0.625	0.344	0.97	Yes	0.416	0.229	0.65	Yes	0.680	0.211	0.9	Yes	0.676	0.319	1.00	Yes	1.00	**7.07**
		$U_{27} - U_{28}$			884.29	-331.95	220	554	-2335	-91	-283	-1	-343	-443	0.652	0.340	1.00	Yes	0.434	0.224	0.66	Yes	0.290	0.305	0.6	Yes	0.288	0.293	0.59	Yes	1.00	**8.50**
		$U_{28} - U_{29}$			283.20	-357.75	720	-3579	-4695	-2099	-914	-158	-1121	-665	0.171	0.629	0.80	Yes	0.122	0.421	0.55	Yes	0.256	0.740	1	Yes	0.254	0.534	0.79	Yes	1.00	**16.76**
		$U_{29} - U_{30}$			1082.02	-----	32	1858	-3799	4526	38	661	-265	107	0.532	0.464	1.00	Yes	0.377	0.304	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.06**
		$U_{30} - U_{31}$			947.31	-----	5170	-2726	1338	81	182	749	-444	-180	0.466	0.530	1.00	Yes	0.330	0.347	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.39**
		$U_{31} - U_{32}$			968.24	-----	150	471	-2138	-400	-72	182	376	756	0.654	0.341	1.00	Yes	0.466	0.232	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.66**
		$U_{32} - U_{33}$			-----	-792.22	1106	-1447	-1314	-1504	758	-54	686	331	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.186	0.98	Yes	0.787	0.212	1.00	Yes	1.00	**14.61**
		$U_{33} - U_{34}$			646.75	-808.60	431	230	-993	-1110	122	199	246	143	0.546	0.187	0.74	Yes	0.372	0.121	0.50	Yes	0.808	0.182	1	Yes	0.804	0.157	0.97	Yes	1.00	**7.45**
		$U_{34} - U_{35}$			288.21	-970.50	402	18	-901	-1157	102	-4	270	-18	0.211	0.170	0.39	Yes	0.143	0.115	0.26	Yes	0.842	0.148	1	Yes	0.837	0.141	0.98	Yes	1.00	**5.87**
		$U_{35} - U_{36}$			39.51	-1192.48	184	-227	-1253	-987	95	104	244	52	0.023	0.153	0.18	Yes	0.016	0.100	0.12	Yes	0.815	0.179	1	Yes	0.809	0.133	0.95	Yes	1.00	**5.34**
		$U_{36} - U_{37}$			-----	-1336.36	-121	-55	-1448	-1699	135	-79	300	60	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.233	1	Yes	0.761	0.151	0.92	Yes	1.00	**4.53**
		$U_{37} - U_{38}$			-----	-1246.38	58	-1273	-2230	-1029	4	-108	157	6	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.283	1	Yes	0.710	0.199	0.91	Yes	1.00	**3.74**
		$U_{38} - U_{39}$			-----	-1555.37	208	-2156	-2022	-1745	-8	-444	214	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1	Yes	0.799	0.179	0.98	Yes	1.00	**4.56**
		$U_{39} - U_{40}$			-----	-1363.00	-338	-471	-2499	-1373	-117	-144	-160	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.291	1	Yes	0.700	0.207	0.91	Yes	1.00	**3.72**
		$U_{40} - U_{41}$			-----	-1259.81	-408	-433	-2221	-1171	-89	-138	-161	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.275	1	Yes	0.717	0.198	0.92	Yes	1.00	**3.57**
		$U_{41} - U_{42}$			-----	-1088.93	-281	-174	-2014	-459	-99	26	-60	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.218	1	Yes	0.773	0.205	0.98	Yes	1.00	**3.83**
		$U_{42} - U_{43}$			-----	-776.78	-262	-285	-1513	-308	-18	-45	207	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1	Yes	0.750	0.230	0.98	Yes	1.00	**4.48**
		$U_{43} - U_{44}$			-----	-513.91	-41	-1031	-1797	-227	-161	-536	399	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.611	0.380	1	Yes	0.607	0.305	0.92	Yes	1.00	**7.35**
	Structure 3	$U_0 - U_1$			-----	-569.37	1289	-1340	-1741	-637	9	-308	842	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.267	0.92	Yes	0.641	0.350	1.00	Yes	1.00	**8.66**
		$U_1 - U_2$			-----	-721.11	50	-653	-362	-511	182	270	346	290	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1	Yes	0.811	0.131	0.95	Yes	1.00	**3.92**
		$U_2 - U_3$			-----	-1052.08	211	-813	-510	-675	604	-57	432	1	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.163	1	Yes	0.823	0.132	0.96	Yes	1.00	**4.41**
		$U_3 - U_4$			-----	-1350.83	-84	-415	-1245	-1039	197	-462	235	4	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.774	0.137	0.92	Yes	1.00	**5.16**
		$U_4 - U_5$			-----	-1357.34	-263	-233	-1454	-642	38	-552	218	-265	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.211	1	Yes	0.778	0.160	0.94	Yes	1.00	**4.15**
		$U_5 - U_6$			-----	-1321.10	-146	-220	-1349	-1116	-52	-210	-45	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1	Yes	0.757	0.149	0.91	Yes	1.00	**4.21**
		$U_6 - U_7$			-----	-1281.66	-197	-980	-1876	-537	-107	-390	-38	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.250	1	Yes	0.735	0.207	0.95	Yes	1.00	**3.74**
		$U_7 - U_8$			-----	-1125.15	-131	-52	-1297	-454	-203	-204	-162	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1	Yes	0.752	0.179	0.94	Yes	1.00	**3.75**
		$U_8 - U_9$			-----	-866.02	-114	146	-1037	-135	-183	-123	-118	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1	Yes	0.812	0.172	0.99	Yes	1.00	**3.54**
		$U_9 - U_{10}$			97.43	-598.93	-91	185	-1034	9	-256	-130	-131	-199	0.106	0.273	0.38	Yes	0.070	0.175	0.25	Yes	0.771	0.224	1	Yes	0.764	0.232	1.00	Yes	1.00	**3.92**
		$U_{10} - U_{11}$			623.50	-486.32	231	218	-1146	-242	-315	-54	-391	-164	0.676	0.319	1.00	Yes	0.458	0.214	0.68	Yes	0.626	0.265	0.9	Yes	0.621	0.257	0.88	Yes	1.00	**7.63**
		$U_{11} - U_{12}$			769.89	-----	-75	889	-1937	1811	-221	187	-352	8	0.631	0.368	1.00	Yes	0.432	0.251	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**
		$U_{12} - U_{13}$			436.51	-12.25	4277	-3989	638	-29	-60	456	-138	58	0.302	0.695	1.00	Yes	0.211	0.473	0.69	Yes	0.010	0.448	0.46	Yes	0.010	0.648	0.66	Yes	1.00	**13.32**
		$U_{13} - U_{14}$			253.55	-470.46	372	-31	-1454	-576	254	458	263	538	0.242	0.383	0.63	Yes	0.169	0.263	0.44	Yes	0.535	0.457	1	Yes	0.529	0.309	0.84	Yes	1.00	**11.22**
		$U_{14} - U_{15}$			-----	-577.05	604	-248	-450	-645	362	-191	464	100	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.206	1	Yes	0.778	0.153	0.94	Yes	1.00	**7.62**
		$U_{15} - U_{16}$			353.31	-582.53	285	149	-656	-548	-15	149	136	190	0.405	0.188	0.60	Yes	0.278	0.129	0.41	Yes	0.793	0.203	1	Yes	0.786	0.156	0.95	Yes	1.00	**5.44**
		$U_{16} - U_{17}$			-----	-594.40	404	-538	-801	-544	28	-118	155	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.097	0.91	Yes	0.802	0.191	1.00	Yes	1.00	**4.48**
		$U_{17} - U_{18}$			101.51	-564.32	227	-130	-744	-477	-67	135	-16	-50	0.116	0.200	0.32	Yes	0.078	0.130	0.21	Yes	0.768	0.225	1	Yes	0.761	0.177	0.94	Yes	1.00	**3.22**
		$U_{18} - U_{19}$			-----	-547.65	66	-184	-909	-289	27	179	183	10	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.254	1	Yes	0.739	0.216	0.96	Yes	1.00	**3.11**
		$U_{19} - U_{20}$			-----	-485.33	110	-313	-927	-334	-65	18	324	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.330	1	Yes	0.654	0.220	0.88	Yes	1.00	**4.34**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Lower Chord	Structure 1	L_0 - L_1	127.80	-33.22	966	-1511	-178	65	-444	-1630	23	84	0.196	0.803	1.00	Yes	0.115	0.482	0.60	Yes	0.060	0.548	0.61	Yes	0.060	0.453	0.52	Yes	1.00	**14.21**
		L_1 - L_2	458.36	-----	277	-731	-461	-633	12	-74	-347	33	0.701	0.294	1.00	Yes	0.428	0.195	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		L_2 - L_3	654.47	-56.77	-37	54	-851	-561	11	-6	9	-226	0.753	0.242	1.00	Yes	0.436	0.145	0.59	Yes	0.078	0.238	0.32	Yes	0.077	0.206	0.29	Yes	1.00	**4.11**
		L_3 - L_4	644.30	-----	86	-678	-943	-457	-137	22	-114	167	0.741	0.255	1.00	Yes	0.440	0.165	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		L_4 - L_5	228.19	-460.10	87	434	-1117	394	128	-124	-136	49	0.296	0.320	0.62	Yes	0.177	0.211	0.39	Yes	0.707	0.220	0.93	Yes	0.701	0.296	1.00	Yes	1.00	**4.58**
		L_5 - L_6	9.91	-715.77	133	549	-784	99	9	67	-49	115	0.010	0.189	0.20	Yes	0.006	0.114	0.13	Yes	0.835	0.158	1	Yes	0.826	0.173	1.00	Yes	1.00	**5.42**
		L_6 - L_7	-----	-1006.76	157	90	-1164	200	166	10	50	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.107	0.93	Yes	0.810	0.183	1.00	Yes	1.00	**6.57**
		L_7 - L_8	-----	-1077.09	95	1014	-1391	2363	-160	-76	207	113	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.278	0.97	Yes	0.682	0.313	1.00	Yes	1.00	**10.54**
		L_8 - L_9	-----	-1214.26	1735	-404	542	-20	-25	-58	62	7	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.208	0.99	Yes	0.769	0.230	1.00	Yes	1.00	**7.99**
		L_9 - L_{10}	-----	-861.04	1396	-1895	-1515	-693	46	-272	294	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.104	0.81	Yes	0.693	0.298	1.00	Yes	1.00	**18.18**
		L_{10} - L_{11}	386.00	-533.92	482	-19	-264	-692	73	10	-9	-3	0.500	0.196	0.70	Yes	0.291	0.119	0.41	Yes	0.821	0.112	0.94	Yes	0.813	0.183	1.00	Yes	1.00	**6.83**
		L_{11} - L_{12}	590.46	-----	435	-768	-122	-573	-108	-16	-61	148	0.765	0.229	1.00	Yes	0.459	0.151	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_{12} - L_{13}	1064.47	-----	98	-127	-601	-781	-151	-105	-48	19	0.840	0.156	1.00	Yes	0.537	0.093	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_{13} - L_{14}	1271.49	-----	659	-1591	-646	-899	-318	-39	-80	294	0.748	0.246	1.00	Yes	0.484	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		L_{14} - L_{15}	1495.41	-----	-347	-81	-2132	-377	-65	-50	-153	161	0.731	0.268	1.00	Yes	0.475	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		L_{15} - L_{16}	1581.54	-----	-192	-388	-1784	-1055	-76	13	-109	43	0.773	0.223	1.00	Yes	0.496	0.129	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		L_{16} - L_{17}	1182.78	-----	-399	39	-1555	55	-34	-64	-157	39	0.748	0.242	1.00	Yes	0.485	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{17} - L_{18}	900.33	-----	-175	-56	-1028	-58	-74	-13	-49	-49	0.784	0.208	1.00	Yes	0.502	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{18} - L_{19}	428.07	-----	-246	173	-1002	403	-4	-32	-171	105	0.655	0.336	1.00	Yes	0.443	0.209	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_{19} - L_{20}	79.14	-14.01	-101	22	-2075	939	-35	-8	1194	267	0.121	0.870	1.00	Yes	0.074	0.576	0.66	Yes	0.025	0.518	0.55	Yes	0.025	0.623	0.65	Yes	1.00	**15.59**
	Structure 2	L_0 - L_1	4.75	-110.45	1067	-3154	-164	83	-605	-2100	16	55	0.006	0.987	1.00	Yes	0.003	0.622	0.63	Yes	0.159	0.706	0.87	Yes	0.158	0.642	0.80	Yes	1.00	**21.57**
		L_1 - L_2	546.90	-----	735	-1451	-240	-1046	54	126	-207	124	0.664	0.329	1.00	Yes	0.395	0.212	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		L_2 - L_3	1017.42	-----	406	-1017	-578	-851	4	108	436	12	0.802	0.193	1.00	Yes	0.526	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		L_3 - L_4	1335.60	-----	371	-1585	-853	-1574	-56	81	-48	279	0.785	0.208	1.00	Yes	0.528	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_4 - L_5	1686.07	-----	53	-1709	-2013	-1282	-142	-114	229	171	0.786	0.206	1.00	Yes	0.520	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_5 - L_6	1806.70	-----	-3	-1840	-1933	-2227	-363	-122	-152	161	0.775	0.220	1.00	Yes	0.520	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		L_6 - L_7	1778.58	-----	-393	-104	-2556	-1625	52	-11	20	246	0.753	0.240	1.00	Yes	0.500	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_7 - L_8	1263.49	-----	-196	214	-2348	-225	-70	78	-179	125	0.724	0.274	1.00	Yes	0.476	0.160	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_8 - L_9	1076.56	-246.97	-127	491	-1685	313	43	-123	-96	134	0.753	0.240	1.00	Yes	0.507	0.149	0.66	Yes	0.205	0.130	0.34	Yes	0.203	0.227	0.44	Yes	1.00	**6.26**
		L_9 - L_{10}	798.98	-567.01	-86	589	-1677	-38	-37	33	-86	39	0.713	0.279	1.00	Yes	0.415	0.174	0.59	Yes	0.599	0.166	0.77	Yes	0.595	0.268	0.87	Yes	1.00	**7.46**
		L_{10} - L_{11}	176.74	-650.05	-5	551	-1321	509	118	-57	-63	-33	0.176	0.247	0.43	Yes	0.103	0.156	0.26	Yes	0.769	0.075	0.85	Yes	0.764	0.231	1.00	Yes	1.00	**5.74**
		L_{11} - L_{12}	-----	-972.18	-7	920	-1431	634	12	54	82	83	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.132	0.94	Yes	0.797	0.195	1.00	Yes	1.00	**6.96**
		L_{12} - L_{13}	-----	-1213.46	142	-255	-2096	-1203	92	42	-101	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.268	1	Yes	0.726	0.208	0.94	Yes	1.00	**8.65**
		L_{13} - L_{14}	-----	-1125.10	-234	1409	-3932	4896	-530	-501	85	34	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.289	0.87	Yes	0.566	0.428	1.00	Yes	1.00	**12.15**
		L_{14} - L_{15}	-----	-1212.54	4462	-2768	1214	-549	-269	-142	-275	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.616	0.251	0.87	Yes	0.610	0.390	1.00	Yes	1.00	**9.64**
		L_{15} - L_{16}	-----	-1218.56	-144	203	-2657	-662	186	176	-20	33	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.257	1	Yes	0.729	0.264	1.00	Yes	1.00	**9.31**
		L_{16} - L_{17}	139.85	-847.63	3024	-2765	-977	-1520	-574	-303	426	208	0.087	0.421	0.51	Yes	0.058	0.250	0.31	Yes	0.622	0.291	0.92	Yes	0.617	0.373	1.00	Yes	1.00	**19.98**
		L_{17} - L_{18}	589.14	-190.54	2061	-2637	-1407	-995	-337	-222	106	396	0.526	0.470	1.00	Yes	0.306	0.292	0.60	Yes	0.201	0.269	0.48	Yes	0.200	0.422	0.63	Yes	1.00	**18.23**
		L_{18} - L_{19}	671.97	-----	1011	-1034	-919	-1055	-183	-135	183	118	0.761	0.232	1.00	Yes	0.439	0.138	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.66**
		L_{19} - L_{20}	668.67	-----	689	-1024	-621	-825	-222	-23	-62	235	0.757	0.234	1.00	Yes	0.448	0.149	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
		L_{20} - L_{21}	965.33	-----	416	-1191	-1191	-1418	-197	-70	31	68	0.770	0.228	1.00	Yes	0.505	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		L_{21} - L_{22}	935.17	-----	245	-1416	-1297	-1520	-216	-10	37	231	0.746	0.247	1.00	Yes	0.499	0.155	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		L_{22} - L_{23}	837.21	-42.39	-89	46	-2214	-415	-2	-45	-73	68	0.668	0.331	1.00	Yes	0.447	0.206	0.66	Yes	0.040	0.270	0.32	Yes	0.040	0.323	0.37	Yes	1.00	**5.44**
		L_{23} - L_{24}	879.05	-323.06	-5	307	-1940	-368	-5	68	68	122	0.701	0.296	1.00	Yes	0.460	0.175	0.64	Yes	0.305	0.247	0.56	Yes	0.303	0.283	0.59	Yes	1.00	**6.83**
		L_{24} - L_{25}	602.71	-447.64	100	448	-1555	45	95	-90	-56	23	0.683	0.315	1.00	Yes	0.404	0.202	0.61	Yes	0.600	0.132	0.74	Yes	0.597	0.300	0.90	Yes	1.00	**6.52**
		L_{25} - L_{26}	219.87	-578.54	56	549	-1164	220	9	77	-18	88	0.249	0.238	0.49	Yes	0.144	0.142	0.29	Yes	0.776	0.154	0.94	Yes	0.771	0.225	1.00	Yes	1.00	**6.15**
		L_{26} - L_{27}	-----	-739.23	130	484	-1385	543	127	-22	-69	38	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.085	0.87	Yes	0.776	0.222	1.00	Yes	1.00	**6.25**
		L_{27} - L_{28}	-----	-1066.64	69	1019	-1785	709	78	144	-47	2	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.178	0.97	Yes	0.777	0.220	1.00	Yes	1.00	**8.68**
		L_{28} - L_{29}	-----	-1200.78	186	-493	-2123	-1459	202	171	-190	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.271	1	Yes	0.718	0.211	0.93	Yes	1.00	**9.19**
		L_{29} - L_{30}	-----	-1123.18	-203	1186	-3971	4930	-372	-462	144	184	-----	-----	-----	-----	-----	-----	-----	-----	0.570	0.280	0.86	Yes	0.565	0.430	1.00	Yes	1.00	**12.11**
		L_{30} - L_{31}	-----	-1206.77	4391	-2394	1137	-265	168	143	-358	-256	-----	-----	-----	-----	-----	-----	-----	-----	0.613	0.264	0.88	Yes	0.607	0.383	1.00	Yes	1.00	**9.97**
		L_{31} - L_{32}	-----	-1145.56	-70	-310	-2686	-753	88	-1	205	146	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.299	1	Yes	0.685	0.267	0.96	Yes	1.00	**10.30**
		L_{32} - L_{33}	317.49	-637.67	2873	-3443	-1414	-1609	-342	57	597	552	0.221	0.525	0.75	Yes	0.147	0.313	0.46	Yes	0.527	0.326	0.86	Yes	0.523	0.469	1.00	Yes	1.00	**25.68**
		L_{33} - L_{34}	524.39	-----	1324	-2415	-697	-682	-158	-11	169	379	0.524	0.473	1.00	Yes	0.307	0.298	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.40**
		L_{34} - L_{35}	807.94	-----	772	-1542	-660	-876	-111	-72	206	132	0.721	0.271	1.00	Yes	0.420	0.169	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.65**
		L_{35} - L_{36}	1130.34	-----	851	-1278	-725	-951	-332	-84	-79	306	0.791	0.204	1.00	Yes	0.533	0.128	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		L_{36} - L_{37}	1403.16	-----	409	-1301	-1139	-1580	-130	17	144	252	0.805	0.195	1.00	Yes	0.528	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{37} - L_{38}	1754.72	-----	121	-1496	-2636	-1750	-397	-208	-162	185	0.743	0.256	1.00	Yes	0.494	0.150	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		L_{38} - L_{39}	1725.45	-----	-370	-71	-2706	-889	-2	-56	-13	201	0.740	0.252	1.00	Yes	0.497	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		L_{39} - L_{40}	1645.50	-----	-250	-383	-2303	-1100	-63	2	-87	24	0.767	0.223	1.00	Yes	0.508	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_{40} - L_{41}	1275.59	-----	-420	25	-1960	-210	-8	-15	-148	101	0.749	0.241	1.00	Yes	0.505	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		L_{41} - L_{42}	982.76	-----	-187	-95	-1419	-57	11	63	143	110	0.775	0.220	1.00	Yes	0.508	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{42} - L_{43}	541.09	-----	-304	173	-1452	416	48	10	-83	251	0.657	0.337	1.00	Yes	0.391	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{43} - L_{44}	27.96	-4.31	-53	-65	-3488	802	-49	-14	1547	452	0.034	0.964	1.00	Yes	0.020	0.612	0.64	Yes	0.006	0.665	0.68	Yes	0.006	0.710	0.72	Yes	1.00	**20.93**
	Structure 3	L_0 - L_1	36.24	-160.59	1154	-2243	-49	-17	-287	-1303	0	0	0.055	0.943	1.00	Yes	0.034	0.624	0.66	Yes	0.292	0.580	0.88	Yes	0.289	0.673	0.97	Yes	1.00	**17.45**
		L_1 - L_2	430.65	-----	509	-895	43	-338	22	329	-230	222	0.659	0.337	1.00	Yes	0.446	0.212	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_2 - L_3	878.66	-----	339	-773	-362	-470	10	43	633	251	0.765	0.230	1.00	Yes	0.490	0.140	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.25**
		L_3 - L_4	1226.01	-----	491	-1303	-694	-1012	-98	68	-11	303	0.775	0.218	1.00	Yes	0.503	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.17**
		L_4 - L_5	1607.02	-----	-226	-264	-1606	-1170	-154	-125	138	236	0.785	0.210	1.00	Yes	0.504	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_5 - L_6	1547.96	-----	186	-1798	-1151	-1625	-249	118	-115	306	0.756	0.238	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_6 - L_7	1239.68	-----	-347	200	-1845	165	0	-29	-42	176	0.729	0.269	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		L_7 - L_8	1003.26	-----	-91	49	-1033	-331	-23	68	-32	154	0.792	0.201	1.00	Yes	0.506	0.120	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_8 - L_9	580.14	-89.49	-191	307	-851	182	52	-105	-46	33	0.751	0.244	1.00	Yes	0.451	0.161	0.62	Yes	0.138	0.123	0.27	Yes	0.136	0.225	0.37	Yes	1.00	**4.33**
		L_9 - L_{10}	249.92	-487.83	-41	450	-933	101	-24	24	125	146	0.324	0.273	0.60	Yes	0.188	0.165	0.36	Yes	0.750	0.148	0.9	Yes	0.743	0.247	1.00	Yes	1.00	**6.45**
		L_{10} - L_{11}	-----	-944.40	80	199	-1467	210	89	-124	85	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.122	0.9	Yes	0.760	0.231	1.00	Yes	1.00	**9.01**
		L_{11} - L_{12}	-----	-1197.47	78	1062	-1097	1802	58	104	132	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.206	0.98	Yes	0.758	0.239	1.00	Yes	1.00	**9.78**
		L_{12} - L_{13}	-----	-1099.01	2262	-943	552	-26	-186	-141	-123	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.274	0.98	Yes	0.696	0.300	1.00	Yes	1.00	**9.30**
		L_{13} - L_{14}	-----	-921.90	1116	-1137	-1588	-629	-42	-183	-76	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.131	0.89	Yes	0.742	0.249	1.00	Yes	1.00	**15.05**
		L_{14} - L_{15}	663.06	-373.80	1078	-796	-829	-1394	-275	-20	0	92	0.650	0.345	1.00	Yes	0.421	0.209	0.63	Yes	0.436	0.250	0.69	Yes	0.431	0.308	0.74	Yes	1.00	**13.30**
		L_{15} - L_{16}	506.91	-----	789	-1062	-312	-880	-197	20	-59	333	0.656	0.340	1.00	Yes	0.394	0.222	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		L_{16} - L_{17}	636.51	-174.33	278	13	-1009	-358	33	-78	-25	127	0.732	0.264	1.00	Yes	0.435	0.171	0.61	Yes	0.238	0.267	0.51	Yes	0.236	0.244	0.48	Yes	1.00	**5.28**
		L_{17} - L_{18}	642.41	-32.37	39	-72	-961	-559	12	103	86	172	0.739	0.260	1.00	Yes	0.428	0.156	0.59	Yes	0.044	0.286	0.34	Yes	0.044	0.232	0.28	Yes	1.00	**4.35**
		L_{18} - L_{19}	440.32	-----	-31	31	-926	24	50	-76	29	195	0.674	0.320	1.00	Yes	0.411	0.215	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		L_{19} - L_{20}	10.16	-0.17	53	-146	-2458	1055	-138	-38	1129	307	0.016	0.980	1.00	Yes	0.009	0.595	0.61	Yes	0.000	0.642	0.65	Yes	0.000	0.738	0.74	Yes	1.00	**17.30**

Moment (Start) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Verticals	Structure 1	U_0 - L_0			-----	-299.10	-21	44	-172	194	-95	-31	-893	-287	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.330	1	Yes	0.633	0.247	0.89	Yes	1.00	**1.92**
		U_1 - L_1			24.54	-311.29	23	-18	-261	245	44	18	156	119	0.044	0.379	0.43	Yes	0.024	0.208	0.24	Yes	0.680	0.132	0.82	Yes	0.659	0.334	1.00	Yes	1.00	**4.41**
		U_2 - L_2			-----	-280.84	108	-84	-278	314	-233	-66	-36	70	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.169	0.79	Yes	0.594	0.402	1.00	Yes	1.00	**5.95**
		U_3 - L_3			213.90	-273.09	323	-302	-307	326	145	125	209	288	0.385	0.500	0.89	Yes	0.212	0.275	0.49	Yes	0.598	0.151	0.75	Yes	0.578	0.416	1.00	Yes	1.00	**8.24**
		U_4 - L_4			14.03	-247.35	372	-350	-117	93	-101	-87	-50	24	0.025	0.505	0.53	Yes	0.014	0.278	0.30	Yes	0.544	0.139	0.69	Yes	0.523	0.475	1.00	Yes	1.00	**7.91**
		U_5 - L_5			-----	-428.06	229	-251	20	-39	-123	-95	-107	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.103	0.88	Yes	0.738	0.255	1.00	Yes	1.00	**3.62**
		U_6 - L_6			-----	-519.30	268	-288	46	-59	77	67	-158	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.101	0.89	Yes	0.745	0.252	1.00	Yes	1.00	**3.70**
		U_7 - L_7			-----	-444.84	297	-318	118	-131	-120	58	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.122	0.87	Yes	0.686	0.314	1.00	Yes	1.00	**2.52**
		U_8 - L_8			-----	-1291.06	445	-527	-421	500	-261	-93	-188	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.054	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.52**
		U_9 - L_9			-----	-662.72	-165	189	-395	446	-223	-158	-245	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.128	0.92	Yes	0.749	0.248	1.00	Yes	1.00	**3.25**
		U_{10} - L_{10}			-----	-790.70	-94	139	-405	413	-189	-144	-215	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.099	0.92	Yes	0.780	0.214	1.00	Yes	1.00	**5.66**
		U_{11} - L_{11}			-----	-664.49	-64	178	-388	482	-182	-28	-101	24	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.098	0.9	Yes	0.773	0.224	1.00	Yes	1.00	**4.91**
		U_{12} - L_{12}			-----	-516.20	-38	57	-336	333	-172	17	26	144	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.103	0.85	Yes	0.708	0.287	1.00	Yes	1.00	**4.43**
		U_{13} - L_{13}			-----	-362.79	3	16	-249	267	-95	80	-56	119	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.107	0.85	Yes	0.695	0.305	1.00	Yes	1.00	**3.69**
		U_{14} - L_{14}			2.11	-238.09	171	-162	-367	386	-127	-46	-10	82	0.004	0.530	0.54	Yes	0.002	0.292	0.30	Yes	0.531	0.168	0.7	Yes	0.504	0.493	1.00	Yes	1.00	**8.31**
		U_{15} - L_{15}			222.90	-315.31	239	-253	-172	169	45	-155	-115	-131	0.401	0.368	0.77	Yes	0.220	0.202	0.43	Yes	0.707	0.155	0.87	Yes	0.667	0.323	1.00	Yes	1.00	**5.29**
		U_{16} - L_{16}			96.86	-321.05	238	-245	-53	35	-20	-152	-81	-117	0.174	0.357	0.54	Yes	0.096	0.196	0.30	Yes	0.723	0.141	0.87	Yes	0.679	0.313	1.00	Yes	1.00	**4.31**
		U_{17} - L_{17}			-----	-441.61	212	-230	32	-58	-128	-124	-69	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.119	0.95	Yes	0.762	0.233	1.00	Yes	1.00	**3.37**
		U_{18} - L_{18}			-----	-536.29	432	-443	124	-129	150	-47	-162	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.093	0.88	Yes	0.746	0.251	1.00	Yes	1.00	**3.70**
		U_{19} - L_{19}			-----	-649.42	497	-510	135	-186	235	-33	80	296	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.101	0.92	Yes	0.756	0.237	1.00	Yes	1.00	**4.19**
		U_{20} - L_{20}			-----	-585.92	401	-481	156	-222	709	93	183	24	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.221	1	Yes	0.682	0.223	0.91	Yes	1.00	**2.84**
	Structure 2	U_0 - L_0			-----	-605.39	-112	177	-438	523	-264	-45	-1202	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.269	1	Yes	0.649	0.222	0.88	Yes	1.00	**3.48**
		U_1 - L_1			-----	-707.38	-110	118	-553	550	42	-65	78	18	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.074	0.89	Yes	0.758	0.234	1.00	Yes	1.00	**5.18**
		U_2 - L_2			-----	-578.10	-85	94	-500	495	92	42	-92	57	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.082	0.86	Yes	0.737	0.256	1.00	Yes	1.00	**4.59**
		U_3 - L_3			-----	-489.58	-46	53	-242	251	14	125	-40	113	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.094	0.93	Yes	0.768	0.228	1.00	Yes	1.00	**3.95**
		U_4 - L_4			50.52	-338.57	19	-3	-218	217	-104	60	8	148	0.091	0.322	0.42	Yes	0.050	0.177	0.23	Yes	0.768	0.103	0.88	Yes	0.716	0.279	1.00	Yes	1.00	**3.98**
		U_5 - L_5			143.53	-320.18	131	-114	-234	249	-129	76	-112	125	0.258	0.356	0.62	Yes	0.142	0.196	0.34	Yes	0.723	0.120	0.85	Yes	0.677	0.319	1.00	Yes	1.00	**5.51**
		U_6 - L_6			365.58	-215.20	217	-227	-232	232	-135	84	-32	136	0.658	0.336	1.00	Yes	0.362	0.185	0.55	Yes	0.484	0.094	0.58	Yes	0.455	0.297	0.76	Yes	1.00	**6.37**
		U_7 - L_7			9.52	-239.06	350	-386	-148	156	-114	-73	-124	2	0.017	0.529	0.55	Yes	0.009	0.291	0.31	Yes	0.540	0.177	0.72	Yes	0.506	0.493	1.00	Yes	1.00	**10.36**
		U_8 - L_8			-----	-464.88	366	-372	16	-35	-177	-167	-134	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.121	0.8	Yes	0.670	0.325	1.00	Yes	1.00	**4.18**
		U_9 - L_9			-----	-695.19	566	-585	89	-137	-185	-176	-84	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.087	0.87	Yes	0.745	0.248	1.00	Yes	1.00	**5.08**
		U_{10} - L_{10}			-----	-799.12	539	-563	104	-139	41	-46	-66	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.080	0.87	Yes	0.747	0.249	1.00	Yes	1.00	**5.40**
		U_{11} - L_{11}			-----	-821.56	508	-518	157	-189	3	-2	-36	27	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.068	0.9	Yes	0.768	0.228	1.00	Yes	1.00	**5.00**
		U_{12} - L_{12}			-----	-885.18	520	-530	147	-160	27	67	21	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.075	0.93	Yes	0.767	0.227	1.00	Yes	1.00	**4.90**
		U_{13} - L_{13}			-----	-744.91	572	-560	244	-243	70	78	-83	44	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.110	0.95	Yes	0.718	0.274	1.00	Yes	1.00	**3.67**
		U_{14} - L_{14}			-----	-1301.33	661	-632	-612	568	-61	11	-106	137	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.044	1	Yes	0.863	0.117	0.98	Yes	1.00	**6.57**
		U_{15} - L_{15}			-----	-717.87	-165	167	-635	615	-81	-45	-145	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.142	0.95	Yes	0.692	0.304	1.00	Yes	1.00	**4.85**
		U_{16} - L_{16}			-----	-714.01	-114	103	-543	524	-156	-91	-163	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.097	0.93	Yes	0.765	0.230	1.00	Yes	1.00	**4.92**
		U_{17} - L_{17}			-----	-635.20	-129	126	-556	545	-99	-34	-129	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.087	0.88	Yes	0.739	0.258	1.00	Yes	1.00	**4.79**
		U_{18} - L_{18}			-----	-579.22	-90	107	-497	509	-179	-50	-117	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.092	0.87	Yes	0.738	0.261	1.00	Yes	1.00	**4.44**
		U_{19} - L_{19}			-----	-477.36	-32	40	-296	288	-160	-11	-41	52	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.094	0.82	Yes	0.713	0.285	1.00	Yes	1.00	**4.05**
		U_{20} - L_{20}			27.37	-372.60	10	-4	-243	245	-157	16	-122	39	0.045	0.321	0.37	Yes	0.025	0.176	0.21	Yes	0.764	0.111	0.88	Yes	0.714	0.280	1.00	Yes	1.00	**4.17**
		U_{21} - L_{21}			75.54	-319.26	53	-47	-239	248	-142	26	-123	55	0.136	0.358	0.50	Yes	0.075	0.197	0.28	Yes	0.721	0.122	0.85	Yes	0.676	0.317	1.00	Yes	1.00	**4.32**
		U_{22} - L_{22}			70.59	-224.38	330	-343	-384	405	-175	-72	-61	15	0.127	0.568	0.70	Yes	0.070	0.312	0.39	Yes	0.505	0.184	0.69	Yes	0.475	0.517	1.00	Yes	1.00	**12.81**
		U_{23} - L_{23}			148.83	-322.24	238	-247	-103	96	-108	-109	-96	-45	0.268	0.347	0.62	Yes	0.147	0.191	0.34	Yes	0.728	0.125	0.86	Yes	0.682	0.315	1.00	Yes	1.00	**4.77**
		U_{24} - L_{24}			35.02	-378.79	226	-235	-33	19	-103	-89	-48	-25	0.057	0.295	0.36	Yes	0.031	0.162	0.20	Yes	0.777	0.105	0.89	Yes	0.726	0.268	1.00	Yes	1.00	**4.06**
		U_{25} - L_{25}			-----	-476.45	299	-297	22	-35	10	-30	-82	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.081	0.8	Yes	0.711	0.288	1.00	Yes	1.00	**3.96**
		U_{26} - L_{26}			-----	-570.50	503	-530	73	-113	-25	-8	-71	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.080	0.85	Yes	0.727	0.271	1.00	Yes	1.00	**4.45**
		U_{27} - L_{27}			-----	-635.01	544	-552	141	-157	-106	5	-64	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.077	0.87	Yes	0.739	0.256	1.00	Yes	1.00	**4.23**
		U_{28} - L_{28}			-----	-711.16	552	-552	127	-140	129	88	-35	70	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.073	0.9	Yes	0.762	0.234	1.00	Yes	1.00	**4.33**
		U_{29} - L_{29}			-----	-716.20	639	-627	206	-211	-68	49	-115	26	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.121	0.92	Yes	0.690	0.306	1.00	Yes	1.00	**4.55**
		U_{30} - L_{30}			-----	-1290.06	579	-571	-573	511	-122	-104	-148	71	-----	-----	-----	-----	-----	-----	-----	-----	0.943	0.051	1	Yes	0.855	0.103	0.96	Yes	1.00	**6.08**
		U_{31} - L_{31}			-----	-759.20	-183	179	-548	536	-120	-60	-174	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.138	0.99	Yes	0.732	0.262	1.00	Yes	1.00	**4.26**
		U_{32} - L_{32}			-----	-888.87	-118	109	-531	515	-243	-118	-265	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.128	0.99	Yes	0.770	0.228	1.00	Yes	1.00	**5.81**
		U_{33} - L_{33}			-----	-826.83	-143	146	-498	497	-166	-42	-121	2	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.086	0.92	Yes	0.773	0.220	1.00	Yes	1.00	**5.34**
		U_{34} - L_{34}			-----	-799.97	-91	113	-571	571	-214	-26	-85	81	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.091	0.89	Yes	0.748	0.252	1.00	Yes	1.00	**6.53**
		U_{35} - L_{35}			-----	-693.68	-84	109	-588	587	-188	57	-101	115	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.074	0.85	Yes	0.743	0.249	1.00	Yes	1.00	**5.70**
		U_{36} - L_{36}			-----	-471.13	-35	52	-360	365	-142	70	-76	108	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.095	0.78	Yes	0.679	0.320	1.00	Yes	1.00	**4.14**
		U_{37} - L_{37}			-----	-219.76	109	-109	-368	412	-138	-21	-92	51	-----	-----	-----	-----	-----	-----	-----	-----	0.496	0.189	0.69	Yes	0.465	0.527	1.00	Yes	1.00	**9.80**
		U_{38} - L_{38}			356.51	-142.33	139	-134	-232	240	-132	-157	-100	-104	0.641	0.352	1.00	Yes	0.353	0.194	0.55	Yes	0.320	0.127	0.45	Yes	0.301	0.307	0.61	Yes	1.00	**4.97**
		U_{39} - L_{39}			209.93	-331.82	210	-231	-183	163	-106	-150	-79	-55	0.378	0.339	0.72	Yes	0.208	0.186	0.40	Yes	0.750	0.155	0.91	Yes	0.702	0.295	1.00	Yes	1.00	**5.46**
		U_{40} - L_{40}			96.71	-339.47	216	-218	-51	30	-8	-87	-92	-74	0.174	0.305	0.48	Yes	0.096	0.168	0.27	Yes	0.770	0.113	0.89	Yes	0.718	0.278	1.00	Yes	1.00	**4.18**
		U_{41} - L_{41}			-----	-483.86	240	-254	34	-57	-78	-70	-30	8	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.094	0.92	Yes	0.759	0.231	1.00	Yes	1.00	**4.05**
		U_{42} - L_{42}			-----	-585.99	482	-491	107	-117	51	-61	-85	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.079	0.87	Yes	0.747	0.251	1.00	Yes	1.00	**4.25**
		U_{43} - L_{43}			-----	-710.32	537	-557	141	-158	511	44	-36	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.136	0.95	Yes	0.761	0.236	1.00	Yes	1.00	**4.35**
		U_{44} - L_{44}			-----	-632.61	467	-554	195	-242	992	168	-25	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.239	1	Yes	0.678	0.235	0.92	Yes	1.00	**3.21**
	Structure 3	U_0 - L_0			-----	-558.98	-106	171	-339	419	-250	-33	-974	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.259	1	Yes	0.651	0.194	0.85	Yes	1.00	**2.57**
		U_1 - L_1			-----	-658.51	-112	119	-491	497	1	-77	-165	10	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.091	0.92	Yes	0.766	0.231	1.00	Yes	1.00	**4.52**
		U_2 - L_2			-----	-530.15	-89	95	-451	450	82	32	-72	61	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.079	0.86	Yes	0.737	0.255	1.00	Yes	1.00	**4.62**
		U_3 - L_3			-----	-438.26	-30	48	-223	234	-102	67	-45	139	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.105	0.93	Yes	0.756	0.237	1.00	Yes	1.00	**3.86**
		U_4 - L_4			73.97	-319.45	34	-23	-250	252	-174	78	-56	187	0.133	0.376	0.51	Yes	0.073	0.207	0.29	Yes	0.720	0.109	0.83	Yes	0.676	0.322	1.00	Yes	1.00	**4.48**
		U_5 - L_5			198.06	-314.94	131	-129	-246	261	-157	66	-30	148	0.356	0.379	0.74	Yes	0.196	0.208	0.41	Yes	0.706	0.129	0.84	Yes	0.666	0.333	1.00	Yes	1.00	**5.23**
		U_6 - L_6			100.79	-84.50	529	-572	-419	431	-281	-102	-109	111	0.181	0.812	1.00	Yes	0.100	0.447	0.55	Yes	0.189	0.252	0.45	Yes	0.179	0.731	0.91	Yes	1.00	**14.73**
		U_7 - L_7			-----	-368.51	238	-256	-26	10	-197	-176	-155	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.149	0.9	Yes	0.706	0.292	1.00	Yes	1.00	**3.57**
		U_8 - L_8			-----	-515.03	335	-337	16	-19	-59	-123	-155	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.112	0.86	Yes	0.707	0.288	1.00	Yes	1.00	**4.47**
		U_9 - L_9			-----	-659.66	381	-488	49	-121	-174	-117	-111	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.102	0.9	Yes	0.768	0.226	1.00	Yes	1.00	**4.90**
		U_{10} - L_{10}			-----	-788.35	388	-425	85	-99	-54	39	-20	4	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.070	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.18**
		U_{11} - L_{11}			-----	-644.85	419	-473	182	-211	67	119	-50	62	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.100	0.87	Yes	0.728	0.263	1.00	Yes	1.00	**3.13**
		U_{12} - L_{12}			-----	-1290.13	427	-561	-483	523	33	31	-47	41	-----	-----	-----	-----	-----	-----	-----	-----	0.931	0.042	0.98	Yes	0.894	0.104	1.00	Yes	1.00	**5.72**
		U_{13} - L_{13}			-----	-450.10	-105	116	-287	303	-141	-95	-148	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.138	0.9	Yes	0.694	0.298	1.00	Yes	1.00	**2.75**
		U_{14} - L_{14}			-----	-526.17	-47	80	-266	276	-154	-106	-148	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.104	0.91	Yes	0.755	0.241	1.00	Yes	1.00	**4.14**
		U_{15} - L_{15}			-----	-425.15	-25	32	-242	254	-171	-59	-150	5	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.112	0.89	Yes	0.733	0.258	1.00	Yes	1.00	**4.25**
		U_{16} - L_{16}			-----	-216.85	98	-66	-419	404	-276	-166	-55	87	-----	-----	-----	-----	-----	-----	-----	-----	0.477	0.201	0.68	Yes	0.459	0.535	1.00	Yes	1.00	**8.10**
		U_{17} - L_{17}			265.19	-253.58	230	-252	-357	354	-70	-178	-38	-13	0.477	0.508	0.99	Yes	0.262	0.279	0.55	Yes	0.556	0.156	0.72	Yes	0.537	0.456	1.00	Yes	1.00	**7.25**
		U_{18} - L_{18}			98.21	-294.21	253	-293	-130	132	-77	-117	-31	-20	0.177	0.408	0.59	Yes	0.097	0.224	0.33	Yes	0.643	0.143	0.79	Yes	0.623	0.374	1.00	Yes	1.00	**5.76**
		U_{19} - L_{19}			14.10	-324.85	240	-239	-29	17	-67	-97	-166	-87	0.025	0.355	0.39	Yes	0.014	0.195	0.21	Yes	0.710	0.131	0.85	Yes	0.687	0.307	1.00	Yes	1.00	**3.97**
		U_{20} - L_{20}			-----	-331.10	174	-227	46	-73	216	69	-105	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.162	0.91	Yes	0.701	0.290	1.00	Yes	1.00	**1.96**

Moment (Start) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	461.35	-22.95	6	-8	-201	82	-47	-16	-602	-209	0.605	0.387	1.00	Yes	0.365	0.213	0.58	Yes	0.039	0.263	0.31	Yes	0.035	0.235	0.28	Yes	1.00	**4.85**
		$U_1 - L_2$	355.47	-116.41	20	-15	-150	-15	37	29	-569	-301	0.639	0.357	1.00	Yes	0.352	0.196	0.55	Yes	0.267	0.346	0.62	Yes	0.246	0.192	0.44	Yes	1.00	**7.11**
		$U_2 - L_3$	421.75	-173.06	32	-19	-110	-35	43	16	-277	-325	0.759	0.234	1.00	Yes	0.417	0.129	0.55	Yes	0.398	0.271	0.67	Yes	0.366	0.140	0.51	Yes	1.00	**6.99**
		$U_3 - L_4$	18.16	-346.91	42	-57	-75	-75	-216	-123	-342	-294	0.033	0.195	0.23	Yes	0.018	0.108	0.13	Yes	0.793	0.203	1	Yes	0.734	0.097	0.84	Yes	1.00	**6.05**
		$U_4 - L_4$	563.30	-----	0	3	-128	3	125	40	-93	-169	0.826	0.169	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_4 - L_5$	667.23	-----	3	51	-242	162	359	171	6	-106	0.789	0.203	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		$U_5 - L_6$	619.90	-----	-72	99	-343	213	328	206	348	159	0.733	0.259	1.00	Yes	0.403	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_6 - L_7$	650.88	-----	29	169	-112	303	266	224	291	174	0.770	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_8 - L_9$	1003.87	-----	83	214	-122	346	314	253	236	185	0.803	0.194	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_9 - L_{10}$	1001.79	-----	-71	107	-386	212	94	114	209	145	0.801	0.199	1.00	Yes	0.496	0.111	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		$U_{10} - L_{11}$	1010.18	-----	-49	113	-269	149	5	-4	-82	-141	0.853	0.143	1.00	Yes	0.528	0.080	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{11} - L_{12}$	826.93	-----	-64	59	-284	63	-132	-99	-286	-293	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{12} - L_{13}$	616.09	-----	-47	10	-202	112	-308	-249	-359	-265	0.751	0.247	1.00	Yes	0.473	0.140	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{13} - L_{14}$	437.57	-----	-5	-20	-93	28	-260	-274	-284	-311	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{15} - L_{14}$	123.25	-332.63	57	-101	-76	-30	-226	-299	-290	-336	0.222	0.227	0.45	Yes	0.122	0.125	0.25	Yes	0.779	0.218	1	Yes	0.704	0.129	0.84	Yes	1.00	**4.33**
		$U_{16} - L_{15}$	401.48	-216.24	39	-76	-146	78	-186	-185	-287	-305	0.722	0.275	1.00	Yes	0.397	0.151	0.55	Yes	0.513	0.223	0.74	Yes	0.458	0.187	0.65	Yes	1.00	**5.73**
		$U_{17} - L_{16}$	527.19	-----	-7	-31	-173	84	-147	-137	-180	-214	0.773	0.225	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{18} - L_{17}$	618.13	-----	-97	59	-372	230	6	-44	-287	-209	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{19} - L_{18}$	703.51	-----	-92	65	-376	252	-153	-15	-275	-193	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{20} - L_{19}$	626.39	-----	-116	114	-408	317	-59	175	-645	-181	0.678	0.315	1.00	Yes	0.373	0.173	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
	Structure 2	$U_0 - L_1$	679.10	-----	-68	78	-422	353	-122	52	-832	-270	0.672	0.320	1.00	Yes	0.370	0.176	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_1 - L_2$	791.83	-----	-89	60	-405	304	40	10	-60	-158	0.783	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_2 - L_3$	643.93	-----	-69	52	-333	244	-78	-177	-220	-229	0.761	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_3 - L_4$	560.21	-----	-32	15	-191	113	-237	-215	-329	-275	0.747	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_4 - L_5$	418.09	-126.61	15	-44	-125	84	-275	-202	-301	-260	0.752	0.247	1.00	Yes	0.414	0.136	0.55	Yes	0.313	0.186	0.5	Yes	0.268	0.160	0.43	Yes	1.00	**4.21**
		$U_5 - L_6$	403.60	-297.47	72	-103	-113	57	-349	-233	-432	-247	0.726	0.269	1.00	Yes	0.399	0.148	0.55	Yes	0.702	0.259	0.97	Yes	0.629	0.144	0.78	Yes	1.00	**5.39**
		$U_6 - L_7$	17.37	-371.69	55	-94	-50	-23	-286	-252	-314	-255	0.028	0.189	0.22	Yes	0.016	0.104	0.12	Yes	0.796	0.195	1	Yes	0.712	0.107	0.82	Yes	1.00	**3.20**
		$U_8 - L_7$	553.65	-118.53	20	-67	-259	79	-181	-278	-188	-299	0.706	0.293	1.00	Yes	0.444	0.164	0.61	Yes	0.197	0.158	0.36	Yes	0.178	0.232	0.41	Yes	1.00	**7.10**
		$U_9 - L_8$	704.38	-----	-70	-13	-381	206	-167	-170	-175	-209	0.763	0.229	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		$U_{10} - L_9$	802.13	-----	-78	33	-365	208	-20	-60	-106	-199	0.794	0.199	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_{11} - L_{10}$	895.38	-----	-105	77	-389	283	87	32	16	-72	0.816	0.177	1.00	Yes	0.449	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{12} - L_{11}$	849.55	-----	-99	128	-400	325	354	204	133	57	0.774	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{13} - L_{12}$	742.12	-----	-179	174	-470	378	271	153	220	99	0.734	0.259	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{14} - L_{13}$	757.94	-----	-7	223	-274	433	277	185	289	136	0.750	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{14} - L_{15}$	641.90	-----	23	157	-224	360	175	118	151	81	0.759	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{15} - L_{16}$	630.52	-----	-99	104	-397	334	50	67	114	83	0.745	0.245	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{16} - L_{17}$	748.78	-----	-75	99	-350	348	11	6	13	-6	0.811	0.181	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{17} - L_{18}$	679.75	-----	-66	83	-313	274	-56	-31	-80	-72	0.804	0.192	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{18} - L_{19}$	665.80	-----	-42	50	-310	235	-110	-82	-163	-153	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{19} - L_{20}$	608.18	-----	-11	5	-196	163	-196	-123	-212	-179	0.775	0.219	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{20} - L_{21}$	433.04	-17.55	4	-11	-121	92	-182	-131	-212	-169	0.779	0.216	1.00	Yes	0.428	0.119	0.55	Yes	0.042	0.109	0.16	Yes	0.037	0.155	0.20	Yes	1.00	**3.94**
		$U_{21} - L_{22}$	402.26	-243.39	41	-70	-140	30	-279	-241	-305	-252	0.723	0.267	1.00	Yes	0.398	0.147	0.55	Yes	0.575	0.233	0.81	Yes	0.515	0.179	0.70	Yes	1.00	**6.09**
		$U_{23} - L_{22}$	228.61	-330.76	71	-96	-131	3	-102	-208	-142	-206	0.411	0.228	0.64	Yes	0.226	0.125	0.36	Yes	0.788	0.207	1	Yes	0.700	0.167	0.87	Yes	1.00	**6.43**
		$U_{24} - L_{23}$	445.46	-109.75	26	-41	-121	105	-79	-83	-60	-119	0.801	0.189	1.00	Yes	0.441	0.104	0.55	Yes	0.263	0.060	0.33	Yes	0.232	0.155	0.39	Yes	1.00	**4.64**
		$U_{25} - L_{24}$	602.62	-18.22	13	-27	-226	163	-8	-52	-17	-106	0.768	0.224	1.00	Yes	0.423	0.125	0.55	Yes	0.030	0.069	0.1	Yes	0.027	0.202	0.23	Yes	1.00	**5.71**
		$U_{26} - L_{25}$	675.35	-----	-19	11	-325	257	53	16	32	-63	0.798	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		$U_{27} - L_{26}$	649.77	-----	-54	71	-344	271	204	102	122	22	0.768	0.231	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{28} - L_{27}$	688.27	-----	-67	105	-371	336	339	160	119	38	0.745	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{29} - L_{28}$	623.74	-----	-125	119	-386	337	217	110	215	99	0.737	0.258	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{30} - L_{29}$	634.42	-----	11	164	-220	364	188	146	208	91	0.750	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{30} - L_{31}$	767.55	-----	22	198	-296	445	189	131	114	59	0.759	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{31} - L_{32}$	755.78	-----	-124	128	-508	398	37	48	50	33	0.748	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_{32} - L_{33}$	892.53	-----	-89	133	-376	327	-24	-1	-134	-106	0.813	0.178	1.00	Yes	0.447	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{33} - L_{34}$	875.06	-----	-84	128	-376	250	-75	-38	-265	-222	0.797	0.196	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		$U_{34} - L_{35}$	805.38	-----	-79	48	-329	204	-258	-213	-284	-233	0.797	0.195	1.00	Yes	0.438	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{35} - L_{36}$	705.75	-----	-83	33	-325	216	-339	-248	-376	-294	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{36} - L_{37}$	578.91	-----	-19	-13	-214	106	-331	-313	-322	-341	0.738	0.261	1.00	Yes	0.465	0.147	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{38} - L_{37}$	-----	-390.16	79	-103	-40	-38	-129	-219	-157	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.148	1	Yes	0.747	0.117	0.87	Yes	1.00	**3.47**
		$U_{39} - L_{38}$	322.76	-342.99	100	-125	-94	50	-169	-187	-194	-233	0.580	0.227	0.81	Yes	0.319	0.125	0.45	Yes	0.817	0.179	1	Yes	0.726	0.160	0.89	Yes	1.00	**5.34**
		$U_{40} - L_{39}$	432.22	-150.92	39	-61	-127	93	-74	-102	-124	-184	0.777	0.215	1.00	Yes	0.428	0.118	0.55	Yes	0.361	0.134	0.5	Yes	0.319	0.162	0.49	Yes	1.00	**4.90**
		$U_{41} - L_{40}$	582.28	-----	-16	-23	-201	126	-81	-61	-145	-160	0.776	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{42} - L_{41}$	636.34	-----	-70	47	-377	248	-3	-3	-161	-92	0.752	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		$U_{43} - L_{42}$	747.80	-----	-95	65	-419	277	-5	-29	-434	-212	0.740	0.260	1.00	Yes	0.407	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_{44} - L_{43}$	685.17	-----	-138	121	-441	371	35	5	-783	-124	0.678	0.322	1.00	Yes	0.373	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
	Structure 3	$U_0 - L_1$	487.96	-----	-65	69	-487	326	-132	51	-1302	-139	0.529	0.463	1.00	Yes	0.291	0.255	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_1 - L_2$	703.53	-----	-90	56	-387	245	38	14	-238	-186	0.762	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_2 - L_3$	646.36	-----	-80	50	-325	235	-73	-167	-234	-260	0.764	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_3 - L_4$	525.73	-----	-20	-12	-150	87	-257	-218	-325	-293	0.771	0.227	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_4 - L_5$	399.27	-187.86	13	-52	-126	73	-343	-236	-395	-250	0.718	0.276	1.00	Yes	0.395	0.152	0.55	Yes	0.445	0.226	0.68	Yes	0.398	0.161	0.56	Yes	1.00	**4.41**
		$U_5 - L_6$	274.68	-308.62	60	-101	-108	-22	-378	-330	-430	-328	0.494	0.263	0.76	Yes	0.272	0.145	0.42	Yes	0.723	0.276	1	Yes	0.653	0.138	0.80	Yes	1.00	**5.74**
		$U_7 - L_6$	421.80	-127.48	19	-52	-116	16	-151	-283	-143	-291	0.759	0.233	1.00	Yes	0.417	0.128	0.55	Yes	0.296	0.166	0.47	Yes	0.270	0.149	0.42	Yes	1.00	**5.05**
		$U_8 - L_7$	611.98	-----	-23	-19	-218	105	-137	-164	-230	-294	0.746	0.248	1.00	Yes	0.469	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_8 - L_9$	802.16	-----	-53	64	-342	29	274	152	-73	-199	0.794	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		$U_{10} - L_9$	954.64	-----	-40	47	-305	129	363	198	86	-34	0.806	0.189	1.00	Yes	0.499	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		$U_{11} - L_{10}$	981.28	-----	-90	112	-371	217	324	216	321	168	0.784	0.207	1.00	Yes	0.486	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{12} - L_{11}$	987.75	-----	98	208	-119	362	373	315	347	225	0.790	0.209	1.00	Yes	0.489	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{12} - L_{13}$	670.86	-----	32	164	-116	287	201	168	185	113	0.793	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{13} - L_{14}$	655.39	-----	-58	94	-330	223	124	156	146	101	0.775	0.217	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{14} - L_{15}$	688.28	-----	-12	61	-265	165	69	43	-133	-156	0.814	0.179	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		$U_{15} - L_{16}$	471.52	-13.83	2	-15	-208	-19	-116	-85	-392	-330	0.691	0.302	1.00	Yes	0.380	0.166	0.55	Yes	0.026	0.180	0.21	Yes	0.024	0.211	0.24	Yes	1.00	**8.95**
		$U_{17} - L_{16}$	20.96	-393.64	56	-63	-62	-61	-50	-106	-200	-255	0.038	0.155	0.20	Yes	0.021	0.085	0.11	Yes	0.900	0.093	1	Yes	0.833	0.081	0.92	Yes	1.00	**5.39**
		$U_{18} - L_{17}$	377.17	-243.67	46	-30	-167	-87	103	175	-368	-325	0.678	0.319	1.00	Yes	0.373	0.176	0.55	Yes	0.561	0.348	0.91	Yes	0.516	0.213	0.73	Yes	1.00	**10.60**
		$U_{19} - L_{18}$	437.58	-24.53	27	-40	-115	-9	99	-54	-196	-198	0.787	0.204	1.00	Yes	0.433	0.112	0.55	Yes	0.056	0.153	0.21	Yes	0.052	0.147	0.20	Yes	1.00	**5.53**
		$U_{20} - L_{19}$	293.49	-----	26	0	-269	143	-59	69	-1186	-50	0.385	0.613	1.00	Yes	0.233	0.338	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.06**

Moment (Start) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

| | | | Vehicle | Pedestrian | Axial Force | | ZZ Axis Bending | | | | YY Axis Bending | | | | Tension | | | | | | | | Compression | | | | | | | |

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	18.03	-34.28	649	-1048	-168	31	-830	-3053	54	200	0.028	0.970	1.00	Yes	0.016	0.573	0.59	Yes	0.062	0.721	0.79	Yes	0.062	0.314	0.38	Yes	1.00	**12.98**
		L_1 - L_2	351.43	-----	158	-647	-265	-500	-193	414	-1203	291	0.538	0.452	1.00	Yes	0.328	0.291	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_2 - L_3	627.59	-77.12	-51	41	-750	-545	-185	125	41	-578	0.722	0.274	1.00	Yes	0.418	0.162	0.59	Yes	0.105	0.243	0.35	Yes	0.104	0.181	0.29	Yes	1.00	**4.31**
		L_3 - L_4	581.79	-197.84	-10	256	-627	-365	279	-231	-1111	-66	0.669	0.330	1.00	Yes	0.398	0.205	0.61	Yes	0.270	0.182	0.46	Yes	0.268	0.151	0.42	Yes	1.00	**4.29**
		L_4 - L_5	79.85	-549.41	97	462	-606	324	-72	200	124	-148	0.103	0.196	0.30	Yes	0.062	0.128	0.19	Yes	0.845	0.133	0.98	Yes	0.837	0.160	1.00	Yes	1.00	**3.94**
		L_5 - L_6	-----	-748.38	125	590	-278	345	160	-240	-208	21	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.121	1	Yes	0.863	0.131	1.00	Yes	1.00	**3.90**
		L_6 - L_7	-----	-1156.51	291	-60	-401	158	-244	398	211	40	-----	-----	-----	-----	-----	-----	-----	-----	0.941	0.044	0.99	Yes	0.931	0.063	1.00	Yes	1.00	**5.96**
		L_7 - L_8	-----	-1171.06	18	574	-428	1577	640	252	-503	132	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.246	1	Yes	0.742	0.209	0.96	Yes	1.00	**6.50**
		L_8 - L_9	-----	-1276.26	1136	-101	649	-34	442	366	184	385	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1	Yes	0.808	0.150	0.96	Yes	1.00	**4.00**
		L_9 - L_{10}	-----	-1065.48	854	-894	-140	-194	660	875	-222	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.102	0.97	Yes	0.858	0.140	1.00	Yes	1.00	**9.91**
		L_{10} - L_{11}	211.42	-545.95	499	-53	-49	-605	-284	44	73	-695	0.274	0.282	0.56	Yes	0.159	0.167	0.33	Yes	0.839	0.127	0.97	Yes	0.832	0.160	1.00	Yes	1.00	**7.47**
		L_{11} - L_{12}	504.36	-----	381	-771	64	-586	-165	451	-803	288	0.653	0.344	1.00	Yes	0.392	0.220	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_{12} - L_{13}	1044.43	-----	59	-155	-481	-617	-160	120	-10	-538	0.824	0.172	1.00	Yes	0.527	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_{13} - L_{14}	1274.10	-----	252	-1247	-279	-1223	41	414	-923	188	0.749	0.249	1.00	Yes	0.485	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		L_{14} - L_{15}	1519.05	-----	-501	-170	-1805	-412	-182	92	-166	-457	0.742	0.250	1.00	Yes	0.482	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_{15} - L_{16}	1592.91	-----	-284	-439	-1221	-1046	-4	-186	-932	6	0.778	0.213	1.00	Yes	0.500	0.127	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		L_{16} - L_{17}	1217.99	-----	-421	54	-1364	20	-127	169	211	-300	0.770	0.227	1.00	Yes	0.500	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.57**
		L_{17} - L_{18}	804.94	-----	-222	-19	-900	67	85	-111	-929	-38	0.701	0.293	1.00	Yes	0.449	0.179	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.01**
		L_{18} - L_{19}	390.46	-----	-244	228	-985	485	-159	110	495	-50	0.598	0.398	1.00	Yes	0.404	0.252	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		L_{19} - L_{20}	48.25	-332.11	-174	71	-1163	747	140	31	125	28	0.074	0.378	0.46	Yes	0.045	0.255	0.31	Yes	0.603	0.389	1	Yes	0.598	0.349	0.95	Yes	1.00	**12.84**
	Structure 2	L_0 - L_1	47.44	-153.33	644	-2191	-75	-101	-866	-3010	38	132	0.058	0.940	1.00	Yes	0.034	0.583	0.62	Yes	0.220	0.686	0.91	Yes	0.219	0.446	0.67	Yes	1.00	**17.83**
		L_1 - L_2	472.89	-----	602	-1422	-3	-731	-183	793	-745	353	0.574	0.420	1.00	Yes	0.342	0.265	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.98**
		L_2 - L_3	1027.28	-----	188	-754	-405	-937	-37	161	504	-361	0.810	0.189	1.00	Yes	0.531	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		L_3 - L_4	1277.37	-----	152	-1419	-388	-1392	47	701	-948	426	0.751	0.242	1.00	Yes	0.505	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_4 - L_5	1744.09	-----	-432	-433	-1584	-1436	-56	176	423	-515	0.813	0.184	1.00	Yes	0.538	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_5 - L_6	1783.24	-----	-222	-502	-1198	-1834	190	-90	-1036	53	0.765	0.227	1.00	Yes	0.514	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_6 - L_7	1788.51	-----	-585	-225	-2199	-1331	-160	218	-45	-804	0.757	0.243	1.00	Yes	0.503	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_7 - L_8	1300.77	-----	-308	371	-1605	-347	215	-143	-882	166	0.746	0.250	1.00	Yes	0.490	0.150	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		L_8 - L_9	1030.87	-357.93	-107	582	-1358	285	-89	182	108	-919	0.721	0.270	1.00	Yes	0.486	0.171	0.66	Yes	0.297	0.116	0.42	Yes	0.295	0.183	0.48	Yes	1.00	**6.43**
		L_9 - L_{10}	598.65	-757.62	-127	832	-1248	195	145	-154	-1227	0	0.534	0.347	0.89	Yes	0.311	0.211	0.53	Yes	0.801	0.165	0.97	Yes	0.796	0.200	1.00	Yes	1.00	**7.54**
		L_{10} - L_{11}	-----	-731.42	10	562	-764	562	-83	84	242	0	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.059	0.93	Yes	0.859	0.134	1.00	Yes	1.00	**4.53**
		L_{11} - L_{12}	-----	-1031.20	-72	1099	-656	795	65	-365	-221	35	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.119	0.98	Yes	0.846	0.150	1.00	Yes	1.00	**5.01**
		L_{12} - L_{13}	-----	-1498.53	247	-825	-828	-588	-410	142	288	45	-----	-----	-----	-----	-----	-----	-----	-----	0.904	0.089	1	Yes	0.896	0.082	0.98	Yes	1.00	**7.34**
		L_{13} - L_{14}	-----	-1405.79	-387	1266	-1788	3295	887	724	-923	-447	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.253	0.97	Yes	0.707	0.288	1.00	Yes	1.00	**7.63**
		L_{14} - L_{15}	-----	-1487.78	2789	-988	1473	-435	245	106	422	398	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.189	0.95	Yes	0.749	0.244	1.00	Yes	1.00	**5.16**
		L_{15} - L_{16}	-----	-1270.68	-15	-57	-1691	-506	563	-348	-567	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.230	1	Yes	0.760	0.168	0.93	Yes	1.00	**10.63**
		L_{16} - L_{17}	-----	-1168.36	1164	-329	509	-404	-344	-65	330	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.131	0.99	Yes	0.851	0.144	1.00	Yes	1.00	**5.77**
		L_{17} - L_{18}	119.11	-710.82	1201	-1477	-48	-892	-34	1359	-1624	440	0.106	0.432	0.54	Yes	0.062	0.262	0.33	Yes	0.752	0.247	1	Yes	0.746	0.236	0.99	Yes	1.00	**12.94**
		L_{18} - L_{19}	228.65	-639.19	716	34	-149	-548	-211	60	587	-128	0.259	0.228	0.49	Yes	0.149	0.134	0.29	Yes	0.857	0.121	0.98	Yes	0.852	0.138	1.00	Yes	1.00	**6.31**
		L_{19} - L_{20}	601.98	-473.74	512	131	-183	-831	150	-176	-1017	490	0.682	0.316	1.00	Yes	0.403	0.195	0.60	Yes	0.635	0.138	0.78	Yes	0.631	0.160	0.80	Yes	1.00	**7.26**
		L_{20} - L_{21}	989.20	-283.00	401	-80	-1018	-1060	-185	70	450	-467	0.789	0.205	1.00	Yes	0.517	0.124	0.65	Yes	0.267	0.169	0.44	Yes	0.265	0.155	0.43	Yes	1.00	**7.32**
		L_{21} - L_{22}	855.01	-35.60	100	-298	-758	-1384	136	-102	-1011	98	0.682	0.311	1.00	Yes	0.456	0.198	0.66	Yes	0.034	0.227	0.27	Yes	0.033	0.202	0.24	Yes	1.00	**5.17**
		L_{22} - L_{23}	844.96	-7.48	-217	-41	-2054	-431	-116	160	50	-239	0.674	0.325	1.00	Yes	0.451	0.204	0.66	Yes	0.007	0.351	0.36	Yes	0.007	0.300	0.31	Yes	1.00	**5.76**
		L_{23} - L_{24}	863.06	-324.33	-63	450	-1392	-553	161	-139	-961	202	0.688	0.307	1.00	Yes	0.451	0.187	0.64	Yes	0.306	0.187	0.5	Yes	0.304	0.203	0.51	Yes	1.00	**7.72**
		L_{24} - L_{25}	562.28	-552.03	200	526	-1341	281	-105	150	485	-642	0.637	0.357	1.00	Yes	0.377	0.225	0.61	Yes	0.740	0.190	0.94	Yes	0.736	0.259	1.00	Yes	1.00	**8.38**
		L_{25} - L_{26}	20.31	-642.35	29	729	-727	344	102	-166	-586	-11	0.023	0.230	0.26	Yes	0.013	0.135	0.15	Yes	0.861	0.133	1	Yes	0.856	0.141	1.00	Yes	1.00	**6.31**
		L_{26} - L_{27}	-----	-826.90	188	495	-801	543	-51	221	322	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.088	0.97	Yes	0.868	0.128	1.00	Yes	1.00	**6.13**
		L_{27} - L_{28}	-----	-1140.31	83	1351	-860	1077	239	-6	546	273	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.146	0.99	Yes	0.830	0.167	1.00	Yes	1.00	**8.24**
		L_{28} - L_{29}	-----	-1457.54	402	-665	-746	-1067	-91	789	-1	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.117	1	Yes	0.872	0.106	0.98	Yes	1.00	**8.21**
		L_{29} - L_{30}	-----	-1418.56	-517	1327	-1834	3202	833	843	-652	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.235	0.96	Yes	0.714	0.280	1.00	Yes	1.00	**7.08**
		L_{30} - L_{31}	-----	-1533.90	2548	-757	1671	-480	267	279	569	475	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.190	0.97	Yes	0.772	0.222	1.00	Yes	1.00	**3.66**
		L_{31} - L_{32}	-----	-1296.22	58	-378	-1464	-635	676	-360	-286	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.209	1	Yes	0.775	0.145	0.93	Yes	1.00	**10.43**
		L_{32} - L_{33}	-----	-1054.09	983	-434	498	-564	-114	57	182	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.111	0.99	Yes	0.864	0.134	1.00	Yes	1.00	**4.71**
		L_{33} - L_{34}	346.88	-185.98	1268	-2011	39	-1289	44	2216	-2031	949	0.346	0.650	1.00	Yes	0.203	0.398	0.61	Yes	0.220	0.441	0.67	Yes	0.218	0.352	0.58	Yes	1.00	**15.86**
		L_{34} - L_{35}	709.56	-798.32	870	-82	-338	-992	-225	92	1268	-17	0.633	0.311	0.95	Yes	0.369	0.188	0.56	Yes	0.844	0.133	0.98	Yes	0.838	0.159	1.00	Yes	1.00	**9.86**
		L_{35} - L_{36}	1018.88	-346.64	604	-129	-188	-1101	170	-133	-1407	371	0.713	0.281	1.00	Yes	0.480	0.181	0.67	Yes	0.287	0.147	0.44	Yes	0.285	0.149	0.44	Yes	1.00	**8.00**
		L_{36} - L_{37}	1357.47	-----	303	-258	-911	-1342	-205	151	836	33	0.778	0.217	1.00	Yes	0.511	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		L_{37} - L_{38}	1747.14	-----	-166	-654	-1874	-1976	66	-192	-1338	323	0.739	0.256	1.00	Yes	0.491	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		L_{38} - L_{39}	1758.74	-----	-585	-232	-2342	-928	-117	182	140	-527	0.755	0.241	1.00	Yes	0.506	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		L_{39} - L_{40}	1661.56	-----	-409	-429	-1804	-1045	115	-163	-767	383	0.775	0.222	1.00	Yes	0.513	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_{40} - L_{41}	1291.50	-----	-473	28	-1689	-206	-49	267	190	-524	0.759	0.239	1.00	Yes	0.511	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		L_{41} - L_{42}	940.57	-----	-261	-54	-1188	-42	139	-75	-771	50	0.741	0.254	1.00	Yes	0.486	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.68**
		L_{42} - L_{43}	493.98	-----	-273	213	-1371	473	129	348	734	88	0.600	0.400	1.00	Yes	0.357	0.253	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.21**
		L_{43} - L_{44}	-----	-303.51	-202	18	-1805	725	465	135	871	254	-----	-----	-----	-----	-----	-----	-----	-----	0.436	0.561	1	Yes	0.434	0.367	0.81	Yes	1.00	**17.73**
	Structure 3	L_0 - L_1	12.70	-328.90	571	-1103	31	-145	-221	-1000	26	116	0.019	0.538	0.56	Yes	0.012	0.353	0.37	Yes	0.597	0.402	1	Yes	0.592	0.331	0.93	Yes	1.00	**9.19**
		L_1 - L_2	304.56	-----	677	-1104	130	-614	49	974	-867	476	0.466	0.533	1.00	Yes	0.315	0.342	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.94**
		L_2 - L_3	854.08	-----	241	-597	-258	-576	121	-35	1084	271	0.744	0.254	1.00	Yes	0.476	0.157	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.17**
		L_3 - L_4	1169.68	-----	234	-1081	-274	-1166	41	789	-931	457	0.740	0.254	1.00	Yes	0.480	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		L_4 - L_5	1585.66	-----	-376	-263	-1356	-1041	-30	230	91	-795	0.775	0.219	1.00	Yes	0.497	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		L_5 - L_6	1494.52	-----	-139	-492	-740	-1520	252	-56	-1173	87	0.730	0.266	1.00	Yes	0.474	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_6 - L_7	1229.54	-----	-499	240	-1589	74	-54	254	-129	-684	0.723	0.276	1.00	Yes	0.468	0.170	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_7 - L_8	963.15	-4.84	-107	155	-749	-235	137	-170	-867	-79	0.760	0.234	1.00	Yes	0.486	0.143	0.63	Yes	0.005	0.168	0.18	Yes	0.004	0.133	0.14	Yes	1.00	**6.01**
		L_8 - L_9	535.08	-295.17	-169	431	-852	363	-108	167	447	49	0.693	0.304	1.00	Yes	0.416	0.197	0.62	Yes	0.454	0.124	0.58	Yes	0.450	0.225	0.68	Yes	1.00	**6.44**
		L_9 - L_{10}	-----	-556.83	-67	513	-550	231	146	-153	-290	44	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.080	0.94	Yes	0.848	0.146	1.00	Yes	1.00	**5.83**
		L_{10} - L_{11}	-----	-1093.43	193	-39	-743	393	-334	-96	752	124	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.080	0.98	Yes	0.880	0.117	1.00	Yes	1.00	**9.50**
		L_{11} - L_{12}	-----	-1163.64	38	737	-487	1507	783	159	-1132	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.250	1	Yes	0.737	0.200	0.94	Yes	1.00	**8.92**
		L_{12} - L_{13}	-----	-1249.88	1395	-153	683	-12	204	-89	-34	292	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1	Yes	0.792	0.185	0.98	Yes	1.00	**4.95**
		L_{13} - L_{14}	-----	-1031.32	733	-1079	-367	-224	274	865	-898	18	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.126	0.97	Yes	0.830	0.170	1.00	Yes	1.00	**10.21**
		L_{14} - L_{15}	-----	-727.69	571	110	33	-390	-263	85	-23	-724	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.145	1	Yes	0.840	0.126	0.97	Yes	1.00	**5.16**
		L_{15} - L_{16}	289.47	-551.23	479	135	6	-501	263	-218	-1008	434	0.375	0.312	0.69	Yes	0.225	0.196	0.43	Yes	0.847	0.148	1	Yes	0.840	0.133	0.98	Yes	1.00	**5.81**
		L_{16} - L_{17}	678.96	-132.36	256	-68	-725	-439	-173	190	263	-24	0.781	0.217	1.00	Yes	0.464	0.140	0.61	Yes	0.181	0.219	0.4	Yes	0.179	0.175	0.36	Yes	1.00	**5.10**
		L_{17} - L_{18}	632.53	-18.91	-2	-115	-742	-510	113	-113	-534	169	0.728	0.265	1.00	Yes	0.421	0.157	0.58	Yes	0.026	0.239	0.27	Yes	0.026	0.179	0.21	Yes	1.00	**5.30**
		L_{18} - L_{19}	413.63	-6.04	-67	-11	-829	45	-108	216	251	516	0.633	0.360	1.00	Yes	0.386	0.237	0.63	Yes	0.011	0.303	0.32	Yes	0.011	0.249	0.26	Yes	1.00	**5.37**
		L_{19} - L_{20}	-----	-72.51	182	-290	-1690	1170	249	68	-2121	-577	-----	-----	-----	-----	-----	-----	-----	-----	0.132	0.862	1	Yes	0.131	0.507	0.64	Yes	1.00	**27.70**

Moment (Start) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-281.79	-8	55	-109	168	171	55	-976	-313	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.367	1	Yes	0.596	0.215	0.82	Yes	1.00	**1.88**
		$U_1 - L_1$	19.07	-323.36	27	-20	-243	234	571	208	-696	-225	0.034	0.512	0.55	Yes	0.019	0.282	0.31	Yes	0.707	0.264	0.98	Yes	0.684	0.311	1.00	Yes	1.00	**4.83**
		$U_2 - L_2$	86.32	-215.86	81	-88	-134	174	753	233	-1649	-528	0.155	0.700	0.86	Yes	0.085	0.385	0.48	Yes	0.472	0.524	1	Yes	0.457	0.223	0.68	Yes	1.00	**5.80**
		$U_3 - L_3$	159.67	-107.96	208	-201	-107	123	-1533	-729	-301	-18	0.287	0.709	1.00	Yes	0.158	0.390	0.55	Yes	0.237	0.454	0.7	Yes	0.228	0.265	0.50	Yes	1.00	**9.20**
		$U_4 - L_4$	-----	-189.93	261	-256	31	-44	-1829	-813	-20	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.418	0.578	1	Yes	0.402	0.334	0.74	Yes	1.00	**7.81**
		$U_5 - L_5$	-----	-383.48	196	-220	72	-85	222	276	936	343	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.298	1	Yes	0.662	0.223	0.89	Yes	1.00	**4.10**
		$U_6 - L_6$	-----	-416.12	209	-217	77	-66	893	470	1485	739	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.363	1	Yes	0.597	0.190	0.79	Yes	1.00	**4.04**
		$U_7 - L_7$	-----	-378.65	255	-275	106	-119	275	137	1264	304	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.358	1	Yes	0.584	0.271	0.86	Yes	1.00	**3.45**
		$U_8 - L_8$	-----	-1216.89	336	-410	-419	499	746	111	-1106	-551	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.121	1	Yes	0.844	0.093	0.94	Yes	1.00	**7.62**
		$U_9 - L_9$	-----	-657.52	-228	259	-414	456	625	238	-296	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.183	0.97	Yes	0.743	0.253	1.00	Yes	1.00	**3.59**
		$U_{10} - L_{10}$	-----	-764.43	-158	155	-354	384	625	289	-819	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.201	1	Yes	0.754	0.199	0.96	Yes	1.00	**5.19**
		$U_{11} - L_{11}$	-----	-662.12	-165	240	-380	487	215	145	-155	179	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.111	0.91	Yes	0.771	0.226	1.00	Yes	1.00	**5.41**
		$U_{12} - L_{12}$	-----	-521.62	-125	133	-316	325	329	273	-403	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.165	0.92	Yes	0.716	0.277	1.00	Yes	1.00	**5.27**
		$U_{13} - L_{13}$	-----	-370.07	-63	85	-225	250	6	39	-370	95	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.196	0.95	Yes	0.709	0.286	1.00	Yes	1.00	**4.53**
		$U_{14} - L_{14}$	-----	-192.97	123	-122	-265	290	-1846	-724	-292	-524	-----	-----	-----	-----	-----	-----	-----	-----	0.431	0.566	1	Yes	0.408	0.371	0.78	Yes	1.00	**12.56**
		$U_{15} - L_{15}$	67.10	-312.01	237	-261	-67	54	-575	-119	116	-475	0.121	0.500	0.63	Yes	0.066	0.275	0.35	Yes	0.699	0.245	0.95	Yes	0.660	0.334	1.00	Yes	1.00	**7.86**
		$U_{16} - L_{16}$	-----	-322.55	237	-247	45	-50	-487	-94	473	107	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.222	0.95	Yes	0.682	0.316	1.00	Yes	1.00	**5.26**
		$U_{17} - L_{17}$	-----	-417.37	203	-221	80	-93	38	82	504	200	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1	Yes	0.720	0.224	0.95	Yes	1.00	**3.59**
		$U_{18} - L_{18}$	-----	-535.85	436	-449	172	-179	197	44	677	171	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.183	0.97	Yes	0.745	0.254	1.00	Yes	1.00	**5.07**
		$U_{19} - L_{19}$	-----	-643.33	415	-432	183	-196	342	67	596	117	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.192	1	Yes	0.749	0.200	0.95	Yes	1.00	**4.56**
		$U_{20} - L_{20}$	-----	-591.09	392	-468	237	-285	214	28	461	60	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1	Yes	0.688	0.217	0.91	Yes	1.00	**3.52**
	Structure 2	$U_0 - L_0$	-----	-623.83	-155	273	-324	469	-12	-2	-1041	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1	Yes	0.669	0.199	0.87	Yes	1.00	**2.71**
		$U_1 - L_1$	-----	-708.46	-209	216	-544	546	628	162	-340	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.147	0.96	Yes	0.759	0.232	1.00	Yes	1.00	**4.61**
		$U_2 - L_2$	-----	-595.13	-155	170	-444	465	622	285	-506	108	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.178	0.98	Yes	0.758	0.238	1.00	Yes	1.00	**4.23**
		$U_3 - L_3$	-----	-456.75	-75	86	-216	232	545	265	101	236	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.213	1	Yes	0.716	0.212	0.93	Yes	1.00	**3.64**
		$U_4 - L_4$	-----	-321.92	-20	30	-197	205	561	235	-235	102	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.262	1	Yes	0.681	0.262	0.95	Yes	1.00	**4.66**
		$U_5 - L_5$	67.13	-271.99	76	-57	-163	189	-125	-108	-977	1	0.121	0.524	0.65	Yes	0.066	0.288	0.36	Yes	0.614	0.383	1	Yes	0.576	0.242	0.82	Yes	1.00	**6.75**
		$U_6 - L_6$	347.04	-89.97	196	-202	-116	125	-374	-296	-358	-21	0.624	0.367	1.00	Yes	0.343	0.202	0.55	Yes	0.202	0.159	0.37	Yes	0.190	0.258	0.45	Yes	1.00	**8.97**
		$U_7 - L_7$	-----	-202.47	334	-381	-3	-6	-1065	-479	-705	-702	-----	-----	-----	-----	-----	-----	-----	-----	0.457	0.533	1	Yes	0.428	0.487	0.92	Yes	1.00	**12.99**
		$U_8 - L_8$	-----	-474.89	337	-360	150	-170	-440	-101	419	44	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.158	0.85	Yes	0.684	0.315	1.00	Yes	1.00	**4.42**
		$U_9 - L_9$	-----	-692.29	577	-592	265	-288	-409	6	608	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.139	0.91	Yes	0.742	0.251	1.00	Yes	1.00	**5.63**
		$U_{10} - L_{10}$	-----	-747.40	508	-530	233	-234	82	263	1171	687	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.699	0.234	0.94	Yes	1.00	**5.68**
		$U_{11} - L_{11}$	-----	-733.74	458	-462	226	-219	638	522	1186	667	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1	Yes	0.686	0.204	0.89	Yes	1.00	**4.80**
		$U_{12} - L_{12}$	-----	-720.64	415	-410	187	-169	775	451	1474	644	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.302	1	Yes	0.625	0.178	0.81	Yes	1.00	**4.58**
		$U_{13} - L_{13}$	-----	-623.28	494	-482	225	-223	582	204	1157	310	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.297	1	Yes	0.601	0.237	0.84	Yes	1.00	**4.83**
		$U_{14} - L_{14}$	-----	-1234.22	450	-432	-587	546	630	-67	-717	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.095	1	Yes	0.818	0.104	0.93	Yes	1.00	**9.35**
		$U_{15} - L_{15}$	-----	-679.43	-258	256	-605	582	747	59	-163	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.238	1	Yes	0.655	0.290	0.95	Yes	1.00	**5.33**
		$U_{16} - L_{16}$	-----	-719.23	-187	175	-524	511	671	192	-331	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.161	1	Yes	0.771	0.222	1.00	Yes	1.00	**5.07**
		$U_{17} - L_{17}$	-----	-641.16	-198	198	-524	529	595	194	-617	61	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.159	0.96	Yes	0.746	0.245	1.00	Yes	1.00	**4.72**
		$U_{18} - L_{18}$	-----	-579.87	-158	164	-479	502	622	214	-79	96	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.168	0.95	Yes	0.739	0.257	1.00	Yes	1.00	**4.84**
		$U_{19} - L_{19}$	-----	-479.18	-88	90	-290	289	520	195	-323	91	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.169	0.89	Yes	0.716	0.279	1.00	Yes	1.00	**4.50**
		$U_{20} - L_{20}$	-----	-366.73	-41	46	-203	216	516	182	-595	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.238	1	Yes	0.703	0.246	0.95	Yes	1.00	**4.71**
	Structure 3	$U_{21} - L_{21}$	39.18	-318.84	29	-20	-230	248	9	-107	-201	79	0.070	0.376	0.45	Yes	0.039	0.207	0.25	Yes	0.720	0.155	0.88	Yes	0.675	0.317	1.00	Yes	1.00	**6.93**
		$U_{22} - L_{22}$	-----	-247.84	335	-368	-264	279	-272	-387	-308	-823	-----	-----	-----	-----	-----	-----	-----	-----	0.558	0.355	0.92	Yes	0.524	0.470	1.00	Yes	1.00	**18.02**
		$U_{23} - L_{23}$	-----	-322.59	228	-245	14	-18	-510	-31	525	166	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.247	0.98	Yes	0.683	0.313	1.00	Yes	1.00	**5.41**
		$U_{24} - L_{24}$	-----	-369.17	222	-232	54	-59	-74	43	584	205	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.236	1	Yes	0.707	0.265	0.98	Yes	1.00	**4.32**
		$U_{25} - L_{25}$	-----	-474.70	299	-297	100	-101	107	167	589	224	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.183	0.9	Yes	0.709	0.288	1.00	Yes	1.00	**4.44**
		$U_{26} - L_{26}$	-----	-571.06	487	-515	170	-178	-259	161	708	302	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.189	0.96	Yes	0.728	0.263	1.00	Yes	1.00	**4.91**
		$U_{27} - L_{27}$	-----	-634.34	553	-559	202	-205	213	389	770	314	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.194	0.98	Yes	0.738	0.259	1.00	Yes	1.00	**5.45**
		$U_{28} - L_{28}$	-----	-615.34	467	-450	157	-131	966	424	1634	551	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.288	1	Yes	0.659	0.198	0.86	Yes	1.00	**5.15**
		$U_{29} - L_{29}$	-----	-620.50	569	-558	156	-160	-154	108	1172	199	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.300	1	Yes	0.598	0.272	0.88	Yes	1.00	**6.88**
		$U_{30} - L_{30}$	-----	-1220.36	305	-318	-608	541	297	-196	-675	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.099	1	Yes	0.809	0.108	0.92	Yes	1.00	**8.28**
		$U_{31} - L_{31}$	-----	-716.27	-305	297	-547	525	519	95	-247	18	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.201	1	Yes	0.691	0.262	0.96	Yes	1.00	**4.08**
		$U_{32} - L_{32}$	-----	-851.00	-219	193	-466	464	617	192	-661	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1	Yes	0.738	0.200	0.94	Yes	1.00	**4.78**
		$U_{33} - L_{33}$	-----	-824.93	-247	234	-505	503	443	203	-250	137	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.140	0.97	Yes	0.771	0.223	1.00	Yes	1.00	**5.30**
		$U_{34} - L_{34}$	-----	-807.75	-237	251	-528	550	552	337	-748	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.191	0.99	Yes	0.755	0.243	1.00	Yes	1.00	**5.97**
		$U_{35} - L_{35}$	-----	-692.39	-255	269	-552	576	631	376	-1118	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.222	1	Yes	0.742	0.245	0.99	Yes	1.00	**5.57**
		$U_{36} - L_{36}$	-----	-477.74	-132	156	-328	353	158	126	-95	106	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.113	0.81	Yes	0.688	0.309	1.00	Yes	1.00	**4.92**
		$U_{37} - L_{37}$	-----	-161.45	-3	10	-273	309	-772	-296	-91	-336	-----	-----	-----	-----	-----	-----	-----	-----	0.365	0.633	1	Yes	0.342	0.395	0.74	Yes	1.00	**9.20**
		$U_{38} - L_{38}$	222.81	-133.81	134	-141	-156	152	-1374	-338	-995	-728	0.401	0.597	1.00	Yes	0.220	0.328	0.55	Yes	0.301	0.343	0.65	Yes	0.283	0.199	0.49	Yes	1.00	**8.01**
		$U_{39} - L_{39}$	59.66	-316.45	212	-235	-62	46	-664	-66	318	-290	0.107	0.493	0.61	Yes	0.059	0.271	0.34	Yes	0.715	0.278	1	Yes	0.670	0.301	0.98	Yes	1.00	**7.08**
		$U_{40} - L_{40}$	-----	-325.66	216	-220	37	-45	71	44	595	172	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.689	0.281	0.97	Yes	1.00	**4.69**
		$U_{41} - L_{41}$	-----	-460.30	231	-244	88	-97	-81	55	578	193	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.722	0.222	0.95	Yes	1.00	**3.90**
		$U_{42} - L_{42}$	-----	-581.71	494	-502	171	-180	62	61	670	172	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.173	0.96	Yes	0.741	0.257	1.00	Yes	1.00	**5.24**
		$U_{43} - L_{43}$	-----	-705.38	542	-558	187	-205	719	274	620	186	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.168	0.98	Yes	0.756	0.237	1.00	Yes	1.00	**6.52**
		$U_{44} - L_{44}$	-----	-655.71	466	-592	247	-315	499	85	728	123	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.213	1	Yes	0.703	0.251	0.96	Yes	1.00	**5.10**
	Structure 4	$U_0 - L_0$	-----	-540.94	-135	238	-293	394	108	14	-1109	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.282	1	Yes	0.630	0.183	0.82	Yes	1.00	**2.35**
		$U_1 - L_1$	-----	-651.03	-205	204	-518	508	620	141	-101	86	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.163	0.98	Yes	0.758	0.240	1.00	Yes	1.00	**4.60**
		$U_2 - L_2$	-----	-543.94	-157	169	-402	420	660	305	-247	151	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.195	1	Yes	0.757	0.238	1.00	Yes	1.00	**4.02**
		$U_3 - L_3$	-----	-406.66	-69	85	-183	204	563	271	-295	173	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1	Yes	0.702	0.207	0.91	Yes	1.00	**3.05**
		$U_4 - L_4$	-----	-318.75	-30	36	-225	235	614	223	-237	118	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.275	1	Yes	0.674	0.301	0.98	Yes	1.00	**5.37**
		$U_5 - L_5$	68.65	-286.02	68	-54	-224	246	-534	-276	-842	-11	0.123	0.558	0.69	Yes	0.068	0.307	0.38	Yes	0.641	0.352	1	Yes	0.605	0.314	0.92	Yes	1.00	**7.79**
		$U_6 - L_6$	-----	-189.69	261	-276	-66	72	-1881	-729	-164	-292	-----	-----	-----	-----	-----	-----	-----	-----	0.423	0.574	1	Yes	0.401	0.353	0.76	Yes	1.00	**10.48**
		$U_7 - L_7$	-----	-365.09	231	-257	74	-92	-148	-9	436	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.196	0.94	Yes	0.699	0.293	1.00	Yes	1.00	**4.08**
		$U_8 - L_8$	-----	-516.41	332	-335	131	-137	-12	73	540	175	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.187	0.94	Yes	0.709	0.286	1.00	Yes	1.00	**5.33**
		$U_9 - L_9$	-----	-625.34	382	-479	163	-218	605	484	1108	469	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.247	1	Yes	0.728	0.222	0.96	Yes	1.00	**5.59**
		$U_{10} - L_{10}$	-----	-694.22	306	-316	151	-152	1313	756	1235	483	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.277	1	Yes	0.685	0.164	0.85	Yes	1.00	**4.46**
		$U_{11} - L_{11}$	-----	-554.76	327	-371	205	-237	805	434	1369	605	-----	-----	-----	-----	-----	-----	-----	-----	0.661	0.338	1	Yes	0.627	0.206	0.84	Yes	1.00	**2.69**
		$U_{12} - L_{12}$	-----	-1098.32	313	-422	-315	329	1246	381	-1894	-606	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.205	1	Yes	0.761	0.079	0.84	Yes	1.00	**6.22**
		$U_{13} - L_{13}$	-----	-449.73	-154	168	-279	297	658	119	-694	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.247	1	Yes	0.694	0.293	0.99	Yes	1.00	**2.68**
		$U_{14} - L_{14}$	-----	-516.56	-96	90	-245	261	731	235	-476	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1	Yes	0.741	0.228	0.97	Yes	1.00	**4.32**
		$U_{15} - L_{15}$	-----	-429.68	-79	88	-206	232	525	242	-588	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.218	1	Yes	0.741	0.236	0.98	Yes	1.00	**4.59**
		$U_{16} - L_{16}$	-----	-205.34	-29	42	-227	227	-881	-421	-1756	-756	-----	-----	-----	-----	-----	-----	-----	-----	0.452	0.546	1	Yes	0.434	0.291	0.73	Yes	1.00	**7.40**
		$U_{17} - L_{17}$	163.49	-177.09	129	-151	-202	201	-1516	-557	428	-211	0.294	0.697	1.00	Yes	0.162	0.383	0.55	Yes	0.388	0.435	0.83	Yes	0.375	0.258	0.64	Yes	1.00	**9.36**
		$U_{18} - L_{18}$	94.04	-298.51	244	-287	-100	108	-840	-449	479	153	0.169	0.610	0.78	Yes	0.093	0.336	0.43	Yes	0.652	0.337	0.99	Yes	0.632	0.367	1.00	Yes	1.00	**8.65**
		$U_{19} - L_{19}$	-----	-327.86	227	-236	-24	8	77	53	432	221	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.213	0.93	Yes	0.694	0.302	1.00	Yes	1.00	**5.99**
		$U_{20} - L_{20}$	-----	-322.65	199	-241	79	-91	157	51	605	194	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.272	1	Yes	0.683	0.308	1.00	Yes	1.00	**3.59**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Diagonals	Structure 1	$U_0 - L_1$	435.41	-----	34	-10	-130	59	-228	-80	-1071	-348	0.571	0.421	1.00	Yes	0.345	0.232	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.60**
		$U_1 - L_2$	379.50	-100.95	12	-15	-94	-3	370	198	-658	-609	0.683	0.311	1.00	Yes	0.375	0.171	0.55	Yes	0.232	0.260	0.5	Yes	0.214	0.120	0.34	Yes					1.00	**5.22**
		$U_2 - L_3$	138.99	-244.62	48	-29	-99	-44	501	264	-982	-737	0.250	0.411	0.67	Yes	0.137	0.226	0.37	Yes	0.563	0.430	1	Yes	0.518	0.127	0.65	Yes					1.00	**8.53**
		$U_3 - L_4$	-----	-259.79	48	-11	-37	-70	478	279	-1078	-439	-----	-----	-----	-----	-----	-----	-----	-----	0.594	0.404	1	Yes	0.550	0.089	0.64	Yes					1.00	**6.12**
		$U_4 - L_4$	559.23	-----	-7	70	-117	34	-148	101	-233	54	0.820	0.173	1.00	Yes	0.451	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.70**
		$U_5 - L_5$	649.83	-----	-15	138	-215	230	-248	59	-524	237	0.768	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.89**
		$U_7 - L_6$	567.40	-----	-36	84	-278	223	-922	-87	82	286	0.671	0.325	1.00	Yes	0.369	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.95**
		$U_6 - L_7$	641.94	-----	61	183	-93	305	330	-80	-129	149	0.759	0.234	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.14**
		$U_8 - L_9$	957.02	-----	42	210	-95	354	426	233	-110	-569	0.765	0.230	1.00	Yes	0.474	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.85**
		$U_9 - L_{10}$	963.88	-----	-110	141	-306	223	647	295	-467	-729	0.771	0.229	1.00	Yes	0.477	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.39**
		$U_{10} - L_{11}$	877.90	-----	-69	132	-279	162	309	43	-416	-952	0.742	0.254	1.00	Yes	0.459	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.45**
		$U_{11} - L_{12}$	711.39	-----	-89	80	-294	62	211	-17	-1005	-973	0.704	0.287	1.00	Yes	0.387	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.07**
		$U_{12} - L_{13}$	552.05	-----	-85	62	-193	117	100	-36	-315	-786	0.673	0.322	1.00	Yes	0.423	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.62**
		$U_{13} - L_{14}$	380.12	-----	-30	-15	-93	10	-183	-191	-397	-681	0.684	0.316	1.00	Yes	0.376	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.72**
		$U_{15} - L_{14}$	407.06	-325.75	46	-130	-132	-17	133	-201	17	-18	0.732	0.227	0.96	Yes	0.403	0.125	0.53	Yes	0.763	0.232	1	Yes	0.689	0.169	0.86	Yes					1.00	**11.49**
		$U_{16} - L_{15}$	406.10	-----	-18	-2	-143	91	-288	-127	-284	85	0.730	0.266	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.68**
		$U_{17} - L_{16}$	525.63	-----	-45	22	-152	92	-306	-106	-163	73	0.771	0.225	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.71**
		$U_{18} - L_{17}$	618.01	-----	-130	89	-334	251	-400	-112	-358	102	0.731	0.262	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.21**
		$U_{19} - L_{18}$	689.62	-----	-132	96	-334	250	-455	-203	-363	-62	0.747	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.57**
		$U_{20} - L_{19}$	714.34	-----	-174	140	-349	291	-261	-139	-184	4	0.774	0.221	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.92**
	Structure 2	$U_0 - L_1$	617.79	-----	-90	133	-305	307	-293	-73	-1605	-301	0.611	0.382	1.00	Yes	0.336	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_1 - L_2$	708.37	-----	-165	119	-381	276	139	-35	-448	-754	0.701	0.289	1.00	Yes	0.385	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.90**
		$U_2 - L_3$	568.71	-----	-118	88	-314	234	126	-26	-523	-791	0.672	0.321	1.00	Yes	0.370	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.91**
		$U_3 - L_4$	541.09	-----	-53	26	-172	111	167	7	-316	-577	0.721	0.278	1.00	Yes	0.397	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.05**
		$U_4 - L_5$	337.68	-33.46	0	-15	-127	70	228	31	-285	-779	0.607	0.388	1.00	Yes	0.334	0.213	0.55	Yes	0.083	0.216	0.3	Yes	0.071	0.162	0.24	Yes					1.00	**5.68**
		$U_5 - L_6$	364.65	-267.30	64	-118	-110	36	-665	-167	-525	-603	0.656	0.343	1.00	Yes	0.361	0.189	0.55	Yes	0.631	0.161	0.8	Yes	0.566	0.151	0.72	Yes					1.00	**9.53**
		$U_6 - L_7$	-----	-394.58	54	-108	-24	-47	-249	-78	39	-483	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.152	1	Yes	0.756	0.123	0.88	Yes					1.00	**4.73**
		$U_8 - L_7$	574.33	-----	-80	35	-213	124	-67	-148	101	370	0.732	0.266	1.00	Yes	0.461	0.150	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.25**
		$U_8 - L_8$	719.41	-----	-162	153	-331	248	-303	-93	-196	-1	0.779	0.219	1.00	Yes	0.429	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.44**
		$U_{10} - L_9$	809.07	-----	-125	154	-349	262	-186	22	-185	248	0.800	0.199	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.10**
		$U_{11} - L_{10}$	891.14	-----	-129	193	-349	303	-254	59	-203	248	0.812	0.183	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.32**
		$U_{12} - L_{11}$	844.31	-----	-133	176	-334	342	-576	59	-560	262	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.89**
		$U_{13} - L_{12}$	728.53	-----	-157	161	-423	377	-543	2	-268	208	0.721	0.277	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.46**
		$U_{14} - L_{13}$	744.28	-----	33	213	-253	430	381	-68	-139	33	0.736	0.257	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.82**
		$U_{14} - L_{15}$	583.40	-----	-20	170	-215	375	505	228	102	-211	0.690	0.304	1.00	Yes	0.379	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.53**
		$U_{15} - L_{16}$	587.03	-----	-171	168	-346	314	585	177	201	-274	0.694	0.302	1.00	Yes	0.382	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.37**
		$U_{16} - L_{17}$	671.82	-----	-128	155	-330	335	373	109	5	-587	0.728	0.268	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.36**
		$U_{17} - L_{18}$	617.50	-----	-111	127	-288	260	358	88	-338	-570	0.730	0.267	1.00	Yes	0.402	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.17**
		$U_{18} - L_{19}$	615.44	-----	-83	97	-276	241	288	75	-84	-612	0.728	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.61**
		$U_{19} - L_{20}$	540.73	-----	-43	48	-187	137	288	79	-347	-663	0.689	0.302	1.00	Yes	0.379	0.173	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.87**
		$U_{20} - L_{21}$	398.66	-----	-15	13	-123	99	236	67	-142	-423	0.717	0.279	1.00	Yes	0.394	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.48**
		$U_{21} - L_{22}$	362.04	-183.39	19	-73	-112	20	-309	-39	-211	-701	0.651	0.346	1.00	Yes	0.358	0.190	0.55	Yes	0.433	0.238	0.68	Yes	0.388	0.143	0.54	Yes					1.00	**7.93**
		$U_{23} - L_{22}$	387.22	-95.34	14	-20	-143	29	-293	-105	405	371	0.696	0.299	1.00	Yes	0.383	0.165	0.55	Yes	0.227	0.214	0.45	Yes	0.202	0.182	0.39	Yes					1.00	**8.85**
		$U_{24} - L_{23}$	425.94	-----	-19	19	-124	104	-255	-63	-165	193	0.766	0.232	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.94**
		$U_{25} - L_{24}$	591.37	-----	-42	50	-198	168	-299	-81	4	185	0.754	0.238	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.35**
		$U_{26} - L_{25}$	663.19	-----	-80	98	-286	271	-252	-56	-58	271	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.32**
		$U_{27} - L_{26}$	638.58	-----	-101	143	-293	281	-395	115	-69	360	0.755	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.84**
		$U_{28} - L_{27}$	675.61	-----	-94	148	-313	340	-553	45	-400	332	0.732	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.18**
		$U_{29} - L_{28}$	595.34	-----	-94	107	-348	331	-541	-41	-336	119	0.704	0.295	1.00	Yes	0.387	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.55**
		$U_{30} - L_{29}$	618.96	-----	50	160	-191	357	348	-101	-130	159	0.732	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.87**
		$U_{30} - L_{31}$	726.82	-----	-57	230	-257	427	466	202	53	-519	0.719	0.275	1.00	Yes	0.395	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.80**
		$U_{31} - L_{32}$	728.36	-----	-233	219	-425	366	500	139	-56	-455	0.721	0.272	1.00	Yes	0.396	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.48**
		$U_{32} - L_{33}$	811.71	-----	-157	204	-345	320	475	140	-484	-813	0.739	0.257	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.35**
		$U_{33} - L_{34}$	843.19	-----	-145	176	-326	266	339	75	-384	-680	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.39**
		$U_{34} - L_{35}$	739.31	-----	-134	138	-317	225	129	-22	-274	-760	0.731	0.261	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.21**
		$U_{35} - L_{36}$	650.19	-----	-157	134	-314	197	151	13	-681	-805	0.704	0.293	1.00	Yes	0.387	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.29**
		$U_{36} - L_{37}$	524.90	-----	-76	29	-181	116	-325	-224	-122	-818	0.669	0.329	1.00	Yes	0.421	0.189	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.94**
		$U_{38} - L_{37}$	-----	-374.41	46	-99	-33	-46	279	-260	-16	50	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.187	1	Yes	0.717	0.113	0.84	Yes					1.00	**4.76**
		$U_{39} - L_{38}$	434.70	-217.98	58	-103	-132	61	-93	-79	-168	19	0.782	0.218	1.00	Yes	0.430	0.120	0.55	Yes	0.519	0.183	0.71	Yes	0.461	0.169	0.64	Yes					1.00	**9.70**
		$U_{40} - L_{39}$	395.24	-9.40	-6	-9	-138	89	-379	-103	-197	200	0.711	0.286	1.00	Yes	0.391	0.157	0.55	Yes	0.022	0.166	0.19	Yes	0.020	0.176	0.20	Yes					1.00	**6.19**
		$U_{41} - L_{40}$	560.60	-----	-57	31	-177	124	-411	-178	-320	-42	0.747	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.51**
		$U_{42} - L_{41}$	622.95	-----	-122	92	-322	261	-402	-168	-433	1	0.736	0.261	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		$U_{43} - L_{42}$	770.22	-----	-136	103	-378	308	-376	-193	-391	-71	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.87**
		$U_{44} - L_{43}$	802.05	-----	-161	154	-382	376	-172	9	-92	61	0.793	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.72**
	Structure 3	$U_0 - L_1$	566.80	-----	-72	106	-295	262	-220	-48	-1401	-302	0.614	0.381	1.00	Yes	0.338	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.47**
		$U_1 - L_2$	656.54	-----	-159	108	-343	240	161	-42	-329	-643	0.711	0.281	1.00	Yes	0.391	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.75**
		$U_2 - L_3$	566.29	-----	-125	86	-310	226	129	-30	-425	-819	0.670	0.324	1.00	Yes	0.368	0.178	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.97**
		$U_3 - L_4$	475.06	-----	-42	19	-140	78	156	-23	-652	-687	0.697	0.302	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.97**
		$U_4 - L_5$	348.71	-8.61	-15	-4	-126	74	190	4	-266	-715	0.627	0.368	1.00	Yes	0.345	0.203	0.55	Yes	0.020	0.206	0.23	Yes	0.018	0.161	0.18	Yes					1.00	**5.76**
		$U_5 - L_6$	275.37	-281.19	33	-117	-101	-42	-697	-253	-727	-1000	0.495	0.440	0.94	Yes	0.272	0.242	0.52	Yes	0.659	0.333	1	Yes	0.595	0.150	0.75	Yes					1.00	**9.19**
		$U_7 - L_6$	455.88	-----	-26	-18	-105	27	-117	-127	-9	49	0.820	0.171	1.00	Yes	0.451	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.52**
		$U_8 - L_7$	620.43	-----	-83	72	-207	149	-303	-108	-115	177	0.756	0.240	1.00	Yes	0.476	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.38**
		$U_8 - L_8$	812.97	-----	-72	96	-326	100	-216	8	-120	286	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.60**
		$U_{10} - L_9$	951.88	-----	-47	157	-293	197	-103	84	-453	390	0.804	0.195	1.00	Yes	0.498	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.35**
		$U_{11} - L_{10}$	910.96	-----	-66	102	-287	241	-1066	-204	-66	256	0.728	0.264	1.00	Yes	0.451	0.150	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.20**
		$U_{12} - L_{11}$	1014.79	-----	118	241	-71	324	235	-10	46	322	0.811	0.185	1.00	Yes	0.503	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.17**
		$U_{12} - L_{13}$	607.21	-----	15	165	-89	290	640	320	59	-286	0.718	0.281	1.00	Yes	0.395	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
		$U_{13} - L_{14}$	578.05	-----	-97	131	-292	216	714	294	-792	-451	0.683	0.310	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.02**
		$U_{14} - L_{15}$	634.05	-----	-34	143	-227	200	542	228	-73	-617	0.750	0.241	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.01**
		$U_{15} - L_{16}$	467.46	-----	-14	61	-112	8	417	191	-846	-686	0.685	0.311	1.00	Yes	0.377	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.14**
		$U_{17} - L_{16}$	-----	-332.91	53	-9	-87	-109	-232	5	405	338	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.237	1	Yes	0.704	0.140	0.85	Yes					1.00	**10.69**
		$U_{18} - L_{17}$	356.21	-300.96	56	-38	-154	-36	-188	-68	-466	-7	0.641	0.331	0.98	Yes	0.352	0.182	0.54	Yes	0.693	0.298	1	Yes	0.637	0.197	0.84	Yes					1.00	**12.81**
		$U_{19} - L_{18}$	454.21	-102.74	18	-21	-94	4	-206	-117	-200	-167	0.817	0.180	1.00	Yes	0.449	0.099	0.55	Yes	0.236	0.160	0.4	Yes	0.217	0.121	0.34	Yes					1.00	**7.45**
		$U_{20} - L_{19}$	575.02	-----	-18	4	-133	80	202	56	-339	-74	0.754	0.241	1.00	Yes	0.456	0.133	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.97**

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Upper Chord

Location	Member	Member Forces from STAAD D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_2	-71.64	14.85	-69.86			0.90	1.24	16.53	-77.78	0.00	0.00	Vehicle	Vehicle	-----	-194.24	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.35	6.35
	U_2 - U_3	-90.83	29.88	-130.18			0.90	1.24	33.27	-144.93	0.00	0.00	Vehicle	Vehicle	-----	-306.49	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.27	3.27
	U_3 - U_4	-61.13	44.36	-147.72			0.90	1.24	49.39	-164.45	0.00	0.00	Vehicle	Vehicle	-----	-293.26	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.07	3.07
	U_4 - U_5	10.71	58.25	-137.27			0.90	1.24	64.85	-152.82	0.00	0.00	Vehicle	Vehicle	98.22	-184.75	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.18	10.18	3.77	3.77
	U_4 - U_6	12.86	58.40	-114.80			0.90	1.24	65.02	-127.80	0.00	0.00	Vehicle	Vehicle	101.24	-149.42	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.12	10.12	4.52	4.52
	U_6 - U_8	121.37	-63.90	-62.66			0.90	1.24	-69.75	-71.14	0.00	0.00	Vehicle	Vehicle	67.11	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
	U_7 - U_9	249.49	74.59	-36.13			0.90	1.24	83.04	-40.23	0.00	0.00	Vehicle	Vehicle	432.29	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	6.68	6.68	-----	-----
	U_8 - U_9	376.92	7.18	-1.91			0.90	1.24	7.99	-2.13	0.00	0.00	Vehicle	Vehicle	500.38	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	91.78	91.78	-----	-----
	U_9 - U_8	319.74	2.66	-19.69			0.90	1.20	2.86	-21.23	0.00	0.00	Vehicle	Vehicle	419.38	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	216.11	216.11	-----	-----
	U_9 - U_{10}	128.77	76.36	-60.66			0.90	1.20	82.33	-65.40	0.00	0.00	Vehicle	Vehicle	274.43	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	7.05	7.05	-----	-----
	U_{10} - U_{11}	-70.90	66.68	-97.52			0.90	1.20	71.90	-105.14	0.00	0.00	Vehicle	Vehicle	1.30	-228.86	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	10.85	10.85	5.01	5.01
	U_{11} - U_{12}	-252.96	59.68	-143.70			0.90	1.20	64.35	-154.93	0.00	0.00	Vehicle	Vehicle	-----	-530.27	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.61	3.61
	U_{12} - U_{13}	-391.95	51.60	-179.01			0.90	1.20	55.63	-193.01	0.00	0.00	Vehicle	Vehicle	-----	-760.44	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.86	3.86
	U_{13} - U_{14}	-482.99	43.38	-197.48			0.90	1.20	46.77	-212.92	0.00	0.00	Vehicle	Vehicle	-----	-904.88	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.97	3.97
	U_{14} - U_{15}	-454.44	43.22	-164.20			0.90	1.20	46.60	-177.04	0.00	0.00	Vehicle	Vehicle	-----	-859.92	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.76	4.76
	U_{15} - U_{16}	-502.02	19.20	-168.34			0.90	1.20	20.70	-181.51	0.00	0.00	Vehicle	Vehicle	-----	-888.59	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.55	4.55
	U_{16} - U_{17}	-467.99	-56.80	-156.31			0.90	1.20	-61.24	-168.53	0.00	0.00	Vehicle	Vehicle	-----	-827.48	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.10	5.10
	U_{17} - U_{18}	-368.86	-120.57	-85.92			0.90	1.20	-92.64	-130.00	0.00	0.00	Vehicle	Vehicle	-----	-648.51	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.63	4.63
	U_{18} - U_{19}	-251.56	-78.44	-50.93			0.90	1.20	-54.91	-84.57	0.00	0.00	Vehicle	Vehicle	-----	-436.97	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.04	5.04
	U_{19} - U_{20}	-117.89	-40.93	-12.41			0.90	1.20	-13.38	-44.13	0.00	0.00	Vehicle	Vehicle	-----	-210.62	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	12.68	12.68
Structure 2	U_1 - U_1	-118.23	5.78	-42.23			0.90	1.18	6.15	-44.97	0.00	0.00	Vehicle	Vehicle	-----	-212.15	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	11.77	11.77
	U_1 - U_2	-239.56	13.13	-93.46			0.90	1.18	13.98	-99.51	0.00	0.00	Vehicle	Vehicle	-----	-440.79	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.54	5.54
	U_1 - U_3	-350.44	22.08	-137.19			0.90	1.18	23.51	-146.06	0.00	0.00	Vehicle	Vehicle	-----	-645.46	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	99.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.98	4.98
	U_3 - U_4	-449.15	20.17	-180.71			0.90	1.18	21.47	-192.40	0.00	0.00	Vehicle	Vehicle	-----	-834.02	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.64	4.64
	U_4 - U_5	-453.26	43.60	-179.02			0.90	1.18	46.72	-216.16	0.00	0.00	Vehicle	Vehicle	-----	-909.24	15.19	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.64	4.64
	U_5 - U_6	-485.85	55.52	-207.29			0.90	1.18	59.11	-220.70	0.00	0.00	Vehicle	Vehicle	-----	-918.52	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.54	4.54
	U_6 - U_7	-428.85	65.79	-200.66			0.90	1.18	70.04	-213.64	0.00	0.00	Vehicle	Vehicle	-----	-835.23	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.27	4.27
	U_7 - U_8	-428.37	65.95	-175.36			0.90	1.18	70.21	-186.70	0.00	0.00	Vehicle	Vehicle	-----	-799.59	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.89	4.89
	U_8 - U_9	-335.42	75.63	-165.72			0.90	1.18	80.52	-176.44	0.00	0.00	Vehicle	Vehicle	-----	-665.42	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.48	4.48
	U_8 - U_{10}	-200.29	81.84	-113.51			0.90	1.18	87.14	-120.86	0.00	0.00	Vehicle	Vehicle	-----	-417.49	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.68	5.68
	U_{10} - U_{11}	-52.14	86.88	-90.25			0.90	1.18	92.51	-96.08	0.00	0.00	Vehicle	Vehicle	52.47	-192.69	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	10.41	10.41	7.46	7.46
	U_{11} - U_{12}	107.02	-39.58	-63.19			0.90	1.18	-42.14	-67.28	0.00	0.00	Vehicle	Vehicle	84.34	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{12} - U_{13}	259.33	83.18	-19.09			0.90	1.18	88.56	-20.33	0.00	0.00	Vehicle	Vehicle	452.26	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.93	9.93	-----	-----
	U_{13} - U_{14}	391.98	3.07	-16.32			0.90	1.18	3.27	-17.38	0.00	0.00	Vehicle	Vehicle	513.82	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	359.02	359.02	-----	-----
	U_{14} - U_{15}	439.40	11.58	-5.82			0.90	1.17	12.19	-6.13	0.00	0.00	Vehicle	Vehicle	587.07	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	92.31	92.31	-----	-----
	U_{15} - U_{16}	369.66	79.57	-29.92			0.90	1.17	83.71	-31.48	0.00	0.00	Vehicle	Vehicle	589.39	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	10.78	10.78	-----	-----
	U_{16} - U_{17}	271.39	77.08	-56.97			0.90	1.17	81.10	-59.94	0.00	0.00	Vehicle	Vehicle	458.23	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	9.53	9.53	-----	-----
	U_{17} - U_{18}	171.75	72.47	-79.03			0.90	1.17	76.24	-83.15	0.00	0.00	Vehicle	Vehicle	322.39	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	7.80	7.80	-----	-----
	U_{18} - U_{19}	72.78	66.94	-112.85			0.90	1.17	70.43	-118.73	0.00	0.00	Vehicle	Vehicle	186.17	-59.73	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	9.85	9.85	6.07	6.07
	U_{19} - U_{20}	-8.11	59.18	-141.98			0.90	1.17	62.26	-149.38	0.00	0.00	Vehicle	Vehicle	70.40	-204.74	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.30	13.30	4.58	4.58
	U_{20} - U_{21}	-60.13	27.81	-154.37			0.90	1.17	29.26	-162.41	0.00	0.00	Vehicle	Vehicle	-----	-289.30	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.78	4.78
	U_{21} - U_{22}	-82.18	38.71	-166.09			0.90	1.17	40.73	-174.74	0.00	0.00	Vehicle	Vehicle	-----	-334.00	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.32	4.32
	U_{22} - U_{23}	-82.40	39.91	-144.51			0.90	1.17	41.99	-152.04	0.00	0.00	Vehicle	Vehicle	-----	-304.78	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.96	4.96
	U_{23} - U_{24}	-65.94	49.42	-121.54			0.90	1.17	51.99	-127.87	0.00	0.00	Vehicle	Vehicle	-----	-251.96	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.03	6.03
	U_{24} - U_{25}	-215.12	58.93	-115.12			0.90	1.17	62.00	-121.12	0.00	0.00	Vehicle	Vehicle	57.25	-180.80	5.50	32.31	26.8125	1066.31	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.52	13.52	5.57	5.57
	U_{25} - U_{26}	55.02	-62.91	-101.22			0.90	1.17	-66.18	-106.49	0.00	0.00	Vehicle	Vehicle	-----	-66.91	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.60	6.60
	U_{26} - U_{27}	136.02	-48.50	-61.57			0.90	1.17	-51.03	-64.77	0.00	0.00	Vehicle	Vehicle	110.46	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{27} - U_{28}	216.87	-13.17	-42.24			0.90	1.17	-13.86	-44.44	0.00	0.00	Vehicle	Vehicle	263.91	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{28} - U_{29}	293.76	45.73	-22.79			0.90	1.17	48.11	-23.98	0.00	0.00	Vehicle	Vehicle	444.42	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	20.34	20.34	-----	-----
	U_{29} - U_{30}	358.11	12.51	-19.42			0.90	1.17	13.16	-20.43	0.00	0.00	Vehicle	Vehicle	482.65	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	91.67	91.67	-----	-----
	U_{30} - U_{31}	339.33	17.29	-8.94			0.90	1.18	18.41	-9.51	0.00	0.00	Vehicle	Vehicle	465.06	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	66.54	66.54	-----	-----
	U_{31} - U_{32}	251.17	86.83	-33.74			0.90	1.18	92.45	-35.93	0.00	0.00	Vehicle	Vehicle	446.71	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.60	9

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — LL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30 — LL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Lower Chord

Location	Member	D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0 - L_1	4.85	-1.93	-2.82			0.90	1.24	-2.15	-3.13	0.00	0.00	Vehicle	Vehicle	3.51	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
	L_1 - L_2	74.27	-17.03	72.13			0.90	1.24	80.30	-18.96	0.00	0.00	Vehicle	Vehicle	200.94	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.33**	**5.33**	-----	-----
	L_2 - L_3	97.77	-32.17	100.19			0.90	1.24	111.54	-35.81	0.00	0.00	Vehicle	Vehicle	272.10	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.12**	**5.12**	-----	-----
	L_3 - L_4	66.93	-46.01	115.74			0.90	1.24	128.86	-51.23	0.00	0.00	Vehicle	254.52	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.67**	**4.67**	-----	-----
	L_4 - L_5	-108.46	36.03	90.58			0.90	1.24	100.84	40.11	0.00	0.00	Vehicle	-----	-----	-88.85	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	-----	-----
	L_5 - L_6	-237.28	-76.80	59.45			0.90	1.24	66.18	-85.50	0.00	0.00	Vehicle	-----	-----	-419.61	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**4.94**	**4.94**	-----	-----
	L_6 - L_7	-362.27	-31.62	2.41			0.90	1.24	2.69	-35.20	0.00	0.00	Vehicle	-----	-----	-516.71	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	**16.55**	**16.55**	-----	-----
	L_7 - L_8	-478.66	-73.78	0.41			0.90	1.24	0.46	-82.14	0.00	0.00	Vehicle	-----	-----	-729.04	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	**8.78**	**8.78**	-----	-----
	L_8 - L_9	-477.02	-75.12	-25.36			0.90	1.20	-27.35	-81.00	0.00	0.00	Vehicle	-----	-----	-725.42	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	**8.92**	**8.92**	-----	-----
	L_9 - L_{10}	-301.43	-76.06	-8.02			0.90	1.20	-8.65	-82.01	0.00	0.00	Vehicle	-----	-----	-498.47	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	**7.85**	**7.85**	-----	-----
	L_{10} - L_{11}	-104.46	-67.22	31.96			0.90	1.20	34.46	-72.48	0.00	0.00	Vehicle	-----	-----	-230.01	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**5.46**	**5.46**	-----	-----
	L_{11} - L_{12}	97.11	-59.30	60.26			0.90	1.20	64.98	-63.93	0.00	0.00	Vehicle	210.71	-----	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.65**	**7.65**	-----	-----
	L_{12} - L_{13}	268.74	-51.49	101.87			0.90	1.20	109.84	-55.52	0.00	0.00	Vehicle	492.15	-----	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.43**	**6.43**	-----	-----
	L_{13} - L_{14}	405.66	-43.44	139.93			0.90	1.20	150.87	-46.84	0.00	0.00	Vehicle	723.48	-----	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.98**	**5.98**	-----	-----
	L_{14} - L_{15}	502.77	82.46	162.97			0.90	1.20	175.71	88.91	0.00	0.00	Vehicle	882.03	-----	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.10**	**6.10**	-----	-----
	L_{15} - L_{16}	469.25	-18.80	150.34			0.90	1.20	162.10	-20.26	0.00	0.00	Vehicle	820.75	-----	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.82**	**6.82**	-----	-----
	L_{16} - L_{17}	365.43	61.85	96.42			0.90	1.20	103.96	66.69	0.00	0.00	Vehicle	610.20	-----	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.19**	**8.19**	-----	-----
	L_{17} - L_{18}	248.67	26.06	64.41			0.90	1.20	69.44	28.09	0.00	0.00	Vehicle	413.55	-----	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.14**	**9.14**	-----	-----
	L_{18} - L_{19}	112.99	-5.01	14.53			0.90	1.20	15.67	-5.40	0.00	0.00	Vehicle	167.25	-----	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**24.86**	**24.86**	-----	-----
	L_{19} - L_{20}	-14.26	-33.34	14.65			0.90	1.20	15.80	-35.95	0.00	0.00	Vehicle	2.00	-65.26	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**32.72**	**32.72**	**11.39**	**11.39**
Structure 2	L_0 - L_1	15.26	0.72	-3.72			0.90	1.18	0.76	-3.96	0.00	0.00	Vehicle	Vehicle	20.83	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**810.79**	**810.79**	-----	-----
	L_1 - L_2	136.12	-5.51	38.88			0.90	1.18	41.39	-5.87	0.00	0.00	Vehicle	230.76	-----	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**12.01**	**12.01**	-----	-----
	L_2 - L_3	262.92	-11.31	83.11			0.90	1.18	88.49	-12.04	0.00	0.00	Vehicle	456.83	-----	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.06**	**8.06**	-----	-----
	L_3 - L_4	373.32	-14.96	128.79			0.90	1.18	137.12	-15.92	0.00	0.00	Vehicle	663.58	-----	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.83**	**6.83**	-----	-----
	L_4 - L_5	456.80	-30.57	149.84			0.90	1.18	159.53	-32.55	0.00	0.00	Vehicle	801.24	-----	-----	11.85	65.05	54.1000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.48**	**7.48**	-----	-----
	L_5 - L_6	489.63	-41.56	175.45			0.90	1.18	186.80	-44.25	0.00	0.00	Vehicle	879.35	-----	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.98**	**6.98**	-----	-----
	L_6 - L_7	479.27	-52.76	162.81			0.90	1.18	173.34	-56.18	0.00	0.00	Vehicle	848.39	-----	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**7.72**	**7.72**	-----	-----
	L_7 - L_8	330.30	-72.46	171.21			0.90	1.18	182.29	-77.15	0.00	0.00	Vehicle	666.36	-----	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**5.55**	**5.55**	-----	-----
	L_8 - L_9	189.19	85.61	127.89			0.90	1.18	136.16	91.15	0.00	0.00	Vehicle	422.95	-----	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**6.69**	**6.69**	-----	-----
	L_9 - L_{10}	39.95	-83.51	100.51			0.90	1.18	107.01	-88.91	0.00	0.00	Vehicle	191.05	-63.65	-----	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**7.68**	**7.68**	**8.63**	**8.63**
	L_{10} - L_{11}	-127.23	21.13	64.86			0.90	1.18	69.05	22.50	0.00	0.00	Vehicle	-----	-136.15	-----	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
	L_{11} - L_{12}	-282.51	-40.26	32.14			0.90	1.18	34.22	-42.86	0.00	0.00	Vehicle	-----	-422.98	-----	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.12**	**15.12**
	L_{12} - L_{13}	-426.62	-77.18	6.63			0.90	1.18	7.06	-82.18	0.00	0.00	Vehicle	-----	-661.44	-----	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.33**	**10.33**
	L_{13} - L_{14}	-536.34	-59.14	10.28			0.90	1.18	10.95	-62.96	0.00	0.00	Vehicle	-----	-779.09	-----	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.55**	**15.55**
	L_{14} - L_{15}	-537.64	-72.04	-23.19			0.90	1.17	-24.40	-75.80	0.00	0.00	Vehicle	-----	-797.47	-----	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.90**	**12.90**
	L_{15} - L_{16}	-475.53	-84.66	0.11			0.90	1.17	0.11	-89.09	0.00	0.00	Vehicle	-----	-733.98	-----	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**8.98**	**8.98**	-----	-----
	L_{16} - L_{17}	-384.21	-79.48	0.24			0.90	1.17	0.25	-83.62	0.00	0.00	Vehicle	-----	-608.18	-----	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**7.93**	**7.93**	-----	-----
	L_{17} - L_{18}	-281.70	-76.32	30.86			0.90	1.17	32.47	-80.29	0.00	0.00	Vehicle	-----	-470.60	-----	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.55**	**5.55**
	L_{18} - L_{19}	-174.99	-69.62	62.52			0.90	1.17	65.78	-73.25	0.00	0.00	Vehicle	-----	-322.71	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**5.44**	**5.44**
	L_{19} - L_{20}	-76.34	-62.93	74.92			0.90	1.17	78.82	-66.21	0.00	0.00	Vehicle	3.22	-185.32	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.58**	**9.58**	**7.51**	**7.51**
	L_{20} - L_{21}	4.59	-53.52	102.93			0.90	1.17	108.30	-56.30	0.00	0.00	Vehicle	146.76	-67.22	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.86**	**8.86**	**14.54**	**14.54**
	L_{21} - L_{22}	56.15	-10.66	100.56			0.90	1.17	105.80	-11.22	0.00	0.00	Vehicle	210.53	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.59**	**8.59**	-----	-----
	L_{22} - L_{23}	63.16	-28.49	128.69			0.90	1.17	135.39	-29.97	0.00	0.00	Vehicle	258.12	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.66**	**6.66**	-----	-----
	L_{23} - L_{24}	15.68	-37.97	106.03			0.90	1.17	111.55	-39.95	0.00	0.00	Vehicle	165.40	-31.55	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.51**	**8.51**	**20.78**	**20.78**
	L_{24} - L_{25}	-55.90	22.30	82.28			0.90	1.17	86.56	23.46	0.00	0.00	Vehicle	39.86	-42.17	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.49**	**8.49**	-----	-----
	L_{25} - L_{26}	-136.32	-22.75	61.03			0.90	1.17	64.21	-23.93	0.00	0.00	Vehicle	-----	-208.33	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**18.27**	**18.27**
	L_{26} - L_{27}	-217.71	-36.46	34.69			0.90	1.17	36.50	-38.36	0.00	0.00	Vehicle	-----	-332.89	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**13.29**	**13.29**
	L_{27} - L_{28}	-296.28	-82.90	18.60			0.90	1.17	19.57	-87.22	0.00	0.00	Vehicle	-----	-498.55	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**8.61**	**8.61**	-----	-----
	L_{28} - L_{29}	-364.24	-127.74	0.37			0.90	1.17	0.39	-134.39	0.00	0.00	Vehicle	-----	-648.22	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**6.78**	**6.78**	-----	-----
	L_{29} - L_{30}	-418.31	-86.35	37.07			0.90	1.17	39.00	-90.85	0.00	0.00	Vehicle	-----	-661.91	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.07**	**12.07**
	L_{30} - L_{31}	-350.66	-67.50	-15.78			0.90	1.18	-16.81	-71.87	0.00	0.00	Vehicle	-----	-549.29	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.20**	**16.20**
	L_{31} - L_{32}	-275.63	-38.67	-23.74			0.90	1.18	-25.28	-41.17	0.00	0.00	Vehicle	-----	-411.85	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**24.27**	**24.27**
	L_{32} - L_{33}	-178.96	-69.03	3.30			0.90	1.18	3.51	-73.50	0.00	0.00	Vehicle	-----	-328.20	7.48	43.48	35.9950	1434.68	131.71	10.8490	5.8542	16.68	32.74	-1209.70	18.00	0.96	4.10	0.63	4.10	0.63	16.

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1	U$_0$ - L$_0$	-77.20	-85.70	13.30			0.90	1.24	14.81	-95.41	0.00	0.00	Vehicle	Vehicle	------	-224.40	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**2.80**	**2.80**
		U$_0$ - L$_1$	-33.88	-58.73	11.96			0.90	1.24	13.31	-65.38	0.00	0.00	Vehicle	Vehicle	------	-129.03	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**4.87**	**4.87**
		U$_1$ - L$_2$	10.41	-38.84	11.27			0.90	1.24	12.55	-43.24	0.00	0.00	Vehicle	Vehicle	29.84	-42.69	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**33.26**	**33.26**
		U$_1$ - L$_3$	44.37	-29.68	11.85			0.90	1.24	13.19	-33.04	0.00	0.00	Vehicle	Vehicle	74.83	------	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	------	------	------	------	------	**29.07**	**29.07**
		U$_2$ - L$_4$	-16.71	0.02	-16.13			0.90	1.24	0.03	-17.95	0.00	0.00	Vehicle	Vehicle	------	-45.06	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**18.55**	**18.55**
		U$_3$ - L$_5$	-109.52	2.75	-69.81			0.90	1.24	3.06	-77.72	0.00	0.00	Vehicle	Vehicle	------	-243.41	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	**4.06**	**4.06**
		U$_4$ - L$_6$	-143.61	-0.96	-85.12			0.90	1.24	-1.07	-94.77	0.00	0.00	Vehicle	Vehicle	------	-309.89	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	45.00	Pass	8.89	12.00	Pass	------	------	------	**3.85**	**3.85**
		U$_5$ - L$_7$	-142.76	2.38	-87.36			0.90	1.24	2.65	-97.26	0.00	0.00	Vehicle	Vehicle	------	-312.02	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	45.00	Pass	10.00	12.00	Pass	------	------	------	**3.26**	**3.26**
		U$_6$ - L$_8$	-391.96	-84.12	-93.47			0.90	1.24	-93.65	-104.05	0.00	0.00	Vehicle	Vehicle	------	-644.82	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	**6.47**	**6.47**
		U$_7$ - L$_9$	-223.26	-79.07	8.43			0.90	1.20	9.09	-85.25	0.00	0.00	Vehicle	Vehicle	------	-401.06	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	45.00	Pass	9.60	12.00	Pass	------	------	------	**4.95**	**4.95**
		U$_8$ - L$_{10}$	-225.85	-79.72	-1.88			0.90	1.20	-2.03	-85.95	0.00	0.00	Vehicle	Vehicle	------	-405.35	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	**6.01**	**6.01**
		U$_9$ - L$_{11}$	-198.80	-71.10	5.89			0.90	1.20	6.35	-76.66	0.00	0.00	Vehicle	Vehicle	------	-358.10	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	**5.77**	**5.77**
		U$_{10}$ - L$_{12}$	-154.81	-65.30	8.48			0.90	1.20	9.14	-70.41	0.00	0.00	Vehicle	Vehicle	------	-292.78	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	**5.36**	**5.36**
		U$_{11}$ - L$_{13}$	-109.06	-52.16	16.68			0.90	1.20	17.99	-56.24	0.00	0.00	Vehicle	Vehicle	------	-214.89	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	**4.83**	**4.83**
		U$_{12}$ - L$_{14}$	-12.31	4.93	-10.17			0.90	1.20	-5.32	-10.96	0.00	0.00	Vehicle	Vehicle	------	-30.25	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**30.33**	**30.33**
		U$_{13}$ - L$_{15}$	-5.62	24.25	-48.47			0.90	1.20	26.15	-52.26	0.00	0.00	Vehicle	Vehicle	26.69	-75.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	**16.57**	**16.57**	**6.46**	**6.46**
		U$_{14}$ - L$_{16}$	-51.73	16.78	-56.86			0.90	1.20	18.09	-61.30	0.00	0.00	Vehicle	Vehicle	------	-146.95	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**4.72**	**4.72**
		U$_{17}$ - L$_{17}$	-127.32	9.95	-77.11			0.90	1.20	10.73	-83.14	0.00	0.00	Vehicle	Vehicle	------	-273.60	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	**3.42**	**3.42**
		U$_{18}$ - L$_{18}$	-159.94	9.18	-88.06			0.90	1.20	9.90	-94.95	0.00	0.00	Vehicle	Vehicle	------	-331.36	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	45.00	Pass	7.23	12.00	Pass	------	------	------	**3.85**	**3.85**
		U$_{19}$ - L$_{19}$	-191.17	7.78	-90.50			0.90	1.20	8.38	-97.58	0.00	0.00	Vehicle	Vehicle	------	-375.37	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	**4.36**	**4.36**
		U$_{20}$ - L$_{20}$	-212.33	7.78	-90.72			0.90	1.20	8.39	-97.81	0.00	0.00	Vehicle	Vehicle	------	-403.19	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	**3.78**	**3.78**
	Structure 2	U$_0$ - L$_0$	-206.69	-93.68	9.82			0.90	1.18	10.46	-99.74	0.00	0.00	Vehicle	Vehicle	------	-398.36	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	**4.37**	**4.37**
		U$_1$ - L$_1$	-188.76	-79.14	10.08			0.90	1.18	10.74	-84.26	0.00	0.00	Vehicle	Vehicle	------	-354.93	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	**5.74**	**5.74**
		U$_1$ - L$_2$	-155.92	-70.10	10.64			0.90	1.18	11.33	-74.64	0.00	0.00	Vehicle	Vehicle	------	-299.72	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	**5.61**	**5.61**
		U$_2$ - L$_3$	-134.58	-68.79	12.06			0.90	1.18	12.84	-73.24	0.00	0.00	Vehicle	Vehicle	------	-270.16	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	**4.33**	**4.33**
		U$_3$ - L$_4$	-64.49	-57.03	11.52			0.90	1.18	12.27	-60.72	0.00	0.00	Vehicle	Vehicle	------	-162.77	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**4.52**	**4.52**
		U$_4$ - L$_5$	-19.94	-46.24	23.90			0.90	1.18	25.44	-49.23	0.00	0.00	Vehicle	Vehicle	7.16	-89.92	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	**17.59**	**17.59**	**6.51**	**6.51**
		U$_5$ - L$_6$	40.08	-33.54	34.02			0.90	1.18	36.23	-35.71	0.00	0.00	Vehicle	Vehicle	99.20	------	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	**10.70**	**10.70**	------	------
		U$_6$ - L$_7$	-26.04	-0.95	-5.05			0.90	1.18	-1.02	-5.38	0.00	0.00	Vehicle	Vehicle	------	-40.84	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**58.47**	**58.47**
		U$_7$ - L$_8$	-125.25	18.13	-61.26			0.90	1.18	19.31	-65.22	0.00	0.00	Vehicle	Vehicle	------	-247.60	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	**6.21**	**6.21**
		U$_8$ - L$_9$	-174.53	6.71	-76.67			0.90	1.18	7.15	-81.63	0.00	0.00	Vehicle	Vehicle	------	-333.01	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	**6.33**	**6.33**
		U$_9$ - L$_{10}$	-202.66	-0.51	-86.68			0.90	1.18	-0.54	-92.28	0.00	0.00	Vehicle	Vehicle	------	-383.42	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	**6.24**	**6.24**
		U$_{10}$ - L$_{11}$	-229.53	2.35	-92.90			0.90	1.18	2.50	-98.91	0.00	0.00	Vehicle	Vehicle	------	-426.97	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	**5.41**	**5.41**
		U$_{11}$ - L$_{12}$	-250.85	1.68	-96.73			0.90	1.18	1.78	-102.99	0.00	0.00	Vehicle	Vehicle	------	-459.98	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	**5.35**	**5.35**
		U$_{12}$ - L$_{13}$	-223.32	9.57	-95.69			0.90	1.18	10.19	-101.88	0.00	0.00	Vehicle	Vehicle	------	-422.76	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	**4.58**	**4.58**
		U$_{13}$ - L$_{14}$	-343.31	-68.94	-83.71			0.90	1.18	-73.40	-89.12	0.00	0.00	Vehicle	Vehicle	------	-562.17	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	**7.95**	**7.95**
		U$_{14}$ - L$_{15}$	-123.14	-72.24	9.77			0.90	1.17	10.28	-76.01	0.00	0.00	Vehicle	Vehicle	------	-258.89	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	**7.46**	**7.46**
		U$_{15}$ - L$_{16}$	-156.70	-79.04	7.60			0.90	1.17	7.99	-83.15	0.00	0.00	Vehicle	Vehicle	------	-311.80	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	**6.13**	**6.13**
		U$_{16}$ - L$_{17}$	-147.91	-73.36	7.32			0.90	1.17	7.70	-77.18	0.00	0.00	Vehicle	Vehicle	------	-292.62	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	**6.16**	**6.16**
		U$_{17}$ - L$_{18}$	-142.22	-72.54	9.19			0.90	1.17	9.67	-76.32	0.00	0.00	Vehicle	Vehicle	------	-284.11	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	**5.70**	**5.70**
		U$_{18}$ - L$_{19}$	-111.48	-71.73	10.28			0.90	1.17	10.81	-75.47	0.00	0.00	Vehicle	Vehicle	------	-243.04	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	**5.30**	**5.30**
		U$_{19}$ - L$_{20}$	-76.55	-56.03	17.33			0.90	1.17	18.23	-58.95	0.00	0.00	Vehicle	Vehicle	------	-176.14	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	**5.07**	**5.07**
		U$_{20}$ - L$_{21}$	-44.31	-49.38	21.25			0.90	1.17	22.36	-51.95	0.00	0.00	Vehicle	Vehicle	------	-125.14	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**5.70**	**5.70**
		U$_{21}$ - L$_{22}$	-21.25	0.17	-4.06			0.90	1.17	0.18	-4.27	0.00	0.00	Vehicle	Vehicle	------	-33.17	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**75.14**	**75.14**
		U$_{22}$ - L$_{23}$	-39.07	26.34	-48.64			0.90	1.17	27.71	-51.18	0.00	0.00	Vehicle	Vehicle	------	-117.32	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	**5.89**	**5.89**
		U$_{23}$ - L$_{24}$	-74.84	16.37	-57.37			0.90	1.17	17.22	-60.36	0.00	0.00	Vehicle	Vehicle	------	-175.76	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	**4.98**	**4.98**
		U$_{24}$ - L$_{25}$	-103.27	12.59	-75.64			0.90	1.17	13.25	-79.58	0.00	0.00	Vehicle	Vehicle	------	-237.70	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	**5.13**	**5.13**
		U$_{25}$ - L$_{26}$	-120.22	11.88	-80.34			0.90	1.17	12.50	-84.53	0.00	0.00	Vehicle	Vehicle	------	-266.17	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	**5.41**	**5.41**
		U$_{26}$ - L$_{27}$	-123.93	9.81	-87.22			0.90	1.17	10.32	-91.76	0.00	0.00	Vehicle	Vehicle	------	-280.40	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	**5.44**	**5.44**
		U$_{27}$ - L$_{28}$	-135.60	8.92	-94.37			0.90	1.17	9.39	-99.28	0.00	0.00	Vehicle	Vehicle	------	-305.34	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	**5.34**	**5.34**
		U$_{28}$ - L$_{29}$	-116.87	5.22	-87.98			0.90	1.17	5.49	-92.56	0.00	0.00	Vehicle	Vehicle	------	-272.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	**6.19**	**6.19**
		U$_{29}$ - L$_{30}$	-262.02	-77.10	-74.68			0.90	1.18	-79.51	-82.09	0.00	0.00	Vehicle	Vehicle	------	-447.34	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	**9.62**	**9.62**
		U$_{30}$ - L$_{31}$	-156.38	-77.99	12.30			0.90	1.18	13.10	-83.03	0.00	0.00	Vehicle	Vehicle	------	-311.23	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	**6.43**	**6.43**
		U$_{31}$ - L$_{32}$	-185.51	-86.67	8.55			0.90	1.18	9.10	-92.28	0.00	0.00	Vehicle	Vehicle	------	-361.12	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	**6.68**	**6.68**
		U$_{32}$ - L$_{33}$	-186.18	-82.44	7.29			0.90	1.18	7.76	-87.78	0.00	0.00	Vehicle	Vehicle	------	-356.15	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	**6.59**	**6.59**
		U$_{33}$ - L$_{34}$	-167.23	-81.00	2.53			0.90	1.18	2.70	-86.24	0.00	0.00	Vehicle	Vehicle	------	-329.51	2.42	38.13	35.7105	1258.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals	Structure 1																																													
	U_1 - L_1	87.33	64.55	-18.66			0.90	1.24	71.87	-20.78	0.00	0.00	Vehicle	Vehicle	206.95	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
	U_1 - L_2	23.35	65.16	1.68			0.90	1.24	72.54	1.87	0.00	0.00	Vehicle	Vehicle	124.65	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.57**	**5.57**	-----	-----
	U_3 - L_3	-37.85	36.40	-19.68			0.90	1.24	40.53	-21.91	0.00	0.00	Vehicle	Vehicle	3.48	-77.69	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**11.49**	**11.49**	**13.53**	**13.53**
	U_3 - L_4	-92.19	-17.56	-52.71			0.90	1.24	-19.55	-58.68	0.00	0.00	Vehicle	Vehicle	-----	-196.13	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**4.16**	**4.16**	-----	-----
	U_4 - L_4	143.37	12.20	12.85			0.90	1.24	14.30	13.58	0.00	0.00	Vehicle	Vehicle	204.97	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**26.65**	**26.65**	-----	-----
	U_4 - L_5	177.90	93.91	-3.22			0.90	1.24	104.55	-3.59	0.00	0.00	Vehicle	Vehicle	367.18	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.52**	**4.52**	-----	-----
	U_5 - L_6	184.42	105.20	0.17			0.90	1.24	117.12	0.19	0.00	0.00	Vehicle	Vehicle	392.00	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.98**	**3.98**	-----	-----
	U_6 - L_7	180.02	97.33	-1.15			0.90	1.24	108.36	-1.28	0.00	0.00	Vehicle	Vehicle	374.88	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.34**	**4.34**	-----	-----
	U_8 - L_9	268.98	87.50	-9.75			0.90	1.20	94.34	-10.51	0.00	0.00	Vehicle	Vehicle	472.32	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.35**	**7.35**	-----	-----
	U_9 - L_{10}	278.85	83.52	-8.86			0.90	1.20	90.06	-9.56	0.00	0.00	Vehicle	Vehicle	479.58	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
	U_{10} - L_{11}	285.04	90.77	2.28			0.90	1.20	97.87	2.46	0.00	0.00	Vehicle	Vehicle	497.78	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**6.39**	**6.39**	-----	-----
	U_{11} - L_{12}	250.60	89.77	-9.58			0.90	1.20	96.79	-10.33	0.00	0.00	Vehicle	Vehicle	451.60	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.44**	**5.44**	-----	-----
	U_{12} - L_{13}	189.65	74.25	-22.95			0.90	1.20	80.05	-24.75	0.00	0.00	Vehicle	Vehicle	350.61	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**5.51**	**5.51**	-----	-----
	U_{13} - L_{14}	123.32	53.43	-30.56			0.90	1.20	57.60	-32.95	0.00	0.00	Vehicle	Vehicle	235.20	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
	U_{13} - L_{14}	-24.41	36.18	-46.62			0.90	1.20	39.00	-50.26	0.00	0.00	Vehicle	Vehicle	18.97	-97.08	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**11.59**	**11.59**	**6.05**	**6.05**
	U_{14} - L_{15}	48.53	66.49	-25.08			0.90	1.20	71.69	-27.04	0.00	0.00	Vehicle	Vehicle	156.29	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U_{15} - L_{16}	146.59	84.42	-7.67			0.90	1.20	91.02	-8.27	0.00	0.00	Vehicle	Vehicle	308.89	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.15**	**4.15**	-----	-----
	U_{16} - L_{17}	182.46	92.09	-11.72			0.90	1.20	99.29	-12.64	0.00	0.00	Vehicle	Vehicle	366.28	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U_{18} - L_{18}	223.82	100.61	-9.82			0.90	1.20	108.48	-10.58	0.00	0.00	Vehicle	Vehicle	431.99	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.48**	**4.48**	-----	-----
	U_{20} - L_{19}	232.72	90.71	-8.21			0.90	1.20	97.80	-8.86	0.00	0.00	Vehicle	Vehicle	429.68	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.88**	**4.88**	-----	-----
	Structure 2																																													
	U_2 - L_1	213.54	64.77	-10.48			0.90	1.18	68.96	-11.16	0.00	0.00	Vehicle	Vehicle	367.25	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
	U_2 - L_2	200.48	89.47	-12.31			0.90	1.18	95.26	-13.10	0.00	0.00	Vehicle	Vehicle	384.47	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
	U_3 - L_3	172.81	80.22	-13.78			0.90	1.18	85.41	-14.67	0.00	0.00	Vehicle	Vehicle	335.69	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
	U_3 - L_4	147.16	81.10	-10.98			0.90	1.18	86.35	-11.69	0.00	0.00	Vehicle	Vehicle	303.57	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**4.98**	**4.98**	-----	-----
	U_5 - L_5	49.10	61.28	-28.80			0.90	1.18	65.24	-30.67	0.00	0.00	Vehicle	Vehicle	148.65	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	67.41	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.80**	**5.80**	-----	-----
	U_6 - L_6	2.96	56.16	-37.63			0.90	1.18	59.79	-40.06	0.00	0.00	Vehicle	Vehicle	81.59	-48.23	0.00	16.85	16.8486	556.00	131.71	13.1356	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.10**	**7.10**	**8.20**	**8.20**
	U_7 - L_7	-85.74	34.06	-58.15			0.90	1.18	36.26	-61.91	0.00	0.00	Vehicle	Vehicle	-----	-191.95	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.42**	**4.42**
	U_8 - L_7	140.30	65.53	-26.76			0.90	1.18	69.77	-28.49	0.00	0.00	Vehicle	Vehicle	273.08	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.64**	**6.64**	-----	-----
	U_8 - L_8	204.22	87.59	-12.87			0.90	1.18	93.25	-13.70	0.00	0.00	Vehicle	Vehicle	386.71	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U_9 - L_9	234.87	93.88	-7.64			0.90	1.18	99.96	-8.14	0.00	0.00	Vehicle	Vehicle	435.27	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U_{11} - L_{10}	263.10	105.94	1.26			0.90	1.18	112.79	1.35	0.00	0.00	Vehicle	Vehicle	488.66	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.15**	**5.15**	-----	-----
	U_{12} - L_{11}	274.02	101.73	1.85			0.90	1.18	108.31	1.97	0.00	0.00	Vehicle	Vehicle	497.03	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.27**	**5.27**	-----	-----
	U_{13} - L_{12}	254.94	100.13	-10.52			0.90	1.18	106.61	-11.20	0.00	0.00	Vehicle	Vehicle	470.01	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.90**	**4.90**	-----	-----
	U_{13} - L_{13}	217.71	90.53	-11.05			0.90	1.18	96.39	-11.77	0.00	0.00	Vehicle	Vehicle	408.32	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.81**	**5.81**	-----	-----
	U_{14} - L_{15}	110.05	75.65	-10.28			0.90	1.17	79.59	-10.81	0.00	0.00	Vehicle	Vehicle	246.53	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
	U_{15} - L_{16}	132.30	77.47	-10.96			0.90	1.17	81.51	-11.53	0.00	0.00	Vehicle	Vehicle	277.95	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.36**	**6.36**	-----	-----
	U_{17} - L_{17}	172.89	87.71	-7.70			0.90	1.17	92.28	-8.10	0.00	0.00	Vehicle	Vehicle	344.72	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
	U_{17} - L_{18}	160.19	81.93	-9.17			0.90	1.17	86.20	-9.65	0.00	0.00	Vehicle	Vehicle	320.31	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.69**	**5.69**	-----	-----
	U_{19} - L_{19}	152.35	85.33	-10.18			0.90	1.17	89.77	-10.71	0.00	0.00	Vehicle	Vehicle	314.76	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.55**	**5.55**	-----	-----
	U_{20} - L_{20}	120.69	74.86	-18.13			0.90	1.17	78.76	-19.08	0.00	0.00	Vehicle	Vehicle	259.28	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.13**	**6.13**	-----	-----
	U_{20} - L_{21}	76.08	66.29	-26.18			0.90	1.17	69.75	-27.54	0.00	0.00	Vehicle	Vehicle	189.58	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.04**	**5.04**	-----	-----
	U_{22} - L_{22}	31.46	50.23	-37.09			0.90	1.17	52.85	-39.02	0.00	0.00	Vehicle	Vehicle	109.59	-9.84	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.50**	**7.50**	**9.15**	**9.15**
	U_{22} - L_{23}	24.30	48.73	-39.61			0.90	1.17	51.27	-41.67	0.00	0.00	Vehicle	Vehicle	98.23	-22.59	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.87**	**7.87**	**8.33**	**8.33**
	U_{23} - L_{23}	72.26	65.97	-28.83			0.90	1.17	69.40	-30.34	0.00	0.00	Vehicle	Vehicle	184.16	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.12**	**5.12**	-----	-----
	U_{23} - L_{24}	112.13	77.35	-18.27			0.90	1.17	82.01	-19.22	0.00	0.00	Vehicle	Vehicle	252.38	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
	U_{25} - L_{25}	127.84	92.34	-9.08			0.90	1.17	97.15	-9.55	0.00	0.00	Vehicle	Vehicle	292.49	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
	U_{26} - L_{26}	132.67	92.57	-12.28			0.90	1.17	97.40	-12.92	0.00	0.00	Vehicle	Vehicle	299.08	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
	U_{26} - L_{27}	137.94	95.50	-10.58			0.90	1.17	100.48	-11.13	0.00	0.00	Vehicle	Vehicle	309.94	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
	U_{28} - L_{27}	137.94	95.50	-10.58			0.90	1.17	100.48	-11.13	0.00	0.00	Vehicle	Vehicle	289.04	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
	U_{28} - L_{29}	102.75	82.67	-4.89			0.90	1.17	86.98	-5.14	0.00	0.00	Vehicle	Vehicle	246.65	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
	U_{30} - L_{31}	140.07	72.43	-12.67			0.90	1.18	77.12	-13.49	0.00	0.00	Vehicle	Vehicle	282.34	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
	U_{31} - L_{32}	167.39	82.47	-14.00			0.90	1.18	87.80	-14.91	0.00	0.00	Vehicle	Vehicle	331.75	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.95**	**6.95**	-----	-----
	U_{32} - L_{33}	202.10	88.09	-8.20			0.90	1.18	93.79	-8.73	0.00	0.00	Vehicle	Vehicle	384.66	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.85**	**6.85**	-----	-----
	U_{33} - L_{34}	201.91	93.59	-5.07			0.90	1.18	99.64	-5.40	0.00	0.00	Vehicle	Vehicle	392.02	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.45**	**6.45**	-----	-----
	U_{35} - L_{35}	180.76	86.55	-9.39			0.90	1.18	92.14	-9.99	0.00	0.00	Vehicle	Vehicle	354.78	-----	0.00

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors DL Factor: 1.30 Pedestrian Load Factors DL Factor: 1.30
Condition: As-Built Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: Cc	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.64	11.11	-75.67			0.75	1.24	10.31	-70.21	0.00	0.00	Vehicle	Vehicle	-----	-159.69	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	7.30	7.30
		U_1 - U_2	-61.57	27.94	-127.83			0.75	1.24	25.92	-118.60	0.00	0.00	Vehicle	Vehicle	-----	-234.21	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.25	4.25
		U_2 - U_3	-26.99	38.61	-139.57			0.75	1.24	35.82	-129.48	0.00	0.00	Vehicle	Vehicle	11.48	-203.42	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	19.49	19.49	4.16	4.16
		U_3 - U_4	32.92	-46.47	-121.53			0.75	1.24	-43.11	-112.75	0.00	0.00	Vehicle	Vehicle	-----	-103.77	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.31	5.31
		U_4 - U_5	34.77	47.02	-70.62			0.75	1.24	43.62	-65.52	0.00	0.00	Vehicle	Vehicle	101.91	-39.97	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.59	14.59	9.16	9.16
		U_5 - U_6	124.13	-70.32	-63.01			0.75	1.24	-58.46	-65.24	0.00	0.00	Vehicle	Vehicle	85.37	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_6 - U_7	223.19	-2.46	-36.64			0.75	1.24	-2.28	-33.99	0.00	0.00	Vehicle	Vehicle	287.18	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_7 - U_8	331.76	-11.92	1.42			0.75	1.24	1.32	-11.05	0.00	0.00	Vehicle	Vehicle	433.00	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	591.29	591.29	-----	-----
		U_8 - U_9	267.61	36.75	-26.85			0.75	1.20	33.02	-24.12	0.00	0.00	Vehicle	Vehicle	390.83	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	20.33	20.33	-----	-----
		U_9 - U_{10}	89.12	50.94	-66.03			0.75	1.20	45.77	-59.32	0.00	0.00	Vehicle	Vehicle	175.35	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.55	13.55	-----	-----
		U_{10} - U_{11}	-76.81	45.60	-103.45			0.75	1.20	40.97	-92.95	0.00	0.00	Vehicle	Vehicle	-----	-220.68	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.60	5.60
		U_{11} - U_{12}	-230.69	39.66	-141.46			0.75	1.20	35.63	-127.10	0.00	0.00	Vehicle	Vehicle	-----	-465.12	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.58	4.58
		U_{12} - U_{13}	-341.88	36.70	-165.05			0.75	1.20	32.98	-148.29	0.00	0.00	Vehicle	Vehicle	-----	-637.22	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.37	5.37
		U_{13} - U_{14}	-421.62	-83.33	-174.98			0.75	1.20	-74.87	-157.22	0.00	0.00	Vehicle	Vehicle	-----	-752.50	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.76	5.76
		U_{14} - U_{15}	-422.51	30.49	-145.18			0.75	1.20	27.40	-130.44	0.00	0.00	Vehicle	Vehicle	-----	-718.83	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.94	6.94
		U_{15} - U_{16}	-439.94	-105.94	-149.00			0.75	1.20	-95.18	-133.88	0.00	0.00	Vehicle	Vehicle	-----	-745.97	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.63	6.63
		U_{16} - U_{17}	-422.43	-96.17	-144.97			0.75	1.20	-86.41	-130.26	0.00	0.00	Vehicle	Vehicle	-----	-718.48	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.95	6.95
		U_{17} - U_{18}	-340.94	-128.01	-88.61			0.75	1.20	-79.61	-115.01	0.00	0.00	Vehicle	Vehicle	-----	-592.74	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.48	5.48
		U_{18} - U_{19}	-247.15	-4.24	-46.44			0.75	1.20	-3.81	-41.73	0.00	0.00	Vehicle	Vehicle	-----	-375.54	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.31	10.31
		U_{19} - U_{20}	-131.71	-31.68	-16.33			0.75	1.20	-14.68	-28.47	0.00	0.00	Vehicle	Vehicle	-----	-208.23	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	19.18	19.18
	Structure 2	U_0 - U_1	-131.51	7.98	-46.56			0.75	1.18	7.08	-41.31	0.00	0.00	Vehicle	Vehicle	-----	-224.66	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.49	12.49
		U_1 - U_2	-247.03	17.10	-97.45			0.75	1.18	15.17	-86.46	0.00	0.00	Vehicle	Vehicle	-----	-433.54	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.30	6.30
		U_2 - U_3	-347.15	26.50	-145.09			0.75	1.18	23.51	-128.73	0.00	0.00	Vehicle	Vehicle	-----	-618.65	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.67	5.67
		U_3 - U_4	-437.07	-128.58	-175.22			0.75	1.18	-114.08	-155.46	0.00	0.00	Vehicle	Vehicle	-----	-770.28	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.82	5.82
		U_4 - U_5	-468.70	45.45	-185.18			0.75	1.18	40.32	-164.30	0.00	0.00	Vehicle	Vehicle	-----	-822.91	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.20	6.20
		U_5 - U_6	-471.03	-106.95	-185.43			0.75	1.18	-94.89	-164.52	0.00	0.00	Vehicle	Vehicle	-----	-826.22	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.18	6.18
		U_6 - U_7	-414.41	59.95	-177.22			0.75	1.18	53.19	-157.24	0.00	0.00	Vehicle	Vehicle	-----	-743.14	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.90	5.90
		U_7 - U_8	-413.45	60.04	-142.47			0.75	1.18	53.27	-126.40	0.00	0.00	Vehicle	Vehicle	-----	-701.81	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.34	7.34
		U_8 - U_9	-321.98	62.50	-112.71			0.75	1.18	55.46	-100.00	0.00	0.00	Vehicle	Vehicle	-----	-548.58	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.04	8.04
		U_9 - U_{10}	-182.11	67.49	-101.19			0.75	1.18	59.88	-89.78	0.00	0.00	Vehicle	Vehicle	-----	-353.45	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	7.84	7.84
		U_{10} - U_{11}	-32.58	73.26	-78.65			0.75	1.18	65.00	-69.78	0.00	0.00	Vehicle	Vehicle	42.15	-133.07	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.51	14.51	10.56	10.56
		U_{11} - U_{12}	133.59	-23.19	-42.33			0.75	1.18	-20.58	-37.56	0.00	0.00	Vehicle	Vehicle	146.92	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	289.99	26.96	-24.31			0.75	1.18	23.92	-21.56	0.00	0.00	Vehicle	Vehicle	408.08	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	35.50	35.50	-----	-----
		U_{13} - U_{14}	434.76	-2.63	-20.23			0.75	1.18	-2.33	-17.95	0.00	0.00	Vehicle	Vehicle	562.16	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{14} - U_{15}	474.45	45.66	-12.36			0.75	1.17	40.03	-10.83	0.00	0.00	Vehicle	Vehicle	668.82	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	27.23	27.23	-----	-----
		U_{15} - U_{16}	383.28	50.75	-40.54			0.75	1.17	44.49	-35.55	0.00	0.00	Vehicle	Vehicle	556.10	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	19.98	19.98	-----	-----
		U_{16} - U_{17}	279.57	54.56	-63.15			0.75	1.17	47.84	-55.37	0.00	0.00	Vehicle	Vehicle	425.63	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	15.98	15.98	-----	-----
		U_{17} - U_{18}	172.63	52.77	-83.29			0.75	1.17	46.26	-73.03	0.00	0.00	Vehicle	Vehicle	284.56	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.83	12.83	-----	-----
		U_{18} - U_{19}	74.36	50.88	-111.86			0.75	1.17	44.61	-98.07	0.00	0.00	Vehicle	Vehicle	154.66	-30.82	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.51	15.51	7.36	7.36
		U_{19} - U_{20}	-10.01	44.21	-127.60			0.75	1.17	38.76	-111.87	0.00	0.00	Vehicle	Vehicle	37.37	-158.45	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.42	21.42	6.10	6.10
		U_{20} - U_{21}	-62.06	23.47	-138.60			0.75	1.17	20.58	-121.52	0.00	0.00	Vehicle	Vehicle	-----	-238.65	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.38	6.38
		U_{21} - U_{22}	-88.74	32.13	-143.17			0.75	1.17	28.17	-125.52	0.00	0.00	Vehicle	Vehicle	-----	-278.53	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U_{22} - U_{23}	-88.92	32.27	-114.02			0.75	1.17	28.30	-99.97	0.00	0.00	Vehicle	Vehicle	-----	-245.55	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.48	7.48
		U_{23} - U_{24}	-76.67	-96.18	-101.42			0.75	1.17	-84.33	-88.92	0.00	0.00	Vehicle	Vehicle	-----	-215.26	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.55	8.55
		U_{24} - U_{25}	-37.64	46.00	-99.10			0.75	1.17	40.33	-86.89	0.00	0.00	Vehicle	Vehicle	3.50	-161.89	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.27	21.27	7.54	7.54
		U_{25} - U_{26}	37.23	-80.97	-86.96			0.75	1.17	-70.99	-76.24	0.00	0.00	Vehicle	Vehicle	-----	-50.72	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.98	8.98
		U_{26} - U_{27}	128.02	-57.23	-57.37			0.75	1.17	-50.17	-50.30	0.00	0.00	Vehicle	Vehicle	101.19	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	233.68	-42.98	-44.94			0.75	1.17	-37.69	-39.40	0.00	0.00	Vehicle	Vehicle	254.79	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{28} - U_{29}	337.65	38.58	-22.83			0.75	1.17	33.83	-20.01	0.00	0.00	Vehicle	Vehicle	482.92	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	27.63	27.63	-----	-----
		U_{29} - U_{30}	437.10	10.82	-15.14			0.75	1.17	9.49	-13.27	0.00	0.00	Vehicle	Vehicle	580.56	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	118.80	118.80	-----	-----
		U_{30} - U_{31}	420.53	52.01	-17.81			0.75	1.18	46.14	-15.80	0.00	0.00	Vehicle	Vehicle	606.67	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	24.79	24.79	-----	-----
		U_{31} - U_{32}	300.69	64.59	-45.24			0.75	1.18	57.31	-40.14	0.00	0.00	Vehicle	Vehicle	465.40	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	14.63	14.63	-----	-----
		U_{32} - U_{33}	161.60	65.35	-74.73			0.75	1.18	57.98	-

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.49	-2.89	-5.84			0.75	1.24	-2.68	-5.41	0.00	0.00	Vehicle	Vehicle	7.55	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	50.81	-16.28	59.00			0.75	1.24	54.73	-15.10	0.00	0.00	Vehicle	Vehicle	137.21	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	8.25	8.25	-----	-----
		L$_2$ - L$_3$	61.22	-27.75	83.28			0.75	1.24	77.26	-25.75	0.00	0.00	Vehicle	Vehicle	180.03	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	7.86	7.86	-----	-----
		L$_3$ - L$_4$	25.70	-37.67	84.98			0.75	1.24	78.84	-34.95	0.00	0.00	Vehicle	Vehicle	135.91	-12.02	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	8.15	8.15	16.84	16.84
		L$_4$ - L$_5$	-118.45	15.24	85.98			0.75	1.24	79.77	14.14	0.00	0.00	Vehicle	Vehicle	-----	-135.61	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	-----	-----
		L$_5$ - L$_6$	-217.80	-5.78	59.90			0.75	1.24	55.58	-5.36	0.00	0.00	Vehicle	Vehicle	-----	-290.11	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	82.41	82.41
		L$_6$ - L$_7$	-320.36	-27.86	11.82			0.75	1.24	10.96	-25.85	0.00	0.00	Vehicle	Vehicle	-----	-450.06	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	24.17	24.17
		L$_7$ - L$_8$	-417.18	-57.42	-0.44			0.75	1.24	-0.40	-53.27	0.00	0.00	Vehicle	Vehicle	-----	-611.59	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	14.69	14.69
		L$_8$ - L$_9$	-410.79	-45.18	-51.36			0.75	1.20	-40.59	-46.14	0.00	0.00	Vehicle	Vehicle	-----	-594.01	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	17.09	17.09
		L$_9$ - L$_{10}$	-247.75	-53.38	-0.16			0.75	1.20	-0.15	-47.96	0.00	0.00	Vehicle	Vehicle	-----	-384.42	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	14.55	14.55
		L$_{10}$ - L$_{11}$	-65.21	-52.12	33.28			0.75	1.20	29.90	-46.83	0.00	0.00	Vehicle	Vehicle	-----	-145.66	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	9.29	9.29
		L$_{11}$ - L$_{12}$	101.88	-46.58	66.81			0.75	1.20	60.03	-41.85	0.00	0.00	Vehicle	Vehicle	210.48	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	8.20	8.20	-----	-----
		L$_{12}$ - L$_{13}$	264.09	-40.48	106.99			0.75	1.20	96.13	-36.37	0.00	0.00	Vehicle	Vehicle	468.28	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	7.39	7.39	-----	-----
		L$_{13}$ - L$_{14}$	373.73	-34.62	131.43			0.75	1.20	118.09	-31.11	0.00	0.00	Vehicle	Vehicle	639.37	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	7.91	7.91	-----	-----
		L$_{14}$ - L$_{15}$	476.34	96.11	168.40			0.75	1.20	151.31	86.35	0.00	0.00	Vehicle	Vehicle	815.94	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	7.26	7.26	-----	-----
		L$_{15}$ - L$_{16}$	459.97	60.00	157.00			0.75	1.20	141.06	53.91	0.00	0.00	Vehicle	Vehicle	781.34	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	7.90	7.90	-----	-----
		L$_{16}$ - L$_{17}$	381.37	73.84	111.62			0.75	1.20	100.29	66.34	0.00	0.00	Vehicle	Vehicle	626.16	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	8.33	8.33	-----	-----
		L$_{17}$ - L$_{18}$	288.98	49.84	76.17			0.75	1.20	68.44	44.78	0.00	0.00	Vehicle	Vehicle	464.64	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	8.69	8.69	-----	-----
		L$_{18}$ - L$_{19}$	176.20	21.06	20.52			0.75	1.20	18.92	18.44	0.00	0.00	Vehicle	Vehicle	253.65	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	17.25	17.25	-----	-----
		L$_{19}$ - L$_{20}$	69.74	-10.46	12.35			0.75	1.20	11.09	-9.40	0.00	0.00	Vehicle	Vehicle	105.09	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	39.02	39.02	-----	-----
		L$_0$' - L$_1$'	24.59	-1.20	-3.54			0.75	1.18	-1.06	-3.14	0.00	0.00	Vehicle	Vehicle	30.59	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$' - L$_2$'	138.59	-8.87	49.53			0.75	1.18	43.95	-7.87	0.00	0.00	Vehicle	Vehicle	237.30	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	11.26	11.26	-----	-----
		L$_2$' - L$_3$'	252.83	-18.54	93.88			0.75	1.18	83.29	-16.45	0.00	0.00	Vehicle	Vehicle	436.96	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	8.68	8.68	-----	-----
		L$_3$' - L$_4$'	352.30	-27.96	133.83			0.75	1.18	118.74	-24.80	0.00	0.00	Vehicle	Vehicle	612.35	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	8.06	8.06	-----	-----
		L$_4$' - L$_5$'	447.17	-38.66	144.48			0.75	1.18	128.19	-34.30	0.00	0.00	Vehicle	Vehicle	747.96	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	9.38	9.38	-----	-----
		L$_5$' - L$_6$'	477.93	-46.98	167.31			0.75	1.18	148.45	-41.68	0.00	0.00	Vehicle	Vehicle	814.29	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	8.86	8.86	-----	-----
		L$_6$' - L$_7$'	482.68	-55.04	143.76			0.75	1.18	127.55	-48.84	0.00	0.00	Vehicle	Vehicle	793.30	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	10.47	10.47	-----	-----
		L$_7$' - L$_8$'	336.61	91.08	137.40			0.75	1.18	121.90	80.81	0.00	0.00	Vehicle	Vehicle	596.07	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	8.24	8.24	-----	-----
		L$_8$' - L$_9$'	196.05	68.18	119.87			0.75	1.18	106.35	60.49	0.00	0.00	Vehicle	Vehicle	393.12	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	8.50	8.50	-----	-----
		L$_9$' - L$_{10}$	45.60	47.33	94.23			0.75	1.18	83.61	42.00	0.00	0.00	Vehicle	Vehicle	167.96	-----	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	-----	-----	6.72	-----	-----	6.72	-----	-----	9.76	9.76	-----	-----
		L$_{10}$ - L$_{11}$	-126.26	21.26	58.30			0.75	1.18	51.72	18.86	0.00	0.00	Vehicle	Vehicle	-----	-139.61	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	25.52	25.52
		L$_{11}$ - L$_{12}$	-284.87	-18.63	37.49			0.75	1.18	33.26	-16.53	0.00	0.00	Vehicle	Vehicle	-----	-391.82	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	39.07	39.07
		L$_{12}$ - L$_{13}$	-433.79	-34.27	11.54			0.75	1.18	10.24	-30.41	0.00	0.00	Vehicle	Vehicle	-----	-603.46	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	27.68	27.68
		L$_{13}$ - L$_{14}$	-552.65	-51.50	21.39			0.75	1.18	18.97	-45.69	0.00	0.00	Vehicle	Vehicle	-----	-777.84	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	21.07	21.07
		L$_{14}$ - L$_{15}$	-573.48	-42.02	-23.36			0.75	1.17	-20.48	-36.84	0.00	0.00	Vehicle	Vehicle	-----	-793.41	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	25.56	25.56
		L$_{15}$ - L$_{16}$	-492.94	-47.47	6.30			0.75	1.17	5.52	-41.62	0.00	0.00	Vehicle	Vehicle	-----	-694.93	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	18.80	18.80
		L$_{16}$ - L$_{17}$	-395.30	-58.54	10.59			0.75	1.17	9.28	-51.32	0.00	0.00	Vehicle	Vehicle	-----	-580.61	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	12.71	12.71
		L$_{17}$ - L$_{18}$	-288.04	-57.86	33.29			0.75	1.17	29.18	-50.73	0.00	0.00	Vehicle	Vehicle	-----	-440.41	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	8.66	8.66
		L$_{18}$ - L$_{19}$	-175.85	-55.56	46.86			0.75	1.17	41.09	-48.71	0.00	0.00	Vehicle	Vehicle	-----	-291.92	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	8.17	8.17
		L$_{19}$ - L$_{20}$	-78.08	-51.13	82.87			0.75	1.17	72.65	-44.82	0.00	0.00	Vehicle	Vehicle	-----	-159.77	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	11.06	11.06
	Structure 2	L$_{20}$ - L$_{21}$	7.55	-45.04	113.49			0.75	1.17	99.50	-39.49	0.00	0.00	Vehicle	Vehicle	139.17	-41.52	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	9.62	9.62	20.81	20.81
		L$_{21}$ - L$_{22}$	59.07	-24.55	104.61			0.75	1.17	91.72	-21.53	0.00	0.00	Vehicle	Vehicle	196.02	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.87	9.87	-----	-----
		L$_{22}$ - L$_{23}$	71.98	73.91	136.12			0.75	1.17	119.34	64.80	0.00	0.00	Vehicle	Vehicle	248.72	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	7.48	7.48	-----	-----
		L$_{23}$ - L$_{24}$	33.55	50.77	116.21			0.75	1.17	101.88	44.51	0.00	0.00	Vehicle	Vehicle	176.06	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.14	9.14	-----	-----
		L$_{24}$ - L$_{25}$	-45.09	50.32	95.94			0.75	1.17	84.12	44.12	0.00	0.00	Vehicle	Vehicle	50.74	-1.26	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	8.61	8.61	-----	-----
		L$_{25}$ - L$_{26}$	-134.94	22.15	66.97			0.75	1.17	58.71	19.42	0.00	0.00	Vehicle	Vehicle	-----	-150.18	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{26}$ - L$_{27}$	-245.90	-8.54	48.97			0.75	1.17	42.93	-7.49	0.00	0.00	Vehicle	Vehicle	-----	-329.40	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	64.34	64.34
		L$_{27}$ - L$_{28}$	-351.78	-29.37	29.57			0.75	1.17	25.93	-25.75	0.00	0.00	Vehicle	Vehicle	-----	-490.79	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	27.02	27.02
		L$_{28}$ - L$_{29}$	-458.29	-37.02	3.61			0.75	1.17	3.16	-32.46	0.00	0.00	Vehicle	Vehicle	-----	-637.98	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	25.18	25.18
		L$_{29}$ - L$_{30}$	-542.18	-50.25	17.06			0.75	1.17	14.96	-44.06	0.00	0.00	Vehicle	Vehicle	-----	-762.11	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	22.09	22.09
		L$_{30}$ - L$_{31}$	-514.03	-51.77	-20.70			0.75	1.18	-18.37	-45.93	0.00	0.00	Vehicle	Vehicle	-----	-727.95	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	21.79	21.79
		L$_{31}$ - L$_{32}$	-411.21	-64.47	-11.66			0.75	1.18	-10.34	-57.20	0.00	0.00	Vehicle	Vehicle	-----	-608.93	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	15.10	15.10

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Verticals	Structure 1	U$_0$ - L$_0$	-67.60	-115.58	10.87			0.75	1.24	10.08	-107.23	0.00	0.00	Vehicle	Vehicle	-----	-227.28	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.58	2.58
		U$_1$ - L$_1$	-24.06	-52.69	10.63			0.75	1.24	9.86	-48.88	0.00	0.00	Vehicle	Vehicle	-----	-94.82	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.71	6.71
		U$_2$ - L$_2$	12.88	-41.49	-3.76			0.75	1.24	-3.49	-38.50	0.00	0.00	Vehicle	Vehicle	12.20	-33.31	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.48	9.48
		U$_3$ - L$_3$	37.35	-32.38	20.54			0.75	1.24	19.05	-30.04	0.00	0.00	Vehicle	Vehicle	73.32	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	20.49	20.49	-----	-----
		U$_4$ - L$_4$	-15.53	3.59	-13.74			0.75	1.24	3.33	-12.74	0.00	0.00	Vehicle	Vehicle	-----	-36.76	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	26.24	26.24
		U$_5$ - L$_5$	-92.52	13.08	-70.43			0.75	1.24	12.13	-65.34	0.00	0.00	Vehicle	Vehicle	-----	-205.22	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.09	5.09
		U$_6$ - L$_6$	-117.01	3.54	-82.34			0.75	1.24	3.28	-76.39	0.00	0.00	Vehicle	Vehicle	-----	-251.42	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	5.12	5.12
		U$_7$ - L$_7$	-127.49	0.32	-91.82			0.75	1.24	0.29	-85.19	0.00	0.00	Vehicle	Vehicle	-----	-276.47	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.91	3.91
		U$_8$ - L$_8$	-368.60	-119.96	-121.93			0.75	1.24	-111.29	-113.12	0.00	0.00	Vehicle	Vehicle	-----	-626.24	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.16	6.16
		U$_9$ - L$_9$	-214.45	-101.23	5.21			0.75	1.20	4.68	-90.96	0.00	0.00	Vehicle	Vehicle	-----	-397.03	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	4.73	4.73
		U$_{10}$ - L$_{10}$	-198.57	-80.53	-3.81			0.75	1.20	-3.43	-72.36	0.00	0.00	Vehicle	Vehicle	-----	-352.20	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.52	7.52
		U$_{11}$ - L$_{11}$	-171.30	-76.99	10.35			0.75	1.20	9.30	-69.17	0.00	0.00	Vehicle	Vehicle	-----	-312.62	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.80	6.80
		U$_{12}$ - L$_{12}$	-128.27	-67.58	19.87			0.75	1.20	17.85	-60.72	0.00	0.00	Vehicle	Vehicle	-----	-245.70	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	6.66	6.66
		U$_{13}$ - L$_{13}$	-96.55	-55.07	24.93			0.75	1.20	22.40	-49.48	0.00	0.00	Vehicle	Vehicle	-----	-189.84	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.74	5.74
		U$_{14}$ - L$_{14}$	-11.04	1.70	-0.80			0.75	1.20	1.52	-0.72	0.00	0.00	Vehicle	Vehicle	-----	-15.29	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	466.59	466.59
		U$_{15}$ - L$_{15}$	-2.54	36.64	-50.54			0.75	1.20	32.92	-45.41	0.00	0.00	Vehicle	Vehicle	39.49	-62.33	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.07	13.07	7.50	7.50
		U$_{16}$ - L$_{16}$	-31.31	27.32	-56.50			0.75	1.20	24.55	-50.77	0.00	0.00	Vehicle	Vehicle	-----	-106.70	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.11	6.11
		U$_{17}$ - L$_{17}$	-105.02	10.98	-77.57			0.75	1.20	9.86	-69.70	0.00	0.00	Vehicle	Vehicle	-----	-227.13	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	4.39	4.39
		U$_{18}$ - L$_{18}$	-126.66	5.13	-85.89			0.75	1.20	4.61	-77.17	0.00	0.00	Vehicle	Vehicle	-----	-264.97	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.17	5.17
		U$_{19}$ - L$_{19}$	-166.54	4.79	-88.52			0.75	1.20	4.30	-79.53	0.00	0.00	Vehicle	Vehicle	-----	-319.89	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.66	5.66
		U$_{20}$ - L$_{20}$	-184.30	4.45	-104.48			0.75	1.20	4.00	-93.87	0.00	0.00	Vehicle	Vehicle	-----	-361.62	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.24	4.24
	Structure 2	U$_0$ - L$_0$	-203.39	-95.41	11.94			0.75	1.18	10.59	-84.65	0.00	0.00	Vehicle	Vehicle	-----	-374.46	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.19	5.19
		U$_1$ - L$_1$	-176.11	-91.61	12.90			0.75	1.18	11.45	-81.28	0.00	0.00	Vehicle	Vehicle	-----	-334.61	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.11	6.11
		U$_2$ - L$_2$	-137.45	-75.48	12.21			0.75	1.18	10.83	-66.97	0.00	0.00	Vehicle	Vehicle	-----	-265.75	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.52	6.52
		U$_3$ - L$_3$	-117.61	-73.98	12.67			0.75	1.18	11.25	-65.63	0.00	0.00	Vehicle	Vehicle	-----	-238.22	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.09	5.09
		U$_4$ - L$_4$	-50.97	-59.33	25.44			0.75	1.18	22.57	-52.64	0.00	0.00	Vehicle	Vehicle	-----	-134.69	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.48	5.48
		U$_5$ - L$_5$	-13.79	-47.59	33.00			0.75	1.18	29.28	-42.23	0.00	0.00	Vehicle	Vehicle	20.14	-72.82	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.08	15.08	7.74	7.74
		U$_6$ - L$_6$	45.46	-37.31	41.69			0.75	1.18	36.99	-33.10	0.00	0.00	Vehicle	Vehicle	107.18	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.33	10.33	-----	-----
		U$_7$ - L$_7$	-22.33	3.23	3.96			0.75	1.18	3.51	2.86	0.00	0.00	Vehicle	Vehicle	-----	-25.31	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	-----
		U$_8$ - L$_8$	-120.06	29.85	-64.12			0.75	1.18	26.48	-56.89	0.00	0.00	Vehicle	Vehicle	-----	-230.04	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.22	7.22
		U$_9$ - L$_9$	-177.00	19.81	-79.43			0.75	1.18	17.58	-70.47	0.00	0.00	Vehicle	Vehicle	-----	-321.72	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
		U$_{10}$ - L$_{10}$	-205.85	17.73	-85.36			0.75	1.18	15.73	-75.74	0.00	0.00	Vehicle	Vehicle	-----	-366.07	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.56	7.56
		U$_{11}$ - L$_{11}$	-239.21	9.57	-89.41			0.75	1.18	8.49	-79.32	0.00	0.00	Vehicle	Vehicle	-----	-414.09	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.63	6.63
		U$_{12}$ - L$_{12}$	-257.92	2.07	-97.20			0.75	1.18	1.83	-86.24	0.00	0.00	Vehicle	Vehicle	-----	-447.41	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.31	6.31
		U$_{13}$ - L$_{13}$	-243.80	6.14	-100.98			0.75	1.18	5.45	-89.60	0.00	0.00	Vehicle	Vehicle	-----	-433.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	4.98	4.98
		U$_{14}$ - L$_{14}$	-420.84	-99.57	-91.86			0.75	1.18	-81.50	-88.34	0.00	0.00	Vehicle	Vehicle	-----	-661.94	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	7.14	7.14
		U$_{15}$ - L$_{15}$	-158.85	-92.57	9.98			0.75	1.17	8.75	-81.16	0.00	0.00	Vehicle	Vehicle	-----	-312.00	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.55	6.55
		U$_{16}$ - L$_{16}$	-174.03	-95.34	3.19			0.75	1.17	2.79	-83.59	0.00	0.00	Vehicle	Vehicle	-----	-334.90	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.89	5.89
		U$_{17}$ - L$_{17}$	-156.46	-79.03	9.02			0.75	1.17	7.91	-69.29	0.00	0.00	Vehicle	Vehicle	-----	-293.47	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U$_{18}$ - L$_{18}$	-142.20	-77.84	14.30			0.75	1.17	12.54	-68.25	0.00	0.00	Vehicle	Vehicle	-----	-273.59	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
		U$_{19}$ - L$_{19}$	-113.66	-71.34	20.78			0.75	1.17	18.22	-62.55	0.00	0.00	Vehicle	Vehicle	-----	-229.07	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.36	6.36
		U$_{20}$ - L$_{20}$	-76.52	-57.50	26.70			0.75	1.17	23.41	-50.41	0.00	0.00	Vehicle	Vehicle	-----	-165.01	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.92	5.92
		U$_{21}$ - L$_{21}$	-45.78	-52.78	27.44			0.75	1.17	24.06	-46.28	0.00	0.00	Vehicle	Vehicle	-----	-119.67	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
		U$_{22}$ - L$_{22}$	-17.71	6.41	7.31			0.75	1.17	6.41	5.62	0.00	0.00	Vehicle	Vehicle	-----	-15.72	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	-----
		U$_{23}$ - L$_{23}$	-30.66	34.73	-51.98			0.75	1.17	30.45	-45.57	0.00	0.00	Vehicle	Vehicle	-----	-99.10	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.80	6.80
		U$_{24}$ - L$_{24}$	-62.03	25.01	-64.48			0.75	1.17	21.93	-56.53	0.00	0.00	Vehicle	Vehicle	-----	-154.13	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.54	5.54
		U$_{25}$ - L$_{25}$	-103.10	22.25	-75.86			0.75	1.17	19.50	-66.51	0.00	0.00	Vehicle	Vehicle	-----	-220.49	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.14	6.14
		U$_{26}$ - L$_{26}$	-134.31	16.16	-79.14			0.75	1.17	14.16	-69.38	0.00	0.00	Vehicle	Vehicle	-----	-264.80	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.38	6.38
		U$_{27}$ - L$_{27}$	-155.93	7.86	-89.59			0.75	1.17	6.89	-78.54	0.00	0.00	Vehicle	Vehicle	-----	-304.81	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.95	5.95
		U$_{28}$ - L$_{28}$	-179.28	1.89	-96.96			0.75	1.17	1.65	-85.01	0.00	0.00	Vehicle	Vehicle	-----	-343.58	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.73	5.73
		U$_{29}$ - L$_{29}$	-171.45	4.69	-95.11			0.75	1.17	4.11	-83.39	0.00	0.00	Vehicle	Vehicle	-----	-331.28	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.22	6.22
		U$_{30}$ - L$_{30}$	-392.76	-107.47	-99.25			0.75	1.18	-88.06	-95.35	0.00	0.00	Vehicle	Vehicle	-----	-634.54	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.91	6.91
		U$_{31}$ - L$_{31}$	-203.21	-100.65	10.16			0.75	1.18	9.01	-89.30	0.00	0.00	Vehicle	Vehicle	-----	-380.27	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.45	5.45
		U$_{32}$ - L$_{32}$	-222.46	-89.44	3.56			0.75	1.18	3.16	-79.35	0.00	0.00	Vehicle	Vehicle	-----	-392.35	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors DL Factor: 1.30 Pedestrian Load Factors DL Factor: 1.30

Condition: As-Built Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in²) **	A_{gross} (in²)	A_{net} (in²)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	43.93	-16.45			0.75	1.24	40.76	-15.26	0.00	0.00	Vehicle	Vehicle	122.21	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**13.08**	**13.08**	-----	-----
		U_1 - L_2	10.78	56.47	4.64			0.75	1.24	52.39	4.30	0.00	0.00	Vehicle	Vehicle	82.11	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.96**	**7.96**	-----	-----
		U_2 - L_3	-44.02	41.21	-33.53			0.75	1.24	38.23	-31.11	0.00	0.00	Vehicle	Vehicle	-----	-97.67	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**9.33**	**9.33**
		U_3 - L_4	-76.72	21.48	-65.31			0.75	1.24	19.92	-60.59	0.00	0.00	Vehicle	Vehicle	-----	-178.50	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**4.29**	**4.29**
		U_4 - L_4	118.39	49.25	16.42			0.75	1.24	45.69	15.23	0.00	0.00	Vehicle	Vehicle	213.31	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**8.89**	**8.89**	-----	-----
		U_5 - L_5	137.53	94.27	-12.93			0.75	1.24	87.46	-12.00	0.00	0.00	Vehicle	Vehicle	292.48	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.87**	**5.87**	-----	-----
		U_6 - L_6	157.34	97.49	-0.09			0.75	1.24	90.45	-0.09	0.00	0.00	Vehicle	Vehicle	322.12	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.45**	**5.45**	-----	-----
		U_7 - L_7	149.30	101.81	-0.35			0.75	1.24	94.45	-0.33	0.00	0.00	Vehicle	Vehicle	316.88	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.31**	**5.31**	-----	-----
		U_8 - L_8	249.09	111.08	-4.87			0.75	1.20	99.80	-4.38	0.00	0.00	Vehicle	Vehicle	453.56	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.15**	**7.15**	-----	-----
		U_9 - L_{10}	260.26	93.38	-0.95			0.75	1.20	83.90	-0.86	0.00	0.00	Vehicle	Vehicle	447.41	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.37**	**8.37**	-----	-----
		U_{10} - L_{11}	236.30	98.21	-7.62			0.75	1.20	88.24	-6.85	0.00	0.00	Vehicle	Vehicle	421.91	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**7.64**	**7.64**	-----	-----
		U_{11} - L_{12}	211.92	88.45	-26.74			0.75	1.20	79.47	-24.03	0.00	0.00	Vehicle	Vehicle	378.82	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.12**	**7.12**	-----	-----
		U_{12} - L_{13}	151.66	78.73	-34.56			0.75	1.20	70.74	-31.05	0.00	0.00	Vehicle	Vehicle	289.12	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
		U_{13} - L_{14}	108.60	68.24	-42.33			0.75	1.20	61.32	-38.03	0.00	0.00	Vehicle	Vehicle	220.90	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.20**	**5.20**	-----	-----
		U_{14} - L_{14}	-24.45	47.31	-59.45			0.75	1.20	42.51	-53.42	0.00	0.00	Vehicle	Vehicle	23.48	-101.23	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**10.64**	**10.64**	**5.69**	**5.69**
		U_{15} - L_{15}	23.99	67.10	-36.94			0.75	1.20	60.28	-33.19	0.00	0.00	Vehicle	Vehicle	109.56	-11.95	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.70**	**6.70**	**10.50**	**10.50**
		U_{17} - L_{16}	120.03	80.87	-23.19			0.75	1.20	72.67	-20.84	0.00	0.00	Vehicle	Vehicle	250.51	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.57**	**5.57**	-----	-----
		U_{18} - L_{17}	144.79	90.15	-7.60			0.75	1.20	81.00	-6.83	0.00	0.00	Vehicle	Vehicle	293.53	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.25**	**6.25**	-----	-----
		U_{19} - L_{18}	193.05	94.26	0.89			0.75	1.20	84.70	0.80	0.00	0.00	Vehicle	Vehicle	361.07	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
		U_{20} - L_{19}	193.51	90.57	-5.06			0.75	1.20	81.38	-4.55	0.00	0.00	Vehicle	Vehicle	357.35	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
		U_0 - L_1	202.41	87.26	-13.44			0.75	1.18	77.42	-11.93	0.00	0.00	Vehicle	Vehicle	363.78	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.43**	**7.43**	-----	-----
		U_1 - L_2	190.86	98.96	-15.06			0.75	1.18	87.80	-13.36	0.00	0.00	Vehicle	Vehicle	362.26	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_2 - L_3	155.85	86.17	-14.63			0.75	1.18	76.45	-12.98	0.00	0.00	Vehicle	Vehicle	301.98	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.47**	**6.47**	-----	-----
		U_3 - L_4	134.05	80.17	-26.98			0.75	1.18	71.13	-23.94	0.00	0.00	Vehicle	Vehicle	266.74	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.23**	**6.23**	-----	-----
		U_4 - L_5	46.02	70.65	-40.52			0.75	1.18	62.68	-35.95	0.00	0.00	Vehicle	Vehicle	141.31	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_5 - L_6	3.45	55.81	-51.55			0.75	1.18	49.52	-45.74	0.00	0.00	Vehicle	Vehicle	68.85	-54.98	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.57**	**8.57**	**7.20**	**7.20**
		U_6 - L_7	-84.29	39.48	-71.06			0.75	1.18	35.03	-63.05	0.00	0.00	Vehicle	Vehicle	-----	-191.53	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.36**	**4.36**
		U_7 - L_7	137.30	67.22	-36.28			0.75	1.18	59.64	-32.19	0.00	0.00	Vehicle	Vehicle	256.02	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.81**	**7.81**	-----	-----
		U_8 - L_8	210.89	83.67	-30.54			0.75	1.18	74.23	-27.10	0.00	0.00	Vehicle	Vehicle	370.66	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.73**	**6.73**	-----	-----
		U_{10} - L_9	236.36	96.65	-20.72			0.75	1.18	85.75	-18.38	0.00	0.00	Vehicle	Vehicle	418.75	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.31**	**6.31**	-----	-----
		U_{11} - L_{10}	274.62	99.14	-13.50			0.75	1.18	87.96	-11.97	0.00	0.00	Vehicle	Vehicle	471.36	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
		U_{12} - L_{11}	281.06	97.83	-7.84			0.75	1.18	86.80	-6.95	0.00	0.00	Vehicle	Vehicle	478.22	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
		U_{13} - L_{12}	278.12	96.49	-1.40			0.75	1.18	85.61	-1.25	0.00	0.00	Vehicle	Vehicle	472.85	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_{14} - L_{13}	235.45	94.92	-6.20			0.75	1.18	84.22	-5.50	0.00	0.00	Vehicle	Vehicle	415.56	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{14} - L_{15}	143.03	93.71	-9.90			0.75	1.17	82.16	-8.68	0.00	0.00	Vehicle	Vehicle	292.74	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{15} - L_{16}	171.91	91.76	-6.71			0.75	1.17	80.45	-5.88	0.00	0.00	Vehicle	Vehicle	328.07	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.95**	**5.95**	-----	-----
		U_{16} - L_{17}	181.04	100.43	-9.55			0.75	1.17	88.05	-8.37	0.00	0.00	Vehicle	Vehicle	349.82	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{17} - L_{18}	171.16	84.70	-16.47			0.75	1.17	74.26	-14.44	0.00	0.00	Vehicle	Vehicle	319.05	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.46**	**6.46**	-----	-----
		U_{18} - L_{19}	150.64	90.77	-23.92			0.75	1.17	79.58	-20.97	0.00	0.00	Vehicle	Vehicle	299.29	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	72.92	-33.70			0.75	1.17	63.94	-29.55	0.00	0.00	Vehicle	Vehicle	246.74	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.47**	**7.47**	-----	-----
		U_{20} - L_{21}	76.05	70.26	-34.78			0.75	1.17	61.60	-30.49	0.00	0.00	Vehicle	Vehicle	178.95	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.71**	**5.71**	-----	-----
		U_{21} - L_{22}	38.34	52.80	-54.51			0.75	1.17	46.29	-47.79	0.00	0.00	Vehicle	Vehicle	110.02	-12.29	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.41**	**8.41**	**7.62**	**7.62**
		U_{23} - L_{22}	18.02	47.57	-48.29			0.75	1.17	41.71	-42.34	0.00	0.00	Vehicle	Vehicle	77.65	-31.61	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**9.82**	**9.82**	**8.05**	**8.05**
		U_{24} - L_{23}	58.54	67.79	-38.24			0.75	1.17	59.44	-33.52	0.00	0.00	Vehicle	Vehicle	153.37	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.21**	**6.21**	-----	-----
		U_{25} - L_{24}	114.92	83.09	-31.49			0.75	1.17	72.85	-27.61	0.00	0.00	Vehicle	Vehicle	244.10	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.70**	**6.70**	-----	-----
		U_{26} - L_{25}	142.93	92.33	-19.21			0.75	1.17	80.95	-16.84	0.00	0.00	Vehicle	Vehicle	291.05	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.27**	**6.27**	-----	-----
		U_{27} - L_{26}	173.71	88.46	-15.60			0.75	1.17	77.55	-13.68	0.00	0.00	Vehicle	Vehicle	326.64	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_{28} - L_{27}	186.49	96.02	-8.56			0.75	1.17	84.18	-7.51	0.00	0.00	Vehicle	Vehicle	351.87	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.22**	**6.22**	-----	-----
		U_{29} - L_{28}	190.57	95.71	-5.77			0.75	1.17	83.91	-5.06	0.00	0.00	Vehicle	Vehicle	356.83	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U_{30} - L_{29}	161.74	87.64	-4.56			0.75	1.17	76.84	-3.99	0.00	0.00	Vehicle	Vehicle	310.16	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.36**	**6.36**	-----	-----
		U_{30} - L_{31}	191.49	92.41	-9.76			0.75	1.18	81.99	-8.66	0.00	0.00	Vehicle	Vehicle	355.53	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.15**	**7.15**	-----	-----
		U_{31} - L_{32}	226.17	100.46	-10.96			0.75	1.18	89.13	-9.72	0.00	0.00	Vehicle	Vehicle	409.89	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.19**	**6.19**	-----	-----
		U_{32} - L_{33}	243.26	95.62	-7.29			0.75	1.18	84.84	-6.46	0.00	0.00	Vehicle	Vehicle	426.53	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.09**	**7.09**	-----	-----
		U_{33} - L_{34}	238.98	90.45	-15.73			0.75	1.18	80.25	-13.96	0.00	0.00	Vehicle	Vehicle	415.00	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.54**	**7.54**	-----	-----
		U_{34} - L_{35}	222.10	85.35	-21.94			0.75	1.18	75.73	-19.47	0.00	0.00	Vehicle	Vehicle	387.18	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
								0.00																																							
Structure 1	U_0 - U_1	-66.77	10.11	-49.76	2.20	-8.83	0.90	1.24	11.25	-55.39	2.20	-8.83	Vehicle	Vehicle	-----	-158.81	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.00	9.00
	U_1 - U_2	-86.66	24.12	-79.95	6.00	-16.34	0.90	1.24	26.85	-89.00	6.00	-16.34	Vehicle	Vehicle	-----	-228.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.38	5.38
	U_2 - U_3	-48.28	35.88	-81.83	9.44	-19.05	0.90	1.24	39.95	-91.10	9.44	-19.05	Vehicle	Vehicle	-----	-181.19	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.68	5.68
	U_3 - U_4	36.43	46.30	-62.44	12.72	-17.47	0.90	1.24	51.54	-69.51	12.72	-17.47	Vehicle	Vehicle	114.36	-43.01	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.31	12.31	8.66	8.66
	U_4 - U_5	38.78	46.45	-42.98	12.78	-17.37	0.90	1.24	51.71	-47.84	12.78	-17.37	Vehicle	Pedestrian	117.64	-34.36	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.23	12.23	9.26	9.26
	U_5 - U_6	154.43	52.18	-28.03	3.10	0.00	0.90	1.24	58.09	-31.21	3.10	0.00	Vehicle	Vehicle	276.27	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.89	8.89	-----	-----
	U_6 - U_7	288.19	56.35	0.45	17.11	-4.31	0.90	1.24	62.73	0.51	17.11	-4.31	Vehicle	Pedestrian	456.21	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.23	8.23	-----	-----
	U_7 - U_8	410.75	4.35	6.97	22.59	0.00	0.90	1.24	7.76	4.84	22.59	0.00	Pedestrian	Vehicle	573.43	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	23.04	23.04	-----	-----
	U_8 - U_9	311.35	42.00	-2.85	12.90	6.15	0.90	1.20	45.28	-3.07	12.90	6.15	Vehicle	Vehicle	463.62	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	13.86	13.86	-----	-----
	U_9 - U_{10}	78.25	44.68	-38.87	12.28	-6.83	0.90	1.20	48.17	-41.91	12.28	-6.83	Vehicle	Vehicle	164.35	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	13.10	13.10	-----	-----
	U_{10} - U_{11}	-141.75	42.14	-72.59	11.11	-18.45	0.90	1.20	45.43	-78.27	11.11	-18.45	Vehicle	Vehicle	-----	-286.02	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.82	5.82
	U_{11} - U_{12}	-338.40	38.83	-102.80	9.77	-27.96	0.90	1.20	41.86	-110.83	9.77	-27.96	Vehicle	Vehicle	-----	-584.01	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.28	4.28
	U_{12} - U_{13}	-480.50	34.00	-120.02	8.23	-34.35	0.90	1.20	36.66	-129.41	8.23	-34.35	Vehicle	Vehicle	-----	-792.87	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.08	5.08
	U_{13} - U_{14}	-571.10	28.88	-129.96	6.68	-37.24	0.90	1.20	31.14	-140.12	6.68	-37.24	Vehicle	Vehicle	-----	-924.58	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.40	5.40
	U_{14} - U_{15}	-571.52	28.74	-115.03	6.65	-37.25	0.90	1.20	30.99	-124.03	6.65	-37.25	Vehicle	Vehicle	-----	-904.21	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.10	6.10
	U_{15} - U_{16}	-582.34	10.91	-99.02	0.00	-31.16	0.90	1.20	11.77	-106.76	0.00	-31.16	Vehicle	Vehicle	-----	-895.83	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.98	6.98
	U_{16} - U_{17}	-539.92	9.80	-69.06	0.00	-28.35	0.90	1.20	10.57	-74.46	0.00	-28.35	Vehicle	Pedestrian	-----	-835.53	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.66	7.66
	U_{17} - U_{18}	-422.72	-78.16	-45.55	-25.07	2.26	0.90	1.20	-49.11	-84.28	2.26	-25.07	Vehicle	Vehicle	-----	-659.09	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	6.50	6.50
	U_{18} - U_{19}	-286.53	-47.95	-12.94	-16.97	1.28	0.90	1.20	-13.95	-51.69	1.28	-16.97	Vehicle	Vehicle	-----	-439.69	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.56	7.56
	U_{19} - U_{20}	-140.97	-19.95	-2.74	-8.68	0.55	0.90	1.20	-2.95	-21.51	0.55	-8.68	Vehicle	Pedestrian	-----	-222.51	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	17.77	17.77
Structure 2	U_0 - U_1	-147.48	3.26	-33.76	0.36	-4.88	0.90	1.18	3.47	-35.95	0.36	-4.88	Vehicle	Vehicle	-----	-238.46	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	13.91	13.91
	U_1 - U_2	-319.09	10.91	-68.47	1.96	-13.36	0.90	1.18	11.62	-72.90	1.96	-13.36	Vehicle	Vehicle	-----	-509.58	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.48	6.48
	U_2 - U_3	-460.93	19.58	-97.92	3.77	-20.95	0.90	1.18	20.85	-104.25	3.77	-20.95	Vehicle	Vehicle	-----	-734.73	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
	U_3 - U_4	-580.02	29.79	-123.88	5.92	-27.68	0.90	1.18	31.72	-131.89	5.92	-27.68	Vehicle	Vehicle	-----	-925.49	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.77	5.77
	U_4 - U_5	-616.47	38.66	-134.13	7.86	-31.35	0.90	1.18	41.16	-142.81	7.86	-31.35	Vehicle	Vehicle	-----	-987.07	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.10	6.10
	U_5 - U_6	-604.69	47.61	-137.43	9.87	-32.88	0.90	1.18	50.69	-146.32	9.87	-32.88	Vehicle	Vehicle	-----	-976.31	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.03	6.03
	U_6 - U_7	-514.75	54.43	-124.16	11.56	-31.23	0.90	1.18	57.95	-132.19	11.56	-31.23	Vehicle	Vehicle	-----	-841.03	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.25	6.25
	U_7 - U_8	-512.80	54.44	-96.82	11.57	-31.18	0.90	1.18	57.96	-103.08	11.57	-31.18	Vehicle	Vehicle	-----	-800.64	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	8.04	8.04
	U_8 - U_9	-373.48	60.48	-84.01	13.16	-27.41	0.90	1.18	64.39	-89.44	13.16	-27.41	Vehicle	Vehicle	-----	-601.79	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.41	8.41
	U_9 - U_{10}	-181.02	63.46	-64.71	14.25	-21.42	0.90	1.18	67.56	-68.90	14.25	-21.42	Vehicle	Vehicle	-----	-324.89	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	10.23	10.23
	U_{10} - U_{11}	26.21	65.78	-38.90	15.21	-14.40	0.90	1.18	70.03	-41.42	15.21	-14.40	Vehicle	Pedestrian	125.11	-38.49	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.63	12.63	14.25	14.25
	U_{11} - U_{12}	237.41	-10.15	-16.64	10.86	0.00	0.90	1.18	-10.81	-17.71	10.86	0.00	Vehicle	Vehicle	294.58	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{12} - U_{13}	435.92	10.78	-6.56	15.82	0.56	0.90	1.18	11.48	-6.98	15.82	0.56	Pedestrian	Vehicle	602.17	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	25.77	25.77	-----	-----
	U_{13} - U_{14}	595.85	13.15	5.71	24.32	0.00	0.90	1.18	14.01	6.08	24.32	0.00	Pedestrian	Vehicle	824.42	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	25.27	25.27	-----	-----
	U_{14} - U_{15}	615.52	53.43	-3.09	13.42	8.77	0.90	1.17	56.22	-3.26	13.42	8.77	Vehicle	Pedestrian	873.26	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	16.88	16.88	-----	-----
	U_{15} - U_{16}	486.12	56.66	-21.51	14.17	3.09	0.90	1.17	59.61	-22.63	14.17	3.09	Vehicle	Vehicle	709.46	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.19	13.19	-----	-----
	U_{16} - U_{17}	339.23	56.36	-38.15	14.66	-2.95	0.90	1.17	59.29	-40.14	14.66	-2.95	Vehicle	Vehicle	518.07	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	11.89	11.89	-----	-----
	U_{17} - U_{18}	192.06	55.12	-61.92	15.12	-9.49	0.90	1.17	57.99	-65.15	15.12	-9.49	Vehicle	Vehicle	325.07	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	9.90	9.90	-----	-----
	U_{18} - U_{19}	53.73	50.51	-80.65	15.12	-15.34	0.90	1.17	53.14	-84.85	15.12	-15.34	Vehicle	Vehicle	138.93	-40.46	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	13.41	13.41	8.26	8.26
	U_{19} - U_{20}	-59.08	44.80	-97.00	15.07	-19.84	0.90	1.17	47.13	-102.05	15.07	-19.84	Vehicle	Vehicle	-----	-209.48	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.21	6.21
Structure 3	U_{20} - U_{21}	-125.50	22.89	-105.07	14.76	-22.39	0.90	1.17	24.08	-110.54	14.76	-22.39	Pedestrian	Vehicle	-----	-306.85	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.43	6.43
	U_{21} - U_{22}	-146.93	30.81	-105.83	14.37	-22.74	0.90	1.17	32.41	-111.34	14.37	-22.74	Pedestrian	Vehicle	-----	-335.75	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.20	6.20
	U_{22} - U_{23}	-146.70	28.83	-83.47	14.36	-22.72	0.90	1.17	30.34	-87.81	14.36	-22.72	Pedestrian	Vehicle	-----	-304.87	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.86	7.86
	U_{23} - U_{24}	-112.76	37.52	-79.12	13.87	-16.66	0.90	1.17	39.47	-83.24	13.87	-16.66	Pedestrian	Vehicle	-----	-254.80	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.70	8.70
	U_{24} - U_{25}	-36.27	43.16	-70.37	13.40	-15.02	0.90	1.17	45.41	-74.04	13.40	-15.02	Vehicle	Vehicle	11.88	-143.41	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	18.86	18.86	8.87	8.87
	U_{25} - U_{26}	80.70	47.35	-41.97	0.37	0.00	0.90	1.17	49.81	-44.15	0.37	0.00	Vehicle	Vehicle	169.66	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.76	13.76	-----	-----
	U_{26} - U_{27}	220.59	-15.54	-29.79	7.92	0.00	0.90	1.17	-16.34	-31.34	7.92	0.00	Vehicle	Vehicle	265.52	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{27} - U_{28}	363.31	-1.51	-18.31	14.90	0.00	0.90	1.17	-1.59	-19.26	14.90	0.00	Pedestrian	Vehicle	489.60	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{28} - U_{29}	503.82	34.35	-1.00	21.74	3.11	0.90	1.17	36.14	-1.06	21.74	3.11	Pedestrian	Pedestrian	730.21	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.28	13.28	-----	-----
	U_{29} - U_{30}	616.57	9.11	-3.04	27.08	0.00	0.90	1.17	9.58	-3.20	27.08	0.00	Pedestrian	Vehicle	849.19	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	25.85	25.85	-----	-----
	U_{30} - U_{31}	559.74	58.21	-3.69	15.74	6.15	0.90	1.18	61.98	-3.93	15.74	6.15	Vehicle	Vehicle	808.23	-----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-2.01	1.10	0.16	0.36	-2.06	0.90	1.24	1.22	0.18	0.36	-2.06	Vehicle	Pedestrian	-----	-5.05	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	67.91	-13.27	41.38	-3.36	9.23	0.90	1.24	46.07	-14.77	9.23	-3.36	Vehicle	Vehicle	148.16	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	9.44	9.44	-----	-----
		L_2 - L_3	78.84	-28.78	72.74	-7.39	15.48	0.90	1.24	80.98	-32.04	15.48	-7.39	Vehicle	Vehicle	207.76	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	7.28	7.28	-----	-----
		L_3 - L_4	39.14	-40.42	65.03	-10.83	18.09	0.90	1.24	72.40	-45.00	18.09	-10.83	Vehicle	Vehicle	145.00	-7.62	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	8.69	8.69	13.38	13.38
		L_4 - L_5	-166.38	-57.78	46.05	-16.90	10.96	0.90	1.24	51.27	-64.32	10.96	-16.90	Vehicle	Vehicle	-----	-299.91	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	5.19	5.19
		L_5 - L_6	-301.23	-63.19	22.27	-15.70	0.00	0.90	1.24	24.79	-70.35	0.00	-15.70	Vehicle	Vehicle	-----	-483.05	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	5.09	5.09
		L_6 - L_7	-438.94	-11.63	-1.52	-4.99	-21.52	0.90	1.24	-1.69	-12.95	-4.99	-21.52	Pedestrian	Pedestrian	-----	-615.42	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	14.68	14.68
		L_7 - L_8	-551.65	-57.04	2.02	-35.55	0.00	0.90	1.24	2.25	-63.50	0.00	-35.55	Vehicle	Pedestrian	-----	-845.91	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	6.54	6.54
		L_8 - L_9	-570.53	-32.53	-31.02	-11.71	-25.77	0.90	1.20	-33.45	-35.08	-11.71	-25.77	Pedestrian	Pedestrian	-----	-820.79	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	10.34	10.34
		L_9 - L_{10}	-355.48	-36.28	-5.12	-11.67	-13.03	0.90	1.20	-5.51	-39.12	-11.67	-13.03	Pedestrian	Vehicle	-----	-512.98	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	15.08	15.08
		L_{10} - L_{11}	-118.48	-37.45	20.53	-10.69	-1.74	0.90	1.20	22.13	-40.38	-1.74	-10.69	Vehicle	Vehicle	-----	-206.52	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	9.46	9.46
		L_{11} - L_{12}	103.45	-34.79	55.01	-9.47	9.96	0.90	1.20	59.31	-37.51	9.96	-9.47	Vehicle	Vehicle	211.59	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	8.27	8.27	-----	-----
		L_{12} - L_{13}	300.60	-32.30	93.07	-8.14	17.83	0.90	1.20	100.34	-34.82	17.83	-8.14	Vehicle	Vehicle	521.23	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	6.72	6.72	-----	-----
		L_{13} - L_{14}	441.19	-27.52	96.28	-6.61	24.15	0.90	1.20	103.81	-29.67	24.15	-6.61	Vehicle	Vehicle	708.50	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	8.35	8.35	-----	-----
		L_{14} - L_{15}	547.00	-17.71	115.25	0.00	21.08	0.90	1.20	124.26	-19.10	21.08	0.00	Vehicle	Vehicle	872.64	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	8.27	8.27	-----	-----
		L_{15} - L_{16}	506.09	-16.64	95.56	0.00	18.29	0.90	1.20	103.03	-17.95	18.29	0.00	Vehicle	Vehicle	791.86	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	10.37	10.37	-----	-----
		L_{16} - L_{17}	398.75	66.81	57.99	0.00	11.88	0.90	1.20	72.04	62.52	11.88	0.00	Vehicle	Vehicle	612.03	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	11.35	11.35	-----	-----
		L_{17} - L_{18}	263.81	42.68	24.94	4.66	0.15	0.90	1.20	46.01	26.89	4.66	0.15	Vehicle	Vehicle	402.77	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	13.46	13.46	-----	-----
		L_{18} - L_{19}	118.75	18.84	3.39	-3.38	0.71	0.90	1.20	20.31	3.65	0.71	-3.38	Vehicle	Vehicle	180.78	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	18.90	18.90	-----	-----
		L_{19} - L_{20}	-23.36	-5.56	3.18	-12.08	1.28	0.90	1.20	3.43	-5.99	1.28	-12.08	Pedestrian	Pedestrian	-----	-53.86	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	22.14	22.14
		L_0- L_1	-36.12	3.83	0.52	1.19	-5.14	0.90	1.18	4.07	0.55	1.19	-5.14	Vehicle	Pedestrian	-----	-52.92	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.64	-2.26	27.22	-0.06	2.93	0.90	1.18	28.98	-2.40	2.93	-0.06	Vehicle	Vehicle	210.11	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	17.28	17.28	-----	-----
		L_2 - L_3	303.94	-10.99	63.86	-1.79	10.52	0.90	1.18	67.99	-11.70	10.52	-1.79	Vehicle	Vehicle	483.51	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	9.88	9.88	-----	-----
		L_3 - L_4	445.73	-19.74	91.93	-3.63	18.15	0.90	1.18	97.87	-21.02	18.15	-3.63	Vehicle	Vehicle	706.69	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	8.82	8.82	-----	-----
		L_4 - L_5	567.64	-31.66	123.14	-6.10	24.81	0.90	1.18	131.11	-33.71	24.81	-6.10	Vehicle	Vehicle	908.38	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	8.26	8.26	-----	-----
		L_5 - L_6	603.43	-40.59	133.60	-8.06	28.47	0.90	1.18	142.24	-43.22	28.47	-8.06	Vehicle	Vehicle	969.37	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	8.36	8.36	-----	-----
		L_6 - L_7	599.28	-51.19	128.57	-10.41	30.25	0.90	1.18	136.89	-54.50	30.25	-10.41	Vehicle	Vehicle	957.01	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	8.90	8.90	-----	-----
		L_7 - L_8	373.73	-64.12	103.84	-13.66	24.92	0.90	1.18	110.56	-68.27	24.92	-13.66	Vehicle	Vehicle	629.57	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	8.75	8.75	-----	-----
		L_8 - L_9	195.51	-69.01	84.37	-15.12	19.51	0.90	1.18	89.83	-73.47	19.51	-15.12	Vehicle	Vehicle	370.94	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	10.07	10.07	-----	-----
		L_9 - L_{10}	-13.41	-71.46	47.55	-7.61	12.45	0.90	1.18	50.63	-76.08	12.45	-7.61	Vehicle	Vehicle	48.38	-116.34	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	17.29	17.29	9.39	9.39
		L_{10} - L_{11}	-217.51	19.98	28.97	-15.65	0.00	0.90	1.18	30.84	21.27	0.00	-15.65	Vehicle	Vehicle	-----	-255.10	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
		L_{11} - L_{12}	-420.12	-70.38	12.46	-23.35	0.00	0.90	1.18	13.27	-74.93	0.00	-23.35	Vehicle	Vehicle	-----	-643.57	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.81	6.81
		L_{12} - L_{13}	-591.61	-28.47	-4.46	-7.10	-18.75	0.90	1.18	-4.75	-30.32	-7.10	-18.75	Pedestrian	Pedestrian	-----	-832.87	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.94	13.94
		L_{13} - L_{14}	-724.42	-25.51	-0.03	-35.12	0.00	0.90	1.18	-0.03	-27.16	0.00	-35.12	Vehicle	Pedestrian	-----	-1022.71	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.70	12.70
		L_{14} - L_{15}	-747.19	13.46	-25.02	0.00	-36.29	0.90	1.17	14.16	-26.32	0.00	-36.29	Vehicle	Pedestrian	-----	-1052.74	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.27	12.27
		L_{15} - L_{16}	-632.29	-43.89	-12.90	-9.38	-12.11	0.90	1.17	-13.58	-46.17	-9.38	-12.11	Pedestrian	Vehicle	-----	-882.00	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.93	13.93
		L_{16} - L_{17}	-488.73	-47.51	10.85	-9.25	-11.44	0.90	1.17	11.41	-49.98	-9.25	-11.44	Vehicle	Vehicle	-----	-700.32	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	11.18	11.18
		L_{17} - L_{18}	-337.06	-47.11	15.47	-9.73	-4.53	0.90	1.17	16.28	-49.56	-4.53	-9.73	Vehicle	Vehicle	-----	-502.61	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	7.88	7.88
		L_{18} - L_{19}	-183.64	-46.38	43.99	-9.59	1.37	0.90	1.17	46.29	-48.80	1.37	-9.59	Vehicle	Vehicle	-----	-302.16	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	7.99	7.99
		L_{19} - L_{20}	-45.76	-41.72	65.13	-9.58	7.21	0.90	1.17	68.52	-43.90	7.21	-9.58	Vehicle	Vehicle	29.59	-116.55	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	10.58	10.58	12.03	12.03
		L_{20} - L_{21}	68.06	-37.08	80.81	-9.12	11.07	0.90	1.17	85.02	-39.01	11.07	-9.12	Vehicle	Vehicle	199.01	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	10.55	10.55	-----	-----
		L_{21} - L_{22}	134.01	-15.88	85.14	-8.81	13.61	0.90	1.17	89.58	-16.70	13.61	-8.81	Vehicle	Pedestrian	290.66	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.27	9.27	-----	-----
		L_{22} - L_{23}	122.68	-30.80	87.89	-7.57	8.54	0.90	1.17	92.46	-32.40	8.54	-7.57	Vehicle	Vehicle	279.69	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.11	9.11	-----	-----
		L_{23} - L_{24}	46.89	-36.50	75.57	-7.09	6.92	0.90	1.17	79.50	-38.41	6.92	-7.09	Vehicle	Vehicle	164.31	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	11.54	11.54	-----	-----
		L_{24} - L_{25}	-66.54	-39.72	50.40	-4.27	3.32	0.90	1.17	53.02	-41.79	3.32	-4.27	Vehicle	Vehicle	-----	-140.83	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	12.13	12.13
		L_{25} - L_{26}	-205.63	-43.47	34.46	-11.77	0.00	0.90	1.17	36.25	-45.73	0.00	-11.77	Vehicle	Vehicle	-----	-326.77	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	8.05	8.05
		L_{26} - L_{27}	-350.43	0.67	19.18	-18.87	0.00	0.90	1.17	20.18	0.70	0.00	-18.87	Vehicle	Pedestrian	-----	-479.16	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L_{27} - L_{28}	-494.65	-26.47	1.78	-25.89	0.00	0.90	1.17	1.87	-27.85	0.00	-25.89	Vehicle	Pedestrian	-----	-712.90	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	10.29	10.29
		L_{28} - L_{29}	-620.83	-49.57	-6.28	-21.97	-5.03	0.90	1.17	-6.61	-52.15	-5.03	-21.97	Pedestrian	Pedestrian	-----	-903.43	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	8.83	8.83
		L_{29} - L_{30}	-716.91	-30.44	-19.39	-36.29	0.00	0.90	1.17	-20.40	-32.02	0.00	-36.29	Vehicle	Pedestrian	-----	-1020.79	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	11.69	11.69
		L_{30} - L_{31}	-850.71	32.29	-19.87	0.00	-35.97	0.90	1.18	34.37	-21.15	0.00	-35.97	Vehicle	Pedestrian	-----	-1180.18	11.98	70.85	58.8700	2338.05	131.71	11.1432

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.72	-58.70	13.18	-12.32	3.44	0.90	1.24	14.68	-65.35	3.44	-12.32	Vehicle	Vehicle	-----	-206.79	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.84	3.84
		U$_1$ - L$_1$	-46.53	-37.57	11.37	-9.05	2.93	0.90	1.24	12.66	-41.83	2.93	-9.05	Vehicle	Vehicle	-----	-114.87	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
		U$_2$ - L$_2$	-0.10	-25.69	10.29	-5.68	2.84	0.90	1.24	11.46	-28.60	2.84	-5.68	Vehicle	Vehicle	14.77	-37.30	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	37.33	37.33	12.31	12.31
		U$_3$ - L$_3$	39.60	-11.97	8.12	-2.12	2.69	0.90	1.24	9.04	-13.33	2.69	-2.12	Vehicle	Vehicle	63.23	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	42.92	42.92	-----	-----
		U$_4$ - L$_4$	-30.20	0.52	-11.06	0.00	-3.46	0.90	1.24	0.58	-12.32	0.00	-3.46	Vehicle	Vehicle	-----	-55.28	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	25.95	25.95
		U$_5$ - L$_5$	-130.49	2.20	-36.03	0.00	-10.23	0.90	1.24	2.45	-40.11	0.00	-10.23	Vehicle	Vehicle	-----	-221.77	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.35	7.35
		U$_6$ - L$_6$	-158.18	5.89	-36.61	0.00	-13.06	0.90	1.24	6.55	-40.76	0.00	-13.06	Vehicle	Vehicle	-----	-258.62	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.58	8.58
		U$_7$ - L$_7$	-152.32	11.50	-36.15	0.00	-13.24	0.90	1.24	12.81	-40.25	0.00	-13.24	Vehicle	Vehicle	-----	-250.34	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.65	7.65
		U$_8$ - L$_8$	-455.55	-56.61	-32.92	-18.97	-12.74	0.90	1.24	-36.65	-63.02	-12.74	-18.97	Pedestrian	Vehicle	-----	-674.14	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	9.68	9.68
		U$_9$ - L$_9$	-287.55	-56.33	0.23	-18.20	0.00	0.90	1.20	0.25	-60.73	0.00	-18.20	Vehicle	Vehicle	-----	-452.77	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	5.89	5.89
		U$_{10}$ - L$_{10}$	-276.32	-55.74	-2.11	-16.17	-1.37	0.90	1.20	-2.27	-60.10	-1.37	-16.17	Pedestrian	Vehicle	-----	-437.35	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.76	7.76
		U$_{11}$ - L$_{11}$	-232.59	-51.13	1.54	-14.41	0.00	0.90	1.20	1.66	-55.13	0.00	-14.41	Vehicle	Vehicle	-----	-374.03	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.42	7.42
		U$_{12}$ - L$_{12}$	-178.43	-39.24	1.04	-11.20	0.00	0.90	1.20	1.12	-42.31	0.00	-11.20	Vehicle	Vehicle	-----	-286.96	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.37	8.37
		U$_{13}$ - L$_{13}$	-127.74	-32.15	4.49	-7.88	0.00	0.90	1.20	4.84	-34.66	0.00	-7.88	Vehicle	Vehicle	-----	-211.12	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.29	7.29
		U$_{14}$ - L$_{14}$	-30.39	-2.00	-2.96	-3.03	0.00	0.90	1.20	-2.16	-3.19	0.00	-3.03	Vehicle	Pedestrian	-----	-47.60	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	50.50	50.50
		U$_{15}$ - L$_{15}$	-28.94	9.50	-24.90	1.55	-4.54	0.90	1.20	10.24	-26.84	1.55	-4.54	Vehicle	Vehicle	-----	-72.51	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.71	11.71
		U$_{16}$ - L$_{16}$	-76.03	5.79	-30.36	1.39	-7.08	0.90	1.20	6.24	-32.74	1.39	-7.08	Vehicle	Vehicle	-----	-141.40	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.10	8.10
		U$_{17}$ - L$_{17}$	-161.89	6.23	-41.16	1.30	-10.66	0.90	1.20	6.71	-44.37	1.30	-10.66	Vehicle	Vehicle	-----	-268.14	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.62	5.62
		U$_{18}$ - L$_{18}$	-190.28	5.34	-40.57	1.12	-12.71	0.90	1.20	5.75	-43.75	1.12	-12.71	Vehicle	Vehicle	-----	-304.24	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.66	7.66
		U$_{19}$ - L$_{19}$	-228.17	4.57	-40.37	0.97	-14.98	0.90	1.20	4.93	-43.52	0.97	-14.98	Vehicle	Pedestrian	-----	-372.68	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.63	6.63
		U$_{20}$ - L$_{20}$	-242.83	4.14	-41.36	0.95	-15.63	0.90	1.20	4.47	-44.60	0.95	-15.63	Vehicle	Pedestrian	-----	-393.97	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.63	5.63
	Structure 2	U$_0$ - L$_0$	-303.03	-61.27	10.08	-15.08	2.22	0.90	1.18	10.74	-65.23	2.22	-15.08	Vehicle	Vehicle	-----	-478.74	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.20	5.20
		U$_1$ - L$_1$	-268.78	-56.26	10.26	-13.67	2.12	0.90	1.18	10.92	-59.90	2.12	-13.67	Vehicle	Vehicle	-----	-427.28	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U$_2$ - L$_2$	-220.87	-52.58	11.04	-12.32	2.34	0.90	1.18	11.75	-55.99	2.34	-12.32	Vehicle	Vehicle	-----	-359.92	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.31	6.31
		U$_3$ - L$_3$	-175.23	-45.43	11.83	-10.35	2.49	0.90	1.18	12.59	-48.37	2.49	-10.35	Vehicle	Vehicle	-----	-290.68	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.72	5.72
		U$_4$ - L$_4$	-82.08	-33.34	10.26	-6.62	2.21	0.90	1.18	10.92	-35.49	2.21	-6.62	Vehicle	Vehicle	-----	-152.84	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.24	7.24
		U$_5$ - L$_5$	-19.89	-26.36	9.96	-4.16	2.23	0.90	1.18	10.60	-28.06	2.23	-4.16	Vehicle	Vehicle	-----	-62.34	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.43	11.43
		U$_6$ - L$_6$	60.32	-13.56	21.63	-0.47	1.75	0.90	1.18	23.03	-14.43	1.75	-0.47	Vehicle	Vehicle	108.35	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	15.95	15.95	-----	-----
		U$_7$ - L$_7$	-41.77	-1.21	-5.90	0.00	-2.49	0.90	1.18	-1.28	-6.28	0.00	-2.49	Vehicle	Pedestrian	-----	-65.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	34.06	34.06
		U$_8$ - L$_8$	-189.01	4.82	-37.43	0.00	-8.38	0.90	1.18	5.14	-39.85	0.00	-8.38	Vehicle	Vehicle	-----	-297.52	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.57	8.57
		U$_9$ - L$_9$	-253.99	1.94	-46.43	0.00	-10.55	0.90	1.18	2.07	-49.44	0.00	-10.55	Vehicle	Vehicle	-----	-394.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.84	8.84
		U$_{10}$ - L$_{10}$	-290.02	3.54	-47.12	0.00	-12.18	0.90	1.18	3.77	-50.17	0.00	-12.18	Vehicle	Vehicle	-----	-442.25	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.74	9.74
		U$_{11}$ - L$_{11}$	-312.18	7.61	-51.05	0.00	-12.59	0.90	1.18	8.11	-54.36	0.00	-12.59	Vehicle	Vehicle	-----	-476.49	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.33	8.33
		U$_{12}$ - L$_{12}$	-327.28	10.97	-46.54	-0.93	-13.01	0.90	1.18	11.67	-49.55	-0.93	-13.01	Vehicle	Vehicle	-----	-489.87	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.58	9.58
		U$_{13}$ - L$_{13}$	-277.21	14.62	-39.30	0.00	-11.39	0.90	1.18	15.57	-41.84	0.00	-11.39	Vehicle	Vehicle	-----	-414.77	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.87	9.87
		U$_{14}$ - L$_{14}$	-505.44	-44.60	-30.72	-11.34	-9.95	0.90	1.18	-32.71	-47.48	-9.95	-11.34	Vehicle	Vehicle	-----	-718.80	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	11.51	11.51
		U$_{15}$ - L$_{15}$	-232.94	-54.65	3.13	-11.17	0.00	0.90	1.17	3.30	-57.50	0.00	-11.17	Vehicle	Vehicle	-----	-377.57	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.95	7.95
		U$_{16}$ - L$_{16}$	-260.12	-54.95	0.41	-12.63	0.83	0.90	1.17	0.44	-57.81	0.83	-12.63	Pedestrian	Vehicle	-----	-413.31	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	7.02	7.02
		U$_{17}$ - L$_{17}$	-228.24	-53.32	6.80	-11.76	0.66	0.90	1.17	7.16	-56.10	0.66	-11.76	Vehicle	Vehicle	-----	-369.64	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.04	7.04
		U$_{18}$ - L$_{18}$	-209.27	-46.46	8.18	-11.28	-0.03	0.90	1.17	8.60	-48.88	-0.03	-11.28	Vehicle	Vehicle	-----	-335.60	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.53	7.53
		U$_{19}$ - L$_{19}$	-166.55	-42.64	8.76	-9.53	-0.07	0.90	1.17	9.21	-44.86	-0.07	-9.53	Vehicle	Vehicle	-----	-274.84	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.69	7.69
		U$_{20}$ - L$_{20}$	-113.95	-33.90	8.75	-7.50	-0.43	0.90	1.17	9.21	-35.66	-0.43	-7.50	Vehicle	Vehicle	-----	-194.49	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.32	7.32
		U$_{21}$ - L$_{21}$	-62.76	-25.01	12.73	-5.22	-0.44	0.90	1.17	13.40	-26.32	-0.44	-5.22	Vehicle	Vehicle	-----	-115.80	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.55	10.55
		U$_{22}$ - L$_{22}$	-38.94	-5.39	-5.96	-2.15	-2.04	0.90	1.17	-5.67	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	35.98	35.98
		U$_{23}$ - L$_{23}$	-74.43	9.31	-30.54	0.48	-6.10	0.90	1.17	9.79	-32.13	0.48	-6.10	Vehicle	Vehicle	-----	-138.53	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.28	8.28
		U$_{24}$ - L$_{24}$	-121.36	9.12	-35.78	0.37	-8.17	0.90	1.17	9.60	-37.64	0.37	-8.17	Vehicle	Vehicle	-----	-206.71	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U$_{25}$ - L$_{25}$	-169.12	8.77	-41.94	0.43	-9.94	0.90	1.17	9.23	-44.13	0.43	-9.94	Vehicle	Vehicle	-----	-277.22	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.75	7.75
		U$_{26}$ - L$_{26}$	-207.97	7.94	-44.81	0.14	-11.42	0.90	1.17	8.35	-47.14	0.14	-11.42	Vehicle	Vehicle	-----	-331.65	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.83	7.83
		U$_{27}$ - L$_{27}$	-219.96	6.53	-46.72	0.16	-11.49	0.90	1.17	6.87	-49.16	0.16	-11.49	Vehicle	Vehicle	-----	-349.85	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.20	8.20
		U$_{28}$ - L$_{28}$	-240.91	9.40	-42.88	-0.25	-11.17	0.90	1.17	9.89	-45.12	-0.25	-11.17	Vehicle	Vehicle	-----	-371.83	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.42	9.42
		U$_{29}$ - L$_{29}$	-202.73	14.30	-37.93	0.00	-10.35	0.90	1.17	15.04	-39.90	0.00	-10.35	Vehicle	Vehicle	-----	-315.41	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	12.21	12.21
		U$_{30}$ - L$_{30}$	-518.05	-47.73	-31.17	-13.79	-8.23	0.90	1.18	-33.19	-50.82	-8.23	-13.79	Vehicle	Vehicle	-----	-739.52	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	10.50	10.50
		U$_{31}$ -

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Built — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U$_0$ - L$_1$	87.66	27.11	-14.50	14.00	-4.60	0.90	1.24	30.18	-16.14	14.00	-4.60	Pedestrian	Vehicle	171.39	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**11.29**	**11.29**	-----	-----
		U$_1$ - L$_2$	23.90	34.90	3.17	9.20	-4.71	0.90	1.24	38.86	3.53	9.20	-4.71	Vehicle	Vehicle	81.58	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.39**	**10.39**	-----	-----
		U$_2$ - L$_3$	-49.02	20.08	-12.77	0.00	-1.00	0.90	1.24	22.35	-14.21	0.00	-1.00	Vehicle	Vehicle	-----	-82.20	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**20.07**	**20.07**
		U$_3$ - L$_4$	-108.88	-3.89	-29.02	-4.20	-2.10	0.90	1.24	-4.33	-32.31	-2.10	-4.20	Pedestrian	Vehicle	-----	-183.54	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.04**	**7.04**
		U$_4$ - L$_4$	153.12	7.63	26.66	3.11	7.00	0.90	1.24	29.68	8.49	7.00	3.11	Vehicle	Pedestrian	237.64	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**12.51**	**12.51**	-----	-----
		U$_5$ - L$_5$	186.35	48.39	-4.79	13.44	0.00	0.90	1.24	53.87	-5.33	13.44	0.00	Vehicle	Vehicle	312.28	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
		U$_6$ - L$_6$	177.52	44.69	-10.57	14.13	0.00	0.90	1.24	49.76	-11.77	14.13	0.00	Vehicle	Vehicle	295.46	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.51**	**9.51**	-----	-----
		U$_7$ - L$_7$	173.18	40.36	-12.74	13.87	0.00	0.90	1.24	44.93	-14.18	13.87	0.00	Vehicle	Vehicle	283.54	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.63**	**10.63**	-----	-----
		U$_8$ - L$_8$	328.11	62.31	0.32	19.31	0.00	0.90	1.20	67.19	0.35	19.31	0.00	Vehicle	Vehicle	513.89	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**9.44**	**9.44**	-----	-----
		U$_9$ - L$_{10}$	339.70	67.94	-2.38	19.74	0.00	0.90	1.20	73.26	-2.57	19.74	0.00	Vehicle	Vehicle	536.84	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.50**	**8.50**	-----	-----
		U$_{10}$ - L$_{11}$	313.22	60.46	4.50	18.15	0.00	0.90	1.20	65.18	4.85	18.15	0.00	Vehicle	Vehicle	491.92	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**9.17**	**9.17**	-----	-----
		U$_{11}$ - L$_{12}$	270.68	56.01	7.20	14.84	0.00	0.90	1.20	60.39	7.76	14.84	0.00	Vehicle	Vehicle	430.40	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.39**	**8.39**	-----	-----
		U$_{12}$ - L$_{13}$	194.17	45.41	-6.23	10.79	0.00	0.90	1.20	48.96	-6.72	10.79	0.00	Vehicle	Vehicle	316.06	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.92**	**8.92**	-----	-----
		U$_{13}$ - L$_{14}$	123.57	31.62	-12.62	2.11	3.86	0.90	1.20	34.10	-13.60	3.86	2.11	Vehicle	Vehicle	204.96	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.92**	**8.92**	-----	-----
		U$_{14}$ - L$_{15}$	-16.32	24.39	-18.14	0.00	-0.87	0.90	1.20	26.29	-19.56	0.00	-0.87	Vehicle	Vehicle	12.96	-46.64	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**16.89**	**16.89**	**15.95**	**15.95**
		U$_{15}$ - L$_{16}$	59.12	34.38	-12.44	6.08	-2.09	0.90	1.20	37.07	-13.41	6.08	-2.09	Vehicle	Vehicle	125.04	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.94**	**9.94**	-----	-----
		U$_{17}$ - L$_{16}$	172.14	49.42	-5.45	9.93	-1.86	0.90	1.20	53.29	-5.88	9.93	-1.86	Vehicle	Vehicle	293.06	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
		U$_{18}$ - L$_{17}$	210.78	49.18	-7.36	12.51	-1.53	0.90	1.20	53.03	-7.93	12.51	-1.53	Vehicle	Vehicle	342.95	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
		U$_{19}$ - L$_{18}$	242.64	48.25	-5.88	13.73	-1.21	0.90	1.20	52.02	-6.33	13.73	-1.21	Vehicle	Vehicle	383.05	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
		U$_{20}$ - L$_{19}$	257.76	40.46	-4.82	15.70	-1.03	0.90	1.20	43.63	-5.20	15.70	-1.03	Pedestrian	Vehicle	412.22	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.63**	**7.63**	-----	-----
		U$_0$ - L$_1$	298.99	50.48	-10.70	14.21	-2.21	0.90	1.18	53.75	-11.39	14.21	-2.21	Vehicle	Vehicle	458.55	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
		U$_1$ - L$_2$	284.21	62.54	-12.74	14.05	-2.66	0.90	1.18	66.59	-13.56	14.05	-2.66	Vehicle	Vehicle	456.04	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.41**	**7.41**	-----	-----
		U$_2$ - L$_3$	221.42	56.49	-13.57	11.83	-2.85	0.90	1.18	60.14	-14.45	11.83	-2.85	Vehicle	Vehicle	366.03	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U$_3$ - L$_4$	178.30	51.97	-15.32	10.08	-3.23	0.90	1.18	55.33	-16.32	10.08	-3.23	Vehicle	Vehicle	303.72	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**7.21**	**7.21**	-----	-----
		U$_4$ - L$_5$	53.50	35.11	-12.11	5.37	-2.87	0.90	1.18	37.38	-12.89	5.37	-2.87	Vehicle	Vehicle	118.14	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.01**	**10.01**	-----	-----
		U$_5$ - L$_6$	-16.51	26.72	-20.59	2.23	-1.22	0.90	1.18	28.45	-21.92	2.23	-1.22	Vehicle	Vehicle	15.52	-49.97	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**15.61**	**15.61**	**14.11**	**14.11**
		U$_6$ - L$_7$	-133.21	12.41	-37.01	0.00	-5.36	0.90	1.18	13.21	-39.41	0.00	-5.36	Vehicle	Vehicle	-----	-224.40	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**5.74**	**5.74**
		U$_7$ - L$_7$	208.77	43.69	-10.11	8.33	0.00	0.90	1.18	46.52	-10.76	8.33	0.00	Vehicle	Vehicle	331.87	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.48**	**8.48**	-----	-----
		U$_8$ - L$_8$	289.58	55.78	-2.11	10.70	0.00	0.90	1.18	59.39	-2.24	10.70	0.00	Vehicle	Vehicle	453.65	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.08**	**7.08**	-----	-----
		U$_{10}$ - L$_9$	327.97	56.85	-1.77	12.66	0.00	0.90	1.18	60.53	-1.89	12.66	0.00	Vehicle	Vehicle	505.05	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.43**	**7.43**	-----	-----
		U$_{11}$ - L$_{10}$	349.25	59.13	-1.75	12.70	0.00	0.90	1.18	62.96	-1.86	12.70	0.00	Vehicle	Vehicle	535.88	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.87**	**7.87**	-----	-----
		U$_{12}$ - L$_{11}$	358.20	56.00	-8.44	13.52	0.00	0.90	1.18	59.62	-8.98	13.52	0.00	Vehicle	Vehicle	543.16	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**8.16**	**8.16**	-----	-----
		U$_{13}$ - L$_{12}$	307.75	46.34	-16.16	12.26	-0.24	0.90	1.18	49.34	-17.21	12.26	-0.24	Vehicle	Vehicle	464.22	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.52**	**9.52**	-----	-----
		U$_{14}$ - L$_{13}$	260.20	37.50	-13.67	9.65	0.00	0.90	1.18	39.93	-14.56	9.65	0.00	Vehicle	Vehicle	390.17	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**12.96**	**12.96**	-----	-----
		U$_{15}$ - L$_{15}$	208.42	50.47	-1.47	11.04	-2.51	0.90	1.17	53.10	-1.55	11.04	-2.51	Vehicle	Pedestrian	339.98	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.33**	**8.33**	-----	-----
		U$_{16}$ - L$_{16}$	243.55	58.73	-4.36	11.54	-1.48	0.90	1.17	61.79	-4.59	11.54	-1.48	Vehicle	Vehicle	396.95	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U$_{17}$ - L$_{17}$	255.86	57.14	-7.17	12.23	0.00	0.90	1.17	60.11	-7.54	12.23	0.00	Vehicle	Vehicle	410.77	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.56**	**7.56**	-----	-----
		U$_{18}$ - L$_{18}$	235.29	58.51	-8.40	11.35	0.00	0.90	1.17	61.56	-8.83	11.35	0.00	Vehicle	Vehicle	385.90	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
		U$_{19}$ - L$_{19}$	212.11	50.96	-10.25	11.09	0.00	0.90	1.17	53.62	-10.78	11.09	0.00	Vehicle	Vehicle	345.45	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
	Structure 2	U$_{20}$ - L$_{20}$	168.24	48.00	-6.32	9.14	0.00	0.90	1.17	50.50	-6.65	9.14	0.00	Vehicle	Vehicle	284.37	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.61**	**8.61**	-----	-----
		U$_{26}$ - L$_{21}$	97.26	33.64	-15.57	6.66	0.00	0.90	1.17	35.39	-16.39	6.66	0.00	Vehicle	Vehicle	172.44	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.34**	**9.34**	-----	-----
		U$_{21}$ - L$_{22}$	30.60	12.12	-23.44	0.58	-2.18	0.90	1.17	12.75	-24.66	0.58	-2.18	Vehicle	Vehicle	56.36	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**31.14**	**31.14**	-----	-----
		U$_{23}$ - L$_{22}$	49.78	30.24	-17.74	5.11	-0.95	0.90	1.17	31.81	-18.66	5.11	-0.95	Vehicle	Vehicle	106.07	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**11.88**	**11.88**	-----	-----
		U$_{24}$ - L$_{23}$	115.07	41.35	-10.29	8.00	-0.72	0.90	1.17	43.50	-10.83	8.00	-0.72	Vehicle	Vehicle	206.15	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.19**	**7.19**	-----	-----
		U$_{25}$ - L$_{24}$	179.22	50.90	-12.03	10.10	0.00	0.90	1.17	53.55	-12.66	10.10	0.00	Vehicle	Vehicle	302.60	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.92**	**7.92**	-----	-----
		U$_{26}$ - L$_{25}$	220.97	51.10	-10.55	11.89	0.00	0.90	1.17	53.76	-11.10	11.89	0.00	Vehicle	Vehicle	357.15	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.99**	**7.99**	-----	-----
		U$_{27}$ - L$_{26}$	234.87	54.08	-8.39	11.45	0.00	0.90	1.17	56.90	-8.83	11.45	0.00	Vehicle	Vehicle	379.30	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.31**	**7.31**	-----	-----
		U$_{28}$ - L$_{27}$	253.15	51.28	-7.56	12.25	0.00	0.90	1.17	53.95	-7.96	12.25	0.00	Vehicle	Vehicle	399.23	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.47**	**8.47**	-----	-----
		U$_{29}$ - L$_{28}$	215.91	41.43	-16.09	10.20	0.61	0.90	1.17	43.58	-16.93	10.20	0.61	Vehicle	Vehicle	337.35	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.97**	**9.97**	-----	-----
		U$_{30}$ - L$_{29}$	180.73	35.69	-13.66	8.49	0.00	0.90	1.17	37.55	-14.37	8.49	0.00	Vehicle	Vehicle	283.76	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.52**	**12.52**	-----	-----
		U$_{31}$ - L$_{31}$	294.99	50.01	-7.67	12.90	0.00	0.90	1.18	53.25	-8.16	12.90	0.00	Vehicle	Vehicle	452.71	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.06**	**9.06**	-----	-----
		U$_{32}$ - L$_{32}$	342.70	58.30	-7.23	13.70	-0.55	0.90	1.18	62.08	-7.70	13.70	-0.55	Vehicle	Vehicle	526.21	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
		U$_{33}$ - L$_{33}$	363.39	61.12	-3.65	14.16	0.00	0.90	1.18	65.07	-3.89	14.16	0.00	Vehicle	Vehicle	557.00	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-129.89	-23.02	-0.20	1.35	-2.37	-12.30	0.00	0.00	0.00	0.00
	U_1 - U_2	-54.81	-51.14	0.21	2.32	-1.34	-16.47	0.00	0.00	0.00	0.00
	U_2 - U_3	-53.09	-44.50	0.36	3.40	-4.34	-16.13	0.00	0.00	0.00	0.00
	U_3 - U_4	-52.27	-51.68	2.10	3.38	-5.78	-16.20	0.00	0.00	0.00	0.00
	U_4 - U_5	-50.17	-50.17	2.26	2.26	-5.64	-15.62	0.00	0.00	0.00	0.00
	U_5 - U_6	-1.19	145.97	-6.99	33.47	-2.76	-4.92	0.00	0.00	0.00	0.00
	U_6 - U_7	34.54	53.23	2.94	1.01	-1.79	-7.80	0.00	0.00	0.00	0.00
	U_7 - U_8	-70.13	598.66	10.76	17.39	-0.03	-0.11	0.00	0.00	0.00	0.00
	U_8 - U_9	528.73	-128.77	-0.25	0.88	9.72	-12.57	0.00	0.00	0.00	0.00
	U_9 - U_{10}	69.10	44.97	1.85	2.26	-2.94	-12.91	0.00	0.00	0.00	0.00
	U_{10} - U_{11}	101.46	-177.08	2.91	2.40	1.74	-12.71	0.00	0.00	0.00	0.00
	U_{11} - U_{12}	48.88	-160.13	2.34	2.26	-0.24	-13.62	0.00	0.00	0.00	0.00
	U_{12} - U_{13}	-56.63	-218.18	2.64	0.95	-1.73	-16.74	0.00	0.00	0.00	0.00
	U_{13} - U_{14}	-173.99	-244.03	1.75	1.65	-7.63	-25.17	0.00	0.00	0.00	0.00
	U_{14} - U_{15}	-287.88	-237.50	2.31	1.33	-4.75	-15.83	0.00	0.00	0.00	0.00
	U_{15} - U_{16}	-196.26	-337.79	1.19	0.54	-3.08	-18.83	0.00	0.00	0.00	0.00
	U_{16} - U_{17}	-290.52	-154.89	1.71	0.50	-13.92	-12.35	0.00	0.00	0.00	0.00
	U_{17} - U_{18}	-190.08	-29.82	-7.28	4.10	-2.56	-6.37	0.00	0.00	0.00	0.00
	U_{18} - U_{19}	-179.81	-63.24	-7.38	2.30	-2.50	-6.10	0.00	0.00	0.00	0.00
	U_{19} - U_{20}	-290.19	260.74	-10.54	12.19	-0.75	-6.83	0.00	0.00	0.00	0.00
	U_0 - L_1	-27.02	-172.57	-0.47	1.10	2.58	-13.17	0.00	0.00	0.00	0.00
	L_1 - U_2	-25.34	-194.81	-0.26	1.13	1.63	-16.52	0.00	0.00	0.00	0.00
	U_2 - L_3	-52.13	-282.61	-0.50	1.49	-5.17	-22.19	0.00	0.00	0.00	0.00
	L_3 - U_4	-53.10	-287.61	-0.53	1.73	-5.73	-22.74	0.00	0.00	0.00	0.00
	U_4 - L_5	-360.73	-390.17	0.14	2.48	-9.20	-34.21	0.00	0.00	0.00	0.00
	L_5 - U_6	-403.61	-197.50	1.85	4.76	-7.81	-28.18	0.00	0.00	0.00	0.00
	U_6 - L_7	-349.76	-208.78	3.45	3.41	-8.98	-34.81	0.00	0.00	0.00	0.00
	L_7 - U_8	-253.89	-280.84	2.68	3.71	-14.14	-19.51	0.00	0.00	0.00	0.00
	U_8 - L_9	-330.50	-97.71	3.21	2.23	-13.83	-20.64	0.00	0.00	0.00	0.00
	L_9 - U_{10}	-237.13	39.43	3.86	4.88	-6.07	-11.52	0.00	0.00	0.00	0.00
	U_{10} - L_{11}	-130.22	-52.94	3.71	2.15	-5.17	-9.17	0.00	0.00	0.00	0.00
	L_{11} - U_{12}	-116.81	-170.72	-7.03	3.75	-8.91	-5.88	0.00	0.00	0.00	0.00
	U_{12} - L_{13}	-191.76	-321.22	-7.53	1.51	-8.91	-6.88	0.00	0.00	0.00	0.00
	L_{13} - U_{14}	-211.75	-121.87	-14.93	25.14	-0.45	-2.48	0.00	0.00	0.00	0.00
	U_{14} - L_{15}	-1029.87	-26.74	1.46	22.51	-19.91		0.00	0.00	0.00	0.00
	L_{15} - U_{16}	9.81	9.84	0.24	2.44	-1.36	-5.42	0.00	0.00	0.00	0.00
	U_{16} - L_{17}	-231.33	25.12	2.83	2.65	-1.35	-17.16	0.00	0.00	0.00	0.00
	L_{17} - U_{18}	-141.74	1.88	2.67	2.41	-1.45	-16.37	0.00	0.00	0.00	0.00
	U_{18} - L_{19}	-156.46	-8.75	3.88	2.97	-1.28	-17.97	0.00	0.00	0.00	0.00
	L_{19} - U_{20}	-48.44	11.25	3.83	3.10	-4.71	-19.80	0.00	0.00	0.00	0.00
	U_{20} - L_{21}	-30.25	-13.30	3.74	3.10	-4.71	-19.80	0.00	0.00	0.00	0.00
	L_{21} - U_{22}	-92.46	-65.91	1.45	2.03	-6.27	-26.21	0.00	0.00	0.00	0.00
	U_{22} - L_{23}	-59.53	-57.40	2.89	2.89	-5.45	-25.34	0.00	0.00	0.00	0.00
	L_{23} - U_{24}	-48.21	-31.51	3.11	0.55	-5.57	-15.57	1.38	39.71	6.88	196.61
	U_{24} - L_{25}	-10.71	13.97	2.88	3.03	-5.57	-15.57	1.38	39.71	6.88	196.61
	L_{25} - U_{26}	10.71	137.69	-5.08	4.33	-6.62	-10.00	-64.10	54.67	-83.58	-126.24
	U_{26} - L_{27}	57.18	122.84	-6.46	4.57	-1.55	-7.92	-81.33	57.67	-19.57	-99.99
	L_{27} - U_{28}	82.58	128.96	-6.76	2.93	-3.56	-15.15	-9.61	36.93	-44.93	-191.28
	U_{28} - L_{29}	14.12	118.69	-6.52	2.24	-3.56	-15.62	-157.97	12.49	-22.91	-204.78
	L_{29} - U_{30}	823.61	100.42	0.12	2.17	20.14	-20.99	1.48	27.89	257.32	-267.79
	U_{30} - L_{31}	32.21	96.21	2.75	2.17	2.75	-15.62	5.17	33.76	189.39	-196.68
	L_{31} - U_{32}	190.29	-52.92	2.80	3.46	3.04	-15.33	35.81	44.16	38.89	-195.82
	U_{32} - L_{33}	17.33	-89.79	3.67	3.88	-1.59	-16.32	46.89	49.61	-20.26	-208.46
	L_{33} - U_{34}	30.25	-13.30	3.74	3.10	-4.71	-19.80	48.33	39.16	-99.45	-250.00
	U_{34} - L_{35}	-75.20	-230.76	3.87	2.42	-5.28	-18.41	49.48	30.89	-3.51	-235.16
	L_{35} - U_{36}	-206.29	-130.41	3.87	2.42	-5.28	-18.41	41.88	41.88	4.59	-267.59
	U_{36} - L_{37}	-84.35	-278.75	3.82	3.33	-8.42	-23.03	48.75	42.58	-157.62	-294.20
	L_{37} - U_{38}	-211.99	-196.45	4.46	3.16	-8.42	-23.03	48.75	42.58	-157.62	-294.20
	U_{38} - L_{39}	-275.08	-274.62	3.16	0.76	-7.65	-26.83	22.21	9.68	-97.77	-342.75
	L_{39} - U_{40}	-257.08	-269.15	5.16	0.52	-13.87	-21.59	17.26	6.58	-177.22	-275.96
	U_{40} - L_{41}	-154.75	-63.91	5.16	0.52	-13.87	-21.59	17.26	6.58	-177.22	-275.96
	L_{41} - U_{42}	-154.97	-33.11	-1.70	0.78	-2.29	-7.97	-21.71	9.95	-30.59	-101.78
	U_{42} - L_{43}	-154.91	-33.11	-1.70	0.78	-2.29	-7.97	-21.71	9.95	-30.59	-101.78
	L_{43} - U_{44}	40.07	-167.86	0.45	0.46	0.44	-10.70	-5.81	5.91	5.23	-138.42
	U_{44} - L_{45}	-10.53	-132.37	-0.34	0.56	-1.52	-12.91	-4.36	7.21	19.68	-167.09
	L_{45} - U_{46}	-140.16	-260.93	0.26	0.77	-2.08	-19.48	3.33	9.95	-26.86	-252.03
	U_{46} - L_{47}	-187.10	-276.08	1.25	1.74	-8.60	-27.76	16.20	22.53	-111.32	-369.16
	L_{47} - U_{48}	-322.62	-140.31	1.25	1.74	-8.60	-27.76	16.20	22.53	-111.32	-369.16
	U_{48} - L_{49}	-162.95	-104.84	0.93	2.76	-3.78	-12.40	12.05	35.75	-48.95	-160.42
	L_{49} - U_{50}	-147.84	26.72	2.07	3.30	-7.64	-8.01	26.77	42.63	-98.86	-103.64
	U_{50} - L_{51}	-153.86	61.93	2.39	3.42	-7.64	-8.01	26.77	42.63	-98.86	-103.64
	L_{51} - U_{52}	-50.77	32.82	-3.52	2.54	-1.17	-4.36	-50.77	32.82	-15.18	-56.63
	U_{52} - L_{53}	-126.23	9.05	-3.52	2.54	-1.17	-4.36	-50.77	32.82	-15.18	-56.63
	L_{53} - U_{54}	-426.23	9.05	0.01	1.25	15.28	-14.86	68.15	16.67	-204.12	-166.56
	U_{54} - L_{55}	-426.23	9.05	0.01	1.25	15.28	-14.86	68.15	16.67	-204.12	-166.56
	L_{55} - U_{56}	-128.06	54.04	3.27	2.85	0.63	-12.41	43.66	38.01	8.35	-165.75
	U_{56} - L_{57}	-70.10	43.63	3.51	2.55	-1.67	-14.44	46.89	34.00	-22.32	-192.89
	L_{57} - U_{58}	-70.10	43.63	3.51	2.55	-1.67	-14.44	46.89	34.00	-22.32	-192.89
	U_{58} - L_{59}	-83.36	-50.45	3.68	0.99	-4.67	-13.04	49.16	13.23	-62.34	-174.21
	L_{59} - U_{60}	-83.36	-50.45	3.68	0.99	-4.67	-13.04	49.16	13.23	-62.34	-174.21
	U_{60} - L_{61}	-8.36	-30.51	9.55	10.88	0.61	-7.11	-127.56	145.30	10.81	-95.03

ZZ Axis Moment Properties

Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I_z (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula (if I_z Term = F_y*S_{bb})	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(DL)}$	Equivalent Mom. Factor $C_{b(LL)}$
U_0 - U_1	-172.20	-6.48	-209.52	-243.01	90.2	90.24	72.24	12746	2147	1328.6	f	4206	0.99800W	2974.3	0.862	0.94	0.94
U_1 - U_2	-67.54	-26.14	-94.49	-352.47	90.2	90.24	72.24	12746	2147	1328.6	f	4206	0.99800W	2974.3	0.268	0.71	0.71
U_2 - U_3	-54.20	-116.95	-230.66	-222.24	90.2	90.24	72.24	12746	2147	1328.6	f	4206	0.99800W	2974.3	0.639	0.86	0.86
U_3 - U_4	-31.46	-138.88	-168.25	-201.24	90.2	90.24	72.24	12746	2147	1328.6	f	4206	0.99800W	2974.3	0.836	0.93	0.93
U_4 - U_5	-5.28	-137.52	-90.31	-90.31	90.2	90.24	72.24	12746	2147	1328.6	f	4206	0.99800W	2974.3	0.999	1.00	1.00
U_5 - U_6	-119.77	244.87	-46.44	104.33	90.2	90.24	72.24	12746	2147	1328.6	f	4206	0.99800W	2974.3	-0.489	0.40	0.40
U_6 - U_7	174.62	102.77	-32.44	-27.60	91.1	91.15	78.18	14216	2986	1649.1	f	4704	0.99801W	3201.5	0.586	0.83	0.83
U_7 - U_8	-143.66	232.28	-0.41	-1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_8 - U_9	63.22	-132.42	892.85	378.81	130.3	130.30	105.11	18077	2955	1795.3	1.39	5965	0.99800W	4292.8	-0.445	0.42	0.42
U_9 - U_{10}	129.99	109.29	80.61	150.02	95.6	96.61	79.12	13629	2172	1367.9	1.40	4465	0.99800W	3184.1	-0.670	0.35	0.35
U_{10} - U_{11}	180.78	-189.89	161.10	-443.95	96.6	96.61	83.55	13029	2174	1387.9	1.40	4465	0.99812W	3184.1	-0.363	0.45	0.45
U_{11} - U_{12}	114.57	-174.19	32.74	-407.96	96.6	96.61	83.55	13029	2174	1387.9	1.40	4465	0.99812W	3184.1	-0.323	0.50	0.50
U_{12} - U_{13}	81.30	-267.62	-564.05	-565.18	151.8	151.76	130.94	21977	4535	2532.6	1.45	7252	0.99805Q	5003.4	0.274	0.71	0.71
U_{13} - U_{14}	1.96	-195.82	-423.99	-332.79	151.8	151.76	130.94	21977	4535	2532.6	1.45	7252	0.99805Q	5003.4	0.224	0.71	0.71
U_{14} - U_{15}	-466.68	-466.00	-623.36	-1075.49	251.7	251.73	219.41	36052	7161	3870.6	1.45	12066	0.99819T	8298.1	0.580	0.83	0.83
U_{15} - U_{16}	-453.94	-115.30	-642.93	-1179.30	251.7	251.73	219.41	36052	7161	3870.6	1.45	12066	0.99819T	8298.1	0.599	0.84	0.84
U_{16} - U_{17}	-397.35	-214.77	-603.81	-849.59	232.2	232.70	189.45	34012	6520	3217.6	1.46	11223	0.99805Q	7670.6	0.711	0.88	0.88
U_{17} - U_{18}	-265.52	-303.54	-564.97	-689.07	232.7	232.70	189.45	34012	6520	3217.6	1.46	11223	0.99805Q	7670.6	0.820	0.93	0.93
U_{18} - U_{19}	-387.80	-67.44	-598.03	-352.16	168.8	168.85	139.65	25144	4971	2408.0	1.49	8355	0.99805Q	5926.5	0.361	0.76	0.76
U_{19} - U_{20}	-244.20	-132.26	-609.15	-139.99	181.9	181.87	147.20	26902	5787	2647.8	1.37	8218	0.99647T	5992.8	0.342	0.74	0.74
U_0 - L_1	-118.79	-13.23	-330.33	-94.50	74.0	74.00	60.00	10423	1749	1088.9	1.47	3699	0.99800W	2435.3	-0.247	0.61	0.61
L_1 - U_2	-283.54	284.18	-299.79	124.36	156.6	156.80	126.72	21481	3285	1852.3	1.37	7089	0.99804Q	5166.9	-0.415	0.43	0.43
U_2 - L_3	-169.39	220.31	-320.14	-169.39	156.6	156.80	126.72	21481	3285	1852.3	1.37	7089	0.99804Q	5166.9	-0.415	0.43	0.43
L_3 - U_4	-76.10	-342.66	-153.61	-736.02	212.6	212.59	170.43	29737	4967	2491.6	1.40	9920	0.99857T	7005.5	0.209	0.68	0.68
U_4 - L_5	-432.06	-305.69	-1.53	-1.53	212.6	212.59	170.43	29737	4967	2491.6	1.40	9920	0.99857T	7005.5	0.289	0.72	0.72
L_5 - U_6	-666.68	-466.00	-623.36	-1075.49	251.7	251.73	219.41	36052	7161	3870.6	1.45	12066	0.99819T	8298.1	0.580	0.83	0.83
U_6 - L_7	-453.94	-115.30	-642.93	-1179.30	251.7	251.73	219.41	36052	7161	3870.6	1.45	12066	0.99819T	8298.1	0.599	0.84	0.84
L_7 - U_8	-397.35	-214.77	-603.81	-849.59	232.2	232.70	189.45	34012	6520	3217.6	1.46	11223	0.99805Q	7670.6	0.711	0.88	0.88
U_8 - L_9	-265.52	-303.54	-564.97	-689.07	232.7	232.70	189.45	34012	6520	3217.6	1.46	11223	0.99805Q	7670.6	0.820	0.93	0.93
L_9 - U_{10}	-387.80	-67.44	-598.03	-352.16	168.8	168.85	139.65	25144	4971	2408.0	1.49	8355	0.99805Q	5926.5	0.361	0.76	0.76
U_{10} - U_{11}	-244.20	-132.26	-609.15	-139.99	181.9	181.87	147.20	26902	5787	2647.8	1.37	8218	0.99647T	5992.8	0.342	0.74	0.74
U_{11} - L_{12}	-118.79	-13.23	-330.33	-94.50	74.0	74.00	60.00	10423	1749	1088.9	1.47	3699	0.99800W	2435.3	-0.247	0.61	0.61
L_{12} - U_{13}	-283.54	284.18	-299.79	124.36	156.6	156.80	126.72	21481	3285	1852.3	1.37	7089	0.99804Q	5166.9	-0.415	0.43	0.43
U_{13} - L_{14}	-169.39	220.31	-320.14	-169.39	156.6	156.80	126.72	21481	3285	1852.3	1.37	7089	0.99804Q	5166.9	-0.415	0.43	0.43
L_{14} - U_{15}	-76.10	-342.66	-153.61	-736.02	212.6	212.59	170.43	29737	4967	2491.6	1.40	9920	0.99857T	7005.5	0.209	0.68	0.68
U_{15} - L_{16}	-432.06	-305.69	-1.53	-1.53	212.6	212.59	170.43	29737	4967	2491.6	1.40	9920	0.99857T	7005.5	0.289	0.72	0.72
L_{16} - U_{17}	-666.68	-466.00	-623.36	-1075.49	251.7	251.73	219.41	36052	7161	3870.6	1.45	12066	0.99819T	8298.1	0.580	0.83	0.83
U_{17} - L_{18}	-453.94	-115.30	-642.93	-1179.30	251.7	251.73	219.41	36052	7161	3870.6	1.45	12066	0.99819T	8298.1	0.599	0.84	0.84
L_{18} - U_{19}	-397.35	-214.77	-603.81	-849.59	232.2	232.70	189.45	34012	6520	3217.6	1.46	11223	0.99805Q	7670.6	0.711	0.88	0.88
U_{19} - L_{20}	-265.52	-303.54	-564.97	-689.07	232.7	232.70	189.45	34012	6520	3217.6	1.46	11223	0.99805Q	7670.6	0.820	0.93	0.93
L_{20} - U_{21}	-387.80	-67.44	-598.03	-352.16	168.8	168.85	139.65	25144	4971	2408.0	1.49	8355	0.99805Q	5926.5	0.361	0.76	0.76
U_{21} - L_{22}	-244.20	-132.26	-609.15	-139.99	181.9	181.87	147.20	26902	5787	2647.8	1.37	8218	0.99647T	5992.8	0.342	0.74	0.74
U_{22} - L_{23}	-118.79	-13.23	-330.33	-94.50	74.0	74.00	60.00	10423	1749	1088.9	1.47	3699	0.99800W	2435.3	-0.247	0.61	0.61
L_{23} - U_{24}	-20.92	-7.48	-51.53	-23.10	14.1	14.14	11.25	1954	1.0	207.5	1.48	705	0.99800W	464.1	-0.379	0.49	0.49
U_{24} - L_{25}	-51.78	-3.93	-71.01	-5.10	14.1	14.14	11.25	1954	1.0	207.5	1.48	705	0.99800W	464.1	-0.379	0.49	0.49
L_{25} - U_{26}	-51.70	-0.53	-71.45	-5.10	14.1	14.14	11.25	1954	1.0	207.5	1.48	705	0.99800W	464.1	-0.379	0.49	0.49
U_{26} - L_{27}	-51.70	-0.53	-71.45	-5.10	14.1	14.14	11.25	1954	1.0	207.5	1.48	705	0.99800W	464.1	-0.379	0.49	0.49
L_{27} - U_{28}	-37.19	-25.25	-51.39	-22.61	14.1	14.14	11.25	1954	1.0	207.5	1.48	705	0.99800W	464.1	-0.379	0.49	0.49
U_{28} - L_{29}	-328.95	-348.98	-2.91	-4.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{29} - U_{30}	-420.71	-331.96	-3.23	-2.29	-1.97	-2.46										
U_{30} - L_{31}	-242.75	10.51	-4.43	-2.33	-1.97	-2.46										
L_{31} - U_{32}	-51.03	-55.29	-2.65	-0.95	-4.45	-3.74										
U_{32} - L_{33}	-30.80	-74.73	-2.68	-0.95	-4.45	-3.80										
L_{33} - U_{34}	-19.97	-4.99	-41.50	50.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_{34} - L_{35}	-82.40	-71.57	-1.25	-1.20	1.92	1.92	1.54	278	0.0	207.5	1.48	705	0.99800W	464.1	-0.379	0.49	0.49
L_{35} - U_{36}	-82.40	-71.57	-1.25	-1.20	1.92	1.92	1.54	278	0.0	207.5	1.48	705	0.99800W	464.1	-0.379	0.49	0.49
U_{36} - L_{37}	-2.36	-2.36	-0.46	-0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{37} - U_{38}	-2.12	-2.82	-40.25	74.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_{38} - L_{39}	-79.20	-4.68	-98.30	-4.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{39} - U_{40}	-7.76	-5.14	-95.64	-2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_{40} - L_{41}	-13.73	-8.91	-135.60	-103.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{41} - U_{42}	-34.13	-43.23	-49.16	-20.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_{42} - L_{43}	-33.76	-44.53	-21.59	-20.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{43} - U_{44}	-38.60	-17.11	-31.51	-26.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_{44} - L_{45}	-38.60	-17.11	-43.33	-23.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{45} - U_{46}	-238.32	-198.45	-3.39	-1.69	-1.79	-2.94										
U_{46} - L_{47}	-241.24	-149.16	-3.39	-1.69	-1.79	-2.94										
L_{47} - U_{48}	-322.34	-210.62	-3.39	-1.69	-1.79	-2.94										
U_{48} - L_{49}	-36.04	-22.51	-58.25	46.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{49} - U_{50}	-26.98	-23.41	-35.25	87.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_{50} - L_{51}	-27.00	-23.41	-35.25	87.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{51} - U_{52}	-18.70	-6.69	-49.05	90.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
U_{52} - L_{53}	-13.76	-7.28	-49.05	90.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00W	0.00	0.000	0.00	0.00
L_{53} - U_{54}	-64.28	-11.32	-6.61	44.33

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-Built**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDP) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-44.17	-99.07	0.73	0.76	3.98	-6.86				
	L_1-L_2	-131.02	-112.64	-0.32	1.86	-0.53	-11.50				
	L_2-L_3	-74.50	-79.90	-1.35	2.52	-3.39	-11.80				
	L_3-L_4	18.36	16.12	1.03	3.93	-3.42	-15.33				
	L_4-L_5	-68.34	-210.23	7.80	0.65	-50.97	-94.08				
	L_5-L_6	8.36	229.14	2.35	6.60	-4.79	-6.43				
	L_6-L_7	8.61	171.52	6.19	5.41	-2.66	-5.84				
	L_7-L_8	1.61	409.41	-1.51	12.46	0.08	-2.20				
	L_8-L_9	439.88	-25.12	8.10	83.20	6.21	-4.71				
	L_9-L_{10}	204.03	-117.02	-1.00	7.39	-3.91	-7.51				
	L_{10}-L_{11}	168.12	-117.13	4.10	1.95	-0.12	-6.77				
	L_{11}-L_{12}	239.72	-217.25	2.01	3.82	3.73	-5.46				
	L_{12}-L_{13}	-19.73	-128.50	2.54	1.25	-1.11	-8.79				
	L_{13}-L_{14}	175.78	-425.21	1.98	1.72	1.11	-19.76				
	L_{14}-L_{15}	-409.28	-207.70	1.98	1.72	1.11	-15.50				
	L_{15}-L_{16}	-209.39	-318.68	0.55	0.61	-10.15	-16.05				
	L_{16}-L_{17}	374.86	83.54	-5.99	3.29	-8.31	-7.20				
	L_{17}-L_{18}	-171.07	19.86	-3.68	3.53	-5.13	-4.24				
	L_{18}-L_{19}	-209.33	253.78	-7.03	4.78	-1.96	-6.01				
	L_{19}-L_{20}	-84.78	1.02	6.89	4.14	0.34	-0.36				
	L_0-L_{13}	10.35	-213.29	-0.38	0.84	3.07	-9.28				
	L_{13}-L_{20}	84.16	-247.73	5.45	11.50	3.38	-13.58				
	L_0-L_1	-0.36	-194.33	-0.49	0.91	-0.23	-11.09				
	L_1-L_2	-0.36	-16.03	-0.49	0.91	-0.23	-2.63				
	L_2-L_3	-287.80	-299.08	-0.20	1.57	-2.89	-17.48				
	L_3-L_4	-287.80	-299.08	-0.20	1.57	-2.89	-17.48				
	L_4-L_5	-467.54	-273.29	2.26	3.41	-8.97	-24.99				
	L_5-L_6	-310.55	-49.89	2.78	5.12	-16.25	-16.33				
	L_6-L_7	-310.55	-49.89	2.78	5.12	-16.25	-16.33				
	L_7-L_8	-261.91	188.33	2.46	5.05	-7.22	-9.22				
	L_8-L_9	-261.91	188.33	2.46	5.05	-7.22	-9.22				
	L_9-L_{10}	-131.48	389.15	-4.83	5.32	-4.67	-6.70				
	L_{10}-L_{11}	-131.48	389.15	-4.83	5.32	-4.67	-6.70				
	L_{11}-L_{12}	-164.35	-140.48	-3.05	1.62	-8.73	-12.80				
	L_{12}-L_{13}	-267.47	998.41	-2.46	1.36	16.18	-13.97				
	L_{13}-L_{14}	912.03	-326.86	1.85	1.36	16.18	-13.97				
	L_{14}-L_{15}	912.03	-326.86	1.85	1.36	16.18	-13.97				
	L_{15}-L_{16}	279.13	-178.24	-4.13	1.39	-0.53	-8.39				
	L_{16}-L_{17}	515.59	-35.24	5.38	1.68	5.07	-10.47				
	L_{17}-L_{18}	515.59	-35.24	5.38	1.68	5.07	-10.47				
	L_{18}-L_{19}	292.02	-25.09	4.75	2.07	-3.67	-8.82				
	L_{19}-L_{20}	292.02	-25.09	4.75	2.07	-3.67	-8.82				
	L_0-L_{20}	230.55	-46.37	2.78	3.16	1.68	-13.44				
	L_{20}-L_{21}	230.55	-46.37	2.78	3.16	1.68	-13.44				
	L_{21}-L_{22}	41.53	-186.96	-0.07	2.42	0.15	-26.62				
	L_{22}-L_{23}	-197.37	-333.93	1.15	3.83	1.18	-39.15				
	L_{23}-L_{24}	-108.53	-10.73	1.42	3.83	-8.12	-15.47				
	L_{24}-L_{25}	-108.53	-10.73	1.42	3.83	-8.12	-15.47				
	L_{25}-L_{26}	-65.47	170.47	3.97	4.81	-7.93	-8.59				
	L_{26}-L_{27}	-65.47	170.47	3.97	4.81	-7.93	-8.59				
	L_{27}-L_{28}	-30.98	151.24	-0.68	6.74	-6.22	-6.44				
	L_{28}-L_{29}	-30.98	151.24	-0.68	6.74	-6.22	-6.44				
	L_{29}-L_{30}	-19.38	-193.41	0.41	2.40	-4.84	-13.28				
	L_{30}-L_{31}	-19.38	-193.41	0.41	2.40	-4.84	-13.28				
	L_{31}-L_{32}	279.13	-178.24	-4.13	1.39	-0.53	-8.39				
	L_{32}-L_{33}	740.88	-268.17	3.57	0.42	15.10	-13.06				
	L_{33}-L_{34}	-140.43	-76.07	-1.26	2.72	-0.79	-10.31				
	L_{34}-L_{35}	-140.43	-76.07	-1.26	2.72	-0.79	-10.31				
	L_{35}-L_{36}	27.79	-114.86	-0.29	2.82	0.68	-12.78				
	L_{36}-L_{37}	27.79	-114.86	-0.29	2.82	0.68	-12.78				
	L_{37}-L_{38}	-182.93	-415.63	2.36	3.26	-12.20	-28.58				
	L_{38}-L_{39}	-370.36	-165.17	2.65	0.64	-15.02	-21.57				
	L_{39}-L_{40}	-370.36	-165.17	2.65	0.64	-15.02	-21.57				
	L_{40}-L_{41}	-204.19	-21.34	-9.05	2.76	-16.02	-9.92				
	L_{41}-L_{42}	-204.19	-21.34	-9.05	2.76	-16.02	-9.92				
	L_{42}-L_{43}	-227.31	59.39	-7.57	4.15	-6.57	-4.11				
	L_{43}-L_{44}	-227.31	59.39	-7.57	4.15	-6.57	-4.11				
	L_0-L_{44}	43.83	-117.87	0.34	0.35	4.24	-7.39				
	L_{44}-L_{45}	-152.35	-177.82	0.41	0.39	3.93	-7.86				
	L_{45}-L_{46}	55.48	-320.34	0.58	0.63	-0.28	-12.29				
	L_{46}-L_{47}	55.48	-320.34	-0.13	0.63	-0.28	-12.29				
	L_{47}-L_{48}	-64.07	-371.05	0.50	1.89	-1.63	-23.25				
	L_{48}-L_{49}	-64.07	-371.05	0.50	1.89	-1.63	-23.25				
	L_{49}-L_{50}	-370.76	-82.43	11.32	4.32	-8.92	-12.50				
	L_{50}-L_{51}	-370.76	-82.43	11.32	4.32	-8.92	-12.50				
	L_{51}-L_{52}	-200.77	-149.87	3.34	3.34	-3.47	-4.82				
	L_{52}-L_{53}	-200.77	-149.87	3.34	3.34	-3.47	-4.82				
	L_{53}-L_{54}	-131.78	166.76	-4.76	4.80	-5.15	-4.76				
	L_{54}-L_{55}	-131.78	166.76	-4.76	4.80	-5.15	-4.76				
	L_{55}-L_{56}	361.88	-17.92	5.95	0.83	8.47	-5.34				
	L_{56}-L_{57}	361.88	-17.92	5.95	0.83	8.47	-5.34				
	L_{57}-L_{58}	61.93	-21.66	1.41	2.94	-1.20	-8.10				
	L_{58}-L_{59}	61.93	-21.66	1.41	2.94	-1.20	-8.10				
	L_{59}-L_{60}	189.90	5.62	3.14	3.34	0.96	-13.74				
	L_{60}-L_{61}	189.90	5.62	3.14	3.34	0.96	-13.74				
	L_{61}-L_{62}	-38.98	-56.51	2.39	1.13	-8.76	-14.39				
	L_{62}-L_{63}	-38.98	-56.51	2.39	1.13	-8.76	-14.39				
	L_{63}-L_{64}	-66.62	-29.78	-6.26	4.08	-1.97	-9.66				

M_z Information — YY Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{xx} (in^3)	S_{tc} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{xx}$	M_z (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor C_{mx}	Equivalent Mem. Factor C_{mm}
Structure 1	L_0-L_1	-0.75	-2.75	10.34	38.05	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	2755.4	-0.047	0.58	0.58
	L_1-L_2	3.26	-6.75	-12.02	-37.01	-1.65	0.24	-5.01	-0.21	-2.56	1.26	4141	0.99991186	3294.8	0.145	0.66	0.66
	L_2-L_3	-2.65	8.87	-27.01	-1.21	0.00	0.00	0.00	0.00	0.00	1.26	4141	0.99991186	3294.8	0.145	0.66	0.66
	L_3-L_4	15.22	1.87	-25.62	-22.63	0.00	0.00	0.00	0.00	0.00	1.14	3759	0.99991186	2991.6	0.145	0.66	0.66
	L_4-L_5	-48.84	-21.28	-45.18	81.85	-3.76	23.80	-3.66	-0.11	-1.48	1.21	3332	0.99900594	3052.4	-0.460	0.41	0.41
	L_5-L_6	7.99	2.31	29.31	-15.19	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	3448.5	0.137	0.65	0.65
	L_6-L_7	28.81	91.29	0.60	17.42	-2.24	-1.14	-2.24	-0.14	-1.82	1.21	3332	0.99900594	4176.0	-0.602	0.36	0.36
	L_7-L_8	-36.28	-11.40	-3.81	64.50	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	3844.5	0.059	0.59	0.59
	L_8-L_9	-4.56	-16.42	-10.39	-3.85	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	4036.3	-0.030	0.59	0.59
	L_9-L_{10}	-6.30	10.73	-24.41	67.80	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	4806.4	-0.155	0.53	0.53
	L_{10}-L_{11}	13.82	33.51	-10.22	-45.14	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	4176.1	-0.964	0.25	0.25
	L_{11}-L_{12}	4.66	14.99	-14.93	6.75	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	3844.5	0.059	0.59	0.59
	L_{12}-L_{13}	15.18	6.42	-5.14	-33.03	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	3052.5	-0.416	0.43	0.43
	L_{13}-L_{14}	4.55	1.43	1.77	-0.44	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	2755.5	-0.727	0.31	0.31
	L_{14}-L_{15}	-11.53	-0.41	0.70	32.89	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	4288.6	0.141	0.66	0.66
	L_{15}-L_{16}	-1.36	-4.93	24.18	-12.93	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5316.6	-0.279	0.49	0.49
	L_{16}-L_{17}	-34.73	-13.43	-0.46	64.64	-2.37	0.00	-2.37	-0.14	-1.85	1.21	3332	0.99900594	3924.6	-0.447	0.41	0.41
	L_{17}-L_{18}	-109.82	-80.52	-43.82	-137.83	-3.75	3.51	-3.75	-0.25	-3.25	1.21	3332	0.99900594	2755.5	-0.727	0.31	0.31
	L_{18}-L_{19}	-22.22	-8.38	-24.42	-155.91	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	2755.5	-0.727	0.31	0.31
	L_0-L_{13}	-0.63	-2.16	-11.49	39.88	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	4022.0	-0.149	0.54	0.54
	L_{13}-L_{20}	-2.04	-0.63	-0.05	-0.17	-0.90	-0.12	-0.90	-0.06	-0.70	1.21	3332	0.99900594	4022.0	-0.149	0.54	0.54
	L_0-L_1	-0.03	2.81	-12.23	23.97	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_1-L_2	60.81	64.32	0.00	22.13	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_2-L_3	88.27	87.52	-0.52	0.00	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_3-L_4	71.73	108.91	0.01	0.69	-1.90	-0.20	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_4-L_5	50.54	10.95	-0.01	-75.51	-1.48	0.00	-1.48	-0.09	-1.15	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_5-L_6	-6.52	-0.82	6.06	53.97	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_6-L_7	-34.85	4.00	-14.13	-45.68	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_7-L_8	9.70	11.72	28.68	-28.36	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_8-L_9	-47.76	-5.64	-31.62	52.79	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_9-L_{10}	-3.02	4.00	14.13	-45.68	0.00	0.00	0.00	0.00	0.00	1.21	3332	0.99900594	5357.7	0.010	0.60	0.60
	L_{10}-L_{11}	41.71	193.65	-0.28	0.31	1.11	-3.58										
	L_{11}-L_{12}	52.47	-82.51	0.40	0.10	-0.74	4.94										
	L_{12}-L_{13}	148.13	-327.41	0.00	0.00	0.00	0.00										
	L_{13}-L_{14}	11.39	-8.00	28.97	52.38	0.00	0.00										
	L_{14}-L_{15}	74.64	-36.11	-29.40	0.00	0.00	0.00										
	L_{15}-L_{16}	31.04	-10.96	0.00	0.00	0.00	0.00										
	L_{16}-L_{17}	34.48	30.77	-34.52	4.84	0.00	0.00										
	L_{17}-L_{18}	12.21	-1.53	0.00	0.00	0.00	0.00										
	L_{18}-L_{19}	-16.87	-3.19	22.50	44.29	0.00	0.00										
	L_{19}-L_{20}	0.57	-6.36	-7.13	26.92	0.00	0.00										
	L_0-L_{20}	-14.86	-2.62	-2.17	0.00	0.00	0.00										
	L_{20}-L_{21}	2.63	5.74	-4.39	-32.66	0.00	0.00										
	L_{21}-L_{22}	-29.84	7.40	-14.42	0.00	0.00	0.00										
	L_{22}-L_{23}	-7.25	-18.91	0.20	0.53	1.01	-2.71										
	L_{23}-L_{24}	-7.35	-2.47	-6.27	18.18	0.00	0.00										
	L_{24}-L_{25}	-27.85	20.00	-18.51	0.00	0.00	0.00										
	L_{25}-L_{26}	-4.73	-14.42	-29.44	30.70	0.00	0.00										
	L_{26}-L_{27}	23.13	16.86	-3.98	-37.97	-1.59	4.74										
	L_{27}-L_{28}	58.55	17.75	-9.55	0.00	0.00	0.00										
	L_{28}-L_{29}	106.27	-29.05	-2.15	0.44	-0.94	3.36										
	L_{29}-L_{30}	94.36	16.03	-1.45	-0.17	-0.87	-1.85										
	L_{30}-L_{31}	79.86	8.32	-0.02	-0.62	2.72	-0.67										
	L_{31}-L_{32}	47.70	4.67	-0.01	-0.01	0.00	0.00										
	L_{32}-L_{33}	41.43	-28.58	0.15	0.36	3.52	-0.59										
	L_{33}-L_{34}	1.44	-0.38	3.07	60.06	0.00	0.00										
	L_{34}-L_{35}	-29.26	-20.78	0.00	0.00	0.00	0.00										
	L_{35}-L_{36}	-53.03	-1.46	-23.83	85.07	0.00	0.00										
	L_{36}-L_{37}	-7.24	34.11	-32.22	89.22	0.00	0.00										
	L_{37}-L_{38}	-28.36	12.04	-32.20	89.22	0.00	0.00										
	L_{38}-L_{39}	-19.48	-3.68	-0.98	0.00	0.00	0.00										
	L_{39}-L_{40}	-87.56	25.57	-2.62	0.00	0.00	0.00										
	L_{40}-L_{41}	-0.22	-0.98	0.37	37.94	0.00	0.00										
	L_{41}-L_{42}	-1.26	-1.15	-3.11	-11.86	0.00	0.00										
	L_{42}-L_{43}	-0.29	-0.83	34.78	-0.00	0.00	0.00										
	L_0-L_{44}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{44}-L_{45}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{45}-L_{46}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{46}-L_{47}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{47}-L_{48}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{48}-L_{49}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{49}-L_{50}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{50}-L_{51}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{51}-L_{52}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{52}-L_{53}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{53}-L_{54}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{54}-L_{55}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{55}-L_{56}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{56}-L_{57}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{57}-L_{58}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{58}-L_{59}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{59}-L_{60}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{60}-L_{61}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{61}-L_{62}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{62}-L_{63}	0.00	0.00	0.00	0.00	0.00	0.00										
	L_{63}-L_{64}	0.00	0.00	0.00	0.00	0.00	0.00										

Tension

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Axial Force (k)	Moment Start (k-in)	Moment End (k-in)	Pass
Structure 1	L_0-L_1	-0.75	-2.75	10.34	38.05	0.00	0.00
	L_1-L_2	3.26	-6.75	-12.02	-37.01	-1.65	0.24
	L_2-L_3	-2.65	8.87	-27.01	-1.21	0.00	0.00
	L_3-L_4	15.22	1.87	-25.62	-22.63	0.00	0.00
	L_4-L_5	-48.84	-21.28	-45.18	81.85	-3.76	23.80
	L_5-L_6	7.99	2.31	29.31	-15.19	0.00	0.00
	L_6-L_7	28.81	91.29	0.60	17.42	-2.24	-1.14
	L_7-L_8	-36.28	-11.40	-3.81	64.50	0.00	0.00
	L_8-L_9	-4.56	-16.42	-10.39	-3.85	0.00	0.00
	L_9-L_{10}	-6.30	10.73	-24.41	67.80	0.00	0.00
	L_{10}-L_{11}	13.82	33.51	-10.22	-45.14	0.00	0.00
	L_{11}-L_{12}	4.66	14.99	-14.93	6.75	0.00	0.00
	L_{12}-L_{13}	15.18	6.42	-5.14	-33.03	0.00	0.00
	L_{13}-L_{14}	4.55	1.43	1.77	-0.44	0.00	0.00
	L_{14}-L_{15}	-11.53	-0.41	0.70	32.89	0.00	0.00
	L_{15}-L_{16}	-1.36	-4.93	24.18	-12.93	0.00	0.00
	L_{16}-L_{17}	-34.73	-13.43	-0.46	64.64	-2.37	0.00
	L_{17}-L_{18}	-109.82	-80.52	-43.82	-137.83	-3.75	3.51
	L_{18}-L_{19}	-22.22	-8.38	-24.42	-155.91	0.00	0.00
	L_0-L_{13}	-0.63	-2.16	-11.49	39.88	0.00	0.00
	L_{13}-L_{20}	-2.04	-0.63	-0.05	-0.17	-0.90	-0.12
	L_0-L_1	-0.03	2.81	-12.23	23.97	0.00	0.00
	L_1-L_2	60.81	64.32	0.00	22.13	0.00	0.00
	L_2-L_3	88.27	87.52	-0.52	0.00	0.00	0.00
	L_3-L_4	71.73	108.91	0.01	0.69	-1.90	-0.20
	L_4-L_5	50.54	10.95	-0.01	-75.51	-1.48	0.00
	L_5-L_6	-6.52	-0.82	6.06	53.97	0.00	0.00
	L_6-L_7	-34.85	4.00	-14.13	-45.68	0.00	0.00
	L_7-L_8	9.70	11.72	28.68	-28.36	0.00	0.00
	L_8-L_9	-47.76	-5.64	-31.62	52.79	0.00	0.00
	L_9-L_{10}	-3.02	4.00	14.13	-45.68	0.00	0.00
	L_{10}-L_{11}	41.71	193.65	-0.28	0.31	1.11	-3.58
	L_{11}-L_{12}	52.47	-82.51	0.40	0.10	-0.74	4.94
	L_{12}-L_{13}	148.13	-327.41	0.00	0.00	0.00	0.00
	L_{13}-L_{14}	11.39	-8.00	28.97	52.38	0.00	0.00
	L_{14}-L_{15}	74.64	-36.11	-29.40	0.00	0.00	0.00
	L_{15}-L_{16}	31.04	-10.96	0.00	0.00	0.00	0.00
	L_{16}-L_{17}	34.48	30.77	-34.52	4.84	0.00	0.00
	L_{17}-L_{18}	12.21	-1.53	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	-16.87	-3.19	22.50	44.29	0.00	0.00
	L_{19}-L_{20}	0.57	-6.36	-7.13	26.92	0.00	0.00
	L_0-L_{20}	-14.86	-2.62	-2.17	0.00	0.00	0.00
	L_{20}-L_{21}	2.63	5.74	-4.39	-32.66	0.00	0.00
	L_{21}-L_{22}	-29.84	7.40	-14.42	0.00	0.00	0.00
	L_{22}-L_{23}	-7.25	-18.91	0.

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: HF1

Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.50	DL Factor:	1.50
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension

(-) Negative Stresses / Forces Indicate Compression

& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel

** Area deducted for rivet holes (see separate calculations)

*** K = 0.75 per MCEB 6.6.2.1

**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009

Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) Start (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0~L_1	-56.29	86.22	-3.35	4.38	0.53	-0.71	-44.78	68.50	-7.08	9.46
	U_1~L_1	-14.44	23.27	-3.43	3.37	0.70	-0.70	-45.82	44.97	9.38	-9.37
	U_1~L_2	6.63	-5.55	3.54	0.84	-0.90	0.00	-41.39	47.23	11.20	-12.70
	U_2~L_2	36.84	-39.22	-2.34	2.58	1.89	-1.69	-31.31	34.49	25.25	-22.60
	U_2~L_3	49.77	-69.19	-2.86	3.75	2.41	-2.44	-11.03	17.02	33.99	-32.60
	U_3~L_3	57.71	-69.80	-0.09	0.04	3.16	-3.52	7.34	0.00	43.20	-46.99
	U_3~L_4	68.32	-67.29	4.03	0.00	3.68	-4.17	40.40	1.96	49.20	-53.11
	U_4~L_4	106.28	-118.16	-0.13	0.11	4.68	-4.84	-1.68	1.52	62.55	-64.59
	U_4~L_5	-10.96	6.72	-4.10	4.92	5.40	-4.45	-54.76	65.77	72.16	-86.65
	U_5~L_5	-144.91	167.70	-4.04	4.30	5.52	-5.31	-52.23	51.66	81.13	-4.04
	U_5~L_6	-102.02	95.66	-2.93	3.43	0.02	-0.33	-37.84	44.35	0.19	-4.24
	U_6~L_6	-111.13	106.65	-2.71	4.43	0.31	-0.27	-48.04	57.26	4.01	-2.69
	U_6~L_7	-96.42	93.90	-3.46	3.64	0.59	-0.46	-44.70	45.75	7.69	-6.90
	U_7~L_7	-90.91	75.94	-3.21	3.38	0.84	-0.82	-41.58	43.68	10.84	-10.66
	U_7~L_8	-33.93	29.66	-3.10	3.31	2.43	-2.42	-30.08	31.45	19.45	-19.45
	U_8~L_8	8.32	-15.87	-1.48	1.53	3.13	-3.28	-19.20	19.82	40.40	-42.46
	U_8~L_9	47.73	-50.39	-0.30	0.72	3.24	-3.47	-40.31	-53.48	118.58	-121.62
	U_9~L_9	61.55	-72.81	-0.46	0.47	3.27	-3.44	-5.98	6.06	42.32	-44.46
	U_9~L_{10}	133.11	-138.25	-0.64	0.65	3.58	-3.76	-8.32	8.77	14.53	-15.00
	U_{10}~L_{10}	157.87	-153.86	-0.66	0.69	6.27	-6.11	-8.51	7.63	81.06	-79.11
	U_{10}~L_{11}	-131.38	-213.66	-2.29	0.48	4.40	-5.78	-3.69	6.18	56.94	-74.77
	U_{11}~L_{11}	-147.13	-191.00	-3.17	0.00	4.73	-6.25	-6.48	0.00	75.91	-98.35
	U_{11}~L_{12}	-122.87	-130.77	-4.88	4.94	0.60	-0.62	-62.35	-63.06	7.70	-7.91
	U_{12}~L_{12}	-91.75	-93.29	-3.27	3.11	0.75	-0.74	-47.31	50.54	5.04	-5.49
	U_{12}~L_{13}	-62.46	-69.03	-2.52	2.96	0.48	-0.49	-37.32	37.78	6.12	-6.23
	U_{13}~L_{13}	-37.86	-43.29	-2.94	2.76	0.29	-0.31	-27.98	31.79	3.70	-3.67
	U_{13}~L_{14}	-9.11	-15.69	2.84	2.99	1.39	-1.34	-36.32	38.19	17.70	-17.06
	U_{14}~L_{14}	14.84	-14.93	-2.50	2.55	1.64	-1.74	-31.93	32.63	20.99	-22.21
	U_{14}~L_{15}	39.69	-45.43	-1.50	1.60	2.40	-2.46	-22.89	23.41	30.84	-32.63
	U_{15}~L_{15}	88.81	-97.92	-1.01	0.84	3.67	-4.03	-12.89	10.74	49.47	-51.46
	U_{15}~L_{16}	133.08	-133.02	-0.60	0.72	3.69	-4.17	16.00	0.00	58.63	-61.24
	U_{16}~L_{16}	140.09	-147.00	-0.01	0.09	4.87	-5.13	-0.10	1.09	62.22	-65.73
	U_{16}~L_{17}	148.96	-153.44	-0.11	0.20	4.78	-4.99	-1.42	2.56	61.01	-63.23
	U_{17}~L_{17}	143.97	-139.95	-0.39	0.67	4.79	-4.72	-5.47	8.77	59.01	-60.14
	U_{17}~L_{18}	185.41	-182.32	-0.54	0.53	5.82	-5.56	-6.86	6.82	74.32	-71.06
	U_{18}~L_{18}	72.60	-71.13	-0.14	0.15	2.77	-2.74	-1.84	1.96	29.73	-28.46
	U_{18}~L_{19}	-128.28	-129.98	-5.14	4.77	0.55	-0.49	-64.89	60.22	6.53	-6.14
	U_{19}~L_{19}	-93.77	-93.77	-3.73	3.53	0.83	-0.81	-47.73	50.39	10.21	-9.82
	U_{19}~L_{20}	-125.94	-122.64	-5.00	5.42	0.56	-0.52	-49.45	68.40	7.01	-6.59
	U_{20}~L_{20}	-109.68	106.91	-5.52	5.72	0.73	-0.72	-69.68	72.22	9.23	-9.08
	U_{20}~L_{21}	-43.25	43.74	-3.12	3.17	0.79	-0.70	-39.43	40.00	10.01	-8.84
	U_{21}~L_{21}	29.76	34.59	-1.41	1.46	0.74	-0.74	-32.22	32.76	9.33	-13.17
	U_{21}~L_{22}	-1.28	1.60	-1.72	1.90	1.55	-1.71	-21.65	24.04	19.62	-21.56
	U_{22}~L_{22}	46.53	-51.18	-0.90	0.77	3.00	-3.72	-11.40	9.73	37.91	-38.34
	U_{22}~L_{23}	62.68	-61.36	-0.74	0.71	4.12	-4.08	-9.29	8.98	52.07	-51.52
	U_{23}~L_{23}	106.60	-105.79	-0.79	0.76	6.27	-6.46	-9.91	9.61	79.20	-81.55
	U_{23}~L_{24}	114.56	-114.55	-0.38	0.32	6.29	-5.96	-4.82	4.01	79.36	-75.18
	U_{24}~L_{24}	-13.74	5.73	-3.54	3.39	1.61	-1.62	-21.12	21.58	19.62	-19.62
	U_{24}~L_{25}	-121.12	118.67	-4.59	4.33	0.59	-0.55	-58.68	55.26	7.58	-7.08
	U_{25}~L_{25}	-92.37	86.40	-3.89	4.06	0.47	-0.65	-49.75	51.92	6.03	-8.34
	U_{25}~L_{26}	-47.73	50.39	-3.70	3.59	0.83	-0.81	-39.43	40.00	10.21	-9.82
	U_{26}~L_{26}	-96.77	103.11	-4.44	4.60	0.06	-0.23	-56.73	58.73	0.77	-2.90
	U_{26}~L_{27}	-10.56	17.90	-4.22	4.09	0.61	-0.61	-49.62	52.01	7.79	-7.79
	U_{27}~L_{27}	-43.45	70.69	-4.19	4.21	0.59	-0.53	-53.56	53.81	7.50	-6.53
	U_{27}~L_{28}	-32.66	38.67	-2.11	2.43	0.78	-0.87	-26.92	31.06	10.02	-10.66
	U_{28}~L_{28}	-16.10	17.79	-2.22	2.49	0.31	-0.31	-27.20	27.20	4.23	-4.23
	U_{28}~L_{29}	4.46	-7.40	-1.79	1.57	2.50	-2.70	-22.91	29.05	31.89	-34.45
	U_{29}~L_{29}	47.22	-50.55	-0.58	0.59	3.16	-3.29	-7.41	7.49	40.31	-41.94
	U_{29}~L_{30}	52.77	-54.32	-0.26	0.98	4.48	-5.73	-11.84	11.63	72.13	-73.67
	U_{30}~L_{30}	-104.86	-112.00	-0.83	0.78	6.38	-6.30	-10.62	9.98	81.48	-80.54
	U_{30}~L_{31}	-108.12	-132.78	-0.42	0.69	4.49	-6.13	-5.34	8.75	57.38	-79.09
	U_{31}~L_{31}	-124.18	-163.55	-2.27	0.00	4.64	-5.43	-6.64	0.00	70.84	-93.31
	U_{31}~L_{32}	-109.22	-116.95	-4.96	4.93	0.43	-0.41	-64.16	63.75	5.60	-5.30
	U_{32}~L_{32}	-30.76	-111.53	-4.96	4.93	0.43	-0.41	-64.16	63.75	5.60	-5.30
	U_{32}~L_{33}	-48.65	58.79	-2.99	2.69	0.36	-0.36	-38.69	38.66	4.64	-4.64
	U_{33}~L_{33}	-39.15	-42.89	-3.24	3.26	0.49	-0.49	-43.13	43.13	6.91	-6.91
	U_{33}~L_{34}	-5.41	-11.55	3.18	3.33	1.18	-1.19	-47.14	43.11	15.22	-15.45
	U_{34}~L_{34}	27.86	-30.67	-1.83	1.92	1.93	-2.03	-23.61	24.75	24.95	-26.29
	U_{34}~L_{35}	76.55	-83.03	-0.66	0.56	3.56	-3.71	-12.50	10.44	45.99	-47.73
	U_{35}~L_{35}	95.00	-97.81	0.10	0.25	3.64	-4.25	-7.38	7.22	51.31	-53.08
	U_{35}~L_{36}	99.11	-131.50	-0.30	0.09	3.93	-4.95	-3.89	1.15	50.90	-63.98
	U_{36}~L_{36}	95.00	-87.91	0.10	0.25	3.64	-4.25	1.26	3.20	47.13	-55.03
	U_{37}~L_{37}	139.46	-154.10	-0.17	0.16	5.10	-5.56	-2.25	2.01	66.01	-71.98
	U_{38}~L_{38}	52.77	-74.32	-0.26	5.98	4.48	-5.73	-75.32	73.82	59.86	-76.55
	U_{39}~L_{39}	-62.87	69.94	-3.78	3.81	0.28	-0.27	-50.43	50.91	3.70	-3.59
	U_{40}~L_{40}	-41.85	35.38	-3.10	3.40	0.15	-0.27	-41.36	45.44	2.02	-3.62
	U_{41}~L_{41}	-36.85	40.05	-2.87	3.09	0.21	-0.13	-35.66	41.25	2.85	-2.06
	U_{42}~L_{42}	-39.84	39.91	-2.77	2.70	0.67	-0.57	-37.03	36.06	8.94	-7.63
	U_{43}~L_{43}	-38.87	40.30	-2.33	2.27	2.12	-2.26	-31.18	30.31	28.28	-27.37
	U_{44}~L_{44}	-13.42	14.14	-1.01	1.14	2.86	-3.39	-13.46	15.22	38.18	-40.29
	U_{45}~L_{45}	5.87	-8.62	-1.06	0.94	4.46	-4.17	-14.11	12.53	59.58	-55.71
	U_{46}~L_{46}	20.19	-40.81	-0.22	0.72	2.68	-4.67	-2.91	9.61	33.84	-52.32

Max. Neg. Mom.

Member	Start (k-ft)	End (k-ft)
U_0~L_1	-131.39	188.14
U_1~L_1	-78.34	88.71
U_1~L_2	-45.39	54.57
U_2~L_2	-7.18	-0.95
U_2~L_3	-49.72	-92.92
U_3~L_3	-72.54	-90.13
U_3~L_4	-89.30	-84.92
U_4~L_4	-135.98	-151.63
U_4~L_5	-85.43	-94.23
U_5~L_5	-256.28	-290.36
U_5~L_6	-181.82	-182.02
U_6~L_6	-205.89	-219.13
U_6~L_7	-183.48	-181.55
U_7~L_7	-133.24	-156.50
U_7~L_8	-63.24	-52.40
U_8~L_8	-14.15	5.13
U_8~L_9	-46.91	-53.48
U_9~L_9	-72.24	-88.78
U_9~L_{10}	-162.27	-168.80
U_{10}~L_{10}	-194.17	-190.09
U_{10}~L_{11}	-255.98	-290.36
U_{11}~L_{11}	-165.97	-269.71
U_{11}~L_{12}	-277.11	-365.60
U_{12}~L_{12}	-240.79	-251.99
U_{12}~L_{13}	-129.71	-138.85
U_{13}~L_{13}	-58.04	-73.38
U_{13}~L_{14}	-69.06	-70.04
U_{14}~L_{14}	-22.22	-23.01
U_{14}~L_{15}	-43.24	-52.40
U_{15}~L_{15}	-98.69	-113.33
U_{15}~L_{16}	-165.60	-152.62
U_{16}~L_{16}	-181.98	-189.69
U_{16}~L_{17}	-191.81	-196.15
U_{17}~L_{17}	-177.89	-175.79
U_{17}~L_{18}	-222.11	-228.41
U_{18}~L_{18}	-89.74	-89.74
U_{18}~L_{19}	-251.10	-247.26
U_{19}~L_{19}	-215.20	-197.54
U_{19}~L_{20}	-254.01	-248.39
U_{20}~L_{20}	-233.17	-230.47
U_{20}~L_{21}	-168.67	-161.53
U_{21}~L_{21}	-107.48	-108.86
U_{21}~L_{22}	-62.22	-52.74
U_{22}~L_{22}	-29.81	-33.23
U_{22}~L_{23}	-45.71	-53.68
U_{23}~L_{23}	-69.40	-68.09
U_{23}~L_{24}	-125.70	-125.04
U_{24}~L_{24}	-142.66	-143.69
U_{24}~L_{25}	-109.85	-91.58
U_{25}~L_{25}	-233.74	-226.11
U_{25}~L_{26}	-184.76	-179.82
U_{26}~L_{26}	-206.01	-205.54
U_{26}~L_{27}	-199.55	-210.40
U_{27}~L_{27}	-193.12	-161.72
U_{27}~L_{28}	-77.46	-90.64
U_{28}~L_{28}	-102.62	-102.62
U_{28}~L_{29}	-14.15	5.13
U_{29}~L_{29}	-51.75	-65.98
U_{29}~L_{30}	-154.26	-132.37
U_{30}~L_{30}	-122.51	-132.63
U_{30}~L_{31}	-133.62	-181.24
U_{31}~L_{31}	-252.54	-312.14
U_{31}~L_{32}	-225.40	-234.91
U_{32}~L_{32}	-225.40	-234.91
U_{32}~L_{33}	-113.54	-126.69
U_{33}~L_{33}	-107.91	-107.91
U_{33}~L_{34}	-147.29	-156.58
U_{34}~L_{34}	-107.91	-107.91
U_{34}~L_{35}	-94.26	-105.69
U_{35}~L_{35}	-94.26	-105.69
U_{35}~L_{36}	-99.93	-98.76
U_{36}~L_{36}	-94.26	-105.69
U_{37}~L_{37}	-139.46	-154.10
U_{38}~L_{38}	-52.77	-74.32
U_{39}~L_{39}	-62.87	-69.94
U_{40}~L_{40}	-41.85	-35.38
U_{41}~L_{41}	-36.85	-40.05
U_{42}~L_{42}	-39.84	-39.91
U_{43}~L_{43}	-38.87	-40.30
U_{44}~L_{44}	-13.42	-14.14
U_{45}~L_{45}	-5.87	-8.62
U_{46}~L_{46}	-20.19	-40.81

Max. Pos. Mom.

Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{top}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(LL)}$
U_0~L_1	188.14	83.97	99.79	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_1~L_1	88.71	-6.56	18.08	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_1~L_2	54.57	-23.74	15.4	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_2~L_2	-0.95	80.71	-75.18	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_2~L_3	-92.92	-159.91	22.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_3~L_3	-90.13	-131.82	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	0.666
U_3~L_4	-84.92	-162.19	20.82	20.67	34.66	53.31	5	1078.0	1.67	1144	1.5	1029.6	0.956
U_4~L_4	-151.63	219.48	-237.08	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3	-0.924
U_4~L_5	-94.23	56.43	107.1	107.13	107.11	162.71	26	2098.9	1.52	3269	1.5	5302.3	-0.747
U_5~L_5	-290.36	290.36	-183.01	212.76	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
U_5~L_6	-182.02	-132.37	118.64	39.5	35.52	39.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
U_6~L_6	-219.13	205.89	278.13	139.22	200.14	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
U_6~L_7	-181.55	-113.35	114.40	21.1	21.09	21.09	39.46	10	1137.6	1.68	1170	1.5	1044.0
U_7~L_7	-156.50	-65.09	84.86	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_7~L_8	-52.40	-59.31	28.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_8~L_8	5.13	63.41	-75.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_8~L_9	-53.48	118.58	-121.62	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_9~L_9	-88.78	135.03	-152.44	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
U_9~L_{10}	-168.80	266.86	-276.59	19.3	35.09	35.09	53.74	4	1187.1	1.67	1196	1.5	1137.0
U_{10}~L_{10}	-190.09	310.61	-302.85	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{10}~L_{11}	-269.71	244.79	-374.96	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{11}~L_{11}	-365.60	321.96	-454.31	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{11}~L_{12}	-251.99	149.72	199.72	46.7	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.956
U_{12}~L_{12}	-138.85	73.24	81.63	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2
U_{13}~L_{13}	-73.38	58.04	73.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{13}~L_{14}	-70.04	11.16	-7.78	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{14}~L_{14}	-23.01	46.58	-48.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{14}~L_{15}	-52.40	34.92	-40.17	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{15}~L_{15}	-113.33	179.76	-194.20	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6
U_{15}~L_{16}	-152.62	83.79	-94.21	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{16}~L_{16}	-189.69	263.00	-276.56	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{16}~L_{17}	-196.15	272.96	-281.67	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{17}~L_{17}	-175.79	245.60	-257.35	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{17}~L_{18}	-228.41	337.65	-329.66	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{18}~L_{18}	-89.74	89.74	-117.72	112.62	112.62	112.62	180.24	16	1516.6	1.63	2332	1.5	2140.4
U_{18}~L_{19}	-247.26	157.72	160.99	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{19}~L_{19}	-197.54	215.20	207.54	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{19}~L_{20}	-248.39	254.01	-164.61	150.86	42.7	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{20}~L_{20}	-230.47	-130.59	129.78	39.8	38.83	38.83	59.23	6	1264.6	1.53	1993	1.5	1922.1
U_{20}~L_{21}	-161.53	-84.21	65.3	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{21}~L_{21}	-108.86	-43.21	45.37	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_{21}~L_{22}	-52.74	-33.23	15.4	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{22}~L_{22}	-33.23	25.95	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{22}~L_{23}	-53.68	109.69	-117.70	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
U_{23}~L_{23}	-68.09	148.16	-146.74	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1
U_{23}~L_{24}	-125.04	241.54	-243.54	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
U_{24}~L_{24}	-143.69	252.10	-246.65	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{24}~L_{25}	-91.58	112.72	112.60	39.8	38.83	38.83	59.23	6	1264.6	1.53	1993	1.5	1922.1
U_{25}~L_{25}	-226.11	-147.65	145.07	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
U_{25}~L_{26}	-179.82	-112.24	101.47	43.2	43.24	43.16	70.66	19	1516.6	1.63	2332	1.5	2140.4
U_{26}~L_{26}	-205.54	-124.32	124.32	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{26}~L_{27}	-210.40	-124.81	130.28	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
U_{27}~L_{27}	-161.72	-72.74	83.28	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	0.941
U_{27}~L_{28}	-90.64	-29.44	39.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{28}~L_{28}	-102.62	-102.62	102.62	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{28}~L_{29}	5.13	63.41	-75.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{29}~L_{29}	-65.98	132.37	-154.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{30}~L_{30}	-132.37	132.63	-122.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{30}~L_{31}	-181.24	312.14	-252.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{31}~L_{31}	-312.14	234.91	-225.40	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{31}~L_{32}	-234.91	126.69	-113.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{32}~L_{32}	-126.69	107.91	-107.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{32}~L_{33}	-107.91	107.91	-107.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{33}~L_{33}	-107.91	156.58	-147.29	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
U_{34}~L_{34}	-107.91	107.91	-107.91	15.4

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.44	-7.53	-1.60	0.78	0.20	-0.17	-21.38	-10.41	2.73	-2.24
	U_1-L_1	-3.41	-8.42	-1.07	0.48	-0.22	-0.23	-13.03	-4.47	-2.99	-3.07
	U_1-L_2	-9.58	3.50	-0.79	0.23	-0.73	-0.60	-10.42	-10.95	-9.73	-8.66
	U_2-L_2	7.93	-13.27	0.32	0.08	-0.31	-1.00	4.23	1.07	-4.18	-13.31
	U_2-L_3	-14.61	18.52	0.14	1.02	-0.34	-0.34	1.80	7.31	-16.26	-7.23
	U_3-L_3	-37.44	76.90	-2.61	2.16	-0.44	-0.37	-34.31	28.87	-0.69	-4.37
	U_3-L_4	27.19	-76.90	2.52	-2.16	0.33	0.00	32.52	-160.66	112.56	-62.73
	U_4-L_4	-8.75	101.69	-1.72	3.36	0.04	-0.04	-22.98	44.93	0.52	-0.48
	U_4-L_5	-5.11	118.70	-1.01	2.40	0.26	-0.20	-23.07	195.59	-2.24	150.96
	U_5-L_5	-77.69	73.54	-1.39	1.92	0.31	-0.12	-25.72	24.62	3.97	-1.59
	U_5-L_6	-43.88	73.22	-1.77	1.36	-0.57	-0.35	-22.86	17.62	-7.43	-4.58
	U_6-L_6	-77.22	73.22	-2.27	1.36	-0.73	-0.73	-29.21	15.74	-7.57	-5.42
	U_6-L_7	-65.20	48.77	-1.79	1.73	0.02	-0.69	-23.16	22.40	-0.21	-8.36
	U_7-L_7	-24.90	8.63	0.84	0.64	0.22	-0.69	-10.83	8.23	2.90	-8.63
	U_7-L_8	-0.81	2.88	-0.23	0.03	0.00	-0.03	-1.75	0.29	-0.63	-14.30
	U_8-L_8	-25.30	9.99	-1.54	1.25	0.44	-0.71	-19.87	14.16	5.68	-9.19
	U_8-L_9	-37.81	20.01	-1.93	1.63	0.50	-0.56	-25.02	20.35	1.54	-5.56
	U_9-L_9	-101.94	74.52	-3.69	3.20	0.42	-0.42	-47.76	41.38	-5.46	-5.41
	U_9-L_{10}	-115.87	80.00	-4.13	3.42	0.38	-0.35	-53.41	47.18	-5.46	-4.54
	U_{10}-L_{10}	-75.88	78.94	-3.19	3.05	0.69	-0.22	-41.25	39.49	11.43	-2.72
	U_{10}-L_{11}	-109.41	98.91	-4.09	3.28	0.38	-0.40	-52.27	41.86	4.89	-6.12
	U_{11}-L_{11}	-89.79	78.55	-3.44	2.96	0.38	-0.56	-46.56	38.51	2.26	-6.56
	U_{11}-L_{12}	-90.87	71.82	-3.22	2.90	0.56	-0.49	-41.19	37.06	7.18	-6.22
	U_{12}-L_{12}	-50.33	73.41	-2.62	2.90	0.56	-0.49	-25.14	21.82	5.30	-4.86
	U_{12}-L_{13}	-20.35	3.86	-1.48	1.33	0.37	-0.68	-18.85	16.96	4.88	-8.70
	U_{13}-L_{13}	-1.38	-11.28	-1.31	1.02	0.37	-0.67	-14.02	12.97	8.97	-12.94
	U_{13}-L_{14}	6.85	-23.87	0.74	0.45	0.64	-1.23	-9.42	8.23	15.75	0.00
	U_{14}-L_{14}	-44.41	35.31	-1.60	1.35	0.43	-0.97	-20.47	17.29	5.54	-12.42
	U_{14}-L_{15}	-96.57	69.69	-3.28	2.87	0.38	-0.74	-41.93	32.36	-1.32	-12.41
	U_{15}-L_{15}	-85.40	67.30	-3.22	2.17	-0.24	-0.52	-41.15	27.67	-8.38	-6.66
	U_{15}-L_{16}	-50.33	50.33	-2.52	2.03	-0.07	-0.07	-25.02	20.35	-1.54	-3.48
	U_{16}-L_{16}	-109.84	116.34	-3.69	3.29	0.08	-0.07	-47.17	42.01	-1.02	-0.84
	U_{16}-L_{17}	-141.98	130.02	-4.84	4.08	0.63	-0.31	-61.85	52.11	0.02	-2.04
	U_{17}-L_{17}	-82.19	133.41	-2.33	4.08	0.63	-0.31	-28.78	53.47	-6.55	-2.04
	U_{17}-L_{18}	-11.96	79.20	-2.61	3.13	0.49	-0.39	-32.94	39.53	6.19	-4.86
	U_{18}-L_{18}	-77.27	78.24	-3.91	3.13	0.49	-0.39	-48.06	42.89	6.72	-4.72
	U_{18}-L_{19}	-66.19	89.97	-3.57	3.37	0.26	-0.32	-45.10	42.35	3.22	-4.00
	U_{19}-L_{19}	-42.73	133.41	-2.33	4.08	0.63	-0.31	-28.78	53.47	-6.55	-2.04
	U_{19}-L_{20}	-56.07	72.69	-3.06	2.66	0.04	-0.48	-38.62	33.55	0.53	-6.11
	U_{20}-L_{20}	-31.84	37.09	-2.06	1.92	0.04	-0.64	-26.03	24.29	0.53	-4.08
	U_{20}-L_{21}	-10.03	2.17	-0.96	0.71	0.29	-0.96	-12.11	8.94	3.66	-8.18
	U_{21}-L_{21}	-19.43	19.57	-1.55	1.49	0.49	-0.80	-19.68	18.63	6.17	-10.06
	U_{21}-L_{22}	-46.53	58.29	-3.40	2.87	0.23	-0.63	-42.95	36.25	2.84	-7.93
	U_{22}-L_{22}	-54.32	68.37	-3.40	3.08	0.40	-0.49	-42.93	38.85	5.00	-6.17
	U_{22}-L_{23}	-49.49	72.12	-4.00	4.08	0.27	-0.33	-56.81	51.47	3.43	-4.14
	U_{23}-L_{23}	-49.49	72.12	-4.00	4.08	0.27	-0.33	-56.81	51.47	3.43	-4.14
	U_{23}-L_{24}	-35.84	53.55	-2.52	3.32	0.64	-0.52	-32.25	42.37	8.13	-6.62
	U_{24}-L_{24}	-35.84	53.55	-2.52	3.32	0.64	-0.52	-32.25	42.37	8.13	-6.62
	U_{24}-L_{25}	-26.26	85.09	-2.96	2.90	0.50	-0.21	-37.84	36.99	6.35	-2.67
	U_{25}-L_{25}	-78.38	71.14	-3.01	2.11	-0.11	-0.20	-38.43	32.11	-1.38	-2.53
	U_{25}-L_{26}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{26}-L_{26}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{26}-L_{27}	-26.26	85.09	-2.96	2.90	0.50	-0.21	-37.84	36.99	6.35	-2.67
	U_{27}-L_{27}	-78.38	71.14	-3.01	2.11	-0.11	-0.20	-38.43	32.11	-1.38	-2.53
	U_{27}-L_{28}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{28}-L_{28}	-26.26	33.90	-1.92	1.58	0.50	-0.21	-20.78	17.42	6.35	-2.67
	L_0-L_1	6.26	-17.63	-0.66	0.33	1.08	-1.36	8.47	4.15	-13.82	-17.63
	L_1-L_2	1.03	-9.85	-1.21	0.83	0.99	-1.27	-15.43	10.63	12.69	-16.17
	L_2-L_3	-13.28	8.61	-1.21	0.83	0.99	-1.27	-44.29	28.78	-0.13	-16.17
	L_3-L_4	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_4-L_5	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_5-L_6	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_6-L_7	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_7-L_8	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_8-L_9	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_9-L_{10}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{10}-L_{11}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{11}-L_{12}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{12}-L_{13}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{13}-L_{14}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{14}-L_{15}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{15}-L_{16}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{16}-L_{17}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{17}-L_{18}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{18}-L_{19}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{19}-L_{20}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{20}-L_{21}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{21}-L_{22}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{22}-L_{23}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{23}-L_{24}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{24}-L_{25}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{25}-L_{26}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{26}-L_{27}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{27}-L_{28}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{28}-L_{29}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{29}-L_{30}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{30}-L_{31}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{31}-L_{32}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{32}-L_{33}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{33}-L_{34}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{34}-L_{35}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{35}-L_{36}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{36}-L_{37}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{37}-L_{38}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{38}-L_{39}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{39}-L_{40}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
Structure 2	U_{28}-L_{29}	-26.26	33.90	-1.92	1.58	0.50	-0.21	-20.78	17.42	6.35	-2.67
	U_{29}-L_{29}	-78.38	71.14	-3.01	2.11	-0.11	-0.20	-38.43	32.11	-1.38	-2.53
	U_{29}-L_{30}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{30}-L_{30}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{30}-L_{31}	-26.26	85.09	-2.96	2.90	0.50	-0.21	-37.84	36.99	6.35	-2.67
	U_{31}-L_{31}	-78.38	71.14	-3.01	2.11	-0.11	-0.20	-38.43	32.11	-1.38	-2.53
	U_{31}-L_{32}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{32}-L_{32}	-26.26	85.09	-2.96	2.90	0.50	-0.21	-37.84	36.99	6.35	-2.67
	U_{32}-L_{33}	-78.38	71.14	-3.01	2.11	-0.11	-0.20	-38.43	32.11	-1.38	-2.53
	U_{33}-L_{33}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{33}-L_{34}	-26.26	85.09	-2.96	2.90	0.50	-0.21	-37.84	36.99	6.35	-2.67
	U_{34}-L_{34}	-78.38	71.14	-3.01	2.11	-0.11	-0.20	-38.43	32.11	-1.38	-2.53
	U_{34}-L_{35}	-76.64	58.13	-3.04	2.70	-0.08	-0.67	-38.89	34.52	-1.02	-8.57
	U_{35}-L_{35}	-26.26	85.09	-2.96	2.90	0.50	-0.21	-37.84	36.99	6.35	-2.67
	U_{36}-L_{36}	-26.26	33.90	-1.92	1.58	0.50	-0.21	-20.78	17.42	6.35	-2.67
	L_{29}-L_{30}	-6.26	-17.63	-0.66	0.33	1.08	-1.36	-8.47	4.15	-13.82	-17.63
	L_{30}-L_{31}	1.03	-9.85	-1.21	0.83	0.99	-1.27	-15.43	10.63	12.69	-16.17
	L_{31}-L_{32}	-13.28	8.61	-1.21	0.83	0.99	-1.27	-44.29	28.78	-0.13	-16.17
	L_{32}-L_{33}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{33}-L_{34}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{34}-L_{35}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{35}-L_{36}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{36}-L_{37}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{37}-L_{38}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{38}-L_{39}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{39}-L_{40}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
Structure 3	U_{37}-L_{37}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	U_{38}-L_{38}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	U_{38}-L_{39}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	U_{39}-L_{39}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	U_{39}-L_{40}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	U_{40}-L_{40}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{40}-L_{41}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{41}-L_{42}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{42}-L_{43}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{43}-L_{44}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{44}-L_{45}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{45}-L_{46}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{46}-L_{47}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{47}-L_{48}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{48}-L_{49}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{49}-L_{50}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{50}-L_{51}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{51}-L_{52}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{52}-L_{53}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{53}-L_{54}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{54}-L_{55}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{55}-L_{56}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{56}-L_{57}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{57}-L_{58}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{58}-L_{59}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{59}-L_{60}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{60}-L_{61}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{61}-L_{62}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{62}-L_{63}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{63}-L_{64}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{64}-L_{65}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{65}-L_{66}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{66}-L_{67}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{67}-L_{68}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{68}-L_{69}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{69}-L_{70}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{70}-L_{71}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{71}-L_{72}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{72}-L_{73}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{73}-L_{74}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{74}-L_{75}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{75}-L_{76}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{76}-L_{77}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{77}-L_{78}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{78}-L_{79}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{79}-L_{80}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{80}-L_{81}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{81}-L_{82}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{82}-L_{83}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{83}-L_{84}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{84}-L_{85}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{85}-L_{86}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{86}-L_{87}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{87}-L_{88}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{88}-L_{89}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{89}-L_{90}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{90}-L_{91}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{91}-L_{92}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{92}-L_{93}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{93}-L_{94}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{94}-L_{95}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{95}-L_{96}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{96}-L_{97}	-1.49	-18.99	-0.84	0.50	0.41	-1.01	-19.15	13.78	8.31	0.00
	L_{97}-L_{98}	-33.28	8.61	-1.21	0.83	0.99	-1.27	-10.60	6.48	5.32	-10.35
	L_{98}-L_{99}	-33.71	19.61	-2.18	1.73	0.17	-0.43	-27.81	22.05	2.11	-5.47
	L_{99}-L_{100}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-47.61	41.01	4.52	0.00
	L_{100}-L_{101}	-78.83	60.14	-4.41	3.51	0.56	-0.51	-56.38	44.82	7.21	-6.46
	L_{101}-L_{102}	-68.12	63.30	-4.55	3.27	0.23	-0.22	-58.86	42.27	3.01	-2.89
	L_{102}-L_{103}	-30.42	64.48	-2.65	3.27	0.23	-0.22	-41.80	34.26	3.60	-4.30
	L_{103}-L_{104}	-33.53	18.27	-1.74	1.55	0.08	-0.35	-22.46	20.02	1.09	-4.50
	L_{104}-L_{105}	-1.49

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0 - U_1	-75.12	-0.70	-0.86	1.15	2.11	-16.36	-9.57	12.79	23.43	-162.10
	U_1 - U_2	-46.81	-20.16	0.09	2.21	-2.23	-18.54	-5.94	24.50	-24.46	-206.38
	U_2 - U_3	-112.19	-86.51	1.01	2.78	-3.26	-18.89	11.26	30.93	-37.40	-210.34
	U_3 - U_4	-15.68	66.14	6.41	2.97	-3.83	-17.32	-11.21	33.94	-42.62	-192.67
	U_4 - U_5	-9.16	61.58	1.44	2.65	-3.29	-9.56	16.04	29.49	-4.33	-106.29
	U_5 - U_6	42.76	120.09	-7.34	4.20	-2.80	-6.40	-81.68	46.70	-31.21	-11.28
	U_6 - U_7	93.72	43.54	1.76	2.00	-0.37	-0.50	-17.33	22.21	4.15	-116.85
	U_7 - U_8	-47.40	525.96	-12.43	18.04	0.09	-0.05	-138.36	200.88	0.69	-0.55
	U_8 - U_9	474.61	-124.27	1.15	1.45	-1.28	-17.01	12.43	15.68	131.45	-183.41
	U_9 - U_{10}	46.76	20.63	1.47	2.24	-2.25	-11.34	15.84	24.10	-2.65	-122.26
	U_{10} - U_{11}	64.51	-138.68	1.26	1.72	-2.01	-15.78	24.28	9.07	-1.91	-170.14
	U_{11} - U_{12}	27.83	-140.42	2.52	1.35	-0.60	-17.56	27.13	14.56	-4.44	-189.31
	U_{12} - U_{13}	-106.18	-154.99	1.94	0.69	-0.43	-20.00	20.87	7.43	-4.64	-211.62
	U_{13} - U_{14}	-137.97	-262.66	4.46	0.46	-0.25	-28.09	34.60	9.67	-1.91	-299.14
	U_{14} - U_{15}	-245.66	-182.98	1.33	0.98	-2.13	-20.25	14.31	10.60	-22.93	-218.29
	U_{15} - U_{16}	-123.52	-326.70	0.32	1.90	-3.91	-21.23	-24.07	-402.40	-113.38	-722.24
	U_{16} - U_{17}	-269.82	-144.38	-1.22	1.18	-12.14	-14.93	-13.12	12.74	-130.92	-166.96
	U_{17} - U_{18}	-134.16	-67.25	0.29	4.63	-3.41	-8.74	-100.13	53.80	-94.18	-8.00
	U_{18} - U_{19}	-170.30	-20.48	-0.84	2.24	-2.49	-5.76	-9.00	24.15	-26.81	-62.04
	U_{19} - U_{20}	-186.12	24.46	-7.23	8.42	-1.79	-13.98	-77.92	90.82	-19.26	-150.74
	U_{20} - U_{21}	-135.44	110.47	-2.39	3.70	-0.51	-15.56	-12.84	39.81	-169.82	-0.05
	U_{21} - U_{22}	-70.88	-181.00	-0.21	1.59	-1.76	-18.96	-2.21	16.88	-18.98	-201.91
	U_{22} - U_{23}	-53.10	-252.22	-0.40	1.61	-1.78	-19.47	-3.55	16.91	-19.03	-204.62
	U_{23} - U_{24}	-327.18	-325.33	0.83	2.64	-9.67	-33.16	8.81	28.11	-96.55	-353.02
	U_{24} - U_{25}	-338.53	-367.26	1.73	2.61	-9.68	-31.75	7.40	27.98	-96.75	-427.67
	U_{25} - U_{26}	-396.09	-197.74	-10.42	4.49	-7.92	-26.57	-110.97	47.76	-86.42	-282.90
	U_{26} - U_{27}	-344.15	-179.39	3.29	2.87	-7.57	-41.99	35.02	30.58	-80.54	-447.01
	U_{27} - U_{28}	-226.10	-291.51	2.49	2.54	-6.97	-38.98	25.82	34.59	-127.03	-218.98
	U_{28} - U_{29}	-350.17	-90.75	2.19	3.74	-5.72	-16.64	23.34	39.85	-7.70	-177.16
	U_{29} - U_{30}	-222.28	-31.53	2.07	3.90	-5.33	-16.02	22.92	41.32	-6.38	-158.87
	U_{30} - U_{31}	-167.07	-39.82	3.52	3.57	-4.53	-11.00	37.49	38.02	-48.25	-117.07
	U_{31} - U_{32}	-109.77	-170.72	-6.91	4.21	-0.90	-7.50	-62.95	44.85	-9.58	-19.81
	U_{32} - U_{33}	-8.73	-279.11	-0.47	1.74	-0.45	-4.75	-5.04	18.56	-2.45	-188.89
	U_{33} - U_{34}	-261.00	-395.93	-17.08	26.99	-0.56	-1.13	-181.86	287.39	-5.58	-12.05
	U_{34} - U_{35}	-1192.75	-1192.75	28.79	28.79	0.03	0.03	301.47	301.47	-202.87	-202.87
	U_{35} - U_{36}	-20.39	-20.39	35.65	47.44	-219.44	0.00	0.00	0.00	0.00	0.00
	U_{36} - U_{37}	-341.10	-341.10	2.68	3.57	-22.06	0.00	28.24	28.24	-222.66	0.00
	U_{37} - U_{38}	-150.58	-33.05	2.51	2.70	-2.63	-18.83	26.37	28.36	-21.40	-198.09
	U_{38} - U_{39}	-147.30	4.36	3.13	2.23	0.33	-21.49	32.68	23.50	3.42	-226.06
	U_{39} - U_{40}	-22.28	31.53	2.07	3.90	-5.33	-16.02	22.92	41.32	-6.38	-158.87
	U_{40} - U_{41}	-31.67	-34.01	0.08	2.50	-0.44	-23.51	0.80	26.26	4.67	-242.32
	U_{41} - U_{42}	-86.04	-71.76	1.59	1.59	-1.76	-27.97	16.72	16.72	-18.39	-287.96
	U_{42} - U_{43}	-60.95	-86.97	1.04	1.42	-3.85	-19.99	10.92	14.98	-40.45	-209.86
	U_{43} - U_{44}	-73.29	-73.29	0.90	0.90	-4.16	-4.16	-197.27	-197.27	0.00	0.00
	U_{44} - U_{45}	-32.99	-28.66	2.37	3.03	-5.75	-17.22	24.91	31.89	-60.45	-181.19
	U_{45} - U_{46}	-15.12	113.76	-9.70	4.65	-5.56	-11.93	-102.03	48.92	-58.52	-125.56
	U_{46} - U_{47}	-13.81	128.87	-9.87	4.77	-5.61	-11.97	-107.37	49.51	-60.13	-127.20
	U_{47} - U_{48}	-2.69	209.81	-12.06	6.54	-3.34	-10.86	-126.66	68.85	-35.17	-114.24
	U_{48} - U_{49}	0.79	224.58	-12.76	6.91	-3.53	-11.49	-132.34	72.03	-36.81	-119.58
	U_{49} - U_{50}	-122.28	-1156.50	-13.72	27.73	0.13	-1.48	-144.59	291.78	1.32	-13.53
	U_{50} - U_{51}	-1153.78	-196.80	-0.10	3.00	24.44	-28.09	-1.05	31.91	260.21	-299.07
	U_{51} - U_{52}	-178.81	-178.81	2.84	3.10	-2.81	-24.91	29.29	35.44	-20.75	-274.99
	U_{52} - U_{53}	-178.87	-59.61	2.75	3.33	1.95	-19.92	29.29	35.44	20.75	-211.02
	U_{53} - U_{54}	-236.40	-153.06	3.91	2.55	-4.59	-40.90	30.95	27.18	-48.87	-435.48
	U_{54} - U_{55}	-98.63	-313.14	1.77	3.78	-6.01	-24.05	18.86	40.22	-64.02	-256.07
	U_{55} - U_{56}	-139.47	-262.94	1.96	3.35	-5.31	-21.25	19.84	36.52	-47.29	-229.12
	U_{56} - U_{57}	-350.27	-386.72	-5.25	1.89	-9.21	-29.20	-128.02	-676.63	-582.88	-906.88
	U_{57} - U_{58}	-278.82	-278.82	1.73	1.73	-9.21	-9.21	7.93	7.93	-20.08	-20.08
	U_{58} - U_{59}	-278.82	-117.63	-9.75	4.67	-3.86	-13.41	-103.83	49.72	-41.33	-142.75
	U_{59} - U_{60}	-282.26	-282.26	3.51	3.51	-11.87	-11.87	-1.04	-1.04	-21.96	-21.96
	U_{60} - U_{61}	-139.58	-187.78	-6.61	1.01	5.76	-13.86	-82.80	10.87	62.13	-149.40
	U_{61} - U_{62}	-47.42	-118.54	-0.32	1.34	-0.18	-14.32	-5.94	16.80	-24.46	-206.38
	U_{62} - U_{63}	-52.50	-128.95	-0.17	0.90	1.39	-18.75	-1.61	9.66	15.03	-202.17
	U_{63} - U_{64}	-277.57	-111.69	-8.81	2.49	-1.88	-22.99	-84.99	26.85	-90.20	-247.91
	U_{64} - U_{65}	-159.47	-260.94	-3.51	1.96	-1.34	-16.87	-47.29	-33.02	-76.13	-211.98
	U_{65} - U_{66}	-166.87	-243.33	-1.19	1.64	-7.39	-28.56	-12.82	17.63	-79.68	-311.99
	U_{66} - U_{67}	-287.50	-127.71	-7.41	1.41	0.37	-17.16	-84.63	15.16	3.99	-207.31
	U_{67} - U_{68}	-141.30	-113.93	-7.12	3.44	-2.08	-13.31	-76.72	37.08	-22.45	-143.49
	U_{68} - U_{69}	-145.41	-22.73	-3.81	2.80	-5.11	-9.57	-41.12	30.23	-55.04	-103.14
	U_{69} - U_{70}	-141.54	56.98	-5.39	3.12	-1.63	-5.01	-40.28	33.60	-17.50	-54.09
	U_{70} - U_{71}	3.07	40.55	-3.38	2.49	-1.82	-5.94	-36.40	26.89	-15.60	-63.99
	U_{71} - U_{72}	-136.80	470.88	-11.21	13.49	0.11	-3.03	-120.68	140.47	-1.21	-9.31
	U_{72} - U_{73}	497.19	-34.44	2.13	1.54	18.83	-20.46	23.76	17.16	209.68	227.80
	U_{73} - U_{74}	41.01	105.92	1.67	2.20	-1.80	-12.28	18.64	24.49	-20.01	-136.72
	U_{74} - U_{75}	113.01	44.44	2.72	1.90	1.07	-14.32	30.25	21.16	11.89	-109.46
	U_{75} - U_{76}	59.30	15.07	2.63	1.66	-1.34	-16.87	29.27	18.48	-14.94	-187.76
	U_{76} - U_{77}	80.84	-19.79	2.65	1.45	1.08	-14.33	29.52	16.18	12.07	-109.49
	U_{77} - U_{78}	80.24	-119.59	-3.37	1.10	-2.98	-14.23	-37.66	12.29	-33.72	-168.46
	U_{78} - U_{79}	-24.67	-27.08	-0.96	1.04	-8.37	-9.41	-10.70	11.60	-104.33	-104.81
	U_{79} - U_{80}	29.36	-160.66	-4.15	8.24	-1.75	-12.68	-68.61	91.71	-19.44	-141.20

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bc} (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term / $F_y S_{bc}$	M_u k|k-in	Equivalent Mom. Factor a	$C_{b(a)}$	$C_{b(b)}$
Structure 1	U_0 - U_1	-103.60	13.73	-60.69	-237.64	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.255	0.70	0.70
	U_1 - U_2	-84.64	5.34	-24.50	-264.51	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.109	0.53	0.53
	U_2 - U_3	-131.21	152.67	-194.46	-160.98	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.828	0.93	0.93
	U_3 - U_4	-113.08	68.54	-16.34	-42.62	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.460	0.78	0.78
	U_4 - U_5	8.94	118.39	-17.54	-58.12	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.076	0.63	0.63
	U_5 - U_6	-50.59	216.84	15.03	63.45	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	-0.233	0.51	0.51
	U_6 - U_7	95.53	95.53	-17.33	22.21	-4.15	-116.85	52.93	52.93	-17.33	22.21	4.15	-116.85	0.99907361	3501.5	-0.400	0.50	0.50
	U_7 - U_8	-138.36	200.88	0.69	-0.55	0.00	0.00	0.00	138.12	138.12	111.77	199.97	3642	21997.7	1.45	6099	0.998945	4564.8
	U_8 - U_9	12.43	15.68	131.45	-183.41	0.00	0.00	0.00	103.30	103.30	130.26	151.1	1864.4	1.42	6028	0.998729	4241.5	0.401
	U_9 - U_{10}	15.84	24.10	-2.65	-122.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10} - U_{11}	24.28	9.07	-1.91	-170.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11} - U_{12}	27.13	14.56	-4.44	-189.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12} - U_{13}	20.87	7.43	-4.64	-211.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13} - U_{14}	34.60	9.67	-1.91	-299.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14} - U_{15}	14.31	10.60	-22.93	-218.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15} - U_{16}	-237.07	-402.40	-113.38	-722.24	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899921	6214.6	0.240	0.70	0.70
	U_{16} - U_{17}	-367.57	-171.90	-520.75	-397.72	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.764	0.91	0.91
	U_{17} - U_{18}	-330.56	-22.52	-246.25	-259.56	127.3	127.31	110.40	189.23	3668	2306.5	1.46	6146	0.99907156	4197.7	0.580	0.83	0.83
	U_{18} - U_{19}	-233.16	4.78	-269.21	-82.64	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	0.419	0.77	0.77
	U_{19} - U_{20}	-343.26	149.86	-266.99	-164.17	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99850041	3452.6	-0.437	0.43	0.43
	U_{20} - U_{21}	-152.84	-253.89	-22.12	-42.73	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99850041	3452.6	-0.143	0.40	0.40
	U_{21} - U_{22}	-95.02	-213.37	-116.82	-497.79	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99899921	4553.8	0.235	0.65	0.69
	U_{22} - U_{23}	-53.10	-252.22	-3.55	-204.62	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99850041	2974.3	-0.018	0.50	0.50
	U_{23} - U_{24}	-443.88	-386.39	-650.84	-881.66	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.625	0.85	0.85
	U_{24} - U_{25}	-419.35	-443.36	-530.67	-1007.31	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.578	0.89	0.89
	U_{25} - U_{26}	-329.48	-197.74	-324.64	-624.83	251.1	251.73	219.41	365.62	7161	3870.6	1.45	12993	0.99891931	8298.1	0.296	0.72	0.72
	U_{26} - U_{27}	-699.19	-194.94	-634.54	-624.83	251.1	251.73	219.41	365.62	7161	3870.6	1.45	12993	0.99891931	8298.1	0.296	0.72	0.72
	U_{27} - U_{28}	-401.88	-193.46	-552.11	-814.33	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.678	0.87	0.87
	U_{28} - U_{29}	-260.63	-329.45	-497.07	-653.30	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.463	0.81	0.81
	U_{29} - U_{30}	-424.88	-66.17	-469.23	-348.28	198.9	198.88	169.65	290.08	5137	2713.1	1.43	9408	0.99885931	6555.3	0.749	0.90	0.90
	U_{30} - U_{31}	-167.07	-39.82	-48.25	-117.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31} - U_{32}	-168.49	101.20	-279.91	-100.43	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.369	0.74	0.74
	U_{32} - U_{33}	-224.52	-260.23	-150.15	-118.18	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	0.501	0.28	0.28
	U_{33} - U_{34}	-679.71	2019.32	-347.07	1630.03	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893050	7310.6	-0.285	0.49	0.49
	U_{34} - U_{35}	-1192.75	-1192.75	28.79	28.79	0.03	0.03	301.47	301.47	-202.87	-202.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35} - U_{36}	-20.39	35.65	-47.44	-219.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36} - U_{37}	-341.10	28.24	-222.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37} - U_{38}	-150.58	33.05	-21.40	-198.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{38} - U_{39}	-147.30	4.36	3.13	2.23	0.33	-21.49	32.68	23.50	3.42	-226.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39} - U_{40}	-22.28	31.53	2.07	3.90	-5.33	-16.02	22.92	41.32	-6.38	-158.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{40} - U_{41}	-31.67	-34.01	0.08	2.50	0.44	-23.51	0.80	26.26	4.67	-242.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{41} - U_{42}	-86.04	-71.76	1.59	1.59	-1.76	-27.97	16.72	16.72	-18.39	-287.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{42} - U_{43}	-60.95	-86.97	1.04	1.42	-3.85	-19.99	10.92	14.98	-40.45	-209.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{43} - U_{44}	-73.29	-73.29	0.90	0.90	-4.16	-4.16	-197.27	-197.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{44} - U_{45}	-32.99	-28.66	2.37	3.03	-5.75	-17.22	24.91	31.89	-60.45	-181.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{45} - U_{46}	-15.12	113.76	-9.70	4.65	-5.56	-11.93	-102.03	48.92	-58.52	-125.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{46} - U_{47}	-13.81	128.87	-9.87	4.77	-5.61	-11.97	-107.37	49.51	-60.13	-127.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{47} - U_{48}	-2.69	209.81	-12.06	6.54	-3.34	-10.86	-126.66	68.85	-35.17	-114.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{48} - U_{49}	0.79	224.58	-12.76	6.91	-3.53	-11.49	-132.34	72.03	-36.81	-119.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{49} - U_{50}	-122.28	-1156.50	-13.72	27.73	0.13	-1.48	-144.59	291.78	1.32	-13.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{50} - U_{51}	-1153.78	-196.80	-0.10	3.00	24.44	-28.09	-1.05	31.91	260.21	-299.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{51} - U_{52}	-178.81	-178.81	2.84	3.10	-2.81	-24.91	29.29	35.44	-20.75	-274.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{52} - U_{53}	-178.87	-59.61	2.75	3.33	1.95	-19.92	29.29	35.44	20.75	-211.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{53} - U_{54}	-236.40	-153.06	3.91	2.55	-4.59	-40.90	30.95	27.18	-48.87	-435.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{54} - U_{55}	-98.63	-313.14	1.77	3.78	-6.01	-24.05	18.86	40.22	-64.02	-256.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{55} - U_{56}	-139.47	-262.94	1.96	3.35	-5.31	-21.25	19.84	36.52	-47.29	-229.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{56} - U_{57}	-350.27	-386.72	-5.25	1.89	-9.21	-29.20	-128.02	-676.63	-582.88	-906.88	251.7	251.73	219.41	365.62	7161	3870.6	1.45
	U_{57} - U_{58}	-278.82	-278.82	1.73	1.73	-9.21	-9.21	7.93	7.93	-20.08	-20.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{58} - U_{59}	-278.82	-117.63	-9.75	4.67	-3.86	-13.41	-103.83	49.72	-41.33	-142.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{59} - U_{60}	-282.26	-282.26	3.51	3.51	-11.87	-11.87	-1.04	-1.04	-21.96	-21.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{60} - U_{61}	-139.58	-187.78	-6.61	1.01	5.76	-13.86	-82.80	10.87	62.13	-149.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{61} - U_{62}	-47.42	-118.54	-0.32	1.34	-0.18	-14.32	-5.94	16.80	-24.46	-206.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{62} - U_{63}	-52.50	-128.95	-0.17	0.90	1.39	-18.75	-1.61	9.66	15.03	-202.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{63} - U_{64}	-277.57	-111.69	-8.81	2.49	-1.88	-22.99	-84.99	26.85	-90.20	-247.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{64} - U_{65}	-159.47	-260.94	-3.51	1.96	-1.34	-16.87	-47.29	-33.02	-76.13	-211.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{65} - U_{66}	-166.87	-243.33	-1.19	1.64	-7.39	-28.56	-12.82	17.63	-79.68	-311.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{66} - U_{67}	-287.50	-127.71	-7.41	1.41	0.37	-17.16	-84.63	15.16	3.99	-207.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{67} - U_{68}	-141.30	-113.93	-7.12	3.44	-2.08	-13.31	-76.72	37.08	-22.45	-143.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{68} - U_{69}	-145.41	-22.73	-3.81	2.80	-5.11	-9.57	-41.12	30.23	-55.04	-103.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	$U_{

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-15.54	-73.33	-0.76	0.79	3.82	-8.19				
	L_1-L_2	39.76	-87.96	-0.10	1.76	3.35	-11.78				
	L_2-L_3	92.09	-42.20	-0.10	1.75	-0.70	-13.10				
	L_3-L_4	-11.34	11.55	0.89	3.06	-0.87	-15.25				
	L_4-L_5	-49.11	208.03	-5.68	4.27	-5.52	-16.60				
	L_5-L_6	-0.46	181.07	-3.99	4.35	-4.52	-7.48				
	L_6-L_7	41.44	78.72	-3.10	4.43	-4.02	-9.28				
	L_7-L_8	-25.11	448.74	-3.17	13.16	0.08	-0.05				
	L_8-L_9	425.89	-36.02	2.02	1.03	10.02	-6.76				
	L_9-L_{10}	150.02	-108.13	2.01	2.33	2.08	-9.27				
	L_{10}-L_{11}	120.44	-115.99	2.97	1.43	0.25	-7.50				
	L_{11}-L_{12}	102.58	-108.12	2.01	2.62	3.26	-9.26				
	L_{12}-L_{13}	-45.24	-121.26	1.87	2.89	-1.75	-10.31				
	L_{13}-L_{14}	96.32	-264.98	1.48	1.05	1.83	-19.68				
	L_{14}-L_{15}	96.32	-352.24	1.48	0.23	1.83	-19.94				
	L_{15}-L_{16}	-191.89	-318.35	1.28	1.32	-10.26	-17.47				
	L_{16}-L_{17}	339.58	64.88	4.32	3.23	6.24	-9.98				
	L_{17}-L_{18}	-154.59	-31.26	-4.23	3.81	-5.35	-5.26				
	L_{18}-L_{19}	-215.80	145.76	-6.50	4.08	-7.26	-2.35				
	L_{19}-L_{20}	-136.32	49.67	-8.53	3.60	-9.50	-0.21				
	L_0-U_1	-2.68	-185.02	-0.54	1.10	2.85	-10.91				
	L_1-U_2	4.23	-249.23	-0.54	1.14	-2.39	-12.67				
	L_2-U_3	4.23	-180.72	-0.14	1.14	-2.39	-12.67				
	L_3-U_4	-252.80	-295.03	1.06	1.85	-3.90	-20.26				
	L_4-U_5	-252.80	-295.03	1.06	1.85	-3.90	-20.26				
	L_5-U_6	-475.08	-292.78	2.84	2.87	-6.65	-28.41				
	L_6-U_7	-280.47	-64.51	-13.07	4.97	-8.57	-16.62				
	L_7-U_8	-292.36	219.74	-14.35	4.25	-8.57	-17.31				
	L_8-U_9	-225.83	141.30	-8.84	4.47	-6.23	-9.98				
	L_9-U_{10}	-201.50	259.45	-7.76	4.67	-4.70	-7.26				
	L_{10}-U_{11}	-160.03	387.16	-9.53	6.07	-5.61	-8.39				
	L_{11}-U_{12}	-202.71	204.45	0.81	2.80	-9.85	-17.61				
	L_{12}-U_{13}	-39.75	1103.15	0.76	0.70	1.37	-10.55				
	L_{13}-U_{14}	1072.48	412.35	0.31	1.24	20.38	-18.44				
	L_{14}-U_{15}	1072.48	412.35	0.31	1.24	20.38	-18.44				
	L_{15}-U_{16}	237.46	1124.41	2.13	2.70	-13.97	-18.59				
	L_{16}-U_{17}	475.57	-49.03	3.79	1.76	3.87	-12.99				
	L_{17}-U_{18}	226.51	-41.81	3.86	1.63	2.85	-11.59				
	L_{18}-U_{19}	214.45	-56.43	2.22	2.34	-2.10	-13.78				
	L_{19}-U_{20}	49.27	-202.49	0.37	2.32	-0.52	-26.36				
	L_0-L_1	-197.10	84.39	-1.51	0.37	-14.89	-2.34				
	L_1-L_2	-111.92	0.86	-3.90	3.79	-8.68	-16.39				
	L_2-L_3	-111.92	0.86	-3.90	3.79	-8.68	-16.39				
	L_3-L_4	-60.78	179.81	-6.91	5.01	-4.39	-10.03				
	L_4-L_5	-81.80	265.56	-4.98	6.25	-6.60	-9.36				
	L_5-L_6	-99.81	279.28	1.60	2.74	-7.39	-19.59				
	L_6-L_7	-271.96	1004.43	-2.23	2.13	-7.75	-9.47				
	L_7-L_8	1026.29	362.30	-1.29	1.53	18.74	-17.43				
	L_8-L_9	-226.76	-125.36	0.83	3.85	-4.22	-13.60				
	L_9-L_{10}	-226.76	-125.36	0.83	3.85	-4.22	-13.60				
	L_{10}-L_{11}	278.05	-132.91	1.79	3.41	4.01	-12.40				
	L_{11}-L_{12}	222.98	-243.21	2.44	2.68	-3.56	-13.08				
	L_{12}-L_{13}	-187.58	-470.72	2.98	2.15	-11.20	-28.44				
	L_{13}-L_{14}	-445.06	-93.48	2.49	0.61	-15.11	-26.52				
	L_{14}-L_{15}	-445.06	-93.48	2.49	0.61	-15.11	-26.52				
	L_{15}-L_{16}	-392.27	38.30	-6.19	3.32	-9.76	-13.19				
	L_{16}-L_{17}	-297.04	199.10	-7.25	3.94	-5.63	-5.23				
	L_{17}-L_{18}	-297.04	199.10	-7.25	3.94	-5.63	-5.23				
	L_{18}-L_{19}	-24.53	-109.42	-0.33	0.51	-4.58	-9.59				
	L_{19}-L_{20}	-139.90	-177.77	-0.32	0.71	3.74	-9.00				
	L_0-L_1	-11.57	138.51	-0.10	0.10	-1.46	-2.66				
	L_1-L_2	47.96	293.64	-0.22	1.00	-3.45	-13.71				
	L_2-L_3	47.96	293.64	-0.22	1.00	-3.45	-13.71				
	L_3-L_4	-47.68	-343.07	0.29	1.80	-0.78	-23.00				
	L_4-L_5	-341.10	86.20	-13.23	7.56	-5.67	-15.27				
	L_5-L_6	-341.10	86.20	-13.23	7.56	-5.67	-15.27				
	L_6-L_7	-201.09	152.50	-5.48	3.57	-2.83	-7.34				
	L_7-L_8	-148.24	148.96	-5.25	4.47	-2.56	-7.11				
	L_8-L_9	-148.24	148.96	-5.25	4.47	-2.56	-7.11				
	L_9-L_{10}	-428.31	-26.46	-2.50	0.89	-11.01	-7.31				
	L_{10}-L_{11}	-70.66	27.55	2.49	3.43	-9.92	-13.47				
	L_{11}-L_{12}	-194.48	-25.11	2.69	1.47	-14.01	-25.44				
	L_{12}-L_{13}	-194.48	-25.11	2.69	1.47	-14.01	-25.44				
	L_{13}-L_{14}	-45.48	-80.88	0.48	1.43	-6.19	-15.04				
	L_{14}-L_{15}	-45.48	-80.88	0.48	1.43	-6.19	-15.04				
	L_{15}-L_{16}	-74.44	-5.53	-8.82	4.93	0.58	-0.56				

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{eff}	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	L_0-L_1	-31.23	-83.66	39.14	213.87	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.164	0.53
	L_1-L_2	-727.08	-24.49	99.5	99.93	84.14	129.49	3409	1372.0	1.26	4141	0.99918818	3294.8	0.133	0.65
	L_2-L_3	-146.66	-227.04	52.94	76.68	114.47	3186	1372.0	1.26	4141	0.99918818	3294.8	0.133	0.65
	L_3-L_4	-68.31	298.37	66.66	127.21	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99925462	3448.5	-0.195	0.52
	L_4-L_5	-137.69	166.92	-19.28	-57.69	114.5	129.09	102.94	3200	4716.0	2755.9	1.33	6364	0.99914964	4776.1	-0.783	0.39
	L_5-L_6	-78.92	773.76	-31.43	582.60	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952915	4806.3	-0.101	0.56
	L_6-L_7	581.91	-32.46	694.10	-141.87	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99919921	4806.4	-0.204	0.52
	L_7-L_8	194.92	-131.85	224.11	-264.46	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99914964	4776.1	-0.783	0.39
	L_8-L_9	-188.19	-130.75	160.26	-256.57	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.625	0.35
	L_9-L_{10}	-224.95	-241.52	149.32	-487.00	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.644	0.34
	L_{10}-L_{11}	581.91	-32.46	694.10	-141.87	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99952915	4806.4	-0.204	0.52
	L_{11}-L_{12}	194.92	-131.85	224.11	-264.46	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99914964	4776.1	-0.783	0.39
	L_{12}-L_{13}	-32.60	-145.21	49.27	-302.21	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99922882	4288.6	0.276	0.71
	L_{13}-L_{14}	-145.96	-646.72	150.85	-737.25	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99910S	5370.6	-0.209	0.52
	L_{14}-L_{15}	-602.66	-60.18	606.75	-69.05	162.9	162.89	144.19	219.93	6887	2613.8	1.35	7258	0.99910S	5370.6	-0.209	0.52
	L_0-U_1	-287.34	-395.31	-393.19	-458.68	179.7	179.69	170.68	251.43	7453	3050.7	1.40	8297	0.99913257	5924.6	0.597	0.84
	L_1-U_2	-822.04	-133.10	653.83	-153.89	136.1	136.09	124.70	183.72	4264	1727.4	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_2-U_3	-260.14	12.75	-275.85	-114.35	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904481	3891.8	0.415	0.77
	L_3-U_4	-371.61	246.66	-309.46	194.49	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332	0.99905637	2755.5	-0.604	0.33
	L_4-U_5	-296.79	127.64	-181.39	61.60	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99905637	2755.5	-0.430	0.43
	L_5-U_6	-10.91	-225.36	36.00	-391.51	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.052	0.56
	L_6-U_7	192.39	-299.45	203.75	-375.16	122.0	122.01	113.29	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.538	0.36
	L_7-U_8	-7.45	-219.15	-38.62	410.34	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.994	0.64
	L_8-U_9	-8.49	-178.76	-108.45	338.59	92.6	92.58	84.98	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.625	0.35
	L_9-U_{10}	-314.09	-357.97	-382.74	-663.97	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.576	0.83
	L_{10}-L_{11}	-192.39	-299.45	-203.75	-375.16	122.0	122.01	113.29	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.538	0.36
	L_{11}-L_{12}	-7.45	-219.15	-38.62	410.34	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.994	0.64
	L_{12}-L_{13}	-8.49	-178.76	-108.45	338.59	92.6	92.58	84.98	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.625	0.35
	L_{13}-L_{14}	-314.09	-357.97	-382.74	-663.97	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.576	0.83
	L_{14}-L_{15}	-602.66	-60.18	606.75	-69.05	162.9	162.89	144.19	219.93	6887	2613.8	1.35	7258	0.99910S	5370.6	-0.209	0.52
	L_0-L_1	-545.55	-15.14	-483.22	313.94	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.028	0.61
	L_1-L_2	-428.61	-361.58	-502.72	114.75	168.3	168.34	149.99	223.22	4264	2152.2	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_2-L_3	-428.61	-361.58	-502.72	114.75	168.3	168.34	149.99	223.22	4264	2152.2	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_3-L_4	-415.57	-245.33	-579.80	45.54	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99914964	4776.1	-0.783	0.39
	L_4-L_5	-290.15	-387.32	-280.75	391.34	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916217	5468.6	-0.494	0.40
	L_5-L_6	-252.31	-227.04	-399.67	-509.55	228.0	228.00	220.86	325.96	7315	3164.84	1.40	11452	0.99900705	7449.1	0.785	0.91
	L_6-L_7	-623.60	-1165.51	-481.27	-1165.51	228.0	228.00	220.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_7-L_8	-1398.47	-518.17	1672.95	-768.28	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_8-L_9	-1398.47	-518.17	1672.95	-768.28	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_9-L_{10}	-1398.47	-518.17	1672.95	-768.28	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_{10}-L_{11}	-623.60	-1165.51	-481.27	-1165.51	228.0	228.00	220.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_{11}-L_{12}	-252.31	-227.04	-399.67	-509.55	228.0	228.00	220.86	325.96	7315	3164.84	1.40	11452	0.99900705	7449.1	0.785	0.91
	L_{12}-L_{13}	-290.15	-387.32	-280.75	391.34	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916217	5468.6	-0.494	0.40
	L_{13}-L_{14}	-545.55	-15.14	-483.22	313.94	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.028	0.61
	L_0-U_1	-287.34	-395.31	-393.19	-458.68	179.7	179.69	170.68	251.43	7453	3050.7	1.40	8297	0.99913257	5924.6	0.597	0.84
	L_1-U_2	-822.04	-133.10	653.83	-153.89	136.1	136.09	124.70	183.72	4264	1727.4	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_2-U_3	-260.14	12.75	-275.85	-114.35	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904481	3891.8	0.415	0.77
	L_3-U_4	-371.61	246.66	-309.46	194.49	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332	0.99905637	2755.5	-0.604	0.33
	L_4-U_5	-296.79	127.64	-181.39	61.60	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99905637	2755.5	-0.430	0.43
	L_5-U_6	-10.91	-225.36	36.00	-391.51	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.052	0.56
	L_6-U_7	192.39	-299.45	203.75	-375.16	122.0	122.01	113.29	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.538	0.36
	L_7-U_8	-7.45	-219.15	-38.62	410.34	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.994	0.64
	L_8-U_9	-8.49	-178.76	-108.45	338.59	92.6	92.58	84.98	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.625	0.35
	L_9-U_{10}	-314.09	-357.97	-382.74	-663.97	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.576	0.83
	L_{10}-U_{11}	-192.39	-299.45	-203.75	-375.16	122.0	122.01	113.29	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.538	0.36
	L_{11}-U_{12}	-7.45	-219.15	-38.62	410.34	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.994	0.64
	L_{12}-U_{13}	-8.49	-178.76	-108.45	338.59	92.6	92.58	84.98	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.625	0.35
	L_{13}-U_{14}	-314.09	-357.97	-382.74	-663.97	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.576	0.83
	L_{14}-U_{15}	-602.66	-60.18	606.75	-69.05	162.9	162.89	144.19	219.93	6887	2613.8	1.35	7258	0.99910S	5370.6	-0.209	0.52
	L_0-L_1	-545.55	-15.14	-483.22	313.94	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.028	0.61
	L_1-L_2	-428.61	-361.58	-502.72	114.75	168.3	168.34	149.99	223.22	4264	2152.2	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_2-L_3	-428.61	-361.58	-502.72	114.75	168.3	168.34	149.99	223.22	4264	2152.2	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_3-L_4	-415.57	-245.33	-579.80	45.54	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99914964	4776.1	-0.783	0.39
	L_4-L_5	-290.15	-387.32	-280.75	391.34	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916217	5468.6	-0.494	0.40
	L_5-L_6	-252.31	-227.04	-399.67	-509.55	228.0	228.00	220.86	325.96	7315	3164.84	1.40	11452	0.99900705	7449.1	0.785	0.91
	L_6-L_7	-623.60	-1165.51	-481.27	-1165.51	228.0	228.00	220.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_7-L_8	-1398.47	-518.17	1672.95	-768.28	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_8-L_9	-1398.47	-518.17	1672.95	-768.28	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_9-L_{10}	-623.60	-1165.51	-481.27	-1165.51	228.0	228.00	220.81	347.03	8248	3698.4	1.39	11452	0.99900030	8222.2	-0.471	0.41
	L_{10}-L_{11}	-252.31	-227.04	-399.67	-509.55	228.0	228.00	220.86	325.96	7315	3164.84	1.40	11452	0.99900705	7449.1	0.785	0.91
	L_{11}-L_{12}	-290.15	-387.32	-280.75	391.34	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916217	5468.6	-0.494	0.40
	L_{12}-L_{13}	-545.55	-15.14	-483.22	313.94	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.028	0.61
	L_0-U_1	-287.34	-395.31	-393.19	-458.68	179.7	179.69	170.68	251.43	7453	3050.7	1.40	8297	0.99913257	5924.6	0.597	0.84
	L_1-U_2	-822.04	-133.10	653.83	-153.89	136.1	136.09	124.70	183.72	4264	1727.4	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_2-U_3	-260.14	12.75	-275.85	-114.35	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904481	3891.8	0.415	0.77
	L_3-U_4	-371.61	246.66	-309.46	194.49	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332	0.99905637	2755.5	-0.604	0.33
	L_4-U_5	-296.79	127.64	-181.39	61.60	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99905637	2755.5	-0.430	0.43
	L_5-U_6	-10.91	-225.36	36.00	-391.51	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.052	0.56
	L_6-U_7	192.39	-299.45	203.75	-375.16	122.0	122.01	113.29	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.538	0.36
	L_7-U_8	-7.45	-219.15	-38.62	410.34	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.994	0.64
	L_8-U_9	-8.49	-178.76	-108.45	338.59	92.6	92.58	84.98	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.625	0.35
	L_9-U_{10}	-314.09	-357.97	-382.74	-663.97	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.576	0.83
	L_{10}-U_{11}	-192.39	-299.45	-203.75	-375.16	122.0	122.01	113.29	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.538	0.36
	L_{11}-U_{12}	-7.45	-219.15	-38.62	410.34	162.5	162.51	151.98	209.67	4946	2152.2	1.29	6919	0.99904436	5357.7	0.994	0.64
	L_{12}-U_{13}	-8.49	-178.76	-108.45	338.59	92.6	92.58	84.98	114.47	3295	1304.9	1.24	3777	0.99913872	3252.3	-0.625	0.35
	L_{13}-U_{14}	-314.09	-357.97	-382.74	-663.97	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10563	0.99952244	5746.8	0.576	0.83
	L_{14}-U_{15}	-602.66	-60.18	606.75	-69.05	162.9	162.89	144.19	219.93	6887	2613.8	1.35	7258	0.99910S	5370.6	-0.209	0.52
	L_0-L_1	-545.55	-15.14	-483.22	313.94	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.028	0.61
	L_1-L_2	-428.61	-361.58	-502.72	114.75	168.3	168.34	149.99	223.22	4264	2152.2	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_2-L_3	-428.61	-361.58	-502.72	114.75	168.3	168.34	149.99	223.22	4264	2152.2	1.29	5716	0.99952635	4005.3	-0.230	0.53
	L_3-L_4	-415.57	-245.33	-579.80	45.54	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99914964	4776.1	-0.783	0.39
	L_4-L_5	-290.15	-387.32	-280.75	391.34	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916217	5468.6	-0.494	0.40
	L_5-L_6	-252.31	-227.04	-399.67	-509

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HF1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
For Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Does I considered in Mxx, Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

Owner Truss Vertical

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) Start (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bot} (in^3)	S_{top} (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_bot	M_r (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Factor a	$C_{m(x)}$	$C_{m(y)}$	Dead Load (k-in)	Live Load (Max) (k-in)	Live Load (Min) (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Max (k-in)	Lane Reduction & Impact Live Load Min (k-in)	Impact Pedestrian Load Max (k-in)	Impact Pedestrian Load Min (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bot} (in^3)	S_{top} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	F_{cm} (ksi)	Formula 1.8 Term * F_y/S_bot	M_r (k-in)	Equivalent Mom. Factor a	$C_{m(x)}$	$C_{m(y)}$	Pass
Structure 1	U_1–L_1	-29.84	-69.00	-3.61	-6.94	0.65	-0.71					-61.04	-135.25	29.42	63.49	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.673	0.33	0.33	-105.02	-33.68	-10.94	-3.51	1.48	0.47					-254.92	-84.59	-115.13	-38.93	94.0	93.99	93.97	104.66	65.3	1.11	3454	237	0.9832467	2993.9	0.321	0.73	0.73				

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

| | | | ZZ Axis Moments from STAAD | | | | | | | | Max. Pos. Mom. | | | | | | | | Max. Neg. Mom. | | | | | | | | YY Axis Moments from STAAD | | | | | | | | Max. Pos. Mom. | | | | | | | | Max. Neg. Mom. | | | | | | | | Tension | | | | | | | Compression | | | | | | | |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design for LRFD (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-ft) | End (k-ft) | Live Load (Min) Start (k-ft) | End (k-ft) | Pedestrian Load (Max) Start (k-ft) | End (k-ft) | Pedestrian Load (Min) Start (k-ft) | End (k-ft) | Lane Reduction & Impact Live Load (Max) Start (k-ft) | End (k-ft) | Lane Reduction & Impact Live Load (Min) Start (k-ft) | End (k-ft) | Impact Pedestrian Load Max Start (k-ft) | End (k-ft) | Impact Pedestrian Load Min Start (k-ft) | End (k-ft) | ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_b (in^3) | S_{bp} (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor f | M_p (k-in) | Formula I.8 Term = F.*S$_{bp}$ | M_u (k-in) | Equivalent Mom. Factor a | $C_{m/a}$ | C_{max} | DL Start (k-ft) | DL End (k-ft) | LL (Max) Start (k-ft) | LL (Max) End (k-ft) | LL (Min) Start (k-ft) | LL (Min) End (k-ft) | Ped. (Max) Start (k-ft) | Ped. (Max) End (k-ft) | Ped. (Min) Start (k-ft) | Ped. (Min) End (k-ft) | YY Axis Moments from STAAD: Max. Neg. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_b (in^3) | S_{bp} (in^3) | Z_Y (in^3) | I_{YY} (in^4) | Shape Factor f | M_p (k-in) | P_{cr} (kip) | Formula I.8 Term = F.*S$_{bp}$ | M_u (k-in) | Equivalent Mom. Factor a | $C_{m/a}$ | C_{max} | Pass | Yield: Axial Portion | Moment Portion | Total | Pass | Tension: Axial Portion | Moment Portion | Total | Pass | Fracture: Axial Portion | Moment Portion | Total | Pass | Compression: Axial Portion | Moment Portion | Total | Pass | Buckle: Axial Portion | Moment Portion | Total | Pass | Yield: Axial Portion | Moment Portion | Total | Pass |
|---|---|---|---

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_D Information

M_L Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_bb | M_u (k-in) | YY Axis Moments from STAAD: Dead Load (Max) | Live Load (Max) | Live Load (Min) | Pedestrian Load (Max) | Pedestrian Load (Min) | Lane Reduction & Impact Live Load (Max) | Lane Reduction & Impact Live Load (Min) | Impact Pedestrian Load (Max) | Impact Pedestrian Load (Min) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_z (in^3) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | P_{DC} (kip) | Formula 1.8 Term * F_y/S_bb | M_u (k-in) | Tension: Pass | Compression: Yield: Axial Axial | Yield: Moment Moment | Yield: Total | Yield: Pass | Buckle: Axial Axial | Buckle: Moment Moment | Buckle: Total | Buckle: Pass | Fracture: Axial Axial | Fracture: Moment Moment | Fracture: Total | Fracture: Pass | Axial Axial | Moment Moment | Total | Pass |
|---|---|---|---

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

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*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Max) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	J (in^4)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	Formula f.S Term = F_y*S_bb	M_y (k-in)	Equivalent Mom. Factor a	$C_{b(a)}$	$C_{b(min)}$	Pass
Structure 1	U_0–L_1	-15.70	54.51	2.72	2.97	0.23	-0.56	-0.04	0.43	0.03	-0.13	36.39	39.65	3.11	2.51	-0.48	5.10	0.34	-1.05	-67.67	122.41	16.36	61.11	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.553	0.38	0.38
	U_1–L_1	-27.61	29.28	-2.47	2.33	0.75	-0.89	-0.57	0.52	0.20	-0.18	-32.94	31.14	10.01	-9.18	-6.82	6.19	2.40	-2.14	-72.72	-78.54	-22.89	26.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.998	0.20	0.20
	L_1–U_2	-3.61	-5.24	1.80	0.89	-0.81	-0.29	0.35	0.20	0.25	-0.26	-18.79	24.01	3.26	-1.85	-10.81	-3.11	-6.29	2.39	-2.75	-13.74	24.40	22.23	-20.56	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.998	0.20	0.20
	U_2–L_2	40.61	-41.50	-1.00	1.11	0.97	-0.92	-0.06	0.10	0.17	-0.21	-13.39	14.76	12.93	-12.25	-0.70	1.25	1.99	-2.46	35.39	-34.76	69.61	-69.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20
	L_2–U_3	56.81	-57.80	-0.27	0.25	1.38	-1.38	0.00	0.00	0.30	-0.31	18.37	-17.89	0.00	0.00	-10.73	10.73	0.00	0.00	69.17	-69.17	69.17	-69.17	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_3–L_3	64.44	-72.22	-0.09	0.14	1.58	-1.77	0.00	0.00	0.42	-0.47	-1.18	1.86	21.68	-23.65	0.00	0.00	0.52	-0.65	82.24	-91.48	111.18	-124.63	15.4	15.42	15.42	23.71	2	907.0	1.54	986	1.5	958.8	-0.952	0.24	0.24
	L_3–U_4	60.40	-64.15	-0.32	0.26	1.43	-1.52	-0.26	0.19	-0.26	0.26	-21.56	21.56	24.25	-24.25	0.00	0.00	0.00	0.00	77.24	-77.24	77.24	-77.24	15.4	15.42	15.42	23.71	2	1076.0	1.67	1144	1.5	1029.6	-0.998	0.20	0.20
	U_4–L_4	109.00	-121.35	-0.60	0.65	1.90	-1.96	0.00	0.00	0.74	-0.81	-8.06	8.67	25.34	-26.34	-26.12	26.12	0.00	0.00	8.90	-9.76	131.23	-146.49	174.65	-191.71	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	-0.911	0.24	0.24
	L_4–U_5	-42.62	47.12	2.75	3.30	2.26	-2.73	-0.77	0.93	0.77	-0.93	-36.67	44.13	30.25	36.43	-9.29	11.14	9.24	-11.11	-115.15	133.09	-16.08	13.89	107.1	107.13	107.11	162.71	26	2056.9	1.52	3,069	1.5	3302.3	-0.616	0.25	0.25
	U_5–L_5	-161.01	205.10	-2.95	3.13	0.09	-0.17	-0.94	1.08	0.00	0.00	-285.54	339.21	-234.52	263.83	1.73	-2.13	-11.24	12.50	0.00	0.00	-285.54	339.21	-234.52	263.83	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.998	0.20	0.20
	U_5–$L_{5.1}$	-123.92	126.16	-2.21	2.52	-0.05	-0.22	-0.61	0.71	0.04	-0.05	-28.36	32.64	-0.63	-2.85	-7.30	8.52	-0.44	-0.58	-207.70	217.51	-161.91	160.30	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.955	0.22	0.22
	$U_{5.1}$–L_6	-122.70	170.46	-2.20	2.94	-0.21	-0.68	0.85	0.00	0.00	0.00	-28.49	38.04	-0.17	-0.65	-6.97	13.22	0.00	0.00	-203.05	271.09	-159.23	220.76	42.74	42.74	42.74	65.30	9	1389.6	1.53	2,155	1.5	2115.6	-0.749	0.30	0.30
	U_6–L_6	-106.29	107.56	-2.00	2.09	0.19	-0.28	-0.52	0.55	0.00	0.00	-25.82	26.99	-1.98	-1.00	-6.18	6.80	0.00	0.00	-171.87	174.91	-133.60	138.63	21.1	21.09	21.09	35.46	10	1134.0	1.67	1170	1.5	1044.0	-0.983	0.21	0.21
	U_6–L_7	-66.48	79.89	-1.82	1.93	0.27	-0.25	-0.35	0.40	0.00	0.00	-23.53	24.91	3.55	-3.22	-4.24	4.82	0.00	0.00	-117.02	136.23	-81.81	99.66	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.899	0.26	0.26
	U_7–L_7	-57.84	56.78	-1.65	1.65	0.27	-0.25	-0.34	0.39	0.00	0.00	-21.56	21.56	0.00	0.00	-10.73	10.73	0.00	0.00	-68.99	68.99	-68.99	68.99	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_7–L_8	17.16	-23.69	-0.68	0.64	1.62	-1.74	-0.10	0.11	0.27	-0.30	-8.79	8.28	21.00	-22.51	-1.20	1.31	3.18	-3.55	82.24	-91.48	111.18	-124.63	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.940	0.22	0.22
	U_8–L_8	60.40	-64.15	-0.32	0.26	1.43	-1.52	-0.26	0.19	-0.26	0.26	-21.56	21.56	24.25	-24.25	0.00	0.00	0.00	0.00	77.24	-77.24	77.24	-77.24	15.4	15.42	15.42	23.71	2	1076.0	1.67	1144	1.5	1029.6	-0.998	0.20	0.20
	U_8–L_9	74.44	-85.11	-0.28	0.29	1.76	-1.83	-0.06	0.06	0.43	-0.46	-3.66	3.73	22.77	-23.73	-0.72	0.73	5.15	-5.53	92.01	-105.79	126.38	-141.49	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.893	0.24	0.24
	U_9–L_9	-17.77	-162.63	-0.38	2.71	-2.75	-0.08	0.08	0.83	-0.87	-0.96	-14.95	38.55	-36.09	-2.92	-10.42	10.42	166.64	-204.54	250.68	-258.33	33.7	35.09	35.09	53.91	15.4	15.42	15.42	23.71	2	1187.1	1.67	1166	1.5	1737.0	-0.970	0.21	0.21
	L_9–U_{10}	-164.37	-173.76	-0.33	0.32	2.63	-2.69	-0.07	0.07	0.91	-0.95	-4.31	4.14	34.00	-34.78	-0.85	0.83	10.97	-11.39	208.09	-220.51	272.19	153.67	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	0.565	0.83	0.83
	$U_{9.1}$–L_{10}	-194.92	-235.55	-0.22	0.29	2.34	-2.73	-0.06	0.07	1.09	-1.17	-2.66	3.73	30.31	-35.36	-0.77	0.88	12.73	-14.04	249.68	-301.37	309.36	189.18	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	0.612	0.84	0.84
	U_{10}–L_{10}	133.48	204.38	-3.34	3.96	0.29	-0.29	0.04	-0.04	0.00	0.00	-1.35	1.35	-228.86	307.08	-158.56	213.00	46.7	46.71	73.44	-98.64	73.44	-98.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{10}–L_{11}	-201.32	204.79	-3.69	3.66	0.69	-0.66	-0.91	0.88	0.15	-0.14	-47.11	46.70	46.83	46.70	-10.88	10.50	1.81	-1.68	-292.53	326.93	-250.18	279.58	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.988	0.20	0.20
	U_{11}–L_{11}	-159.93	159.93	-3.38	3.45	0.73	-0.73	0.00	0.00	0.00	0.00	-38.38	38.38	-8.71	8.17	0.00	0.00	0.00	0.00	-292.53	292.53	-250.18	250.18	46.7	46.71	46.71	71.43	10	1364.5	1.53	2090	1.5	2049.8	-0.993	0.20	0.20
	U_{11}–L_{12}	-79.54	88.71	-1.87	1.94	0.47	-0.48	-0.37	0.41	0.10	-0.10	-23.69	24.75	5.94	-5.15	-4.46	4.87	1.18	-1.21	-134.47	147.49	-66.68	107.33	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.912	0.24	0.24
	U_{12}–L_{13}	-67.01	54.09	-1.75	1.57	0.51	-0.47	-0.69	0.67	0.11	-0.11	-44.61	42.94	3.64	-4.52	-9.92	9.76	0.00	0.00	-116.36	98.28	-116.36	98.28	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{13}–L_{14}	-4.04	12.92	-1.40	1.54	0.73	-0.65	-0.17	0.21	0.13	-0.13	-17.87	19.70	19.32	-19.32	-3.32	3.82	-2.05	2.50	1.51	-1.60	-29.14	31.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.696	0.32	0.32
	U_{14}–L_{15}	27.52	-27.99	-1.02	1.08	1.08	-1.11	-0.04	0.05	0.10	-0.12	-13.04	13.85	13.75	-14.21	-5.43	5.60	1.22	-1.39	18.82	-18.38	53.65	-54.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.976	0.21	0.21
	U_{15}–L_{16}	59.94	-59.39	-0.30	0.25	1.19	-1.19	0.00	0.00	0.29	-0.29	18.37	-18.37	-4.23	5.05	0.00	0.00	10.73	-10.73	72.42	-72.42	72.42	-72.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{16}–L_{17}	130.31	-141.80	-0.26	0.20	2.28	-2.39	0.00	0.00	0.47	-0.54	29.14	-30.92	0.00	0.00	-5.58	-5.94	165.12	-181.03	207.29	-224.02	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.925	0.23	0.23
	U_{17}–L_{18}	216.58	-221.43	-0.13	0.10	3.20	-3.20	0.00	0.00	0.57	-0.61	45.28	-47.48	0.00	0.00	-5.58	-5.94	207.29	-224.02	250.68	-258.33	33.7	35.09	35.09	53.91	15.4	15.42	15.42	23.71	2	1187.1	1.67	1166	1.5	1737.0	-0.970	0.21	0.21
	U_{18}–L_{19}	193.18	-200.19	-0.19	0.28	2.72	-2.86	0.00	0.00	0.67	-0.68	-2.44	3.58	34.79	-36.55	0.00	0.00	8.02	-8.10	247.96	-255.60	296.35	-307.77	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.963	0.21	0.21
	U_{19}–L_{20}	194.78	-194.55	-0.39	0.42	2.57	-2.66	0.00	0.00	0.65	-0.65	-4.41	5.37	32.78	-34.04	0.00	0.00	7.81	-7.82	247.48	-245.94	296.83	-297.16	43.0	43.04	43.04	68.85	14	1479.6	1.60	2366	1.5	2129.0	-0.996	0.20	0.20
	U_{20}–L_{21}	173.73	-170.02	-0.37	0.36	2.30	-2.30	0.00	0.00	0.56	-0.56	-3.79	4.61	28.12	-29.19	0.00	0.00	6.89	-6.96	213.00	-211.68	255.16	-256.30	43.0	43.04	43.04	68.85	14	1479.6	1.60	2366	1.5	2129.0	-0.996	0.20	0.20
	U_{21}–L_{22}	231.65	-230.62	-0.95	0.96	2.41	-2.27	0.00	0.00	0.77	-0.77	-12.15	12.21	30.75	-28.95	0.00	0.00	9.20	-9.19	285.35	-283.93	341.12	-337.44	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.989	0.20	0.20
	U_{22}–L_{23}	24.62	-29.21	-1.40	1.75	0.97	-0.92	-0.06	0.10	0.17	-0.21	-13.39	14.76	12.93	-12.25	-0.70	1.25	1.99	-2.46	31.83	-37.83	69.61	-69.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{23}–L_{24}	-220.23	219.22	-3.97	3.40	0.29	-0.36	-0.83	0.81	0.00	0.00	-45.11	42.94	3.64	-4.52	-9.92	9.76	0.00	0.00	-344.94	340.81	-281.57	279.11	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.988	0.20	0.20
	U_{24}–L_{25}	-182.78	181.59	-3.69	3.77	0.51	-0.49	-0.77	0.78	0.07	-0.08	-46.60	47.63	6.43	-6.14	-8.29	9.34	0.80	-0.98	-298.17	297.99	-229.24	228.08	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	-0.999	0.20	0.20
	U_{25}–L_{26}	-159.39	160.90	-3.41	3.64	0.61	-0.62	-0.74	0.76	0.05	-0.09	-43.10	45.91	17.75	-17.75	-6.84	9.07	0.58	-1.10	-263.18	272.04	-197.07	202.97	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.971	0.21	0.21
	U_{26}–L_{27}	60.40	64.15	-0.32	0.26	1.43	-1.52	-0.26	0.19	-0.26	0.26	-21.56	21.56	24.25	-24.25	0.00	0.00	0.00	0.00	77.24	-77.24	77.24	-77.24	15.4	15.42	15.42	23.71	2	1076.0	1.67	1144	1.5	1029.6	-0.998	0.20	0.20
	U_{27}–L_{28}	-69.51	63.36	-1.82	1.72	0.47	-0.47	-0.34	0.35	0.00	0.00	-20.45	21.73	5.87	-5.92	-4.02	4.24	0.02	-0.12	-103.95	110.61	-69.73	74.67	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.940	0.22	0.22
	U_{28}–L_{29}	37.52	-37.49	-1.39	1.39	1.38	-1.38	0.00	0.00	0.30	-0.31	18.37	-17.89	0.00	0.00	-10.73	10.73	0.00	0.00	-74.96	74.96	-74.96	74.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{29}–L_{30}	-4.56	-5.01	-0.84	0.88	0.99	-1.08	-0.07	0.09	0.13	-0.14	-10.62	11.11	12.52	-13.69	-0.89	1.06	1.52	-1.73	-9.02	9.30	24.20	-14.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.583	0.37	0.37
	U_{30}–L_{31}	-28.38	-55.09	-0.56	0.68	0.69	-0.75	-0.04	0.05	0.09	-0.10	-7.30	8.68	23.28	-24.68	-0.61	0.74	3.54	-4.31	54.87	-101.64	54.87	-101.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.811	0.28	0.28
	U_{31}–L_{32}	70.77	-74.09	-0.53	0.53	1.84	-1.91	-0.05	0.05	0.40	-0.41	-6.70	6.67	22.20	-22.11	-0.61	0.61	4.75	-4.93	82.29	-87.64	122.18	-127.66	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.957	0.22	0.22
	U_{32}–L_{33}	104.65	-105.00	-0.92	0.48	2.23	-2.20	-0.06	0.06	0.52	-0.51	-6.31	6.07	28.18	-27.01	-0.66	0.70	6.19	-6.12	-127.84	-128.60	172.68	-172.52	18.7	18.71	18.71	31.48	8	970.0	1.68	1339	1.5	926.1	-0.999	0.20	0.20
	U_{33}–L_{34}	119.78	-119.78	-0.53	0.53	2.55	-2.55	0.00	0.00	0.74	-0.74	-41.68	41.68	-44.83	44.83	-13.42	13.42	0.00	0.00	-147.56	147.56	-147.56	147.56	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{34}–L_{35}	189.58	-191.05	-0.50	0.48	3.42	-3.47	-0.06	0.06	0.65	-0.69	-8.21	-6.29	6.15	43.29	-43.80	-5.72	0.65	9.58	-8.77	238.28	-240.44	302.63	305.30	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	-0.951	0.20	0.20
	U_{35}–L_{36}	153.03	-157.73	-0.43	0.43	2.93	-2.93	0.00	0.00	0.65	-0.65	-37.72	37.72	0.00	0.00	-9.58	9.58	0.00	0.00	-141.41	141.41	-141.41	141.41	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{36}–L_{37}	207.01	-210.59	-1.00	1.01	2.66	-2.52	0.00	0.00	0.81	-0.81	-12.64	12.73	33.57	-31.79	0.00	0.00	9.72	-9.71	252.68	-257.22	312.75	315.09	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.993	0.20	0.20
	U_{37}–L_{38}	64.68	59.88	-0.32	0.32	1.51	-1.51	-0.26	0.19	-0.26	0.26	-21.56	21.56	24.25	-24.25	0.00	0.00	0.00	0.00	77.24	-77.24	77.24	-77.24	15.4	15.42	15.42	23.71	2	1076.0	1.67	1144	1.5	1029.6	-0.998	0.20	0.20
	U_{38}–L_{39}	-251.15	245.11	-3.25	3.05	0.52	-0.32	-0.82	0.81	0.00	0.00	-41.52	38.93	4.10	-4.09	-9.83	9.68	0.00	0.00	-380.47	369.25	-321.16	313.33	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.975	0.21	0.21
	U_{39}–L_{40}	-185.39	176.08	-2.83	2.93	0.28	-0.49	-0.66	0.69	0.05	-0.10	-36.20	37.43	3.54	-6.30	-7.94	8.27	0.56	-1.25	-286.06	285.17	-236.40	223.32	43.2	43.24	43.16	70.66	19	1515.6	1.63	2303	1.5	2140.4	-0.973	0.21	0.21
	U_{40}–L_{41}	154.98	159.80	-2.37	2.43	0.48	-0.48	-0.66	0.66	0.00	0.00	-37.06	38.73	-2.27	-1.25	-7.63	7.72	0.00	0.00	-289.32	300.33	-241.28	248.22	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.963	0.21	0.21
	U_{41}–L_{42}	-185.34	192.19	-2.90	3.03	-0.52	-0.10	-0.64	0.64	0.00	0.00	-37.06	38.73	-2.27	-1.25	-7.63	7.72	0.00	0.00	-289.32	300.33	-241.28	248.22	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.963	0.21	0.21
	U_{42}–L_{43}	154.98	-159.80	-2.37	2.43	0.48	-0.48	-0.66	0.66	0.00	0.00	-37.06	38.73	-2.27	-1.25	-7.63	7.72	0.00	0.00	-289.32	300.33	-241.28	248.22	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.963	0.21	0.21
	U_{43}–L_{44}	-116.39	129.36	-2.16	2.26	0.21	-0.15	-0.42	0.45	0.00	0.00	-27.53	28.87	2.68	-1.95	-4.99	5.40	0.00	0.00	-187.11	205.70	-147.82	165.63	28.8	28.84	28.84	44.64	7	1037.5	1.67	1143	1.5	1029.6	-0.910	0.24	0.24
	U_{44}–L_{45}	-52.79	62.48	-1.16	1.29	0.43	-0.48	-0.16	0.22	0.00	0.00	-14.66	16.48	5.46	-6.13	-2.18	2.58	0.00	0.00	-87.95	102.65	-51.64	76.60	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	763.3	-0.897	0.26	0.26
	U_{45}–L_{46}	-19.17	20.05	-0.46	0.46	1.72	-1.72	-0.04	0.04	0.12	-0.12	-4.71	4.71	16.00	-16.00	-0.43	0.43	3.72	-3.72	-47.21	47.21	-47.21	47.21	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.997	0.20	0.20
	U_{46}–L_{47}	18.83	-25.55	-0.74	0.67	1.59	-1.72	-0.14	0.14	0.22	-0.25	-9.43	8.99	20.97	-21.94	-1.67	1.73	2.66	-3.02	12.22	-20.55	50.96	-61.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.825	0.27	0.27
	U_{47}–L_{48}	39.35	-43.59	-0.96	0.73	1.17	-1.28	0.00	0.00	0.16	-0.17	-8.59	9.45	15.16	-16.54	0.00	0.00	1.88	-2.05	40.04	-44.38	73.37	27.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.369	0.75	0.75
	U_{48}–L_{49}	177.21	-183.34	-0.65	0.65	2.49	-2.49	0.00	0.00	0.70	-0.70	-38.07	38.65	-1.75	-1.75	-9.58	9.58	0.00	0.00	-243.42	249.92	-202.92	208.26	38.8	38.83	38.83	62.92	13	1364.5	1.62	2090	1.5	1938.9	-0.992	0.20	0.20
	U_{49}–L_{50}	189.59	-202.30	-0.55	0.53	2.70	-2.75	-0.12	0.11	0.78	-0.81	-7.00	6.80	34.46	-35.11	-1.45	1.34	9.40	-9.72	260.19	-291.26	-308.63	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.984	0.20	0.20
	U_{50}–L_{51}	214.89	-210.10	-3.33	3.49	2.21	-2.84	-0.06	0.06	0.81	-0.83	-4.23	6.22	28.20	-26.26	-0.67	1.15	9.59	-11.12	-273.86	-343.04	316.01	-398.26	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.793	0.28	0.28
	U_{51}–L_{52}	180.48	-189.67	-3.09	3.17	0.79	-0.83	-0.11	0.13	0.00	0.00	-48.15	45.16	6.13	-6.64	-13.21	12.35	1.10	-1.03	-292.53	292.53	-250.18	250.18	46.7	46.71	46.71	71.43	10	1364.5	1.53	2090	1.5	2049.8	-0.993	0.20	0.20
	U_{52}–L_{53}	-121.66	132.24	-2.60	2.70	0.06	-0.10	-0.72	0.78	0.00	0.00	-34.72	36.00	0.83	-1.28	-8.66	9.37	0.00	0.00	-203.29	218.72	-157.07	170.24	18.5	18.45	18.36	30.78	7	1020.9	1.67	1018	1.5	913.3	-0.929	0.23	0.23
	U_{53}–L_{54}	-77.50	76.02	-1.93	2.15

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Does Lumpability in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	3.65	-1.42	1.36	0.65	0.05	-0.10	0.15	0.01	0.03	-0.02
	U_1-L_1	-11.48	-3.33	0.61	0.26	-0.04	-0.21	0.25	0.07	0.08	-0.04
	U_1-L_2	-10.62	-11.78	0.43	0.13	-0.29	-0.41	0.00	0.00	-0.04	-0.06
	U_1-U_2	9.81	-15.01	0.10	0.09	-0.02	-0.60	0.08	0.01	-0.08	-0.12
	L_1-L_2	-16.21	25.06	0.14	0.16	-0.03	-0.01	0.00	0.00	-0.01	-0.01
	L_2-L_3	-34.06	79.08	1.25	1.15	-0.12	-0.23	0.44	0.00	-0.06	-0.14
	L_2-U_3	-33.70	77.83	1.13	1.05	-0.23	-0.35	0.52	0.00	-0.06	-0.14
	U_2-L_3	-1.39	10.62	0.74	1.37	0.27	-0.45	-0.09	0.65	0.00	0.00
	U_3-L_3	-12.27	139.07	0.70	1.85	-0.16	-0.09	0.01	0.01	0.00	0.00
	U_3-L_4	-100.92	90.29	1.74	1.76	-0.09	-0.01	-0.50	0.51	0.00	0.00
	L_3-L_4	-73.43	69.79	-1.29	0.90	-0.38	-0.10	-0.31	0.35	0.00	0.00
	L_3-U_4	-82.30	79.65	-1.29	0.90	-0.39	-0.23	0.00	0.00	0.00	0.00
	L_4-L_5	-69.90	47.85	1.20	0.95	-0.14	-0.25	-0.31	0.21	0.00	0.00
	L_4-U_5	-27.40	6.37	0.50	0.29	-0.01	-0.44	-0.03	0.05	-0.12	-0.02
	U_4-L_5	-6.38	-3.27	0.50	0.29	-0.01	-0.44	-0.03	0.05	-0.12	-0.02
	L_5-L_6	-31.05	12.71	0.86	0.68	0.17	-0.34	-0.19	0.11	0.05	-0.04
	L_5-U_6	-46.66	27.26	1.14	0.85	0.31	-0.18	-0.28	0.19	0.04	-0.04
	U_5-L_6	-118.88	85.32	-1.69	1.68	0.28	-0.26	-0.55	0.42	0.06	-0.05
	L_6-L_7	-118.21	87.78	-1.92	1.62	0.40	-0.57	-0.46	0.54	0.04	-0.04
	L_6-U_7	-146.00	120.15	-1.92	1.63	0.10	-0.16	-0.77	0.62	0.04	-0.04
	U_6-L_7	-86.84	116.71	-2.62	2.23	0.17	-0.32	-0.13	0.38	0.01	-0.06
	L_7-L_8	-154.13	114.46	-2.62	2.23	0.17	-0.32	-0.13	0.38	0.01	-0.06
	L_7-U_8	-118.22	92.25	-2.44	2.01	0.56	-0.49	-0.52	0.43	0.11	-0.09
	U_7-L_8	-34.32	8.80	0.96	0.74	0.10	-0.31	-0.18	0.11	0.07	-0.06
	L_8-L_9	-34.32	8.80	0.96	0.74	0.10	-0.31	-0.18	0.11	0.07	-0.06
	L_8-U_9	-13.33	-37.03	0.34	0.16	0.45	-0.79	0.00	0.00	0.14	-0.13
	U_8-L_9	-66.01	54.01	-1.12	0.88	0.00	-0.39	-0.23	0.17	0.00	0.00
	L_9-L_{10}	-133.76	104.25	-2.73	2.13	0.00	-0.39	-0.42	0.32	0.00	0.00
	L_9-U_{10}	-116.16	105.67	-1.88	1.35	-0.07	-0.20	-0.36	0.36	0.00	0.00
	U_9-L_{10}	-33.38	104.35	-0.63	0.45	0.00	-0.08	-0.37	0.36	0.00	0.00
	L_{10}-L_{11}	-131.93	101.03	-2.00	1.80	0.48	-0.26	-0.42	0.51	0.00	0.00
	L_{10}-U_{11}	-179.29	162.92	-2.13	1.93	0.78	-0.56	-0.54	0.56	0.02	-0.02
	U_{10}-L_{11}	-64.32	98.51	-1.30	1.20	0.29	-0.26	-0.27	0.27	0.01	-0.01
	L_{11}-L_{12}	-45.28	135.72	-1.75	2.21	-0.04	-0.17	-0.36	0.49	0.18	-0.02
	L_{11}-U_{12}	-143.91	214.89	-2.24	2.95	-0.04	-0.23	-0.49	0.67	0.24	-0.03
	U_{11}-L_{12}	-112.48	136.84	-2.44	2.35	0.25	-0.30	-0.48	0.53	0.14	-0.01
	L_{12}-L_{13}	-83.68	84.68	-1.96	1.64	0.34	-0.34	-0.37	0.40	0.00	0.00
	L_{12}-U_{13}	-61.76	54.22	-1.39	1.05	-0.02	-0.36	-0.27	0.25	0.00	0.00
	U_{12}-L_{13}	-33.78	104.35	-0.63	0.45	0.00	-0.08	-0.37	0.36	0.00	0.00
	L_{13}-L_{14}	-14.01	1.02	-0.18	0.32	0.26	-0.63	0.00	0.04	-0.01	-0.01
	L_{13}-U_{14}	18.16	5.24	-0.18	0.32	0.26	-0.63	0.00	0.04	-0.01	-0.01
	U_{13}-L_{14}	-32.82	30.90	-1.00	0.82	0.15	-0.31	-0.20	0.17	0.03	-0.03
	L_{14}-L_{15}	-53.09	59.49	-1.42	1.15	0.16	-0.31	-0.29	0.29	0.03	-0.03
	L_{14}-U_{15}	-83.91	100.03	-1.90	1.62	0.33	-0.37	-0.39	0.44	0.00	0.00
	U_{14}-L_{15}	-98.58	117.15	-2.04	1.79	0.28	-0.34	-0.42	0.49	0.00	0.00
	L_{15}-L_{16}	-126.17	124.51	-2.02	1.86	0.77	-0.60	-0.52	0.49	-0.01	-0.01
	L_{15}-U_{16}	-82.40	185.99	-1.78	2.34	0.49	-0.27	-0.44	0.60	0.00	0.00
	U_{15}-L_{16}	-138.42	160.32	-2.94	2.56	0.26	-0.25	-0.45	0.52	0.00	0.00
	L_{16}-L_{17}	-128.98	123.04	-1.97	1.59	-0.09	-0.40	-0.44	0.00	0.00	0.00
	L_{16}-U_{17}	-128.43	95.01	-1.84	1.45	-0.33	-0.36	-0.41	0.35	0.00	0.00
	U_{16}-L_{17}	-8.89	-32.25	-0.39	0.17	0.43	-0.72	0.00	0.00	0.03	-0.12
	L_{17}-L_{18}	-4.65	-13.30	-0.73	0.50	0.29	-0.50	-0.11	0.03	0.07	-0.06
	L_{17}-U_{18}	-43.22	40.48	-1.21	0.98	0.33	-0.29	-0.27	0.19	0.07	-0.07
	U_{17}-L_{18}	-135.94	107.53	-2.05	1.72	0.41	-0.37	-0.55	0.45	0.08	-0.06
	L_{18}-L_{19}	-65.25	88.28	3.49	2.18	0.10	-0.18	-0.12	0.37	0.01	-0.03
	L_{18}-U_{19}	-138.22	96.74	-2.33	1.85	0.33	-0.27	-0.75	0.56	0.05	-0.05
	U_{18}-L_{19}	-113.16	77.07	-1.97	1.57	0.09	-0.12	-0.10	0.06	0.00	-0.00
	L_{19}-L_{20}	-43.91	24.73	-1.22	0.87	0.23	-0.19	-0.20	0.20	-0.01	0.00
	L_{19}-U_{20}	-2.65	25.30	-0.39	0.19	0.14	-0.65	0.00	0.00	-0.05	-0.09
	U_{19}-L_{20}	-77.40	53.68	-1.24	1.01	-0.05	-0.22	-0.32	0.23	0.00	0.00
	L_{20}-L_{21}	-81.44	41.31	-1.43	0.69	-0.10	-0.30	-0.36	0.26	0.00	0.00
	L_{20}-U_{21}	-111.90	77.07	-1.97	1.57	0.09	-0.12	-0.10	0.06	0.00	-0.00
	U_{20}-L_{21}	-54.92	94.91	-1.16	1.15	0.47	-0.18	-0.42	0.50	0.00	0.00
	L_{21}-L_{22}	-10.13	116.77	-1.07	1.97	-0.09	-0.12	-0.10	0.66	0.00	0.00
	L_{21}-U_{22}	-18.98	22.49	0.12	0.37	-0.53	-0.39	0.04	0.01	-0.18	-0.01
	U_{21}-L_{22}	-38.98	90.66	-2.05	1.62	0.04	-0.50	-0.53	0.50	0.00	0.00
	L_{22}-L_{23}	-4.49	-12.52	-0.46	0.15	-0.07	-0.22	-0.23	0.00	0.00	0.00
	L_{22}-U_{23}	-34.24	14.49	-0.68	0.48	0.12	-0.20	-0.13	0.07	-0.01	-0.01

Location	Member	Start (k-in)	End (k-in)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I (in^4)	$I_{t/t}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Terms * F_y/S_x	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b/t/t}$	Equivalent Mom. Factor $C_{b/b/t}$
Structure 1	U_0-L_1	3.65	-1.42	1.36	0.65	0.05	-0.10	0.15	0.01	0.03	-0.02	-18.12	8.63	0.61	-3.31	1.75	0.12	-0.34	-0.23
	U_1-L_1	-11.48	-3.33	0.61	0.26	-0.04	-0.21	0.25	0.07	0.08	-0.04	-0.12	3.42	-0.57	-2.81	-2.95	0.84	0.98	-0.47
	U_1-L_2	-10.62	-11.78	0.43	0.13	-0.29	-0.41	0.00	0.00	-0.04	-0.06	-0.12	0.00	0.00	-0.04	-0.06	-0.12	0.00	0.00
	U_1-U_2	9.81	-15.01	0.10	0.09	-0.02	-0.60	0.08	0.01	-0.08	-0.12	1.30	1.14	-0.28	-1.98	0.90	0.13	-0.94	-1.40
	L_1-L_2	-16.21	25.06	0.14	0.16	-0.03	-0.01	0.00	0.00	-0.01	-0.01	-0.17	-1.89	0.36	0.97	1.51	0.13	0.13	0.13
	L_2-L_3	-34.06	79.08	1.25	1.15	-0.12	-0.23	0.44	0.00	-0.06	-0.14	-16.74	15.39	-1.69	-7.76	-3.32	5.24	0.00	0.00
	L_2-U_3	-33.70	77.83	1.13	1.05	-0.23	-0.35	0.52	0.00	-0.06	-0.14	-16.57	14.92	-1.62	-7.62	-3.13	4.96	0.00	0.00
	U_2-L_3	-1.39	10.62	0.74	1.37	0.27	-0.45	-0.09	0.65	0.00	0.00	-9.86	18.34	3.57	-5.95	-1.07	7.76	0.00	0.00
	U_3-L_3	-12.27	139.07	0.70	1.85	-0.16	-0.09	0.01	0.01	0.00	0.00	-9.04	23.99	-2.04	-11.15	0.14	8.51	0.00	0.00
	U_3-L_4	-100.92	90.29	1.74	1.76	-0.09	-0.01	-0.50	0.51	0.00	0.00	-22.53	17.93	1.15	-11.78	-0.18	0.00	0.00	0.00
	L_3-L_4	-73.43	69.79	-1.29	0.90	-0.38	-0.10	-0.31	0.35	0.00	0.00	-16.72	11.68	-4.85	-1.28	-3.77	4.25	0.00	0.00
	L_3-U_4	-82.30	79.65	-1.29	0.90	-0.39	-0.23	0.00	0.00	0.00	0.00	-19.26	8.44	-5.58	-0.03	-4.34	2.71	0.00	0.00
	L_4-L_5	-69.90	47.85	1.20	0.95	-0.14	-0.25	-0.31	0.21	0.00	0.00	-15.66	12.34	-1.81	-3.18	-3.70	2.56	0.00	0.00
	L_4-U_5	-27.40	6.37	0.50	0.29	-0.01	-0.44	-0.03	0.05	-0.12	-0.02	-6.52	3.69	-0.18	-6.64	-0.31	0.61	-1.44	-0.28
	U_4-L_5	-6.38	-3.27	0.50	0.29	-0.01	-0.44	-0.03	0.05	-0.12	-0.02	-6.52	3.69	-0.18	-6.64	-0.31	0.61	-1.44	-0.28
	L_5-L_6	-31.05	12.71	0.86	0.68	0.17	-0.34	-0.19	0.11	0.05	-0.04	-11.08	8.80	2.13	-4.40	-2.29	1.32	0.56	-0.52
	L_5-U_6	-46.66	27.26	1.14	0.85	0.31	-0.18	-0.28	0.19	0.04	-0.04	-14.75	11.04	-2.13	-2.32	-3.31	2.27	0.50	-0.48
	U_5-L_6	-118.88	85.32	-1.69	1.68	0.28	-0.26	-0.55	0.42	0.06	-0.05	-25.01	21.71	3.56	-3.30	-6.59	5.04	0.67	-0.62
	L_6-L_7	-118.21	87.78	-1.92	1.62	0.40	-0.57	-0.46	0.54	0.04	-0.04	-24.80	19.51	3.55	-3.29	-6.57	4.97	0.67	-0.62
	L_6-U_7	-146.00	120.15	-1.92	1.63	0.10	-0.16	-0.77	0.62	0.04	-0.04	-24.89	21.09	1.94	-2.93	-6.29	7.49	0.40	-0.46
	U_6-L_7	-86.84	116.71	-2.62	2.23	0.17	-0.32	-0.13	0.38	0.01	-0.06	-33.50	28.50	2.16	-4.13	-1.51	4.57	0.14	-0.70
	L_7-L_8	-154.13	114.46	-2.62	2.23	0.17	-0.32	-0.13	0.38	0.01	-0.06	-33.50	28.50	2.16	-4.13	-1.51	4.57	0.14	-0.70
	L_7-U_8	-118.22	92.25	-2.44	2.01	0.56	-0.49	-0.52	0.43	0.11	-0.09	-27.61	21.45	5.01	-2.67	-6.28	5.11	1.37	-1.25
	U_7-L_8	-34.32	8.80	0.96	0.74	0.10	-0.31	-0.18	0.11	0.07	-0.06	-11.27	8.77	2.04	-2.62	-2.39	1.32	0.46	-0.42
	L_8-L_9	-34.32	8.80	0.96	0.74	0.10	-0.31	-0.18	0.11	0.07	-0.06	-11.27	8.77	2.04	-2.62	-2.39	1.32	0.46	-0.42
	L_8-U_9	-13.33	-37.03	0.34	0.16	0.45	-0.79	0.00	0.00	0.14	-0.13	-4.40	-2.91	0.77	0.00	-1.54	11.62	0.00	0.00
	U_8-L_9	-66.01	54.01	-1.12	0.88	0.00	-0.39	-0.23	0.17	0.00	0.00	-14.36	11.23	-0.54	-4.52	-2.80	2.04	0.00	0.00
	L_9-L_{10}	-133.76	104.25	-2.73	2.13	0.00	-0.39	-0.42	0.32	0.00	0.00	-27.22	19.39	-1.07	-9.04	-5.60	4.08	0.00	0.00
	L_9-U_{10}	-116.16	105.67	-1.88	1.35	-0.07	-0.20	-0.36	0.36	0.00	0.00	-24.06	17.30	-0.93	-7.94	-4.27	4.31	0.00	0.00
	U_9-L_{10}	-33.38	104.35	-0.63	0.45	0.00	-0.08	-0.37	0.36	0.00	0.00	-27.37	19.39	-0.51	-7.37	-4.60	4.40	0.00	0.00
	L_{10}-L_{11}	-131.93	101.03	-2.00	1.80	0.48	-0.26	-0.42	0.51	0.00	0.00	-25.67	22.98	6.07	-3.36	-6.03	6.11	0.00	0.00
	L_{10}-U_{11}	-179.29	162.92	-2.13	1.93	0.78	-0.56	-0.54	0.56	0.02	-0.02	-37.27	31.99	7.19	-7.64	-6.67	6.42	-0.22	-0.22
	U_{10}-L_{11}	-64.32	98.51	-1.30	1.20	0.29	-0.26	-0.27	0.27	0.01	-0.01	-24.94	21.45	2.77	-6.27	-6.28	5.11	1.37	-1.25
	L_{11}-L_{12}	-45.28	135.72	-1.75	2.21	-0.04	-0.17	-0.36	0.49	0.18	-0.02	-22.14	27.86	-0.48	-2.13	-4.34	5.82	2.17	-2.28
	L_{11}-U_{12}	-143.91	214.89	-2.24	2.95	-0.04	-0.23	-0.49	0.67	0.24	-0.03	-36.29	31.60	2.46	-2.85	-7.20	9.31	0.00	0.00
	U_{11}-L_{12}	-112.48	136.84	-2.44	2.35	0.25	-0.30	-0.48	0.53	0.14	-0.01	-30.78	29.67	3.17	-3.81	-5.76	6.59	0.00	0.00
	L_{12}-L_{13}	-83.68	84.68	-1.96	1.64	0.34	-0.34	-0.37	0.40	0.00	0.00	-24.89	20.64	4.24	-4.33	-3.49	4.80	0.00	0.00
	L_{12}-U_{13}	-61.76	54.22	-1.39	1.05	-0.02	-0.36	-0.27	0.25	0.00	0.00	-17.54	13.24	-0.20	-4.57	-3.26	3.01	0.00	0.00
	U_{12}-L_{13}	-33.78	104.35	-0.63	0.45	0.00	-0.08	-0.37	0.36	0.00	0.00	-27.37	19.39	-0.51	-7.37	-4.60	4.40	0.00	0.00
	L_{13}-L_{14}	-14.01	1.02	-0.18	0.32	0.26	-0.63	0.00	0.04	-0.01	-0.01	-2.31	3.98	3.24	-7.99	0.02	0.53	-0.16	-0.98
	L_{13}-U_{14}	18.16	5.24	-0.18	0.32	0.26	-0.63	0.00	0.04	-0.01	-0.01	-2.31	3.98	3.24	-7.99	0.02	0.53	-0.16	-0.98
	U_{13}-L_{14}	-32.82	30.90	-1.00	0.82	0.15	-0.31	-0.20	0.17	0.03	-0.03	-12.64	10.32	1.87	-3.66	-2.38	2.08	-0.04	-0.59
	L_{14}-L_{15}	-53.09	59.49	-1.42	1.15	0.16	-0.31	-0.29	0.29	0.03	-0.03	-16.74	13.43	1.87	-3.66	-2.38	2.08	-0.04	-0.59
	L_{14}-U_{15}	-83.91	100.03	-1.90	1.62	0.33	-0.37	-0.39	0.44	0.00	0.00	-23.92	20.44	4.19	-4.62	-4.67	5.27	0.00	0.00
	U_{14}-L_{15}	-98.58	117.15	-2.04	1.79	0.28	-0.34	-0.42	0.49	0.00	0.00	-25.72	22.61	3.54	-4.27	-5.02	5.86	0.00	0.00
	L_{15}-L_{16}	-126.17	124.51	-2.02	1.86	0.77	-0.60	-0.52	0.49	-0.01	-0.01	-25.50	23.44	9.72	-7.55	-6.23	5.52	-0.10	-0.07
	L_{15}-U_{16}	-82.40	185.99	-1.78	2.34	0.49	-0.27	-0.44	0.60	0.00	0.00	-22.72	29.85	6.23	-3.29	-5.32	7.21	0.00	0.00
	U_{15}-L_{16}	-138.42	160.32	-2.94	2.56	0.26	-0.25	-0.45	0.52	0.00	0.00	-28.66	24.85	3.37	-3.64	-5.42	6.29	0.00	0.00
	L_{16}-L_{17}	-128.98	123.04	-1.97	1.59	-0.09	-0.40	-0.44	0.00	0.00	0.00	-25.18	20.25	-1.31	-5.09	-4.85	5.30	0.00	0.00
	L_{16}-U_{17}	-128.43	95.01	-1.84	1.45	-0.33	-0.36	-0.41	0.35	0.00	0.00	-23.55	18.50	-4.17	-4.55	-4.96	4.16	0.00	0.00
	U_{16}-L_{17}	-8.89	-32.25	-0.39	0.17	0.43	-0.72	0.00	0.00	0.03	-0.12	-5.01	-2.21	0.49	0.22	0.00	0.00	0.40	-1.39
	L_{17}-L_{18}	-4.65	-13.30	-0.73	0.50	0.29	-0.50	-0.11	0.03	0.07	-0.06	-9.28	6.36	3.73	-7.01	-1.30	0.30	0.89	-0.71
	L_{17}-U_{18}	-43.22	40.48	-1.21	0.98	0.33	-0.29	-0.27	0.19	0.07	-0.07	-17.07	15.40	12.46	-4.27	-3.72	-3.20	2.30	0.84
	U_{17}-L_{18}	-135.94	107.53	-2.05	1.72	0.41	-0.37	-0.55	0.45	0.08	-0.06	-28.16	22.00	5.29	-4.78	-6.59	5.39	1.01	-0.96
	L_{18}-L_{19}	-65.25	88.28	3.49	2.18	0.10	-0.18	-0.12	0.37	0.01	-0.03	-45.12	29.21	1.31	-2.34	-1.44	4.44	0.07	-0.31
	L_{18}-U_{19}	-138.22	96.74	-2.33	1.85	0.33	-0.27	-0.75	0.56	0.05	-0.05	-30.13	23.91	4.26	-3.55	-9.02	6.68	0.80	-0.60
	U_{18}-L_{19}	-113.16	77.07	-1.97	1.57	0.09	-0.12	-0.10	0.06	0.00	-0.00	-14.36	14.89	6.11	-2.33	-5.76	6.25	0.00	0.00
	L_{19}-L_{20}	-43.91	24.73	-1.22	0.87	0.23	-0.19	-0.20	0.20	-0.01	0.00	-14.33	26.26	-1.04	-5.54	-2.40	0.55	-0.53	-7.53
	L_{19}-U_{20}	-2.65	25.30	-0.39	0.19	0.14	-0.65	0.00	0.00	-0.05	-0.09	-5.08	2.48	1.75	-8.38	0.00	0.00	-0.62	-12.12
	U_{19}-L_{20}	-77.40	53.68	-1.24	1.01	-0.05	-0.22	-0.32	0.23	0.00	0.00	-16.08	13.09	0.60	-3.55	-3.80	2.88	0.00	0.00
	L_{20}-L_{21}	-81.44	41.31	-1.43	0.69	-0.10	-0.30	-0.36	0.26	0.00	0.00	-18.48	8.89	-1.28	-3.84	-4.57	3.01	0.00	0.00
	L_{20}-U_{21}	-111.90	77.07	-1.97	1.57	0.09	-0.12	-0.10	0.06	0.00	-0.00	-14.36	14.89	6.11	-2.33	-5.76	6.25	0.00	0.00
	U_{20}-L_{21}	-54.92	94.91	-1.16	1.15	0.47	-0.18	-0.42	0.50	0.00	0.00	-14.96	14.89	6.11	-2.33	-5.76	6.25	0.00	0.00
	L_{21}-L_{22}	-10.13	116.77	-1.07	1.97	-0.09	-0.12	-0.10	0.66	0.00	0.00	-14.33	26.26	-1.04	-5.54	-2.40	0.55	-0.53	-7.53
	L_{21}-U_{22}	-18.98	22.49	0.12	0.37	-0.53	-0.39	0.04	0.01	-0.18	-0.01	-2.31	1.54	4.96	-7.95	-2.16	-0.16	-0.53	1.43
	U_{21}-L_{22}	-38.98	90.66	-2.05	1.62	0.04	-0.50	-0.53	0.50	0.00	0.00	-27.28	21.66	0.99	-4.64	-6.57	6.00	0.00	0.00
	L_{22}-L_{23}	-4.49	-12.52	-0.46	0.15	-0.07	-0.22	-0.23	0.00	0.00	0.00	-5.05	-2.08	6.08	1.96	-1.56	-0.51	-0.22	0.00
	L_{22}-U_{23}	-34.24	14.49	-0.68	0.48	0.12	-0.20	-0.13	0.07	-0.01	-0.01	-5.67	3.69	-0.01	-6.64	-0.31	0.61	-1.44	-0.28

M_z Information — ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	$I_{z/z}$ (in^4)	Shape Factor	M_p (k-in)	$F_{y/m}$ (ksi)	Formula 1.8 Terms * F_y/S_x	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b/t/t}$	Equivalent Mom. Factor $C_{b/b/t}$
Structure 1	U_0-L_1	-140.20	-50.19	-17.51	17.93	-16.17	-8.33	8.12	7.42	36	-313.67	-112.51	-87.63	-13.12	100.5
	U_1-L_1	-71.09	-27.48	-14.32	14.74	-13.29	-6.85	6.67	6.10	36	-257.88	-92.54	-72.04	-10.79	82.6
	U_1-L_2	-139.74	-40.92	-26.51	-19.50	-42.32	-0.00	0.00	0.00	36	-524.43	-188.19	-146.52	-21.95	168.3
	U_1-U_2	-206.47	91.61	2.67	1.79	-12.76	-4.02	0.12	0.19	2.20	0.58	35.62	23.86	-170.52	-53.65
	L_1-L_2	-154.31	8.15	0.65	0.54	-19.22	-8.63	8.70	12.72	36.07	-77.51	-5.05	3.56	-32.38	-19.52
	L_2-L_3	-192.51	23.27	-1.21	1.87	10.36	0.34	-1.71	0.37	0.00	-21.29	62.60	-5.49	0.00	0.00
	U_2-L_3	-172.01	-0.04	33.23	-73.84	-5.91	-36.19	-7.42	-0.00	0.00	0.00	0.00	-0.00	0.00	0.00
	L_3-L_4	-153.23	-33.91	0.57	2.18	-2.93	-1.73	-1.81	-0.82	0.00	-7.60	29.12	-39.09	-23.05	-26.

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression													
	Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:	1.300	1.300	Tension	Comp.	Start	End	Start	End	Start	End	Start	End																						
LL Factor:	1.300	1.300	(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
North Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-493.35	-182	63	-332	-875	9	-10	137	-392	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.321	1.00	Yes	0.665	0.208	0.88	Yes	1.00	**3.96**
		U_1 - U_2	-----	-580.08	-62	32	-128	-768	-7	-37	-1	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.211	1.00	Yes	0.782	0.183	0.97	Yes	1.00	**2.45**
		U_2 - U_3	67.85	-570.02	-142	193	-354	-585	5	28	62	188	0.078	0.171	0.25	Yes	0.052	0.111	0.17	Yes	0.776	0.217	1.00	Yes	0.769	0.139	0.91	Yes	1.00	**2.29**
		U_3 - U_4	252.35	-547.95	35	246	-352	-716	21	38	144	35	0.289	0.194	0.49	Yes	0.199	0.133	0.34	Yes	0.746	0.253	1.00	Yes	0.739	0.170	0.91	Yes	1.00	**2.83**
		U_4 - U_5	330.50	-600.09	116	275	-651	-477	19	-29	36	-173	0.379	0.184	0.57	Yes	0.260	0.126	0.39	Yes	0.817	0.181	1.00	Yes	0.809	0.155	0.97	Yes	1.00	**3.71**
		U_5 - U_6	-----	-570.28	-953	624	-376	-483	267	-12	342	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.170	0.95	Yes	0.769	0.227	1.00	Yes	1.00	**7.87**
		U_6 - U_7	851.63	-----	373	231	-28	-599	-291	-108	205	-406	0.814	0.183	1.00	Yes	0.569	0.126	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		U_7 - U_8	582.04	-----	-1746	3455	-96	762	373	-669	-409	-407	0.403	0.591	1.00	Yes	0.281	0.403	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.86**
		U_8 - U_9	463.03	-----	635	21	2767	-2857	-1118	-21	-258	671	0.379	0.616	1.00	Yes	0.260	0.419	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.72**
		U_9 - U_{10}	681.37	-240.86	239	283	71	-703	-155	20	51	625	0.739	0.258	1.00	Yes	0.501	0.173	0.68	Yes	0.310	0.277	0.59	Yes	0.307	0.157	0.47	Yes	1.00	**4.80**
		U_{10} - U_{11}	256.93	-602.71	314	-80	241	-1029	30	94	305	181	0.279	0.279	0.56	Yes	0.186	0.179	0.37	Yes	0.776	0.201	0.98	Yes	0.769	0.230	1.00	Yes	1.00	**3.74**
		U_{11} - U_{12}	-----	-851.93	204	-120	56	-865	109	410	245	641	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.184	1.00	Yes	0.799	0.143	0.95	Yes	1.00	**2.60**
		U_{12} - U_{13}	-----	-1176.89	-8	-241	-203	-1032	351	209	577	425	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.199	1.00	Yes	0.786	0.142	0.93	Yes	1.00	**2.66**
		U_{13} - U_{14}	-----	-1316.79	-153	-387	-541	-1502	225	180	368	540	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.233	1.00	Yes	0.755	0.166	0.93	Yes	1.00	**2.49**
		U_{14} - U_{15}	-----	-1357.40	-251	-238	-627	-1151	203	28	529	53	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1.00	Yes	0.778	0.127	0.91	Yes	1.00	**3.16**
		U_{15} - U_{16}	-----	-1373.23	-194	-411	-413	-1406	77	46	384	88	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**3.05**
		U_{16} - U_{17}	-----	-1369.30	-485	-169	-1198	-923	276	-79	605	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1.00	Yes	0.785	0.132	0.92	Yes	1.00	**3.47**
		U_{17} - U_{18}	-----	-1102.67	-699	215	-406	-434	433	11	321	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.121	1.00	Yes	0.863	0.114	0.98	Yes	1.00	**3.69**
		U_{18} - U_{19}	-----	-738.46	-698	60	-435	-436	395	-190	279	-348	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.154	1.00	Yes	0.831	0.140	0.98	Yes	1.00	**3.74**
		U_{19} - U_{20}	-----	-563.61	-1593	1805	-415	-483	267	-665	257	-612	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.197	0.84	Yes	0.634	0.363	1.00	Yes	1.00	**7.15**
	Structure 2	U_0 - U_1	-----	-581.47	-92	-91	278	-1825	3	-71	79	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.285	0.98	Yes	0.687	0.310	1.00	Yes	1.00	**7.32**
		U_1 - U_2	-----	-807.55	-46	-191	-117	-1306	-69	-218	-120	-252	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.213	1.00	Yes	0.779	0.198	0.98	Yes	1.00	**3.84**
		U_2 - U_3	-----	-1123.48	-97	-280	-370	-1664	-29	366	-93	536	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.197	1.00	Yes	0.797	0.169	0.97	Yes	1.00	**3.52**
		U_3 - U_4	-----	-1309.08	-415	-414	-765	-1814	353	538	412	552	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.241	1.00	Yes	0.745	0.162	0.91	Yes	1.00	**2.90**
		U_4 - U_5	-----	-1427.87	-462	-390	-908	-2124	762	303	441	325	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.259	1.00	Yes	0.733	0.176	0.91	Yes	1.00	**2.85**
		U_5 - U_6	-----	-1527.33	-429	-11	-927	-1467	187	-210	363	452	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.203	1.00	Yes	0.784	0.122	0.91	Yes	1.00	**3.12**
		U_6 - U_7	-----	-1313.01	-299	-117	-860	-1844	-127	-180	319	119	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.238	1.00	Yes	0.748	0.164	0.92	Yes	1.00	**2.72**
		U_7 - U_8	-----	-1392.63	-177	-153	-1139	-1481	-113	-192	183	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1.00	Yes	0.793	0.132	0.93	Yes	1.00	**3.44**
		U_8 - U_9	-----	-1198.97	-271	126	-1216	-888	-99	-201	351	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.177	1.00	Yes	0.813	0.129	0.95	Yes	1.00	**3.33**
		U_9 - U_{10}	271.92	-998.65	-7	432	-782	-847	-166	-167	257	-215	0.199	0.131	0.34	Yes	0.135	0.089	0.23	Yes	0.867	0.125	1.00	Yes	0.862	0.103	0.97	Yes	1.00	**4.70**
		U_{10} - U_{11}	666.94	-830.94	285	469	-944	-885	-223	-176	382	-306	0.563	0.180	0.75	Yes	0.383	0.117	0.51	Yes	0.831	0.163	1.00	Yes	0.826	0.133	0.96	Yes	1.00	**6.11**
		U_{11} - U_{12}	-----	-762.44	-1509	863	-1677	-784	575	-60	832	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1.00	Yes	0.758	0.237	1.00	Yes	1.00	**10.31**
		U_{12} - U_{13}	1123.11	-----	466	166	-27	-1520	-419	-368	166	-485	0.758	0.238	1.00	Yes	0.541	0.161	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		U_{13} - U_{14}	563.61	-----	-3432	6775	-369	1356	188	-1368	-408	-510	0.277	0.721	1.00	Yes	0.196	0.473	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.73**
		U_{14} - U_{15}	763.53	-----	1424	257	5821	-4001	-1191	-887	-939	58	0.375	0.620	1.00	Yes	0.266	0.407	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.14**
		U_{15} - U_{16}	1220.50	-----	117	462	-139	-1620	-614	-381	-86	825	0.738	0.254	1.00	Yes	0.525	0.172	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		U_{16} - U_{17}	993.49	-120.72	635	297	488	-1679	-198	-22	514	445	0.732	0.265	1.00	Yes	0.487	0.174	0.67	Yes	0.105	0.260	0.37	Yes	0.105	0.211	0.32	Yes	1.00	**6.08**
		U_{17} - U_{18}	690.40	-286.16	438	311	389	-1141	8	256	256	771	0.693	0.307	1.00	Yes	0.461	0.203	0.67	Yes	0.340	0.312	0.66	Yes	0.338	0.194	0.54	Yes	1.00	**4.71**
		U_{18} - U_{19}	530.33	-639.94	507	220	304	-1415	109	119	489	464	0.532	0.312	0.85	Yes	0.349	0.199	0.55	Yes	0.760	0.179	0.94	Yes	0.756	0.240	1.00	Yes	1.00	**4.76**
		U_{19} - U_{20}	274.13	-693.51	284	194	-209	-1128	32	24	215	520	0.257	0.251	0.51	Yes	0.170	0.165	0.34	Yes	0.770	0.229	1.00	Yes	0.765	0.181	0.95	Yes	1.00	**3.52**
		U_{20} - U_{21}	64.87	-872.16	-65	101	-35	-1185	75	-10	325	284	0.050	0.207	0.26	Yes	0.035	0.134	0.17	Yes	0.802	0.193	1.00	Yes	0.796	0.172	0.97	Yes	1.00	**3.76**
		U_{21} - U_{22}	52.55	-790.65	-49	15	-430	-1380	43	63	209	377	0.041	0.241	0.29	Yes	0.029	0.162	0.20	Yes	0.727	0.267	1.00	Yes	0.722	0.200	0.93	Yes	1.00	**3.01**
		U_{22} - U_{23}	93.25	-832.66	85	-28	-613	-1166	53	-2	385	-14	0.072	0.211	0.29	Yes	0.051	0.142	0.20	Yes	0.765	0.232	1.00	Yes	0.760	0.169	0.93	Yes	1.00	**3.67**
		U_{23} - U_{24}	233.63	-871.21	-54	203	-20	-1249	-37	-64	230	-9	0.181	0.206	0.39	Yes	0.127	0.133	0.26	Yes	0.801	0.193	1.00	Yes	0.795	0.181	0.98	Yes	1.00	**4.73**
		U_{24} - U_{25}	331.69	-716.92	212	310	-466	-936	-73	-87	323	-245	0.311	0.193	0.51	Yes	0.206	0.127	0.34	Yes	0.796	0.201	1.00	Yes	0.791	0.150	0.95	Yes	1.00	**4.40**
		U_{25} - U_{26}	-----	-731.43	-469	591	-616	-773	181	-207	291	-228	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.124	1.00	Yes	0.864	0.131	1.00	Yes	1.00	**5.80**
		U_{26} - U_{27}	-----	-662.93	-983	907	-179	-1137	416	-311	324	-438	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1.00	Yes	0.783	0.193	0.98	Yes	1.00	**9.97**
		U_{27} - U_{28}	-----	-790.06	-1519	2154	-546	-2337	699	-488	784	-447	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.310	1.00	Yes	0.685	0.294	0.98	Yes	1.00	**18.56**
		U_{28} - U_{29}	1057.27	-----	-24	523	-520	-2680	88	-621	415	-497	0.639	0.357	1.00	Yes	0.455	0.239	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.80**
		U_{29} - U_{30}	681.35	-----	-2509	6400	-67	662	145	-968	-256	34	0.335	0.659	1.00	Yes	0.237	0.432	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.62**
		U_{30} - U_{31}	779.22	-----	1098	378	5796	-5048	-1108	-590	-733	496	0.383	0.612	1.00	Yes	0.271	0.402	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.13**
		U_{31} - U_{32}	1106.69	-----	39	421	-471	-1281	-387	-191	66	923	0.747	0.249	1.00	Yes	0.533	0.171	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		U_{32} - U_{33}	843.59	-264.62	454	250	476	-1482	-71	16	596	518	0.713	0.282	1.00	Yes	0.479	0.188	0.67	Yes	0.265	0.165	0.43	Yes	0.263	0.209	0.48	Yes	1.00	**5.55**
		U_{33} - U_{34}	635.27	-693.75	346	227	-117	-1556	41	279	542	1045	0.537	0.347	0.89	Yes	0.365	0.228	0.60	Yes	0.694	0.304	1.00	Yes	0.689	0.219	0.91	Yes	1.00	**5.31**
		U_{34} - U_{35}	305.58	-874.46	320	43	-143	-1598	213	171	633	582	0.224	0.263	0.49	Yes	0.152	0.178	0.33	Yes	0.759	0.236	1.00	Yes	0.755	0.194	0.95	Yes	1.00	**3.99**
		U_{35} - U_{36}	110.08	-1155.02	148	-147	-115	-1468	113	94	450	578	0.063	0.204	0.27	Yes	0.045	0.134	0.18	Yes	0.789	0.207	1.00	Yes	0.783	0.156	0.94	Yes	1.00	**3.82**
		U_{36} - U_{37}	-----	-1303.87	-82	15	-576	-2026	92	2	434	317	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.245	1.00	Yes	0.742	0.181	0.93	Yes	1.00	**3.47**
		U_{37} - U_{38}	-----	-1361.73	136	-136	-694	-1924	42	19	307	250	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1.00	Yes	0.775	0.171	0.95	Yes	1.00	**4.08**
		U_{38} - U_{39}	-----	-1462.51	99	-298	-1003	-2149	132	-34	646	120	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1.00	Yes	0.751	0.178	0.93	Yes	1.00	**3.77**
		U_{39} - U_{40}	-----	-1437.57	-233	-302	-908	-2288	51	1	463	141	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1.00	Yes	0.738	0.190	0.93	Yes	1.00	**4.33**
		U_{40} - U_{41}	-----	-1312.97	-238	-313	-1318	-1881	48	-89	537	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1.00	Yes	0.748	0.168	0.92	Yes	1.00	**4.27**
		U_{41} - U_{42}	-----	-1120.02	-800	212	-1463	-910	321	-60	438	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1.00	Yes	0.795	0.149	0.95	Yes	1.00	**4.74**
		U_{42} - U_{43}	-----	-737.91	-431	62	-525	-1118	-131	-425	293	-596	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.273	1.00	Yes	0.712	0.170	0.89	Yes	1.00	**8.13**
		U_{43} - U_{44}	-----	-584.51	-1651	1800	-186	-994	146	-688	167	-596	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.242	0.94	Yes	0.690	0.306	1.00	Yes	1.00	**8.08**
	Structure 3	U_0 - U_1	-----	-602.09	-5	-160	565	-1578	-2	-51	-32	-328	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.259	0.95	Yes	0.677	0.318	1.00	Yes	1.00	**7.56**
		U_1 - U_2	-----	-709.76	-32	-142	68	-867	-63	-233	-103	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.190	1.00	Yes	0.799	0.174	0.98	Yes	1.00	**3.20**
		U_2 - U_3	-----	-1016.02	-71	-167	-18	-1003	-51	333	-70	491	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.187	1.00	Yes	0.795	0.163	0.96	Yes	1.00	**3.04**
		U_3 - U_4	-----	-1355.01	-168	-297	-297	-1420	371	585	420	539	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.213	1.00	Yes	0.777	0.157	0.94	Yes	1.00	**3.30**
		U_4 - U_5	-----	-1342.18	-400	-72	-561	-1101	693	232	487	295	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.217	1.00	Yes	0.769	0.121	0.90	Yes	1.00	**2.75**
		U_5 - U_6	-----	-1317.94	-188	-282	-625	-1589	141	-147	286	329	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.228	1.00	Yes	0.756	0.175	0.94	Yes	1.00	**2.64**
		U_6 - U_7	-----	-1375.50	-364	-74	-592	-1090	-111	-201	365	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.196	1.00	Yes	0.789	0.120	0.91	Yes	1.00	**3.83**
		U_7 - U_8	-----	-1202.63	-154	36	-448	-909	-70	-192	252	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.185	1.00	Yes	0.803	0.125	0.93	Yes	1.00	**3.70**
		U_8 - U_9	-----	-914.29	-72	226	-635	-429	-52	-164	316	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.128	1.00	Yes	0.858	0.105	0.97	Yes	1.00	**3.44**
		U_9 - U_{10}	489.63	-680.28	66	399	-419	-346	-166	-129	288	-364	0.531	0.152	0.69	Yes	0.354	0.099	0.46	Yes	0.876	0.117	1.00	Yes	0.868	0.094	0.97	Yes	1.00	**6.63**
		U_{10} - U_{11}	-----	-569.95	-1006	720	-291	-1079	637	-569	673	-1144	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.262	1.00	Yes	0.727	0.242	0.97	Yes	1.00	**15.47**
		U_{11} - U_{12}	319.15	-----	-2610	3578	-141	527	514	-1047	-458	-449	0.261	0.729	1.00	Yes	0.179	0.496	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.30**
		U_{12} - U_{13}	939.36	-----	1014	124	1932	-1328	-528	-488	-342	79	0.651	0.346	1.00	Yes	0.454	0.236	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		U_{13} - U_{14}	825.89	-54.99	218	418	55	-649	-325	-205	-8	520	0.790	0.209	1.00	Yes	0.552	0.144	0.70	Yes	0.063	0.212	0.28	Yes	0.062	0.138	0.20	Yes	1.00	**4.63**
		U_{14} - U_{15}	639.78	-408.90	422	292	215	-899	-126	-40	287	139	0.733	0.262	1.00	Yes	0.495	0.171	0.67	Yes	0.556	0.286	0.85	Yes	0.551	0.214	0.77	Yes	1.00	**4.50**
		U_{15} - U_{16}	412.65	-578.99	324	226	-20	-901	-64	133	150	434	0.473	0.288	0.77	Yes	0.325	0.197	0.53	Yes	0.788	0.205	1.00	Yes	0.781	0.214	1.00	Yes	1.00	**3.82**
		U_{16} - U_{17}	490.19	-546.63	452	163	189	-1093	59	70	387	70	0.562	0.325	0.89	Yes	0.386	0.223	0.61	Yes	0.744	0.188	0.94	Yes	0.737	0.260	1.00	Yes	1.00	**4.76**
		U_{17} - U_{18}	233.32	-558.45	341	-62	-187	-949	-63	71	278	118	0.267	0.272	0.54	Yes	0.180	0.178	0.36	Yes	0.760	0.239	1.00	Yes	0.753	0.226	0.98	Yes	1.00	**3.64**
		U_{18} - U_{19}	-----	-537.29	-88	-18	-643	-697	91	-87	486	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.263	1.00	Yes	0.725	0.166	0.90	Yes	1.00	**3.69**
		U_{19} - U_{20}	-----	-549.70	-976	1059	71	-758	350	-477	231	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.136	0.89	Yes	0.741	0.252	1.00	Yes	1.00	**5.82**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-84.76	-342	167	1486	-2793	-25	-90	298	1095	-----	-----	-----	-----	-----	-----	-----	-----	0.154	0.777	0.94	Yes	0.153	0.838	1.00	Yes	1.00	**22.35**
		L_1 - L_2	463.32	-----	151	-33	138	-848	-28	-33	-56	-159	0.709	0.289	1.00	Yes	0.433	0.194	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		L_2 - L_3	658.67	-43.56	-14	35	-287	-855	-34	27	-197	38	0.758	0.238	1.00	Yes	0.438	0.143	0.59	Yes	0.060	0.222	0.29	Yes	0.059	0.206	0.27	Yes	1.00	**3.67**
		L_3 - L_4	660.19	-140.85	85	254	-180	-890	60	69	-122	-40	0.760	0.234	1.00	Yes	0.451	0.152	0.61	Yes	0.192	0.194	0.39	Yes	0.191	0.215	0.41	Yes	1.00	**3.42**
		L_4 - L_5	528.49	-----	-781	728	-626	-221	-329	-108	-305	577	0.684	0.309	1.00	Yes	0.411	0.199	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_5 - L_6	20.27	-733.15	167	603	-307	-129	77	130	186	43	0.020	0.158	0.18	Yes	0.013	0.096	0.11	Yes	0.855	0.140	1.00	Yes	0.846	0.133	0.98	Yes	1.00	**3.82**
		L_6 - L_7	-----	-982.71	-1282	1221	-635	-911	-454	89	-11	861	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.160	0.97	Yes	0.791	0.201	1.00	Yes	1.00	**11.18**
		L_7 - L_8	-----	-1185.66	-137	1739	9	579	-33	-187	-136	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.235	1.00	Yes	0.751	0.230	0.99	Yes	1.00	**5.28**
		L_8 - L_9	-----	-1277.78	1213	54	1224	-527	-173	-59	76	405	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.178	1.00	Yes	0.809	0.162	0.98	Yes	1.00	**6.25**
		L_9 - L_{10}	-----	-1052.78	161	132	619	-936	29	133	-181	-340	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.078	0.94	Yes	0.847	0.147	1.00	Yes	1.00	**6.20**
		L_{10} - L_{11}	56.46	-540.10	514	-12	210	-641	138	45	29	1	0.073	0.194	0.27	Yes	0.043	0.117	0.16	Yes	0.830	0.109	0.94	Yes	0.823	0.170	1.00	Yes	1.00	**4.29**
		L_{11} - L_{12}	539.99	-280.86	513	-149	564	-974	103	-34	-218	-203	0.699	0.296	1.00	Yes	0.420	0.194	0.62	Yes	0.432	0.125	0.56	Yes	0.428	0.258	0.69	Yes	1.00	**4.90**
		L_{12} - L_{13}	1030.68	-----	178	-66	-115	-872	20	28	96	266	0.813	0.186	1.00	Yes	0.520	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_{13} - L_{14}	1251.27	-----	351	-446	297	-1779	9	-1	131	-44	0.736	0.256	1.00	Yes	0.477	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		L_{14} - L_{15}	1644.80	-----	-1309	19	-1341	-1189	-327	-151	-164	368	0.804	0.188	1.00	Yes	0.522	0.114	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		L_{15} - L_{16}	1586.50	-----	-229	-367	-1063	-1665	-111	-69	9	-334	0.775	0.224	1.00	Yes	0.498	0.131	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{16} - L_{17}	1208.10	-----	-1034	409	-1246	-548	-517	-34	-369	399	0.764	0.229	1.00	Yes	0.496	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		L_{17} - L_{18}	920.66	-----	-632	418	-793	-446	-186	-144	36	-298	0.802	0.191	1.00	Yes	0.513	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_{18} - L_{19}	313.48	-----	-1237	986	-541	60	-705	-86	-377	468	0.480	0.518	1.00	Yes	0.325	0.328	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		L_{19} - L_{20}	140.89	-381.31	-1023	542	-78	-49	620	139	-23	-5	0.216	0.436	0.66	Yes	0.132	0.288	0.42	Yes	0.693	0.283	0.98	Yes	0.687	0.307	1.00	Yes	1.00	**7.76**
	Structure 2	L_0 - L_1	41.89	-94.78	-128	34	1147	-3709	-19	-64	-333	-1155	0.051	0.944	1.00	Yes	0.030	0.603	0.64	Yes	0.136	0.650	0.79	Yes	0.135	0.755	0.90	Yes	1.00	**22.25**
		L_1 - L_2	541.72	-----	165	-221	550	-1499	-37	36	-100	-187	0.658	0.336	1.00	Yes	0.391	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		L_2 - L_3	995.30	-----	-47	-167	-22	-1299	79	78	-11	235	0.784	0.213	1.00	Yes	0.514	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_3 - L_4	1315.09	-----	42	-431	-297	-1746	35	57	281	100	0.773	0.227	1.00	Yes	0.520	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_4 - L_5	1706.85	-----	-392	-249	-632	-1947	94	203	-76	124	0.796	0.198	1.00	Yes	0.527	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_5 - L_6	1793.82	-----	-146	-388	-862	-2438	112	-16	10	-135	0.770	0.225	1.00	Yes	0.517	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_6 - L_7	1773.88	-----	-417	-66	-1369	-2475	-170	45	-167	408	0.751	0.243	1.00	Yes	0.499	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_7 - L_8	1425.28	-----	-210	298	-1538	-1200	-131	8	85	-132	0.817	0.181	1.00	Yes	0.537	0.106	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		L_8 - L_9	1127.40	-----	-941	588	-1094	-517	-284	28	-130	643	0.789	0.208	1.00	Yes	0.531	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		L_9 - L_{10}	895.80	-649.22	-93	753	-1068	-684	20	97	154	-219	0.800	0.197	1.00	Yes	0.466	0.123	0.59	Yes	0.686	0.127	0.82	Yes	0.682	0.171	0.86	Yes	1.00	**6.07**
		L_{10} - L_{11}	603.01	-----	-1542	1077	-1544	-244	-725	13	-378	896	0.602	0.391	1.00	Yes	0.353	0.242	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.56**
		L_{11} - L_{12}	116.29	-972.95	-1042	1466	-997	-703	3	259	254	-443	0.081	0.241	0.33	Yes	0.054	0.145	0.20	Yes	0.804	0.151	0.96	Yes	0.798	0.200	1.00	Yes	1.00	**10.87**
		L_{12} - L_{13}	-----	-1276.20	-556	0	-1193	-1625	75	-90	37	447	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.224	1.00	Yes	0.763	0.162	0.93	Yes	1.00	**6.75**
		L_{13} - L_{14}	-----	-1304.22	-1313	3832	-348	1184	-166	-313	-181	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.247	0.91	Yes	0.656	0.335	1.00	Yes	1.00	**7.42**
		L_{14} - L_{15}	-----	-1433.33	1412	-259	3165	-2122	-221	-330	-89	255	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.187	0.92	Yes	0.721	0.276	1.00	Yes	1.00	**7.45**
		L_{15} - L_{16}	-----	-1432.03	-852	343	-1190	-1211	-20	368	89	51	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.129	1.00	Yes	0.857	0.120	0.98	Yes	1.00	**7.03**
		L_{16} - L_{17}	-----	-1161.68	1209	122	1177	-1093	405	192	-141	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.146	1.00	Yes	0.846	0.149	1.00	Yes	1.00	**6.09**
		L_{17} - L_{18}	-----	-810.50	469	224	518	-886	99	-55	-75	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.080	0.94	Yes	0.851	0.142	1.00	Yes	1.00	**4.26**
		L_{18} - L_{19}	130.15	-625.75	653	109	76	-707	0	34	214	292	0.147	0.181	0.33	Yes	0.085	0.107	0.20	Yes	0.839	0.152	1.00	Yes	0.834	0.136	0.98	Yes	1.00	**4.18**
		L_{19} - L_{20}	457.30	-566.74	547	222	450	-1258	56	-42	102	-187	0.518	0.271	0.79	Yes	0.306	0.173	0.48	Yes	0.760	0.193	0.96	Yes	0.755	0.243	1.00	Yes	1.00	**5.43**
		L_{20} - L_{21}	896.59	-457.06	554	48	-374	-1657	-94	-103	17	352	0.715	0.280	1.00	Yes	0.469	0.167	0.64	Yes	0.432	0.213	0.65	Yes	0.429	0.242	0.68	Yes	1.00	**6.33**
		L_{21} - L_{22}	777.69	-1.74	48	-40	66	-2398	-35	45	-82	-211	0.620	0.373	1.00	Yes	0.415	0.233	0.65	Yes	0.002	0.277	0.28	Yes	0.002	0.350	0.36	Yes	1.00	**5.12**
		L_{22} - L_{23}	908.29	-100.77	-156	201	-1478	-1355	-21	3	-72	519	0.724	0.272	1.00	Yes	0.484	0.171	0.66	Yes	0.095	0.249	0.35	Yes	0.095	0.216	0.32	Yes	1.00	**4.69**
		L_{23} - L_{24}	921.06	-302.16	6	376	-966	-1591	11	78	94	-251	0.734	0.259	1.00	Yes	0.482	0.154	0.64	Yes	0.285	0.316	0.61	Yes	0.283	0.232	0.52	Yes	1.00	**6.21**
		L_{24} - L_{25}	608.99	-----	-563	397	-1026	-774	-229	158	-258	678	0.690	0.302	1.00	Yes	0.408	0.189	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		L_{25} - L_{26}	606.01	-469.17	-696	967	-1307	-1097	-67	-142	350	-341	0.687	0.306	1.00	Yes	0.396	0.182	0.58	Yes	0.629	0.158	0.79	Yes	0.625	0.252	0.88	Yes	1.00	**9.38**
		L_{26} - L_{27}	164.16	-753.06	-1290	1239	-1003	-800	-586	-35	-215	756	0.147	0.297	0.45	Yes	0.085	0.182	0.27	Yes	0.796	0.164	0.96	Yes	0.791	0.206	1.00	Yes	1.00	**9.43**
		L_{27} - L_{28}	-----	-1136.80	-471	1335	-796	-315	-95	-37	182	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.136	0.98	Yes	0.828	0.165	1.00	Yes	1.00	**6.63**
		L_{28} - L_{29}	-----	-1403.99	11	-42	-448	-1412	-50	1	56	256	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.148	1.00	Yes	0.840	0.140	0.99	Yes	1.00	**5.33**
		L_{29} - L_{30}	-----	-1383.06	-1139	3407	-379	764	41	115	-57	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.200	0.91	Yes	0.696	0.297	1.00	Yes	1.00	**7.11**
		L_{30} - L_{31}	-----	-1385.62	1553	-280	3458	-2508	-462	-373	487	846	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.232	0.94	Yes	0.697	0.302	1.00	Yes	1.00	**9.95**
		L_{31} - L_{32}	-----	-1104.47	-479	530	-372	-2487	-535	31	-363	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.666	0.329	1.00	Yes	0.661	0.247	0.91	Yes	1.00	**13.94**
		L_{32} - L_{33}	-----	-987.38	966	134	626	-1376	-127	-66	181	242	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.144	0.97	Yes	0.810	0.188	1.00	Yes	1.00	**7.90**
		L_{33} - L_{34}	94.41	-654.98	390	164	673	-1279	8	-88	-164	-231	0.094	0.255	0.35	Yes	0.055	0.160	0.22	Yes	0.775	0.110	0.89	Yes	0.769	0.224	1.00	Yes	1.00	**6.16**
		L_{34} - L_{35}	738.99	-639.03	658	51	333	-1702	-31	65	200	557	0.660	0.339	1.00	Yes	0.384	0.210	0.60	Yes	0.676	0.227	0.91	Yes	0.671	0.272	0.95	Yes	1.00	**7.67**
		L_{35} - L_{36}	1084.27	-270.29	389	-5	189	-1503	102	-49	365	-53	0.758	0.237	1.00	Yes	0.511	0.148	0.66	Yes	0.224	0.156	0.39	Yes	0.222	0.203	0.43	Yes	1.00	**5.78**
		L_{36} - L_{37}	1314.80	-21.33	228	-9	-699	-1868	-102	14	38	457	0.754	0.244	1.00	Yes	0.495	0.144	0.64	Yes	0.015	0.228	0.25	Yes	0.014	0.206	0.23	Yes	1.00	**4.67**
		L_{37} - L_{38}	1757.21	-----	-56	-366	-1177	-2740	-43	-10	217	-83	0.744	0.254	1.00	Yes	0.494	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		L_{38} - L_{39}	1826.06	-----	-248	-158	-1804	-2115	-56	5	-63	426	0.784	0.214	1.00	Yes	0.526	0.131	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_{39} - L_{40}	1627.98	-----	-208	-309	-1290	-2189	-52	-37	-2	-378	0.759	0.232	1.00	Yes	0.502	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		L_{40} - L_{41}	1281.82	-----	-1123	194	-1684	-826	-427	-8	-281	536	0.753	0.240	1.00	Yes	0.507	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		L_{41} - L_{42}	1038.24	-----	-999	402	-904	-918	-101	-3	27	-348	0.818	0.181	1.00	Yes	0.537	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		L_{42} - L_{43}	502.73	-----	-1223	585	-1101	-427	-302	96	-339	837	0.611	0.386	1.00	Yes	0.363	0.243	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_{43} - L_{44}	220.39	-186.18	-2343	827	-70	-12	1543	451	-156	-46	0.268	0.730	1.00	Yes	0.159	0.460	0.62	Yes	0.268	0.472	0.75	Yes	0.266	0.477	0.75	Yes	1.00	**13.78**
	Structure 3	L_0 - L_1	176.90	-270.12	-13	-80	934	-1682	-9	-39	-139	-630	0.271	0.635	0.91	Yes	0.165	0.424	0.59	Yes	0.491	0.358	0.85	Yes	0.486	0.505	1.00	Yes	1.00	**12.30**
		L_1 - L_2	371.21	-----	140	-176	764	-1361	-53	19	-74	-100	0.568	0.429	1.00	Yes	0.384	0.266	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		L_2 - L_3	876.23	-----	-37	-160	204	-1053	37	23	36	246	0.763	0.235	1.00	Yes	0.488	0.141	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_3 - L_4	1213.42	-----	61	-363	48	-1479	42	53	142	52	0.767	0.230	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_4 - L_5	1635.35	-----	-380	-182	-1314	-1370	116	224	184	371	0.799	0.191	1.00	Yes	0.513	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_5 - L_6	1482.56	-----	-83	-346	-216	-2166	143	77	-19	-41	0.724	0.271	1.00	Yes	0.471	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_6 - L_7	1338.53	-----	-1246	399	-1084	-736	-258	7	-130	494	0.787	0.213	1.00	Yes	0.510	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_7 - L_8	1084.64	-----	-84	117	-629	-711	-29	38	109	-40	0.856	0.139	1.00	Yes	0.547	0.083	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		L_8 - L_9	562.75	-----	-723	416	-490	-124	-235	143	-190	420	0.729	0.265	1.00	Yes	0.437	0.171	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_9 - L_{10}	334.46	-564.53	16	518	-505	-304	76	140	199	28	0.433	0.172	0.61	Yes	0.252	0.104	0.36	Yes	0.868	0.113	0.99	Yes	0.860	0.137	1.00	Yes	1.00	**5.74**
		L_{10} - L_{11}	-----	-1030.35	-971	1023	-1037	-583	-294	-100	123	1366	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.149	0.99	Yes	0.829	0.163	1.00	Yes	1.00	**9.98**
		L_{11} - L_{12}	-----	-1210.48	-317	1549	-32	458	-200	-438	-235	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.218	1.00	Yes	0.767	0.205	0.98	Yes	1.00	**6.26**
		L_{12} - L_{13}	-----	-1224.95	1235	84	1558	-709	-150	-310	-115	296	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.205	1.00	Yes	0.776	0.206	0.99	Yes	1.00	**7.39**
		L_{13} - L_{14}	-----	-1104.05	-41	281	-22	-667	-229	122	186	39	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.071	0.97	Yes	0.889	0.105	1.00	Yes	1.00	**4.94**
		L_{14} - L_{15}	-----	-745.96	568	166	333	-451	149	-6	2	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.122	1.00	Yes	0.861	0.126	0.99	Yes	1.00	**3.60**
		L_{15} - L_{16}	175.86	-524.70	415	185	298	-726	13	-56	-43	-50	0.228	0.202	0.43	Yes	0.137	0.134	0.28	Yes	0.807	0.177	0.99	Yes	0.799	0.192	1.00	Yes	1.00	**3.07**
		L_{16} - L_{17}	617.78	-217.17	306	27	-147	-915	97	-34	84	376	0.711	0.282	1.00	Yes	0.422	0.180	0.61	Yes	0.297	0.227	0.53	Yes	0.294	0.221	0.52	Yes	1.00	**3.09**
		L_{17} - L_{18}	654.65	-113.46	87	-9	-554	-899	3	12	147	-54	0.753	0.241	1.00	Yes	0.436	0.145	0.59	Yes	0.155	0.248	0.41	Yes	0.154	0.217	0.38	Yes	1.00	**3.31**
		L_{18} - L_{19}	406.68	-----	-701	272	-418	-654	-164	133	-169	758	0.622	0.373	1.00	Yes	0.380	0.243	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		L_{19} - L_{20}	5.88	-140.82	-1728	1038	-603	-208	2169	590	-813	-221	0.009	0.984	1.00	Yes	0.005	0.589	0.60	Yes	0.256	0.698	0.96	Yes	0.254	0.519	0.78	Yes	1.00	**15.11**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	U_0 - L_0			-----	-320.12	-176	247	-57	90	-71	-23	-31	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.141	0.86	Yes	0.677	0.316	1.00	Yes	1.00	**1.77**
		U_1 - L_1			14.31	-330.63	-220	227	22	-11	-457	-159	-2	-1	0.026	0.423	0.45	Yes	0.014	0.233	0.25	Yes	0.722	0.199	0.93	Yes	0.700	0.291	1.00	Yes	1.00	**3.37**
		U_2 - L_2			98.65	-279.84	-272	313	84	-93	-327	-25	61	29	0.177	0.495	0.68	Yes	0.098	0.272	0.37	Yes	0.612	0.192	0.81	Yes	0.592	0.400	1.00	Yes	1.00	**5.22**
		U_3 - L_3			193.31	-282.09	-274	309	308	-278	50	36	224	186	0.348	0.460	0.81	Yes	0.191	0.253	0.45	Yes	0.618	0.169	0.79	Yes	0.597	0.395	1.00	Yes	1.00	**7.91**
		U_4 - L_4			-----	-213.13	-58	43	423	-412	-247	69	-362	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.469	0.236	0.71	Yes	0.451	0.540	1.00	Yes	1.00	**8.20**
		U_5 - L_5			-----	-423.44	71	-89	228	-261	39	2	101	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.101	0.87	Yes	0.731	0.264	1.00	Yes	1.00	**2.78**
		U_6 - L_6			-----	-520.10	87	-81	262	-283	-210	-54	297	36	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.131	0.92	Yes	0.746	0.248	1.00	Yes	1.00	**2.71**
		U_7 - L_7			-----	-438.83	134	-150	301	-322	-157	13	215	28	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.140	0.88	Yes	0.677	0.317	1.00	Yes	1.00	**2.00**
		U_8 - L_8			-----	-1184.59	-370	435	454	-553	227	120	957	280	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.137	1.00	Yes	0.821	0.103	0.93	Yes	1.00	**4.99**
		U_9 - L_9			-----	-656.45	-413	457	-171	201	-403	-278	-421	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.153	0.94	Yes	0.741	0.254	1.00	Yes	1.00	**3.30**
		U_{10} - L_{10}			-----	-804.15	-357	388	-131	99	-582	-508	-429	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.166	1.00	Yes	0.793	0.201	1.00	Yes	1.00	**4.57**
		U_{11} - L_{11}			-----	-653.81	-392	499	-124	190	-661	-491	-520	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.195	0.98	Yes	0.761	0.232	1.00	Yes	1.00	**3.97**
		U_{12} - L_{12}			-----	-521.78	-329	330	-90	95	-143	-172	-347	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.157	0.92	Yes	0.716	0.282	1.00	Yes	1.00	**3.50**
		U_{13} - L_{13}			-----	-359.33	-240	268	-37	57	-107	-47	-184	6	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.132	0.86	Yes	0.688	0.306	1.00	Yes	1.00	**2.98**
		U_{14} - L_{14}			-----	-170.16	-467	493	213	-222	101	271	118	36	-----	-----	-----	-----	-----	-----	-----	-----	0.380	0.209	0.59	Yes	0.360	0.631	1.00	Yes	1.00	**10.82**
		U_{15} - L_{15}			143.18	-308.00	-100	93	244	-265	80	52	341	-79	0.258	0.437	0.70	Yes	0.142	0.241	0.39	Yes	0.690	0.165	0.86	Yes	0.652	0.339	1.00	Yes	1.00	**4.43**
		U_{16} - L_{16}			8.31	-323.31	13	-27	237	-246	47	-51	258	-154	0.015	0.389	0.41	Yes	0.008	0.214	0.23	Yes	0.729	0.134	0.87	Yes	0.684	0.314	1.00	Yes	1.00	**3.21**
		U_{17} - L_{17}			-----	-437.57	60	-75	218	-240	-122	-113	214	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.122	0.95	Yes	0.755	0.244	1.00	Yes	1.00	**2.52**
		U_{18} - L_{18}			-----	-537.13	144	-151	423	-438	-133	-121	275	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.099	0.89	Yes	0.747	0.248	1.00	Yes	1.00	**2.67**
		U_{19} - L_{19}			-----	-642.73	171	-169	533	-520	-116	-45	214	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.105	0.91	Yes	0.748	0.247	1.00	Yes	1.00	**3.11**
		U_{20} - L_{20}			-----	-582.92	159	-258	349	-512	31	4	586	77	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.227	1.00	Yes	0.678	0.238	0.92	Yes	1.00	**2.41**
		U_0 - L_0			-----	-638.85	-436	524	-168	218	-946	-160	-38	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.231	1.00	Yes	0.685	0.222	0.91	Yes	1.00	**2.85**
		U_1 - L_1			-----	-719.12	-510	525	-116	126	39	75	-106	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.074	0.90	Yes	0.771	0.223	1.00	Yes	1.00	**4.32**
		U_2 - L_2			-----	-581.05	-494	495	-105	115	-297	-53	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.111	0.89	Yes	0.740	0.253	1.00	Yes	1.00	**3.90**
		U_3 - L_3			-----	-486.53	-240	250	-55	63	-99	-67	77	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.093	0.93	Yes	0.763	0.228	1.00	Yes	1.00	**3.27**
		U_4 - L_4			-----	-343.40	-210	212	-15	24	15	2	242	74	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.150	0.93	Yes	0.727	0.271	1.00	Yes	1.00	**3.29**
		U_5 - L_5			125.58	-319.06	-228	248	94	-81	-112	-40	-128	94	0.226	0.354	0.58	Yes	0.124	0.195	0.32	Yes	0.721	0.152	0.88	Yes	0.675	0.317	1.00	Yes	1.00	**4.58**
		U_6 - L_6			355.63	-247.10	-248	254	195	-205	97	11	-73	101	0.640	0.354	1.00	Yes	0.352	0.195	0.55	Yes	0.556	0.116	0.68	Yes	0.523	0.325	0.85	Yes	1.00	**6.45**
		U_7 - L_7			-----	-134.11	-188	212	489	-560	-86	206	29	60	-----	-----	-----	-----	-----	-----	-----	-----	0.303	0.251	0.56	Yes	0.284	0.716	1.00	Yes	1.00	**14.34**
		U_8 - L_8			-----	-466.35	55	-77	346	-367	-40	-42	150	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.106	0.79	Yes	0.672	0.321	1.00	Yes	1.00	**3.58**
		U_9 - L_9			-----	-693.98	162	-171	572	-592	-61	-155	527	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.141	0.92	Yes	0.744	0.251	1.00	Yes	1.00	**4.40**
		U_{10} - L_{10}			-----	-793.18	182	-185	539	-568	-149	-102	476	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.115	0.90	Yes	0.742	0.251	1.00	Yes	1.00	**4.42**
		U_{11} - L_{11}			-----	-810.78	186	-186	510	-527	-187	-70	199	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.102	0.92	Yes	0.758	0.233	1.00	Yes	1.00	**3.98**
		U_{12} - L_{12}			-----	-881.18	157	-136	514	-531	-144	8	468	12	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.145	1.00	Yes	0.764	0.228	1.00	Yes	1.00	**4.15**
		U_{13} - L_{13}			-----	-749.15	210	-207	576	-557	-162	20	419	46	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.162	1.00	Yes	0.722	0.275	1.00	Yes	1.00	**3.46**
		U_{14} - L_{14}			-----	-1214.17	-581	541	783	-748	56	285	601	296	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.109	1.00	Yes	0.805	0.139	0.95	Yes	1.00	**6.63**
		U_{15} - L_{15}			-----	-712.50	-638	607	-116	124	-492	-107	-300	13	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.201	1.00	Yes	0.687	0.305	1.00	Yes	1.00	**5.59**
		U_{16} - L_{16}			-----	-698.88	-523	505	-89	63	-819	-409	-804	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1.00	Yes	0.749	0.222	0.98	Yes	1.00	**4.58**
		U_{17} - L_{17}			-----	-634.21	-561	551	-124	122	-682	-442	-275	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.197	0.99	Yes	0.738	0.261	1.00	Yes	1.00	**4.40**
		U_{18} - L_{18}			-----	-578.00	-501	514	-95	95	-315	-309	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.129	0.90	Yes	0.737	0.263	1.00	Yes	1.00	**3.96**
		U_{19} - L_{19}			-----	-477.95	-295	294	-57	61	-43	-137	-66	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.100	0.82	Yes	0.714	0.284	1.00	Yes	1.00	**3.39**
		U_{20} - L_{20}			-----	-374.98	-240	244	-9	16	-139	-103	-179	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.119	0.89	Yes	0.718	0.278	1.00	Yes	1.00	**3.59**
	Structure 2	U_{21} - L_{21}			53.29	-315.29	-243	256	26	-21	-28	-39	-88	48	0.096	0.352	0.45	Yes	0.053	0.194	0.25	Yes	0.712	0.112	0.83	Yes	0.667	0.327	1.00	Yes	1.00	**3.82**
		U_{22} - L_{22}			-----	-128.24	-512	569	461	-506	70	266	143	146	-----	-----	-----	-----	-----	-----	-----	-----	0.289	0.256	0.55	Yes	0.271	0.727	1.00	Yes	1.00	**18.14**
		U_{23} - L_{23}			93.49	-317.27	-61	51	237	-254	33	118	187	-63	0.168	0.379	0.55	Yes	0.092	0.208	0.31	Yes	0.717	0.130	0.85	Yes	0.671	0.325	1.00	Yes	1.00	**4.01**
		U_{24} - L_{24}			-----	-374.21	8	-22	234	-247	-56	-123	211	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.145	0.92	Yes	0.717	0.282	1.00	Yes	1.00	**3.53**
		U_{25} - L_{25}			-----	-471.16	42	-42	302	-298	-84	-30	366	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.106	0.82	Yes	0.704	0.291	1.00	Yes	1.00	**3.26**
		U_{26} - L_{26}			-----	-569.63	70	-73	501	-529	-120	-23	371	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.131	0.89	Yes	0.726	0.271	1.00	Yes	1.00	**3.76**
		U_{27} - L_{27}			-----	-631.40	88	-88	544	-555	-134	2	535	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.137	0.92	Yes	0.735	0.258	1.00	Yes	1.00	**3.94**
		U_{28} - L_{28}			-----	-707.86	78	-75	546	-546	-151	16	567	19	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.126	0.95	Yes	0.759	0.232	1.00	Yes	1.00	**4.12**
		U_{29} - L_{29}			-----	-714.81	120	-124	632	-606	-115	28	469	20	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.168	0.97	Yes	0.689	0.302	1.00	Yes	1.00	**4.68**
		U_{30} - L_{30}			-----	-1204.31	-762	688	844	-830	324	360	643	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.110	1.00	Yes	0.799	0.149	0.95	Yes	1.00	**8.09**
		U_{31} - L_{31}			-----	-750.82	-544	519	-107	108	-215	-103	-310	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.162	1.00	Yes	0.724	0.260	0.99	Yes	1.00	**5.07**
		U_{32} - L_{32}			-----	-847.54	-447	454	-80	57	-380	-344	-664	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.183	1.00	Yes	0.735	0.195	0.93	Yes	1.00	**5.05**
		U_{33} - L_{33}			-----	-822.13	-499	497	-117	106	-522	-474	-453	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.172	1.00	Yes	0.769	0.220	0.99	Yes	1.00	**5.08**
		U_{34} - L_{34}			-----	-806.51	-513	535	-121	114	-22	-265	-294	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.111	0.91	Yes	0.754	0.236	1.00	Yes	1.00	**5.25**
		U_{35} - L_{35}			-----	-698.25	-579	579	-96	119	-242	-191	-214	2	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.096	0.88	Yes	0.748	0.246	1.00	Yes	1.00	**5.02**
		U_{36} - L_{36}			-----	-472.78	-346	357	-46	60	38	3	-63	64	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.093	0.78	Yes	0.681	0.312	1.00	Yes	1.00	**3.79**
		U_{37} - L_{37}			-----	-116.82	-504	583	129	-140	-146	156	-193	107	-----	-----	-----	-----	-----	-----	-----	-----	0.264	0.271	0.54	Yes	0.247	0.746	1.00	Yes	1.00	**13.20**
		U_{38} - L_{38}			345.91	-174.20	-232	238	154	-160	42	101	231	-73	0.622	0.371	1.00	Yes	0.342	0.204	0.55	Yes	0.392	0.109	0.51	Yes	0.369	0.305	0.68	Yes	1.00	**5.20**
		U_{39} - L_{39}			139.68	-325.22	-145	121	216	-238	116	142	184	-106	0.251	0.358	0.61	Yes	0.138	0.197	0.34	Yes	0.735	0.116	0.86	Yes	0.688	0.305	1.00	Yes	1.00	**5.08**
		U_{40} - L_{40}			-----	-342.66	-5	0	208	-210	14	-37	296	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.106	0.89	Yes	0.725	0.268	1.00	Yes	1.00	**3.44**
		U_{41} - L_{41}			-----	-486.54	29	-33	240	-252	6	-32	182	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.229	1.00	Yes	1.00	**3.41**
		U_{42} - L_{42}			-----	-588.61	63	-72	465	-481	10	-37	470	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.103	0.90	Yes	0.750	0.246	1.00	Yes	1.00	**3.69**
		U_{43} - L_{43}			-----	-705.12	83	-95	548	-553	-49	-49	501	7	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.114	0.93	Yes	0.756	0.234	1.00	Yes	1.00	**3.89**
		U_{44} - L_{44}			-----	-634.16	118	-135	388	-514	-130	-22	1011	171	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.241	1.00	Yes	0.680	0.218	0.90	Yes	1.00	**3.32**
	Structure 3	U_0 - L_0			-----	-590.01	-422	493	-144	192	-643	-84	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.212	1.00	Yes	0.687	0.229	0.92	Yes	1.00	**2.86**
		U_1 - L_1			-----	-659.64	-487	495	-112	124	19	127	-122	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.081	0.91	Yes	0.768	0.230	1.00	Yes	1.00	**4.13**
		U_2 - L_2			-----	-544.44	-415	426	-110	117	-49	14	-148	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.089	0.89	Yes	0.757	0.241	1.00	Yes	1.00	**3.38**
		U_3 - L_3			-----	-439.49	-219	232	-45	57	-154	-74	45	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.121	0.95	Yes	0.758	0.235	1.00	Yes	1.00	**3.10**
		U_4 - L_4			-----	-322.59	-238	245	-16	25	-86	-3	-46	33	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.109	0.84	Yes	0.683	0.313	1.00	Yes	1.00	**3.44**
		U_5 - L_5			108.55	-315.47	-237	256	78	-71	125	8	-96	111	0.195	0.363	0.56	Yes	0.107	0.200	0.31	Yes	0.707	0.144	0.86	Yes	0.668	0.327	1.00	Yes	1.00	**4.29**
		U_6 - L_6			-----	-221.02	-295	308	387	-409	-270	136	99	12	-----	-----	-----	-----	-----	-----	-----	-----	0.493	0.215	0.71	Yes	0.468	0.523	1.00	Yes	1.00	**10.80**
		U_7 - L_7			-----	-366.91	9	-27	235	-255	24	5	199	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.110	0.86	Yes	0.703	0.291	1.00	Yes	1.00	**3.17**
		U_8 - L_8			-----	-516.05	71	-74	331	-336	-8	-100	313	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.138	0.89	Yes	0.708	0.287	1.00	Yes	1.00	**3.66**
		U_9 - L_9			-----	-655.20	109	-165	393	-503	-25	-173	115	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.104	0.89	Yes	0.763	0.234	1.00	Yes	1.00	**4.00**
		U_{10} - L_{10}			-----	-785.63	130	-110	384	-431	-12	13	544	97	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.172	0.99	Yes	0.775	0.223	1.00	Yes	1.00	**4.25**
		U_{11} - L_{11}			-----	-649.28	168	-193	426	-472	-160	-32	429	99	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.148	0.93	Yes	0.733	0.263	1.00	Yes	1.00	**2.91**
		U_{12} - L_{12}			-----	-1184.28	-473	518	530	-686	187	154	779	343	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.145	1.00	Yes	0.821	0.128	0.95	Yes	1.00	**5.92**
		U_{13} - L_{13}			-----	-449.34	-292	303	-66	75	-409	-138	-341	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.187	0.94	Yes	0.693	0.298	1.00	Yes	1.00	**3.21**
		U_{14} - L_{14}			-----	-510.04	-250	261	-45	29	-709	-426	-646	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.224	1.00	Yes	0.731	0.228	0.96	Yes	1.00	**3.63**
		U_{15} - L_{15}			-----	-444.89	-199	227	-36	43	-232	-264	-448	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.189	1.00	Yes	0.768	0.230	1.00	Yes	1.00	**3.26**
		U_{16} - L_{16}			-----	-131.75	-557	544	70	-52	-448	-105	-844	-419	-----	-----	-----	-----	-----	-----	-----	-----	0.290	0.411	0.71	Yes	0.279	0.712	1.00	Yes	1.00	**10.49**
		U_{17} - L_{17}			224.06	-264.38	-341	335	213	-240	155	167	-22	-134	0.403	0.484	0.89	Yes	0.222	0.266	0.49	Yes	0.579	0.146	0.73	Yes	0.559	0.436	1.00	Yes	1.00	**7.17**
		U_{18} - L_{18}			115.52	-298.42	-108	120	238	-285	-107	15	142	-94	0.208	0.405	0.62	Yes	0.114	0.223	0.34	Yes	0.652	0.152	0.81	Yes	0.631	0.364	1.00	Yes	1.00	**5.15**
		U_{19} - L_{19}			39.46	-321.44	-49	38	246	-235	-83	-8	246	27	0.071	0.386	0.46	Yes	0.039	0.212	0.26	Yes	0.702	0.138	0.85	Yes	0.680	0.315	1.00	Yes	1.00	**3.08**
		U_{20} - L_{20}			-----	-330.06	19	-29	116	-210	-45	-14	472	151	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.258	1.00	Yes	0.698	0.268	0.97	Yes	1.00	**1.93**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$			506.85	-0.19	-147	67	-16	-3	-618	-119	-11	5	0.665	0.328	1.00	Yes	0.402	0.181	0.59	Yes	0.000	0.229	0.23	Yes	0.000	0.172	0.18	Yes	1.00	**4.21**
		$U_1 - L_2$			424.97	-----	-78	24	-21	-28	-189	-215	452	81	0.764	0.230	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_2 - L_3$			436.59	-311.79	-118	34	-120	-116	-193	-158	179	-140	0.785	0.209	1.00	Yes	0.432	0.115	0.55	Yes	0.718	0.241	0.96	Yes	0.660	0.153	0.82	Yes	1.00	**9.22**
		$U_3 - L_4$			-----	-376.08	29	-13	-8	-75	23	22	38	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.132	1.00	Yes	0.796	0.096	0.90	Yes	1.00	**3.36**
		$U_4 - L_5$			336.82	-----	0	98	-190	-52	104	55	-1304	-671	0.494	0.496	1.00	Yes	0.272	0.273	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.09**
		$U_5 - L_6$			684.47	-----	-200	225	-51	78	-282	-306	-324	-131	0.809	0.187	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_6 - L_8$			673.44	-----	-286	249	-93	100	-159	-190	145	51	0.796	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.85**
		$U_8 - L_7$			659.60	-----	-102	309	-9	130	-113	-129	229	113	0.780	0.217	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_8 - L_9$			985.88	-----	-95	368	16	137	359	318	369	108	0.788	0.211	1.00	Yes	0.488	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_9 - L_{10}$			1034.65	-----	-293	281	-71	84	186	329	86	111	0.827	0.172	1.00	Yes	0.512	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_{10} - L_{11}$			993.45	-----	-229	207	-130	66	60	307	356	219	0.839	0.152	1.00	Yes	0.519	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{11} - L_{12}$			858.21	-----	-252	131	-133	-13	-3	166	124	116	0.849	0.142	1.00	Yes	0.467	0.078	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{12} - L_{13}$			652.09	-----	-202	177	-84	21	44	38	56	-112	0.795	0.199	1.00	Yes	0.500	0.111	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_{13} - L_{14}$			458.82	-10.43	-88	54	-17	-35	-22	-82	-47	-199	0.825	0.171	1.00	Yes	0.454	0.094	0.55	Yes	0.024	0.102	0.13	Yes	0.022	0.113	0.14	Yes	1.00	**3.99**
		$U_{15} - L_{14}$			187.25	-313.93	-47	0	43	-110	-220	-219	-381	-129	0.337	0.251	0.59	Yes	0.185	0.138	0.33	Yes	0.736	0.258	1.00	Yes	0.664	0.141	0.81	Yes	1.00	**4.32**
		$U_{16} - L_{15}$			406.40	-66.42	-128	90	-6	-31	-344	-309	-300	-152	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	0.157	0.185	0.35	Yes	0.141	0.164	0.31	Yes	1.00	**3.68**
		$U_{17} - L_{16}$			518.59	-----	-138	99	-41	6	-409	-354	-354	-226	0.760	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
		$U_{18} - L_{17}$			611.89	-----	-313	253	-112	76	-522	-464	-113	-119	0.723	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_{19} - L_{18}$			688.66	-----	-346	256	-132	87	-441	-444	-67	-107	0.746	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		$U_{20} - L_{19}$			691.94	-----	-263	260	-94	92	-666	-425	-103	-39	0.749	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
	Structure 2	$U_0 - L_1$			657.45	-----	-430	359	-115	100	-981	123	-60	-51	0.650	0.346	1.00	Yes	0.358	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_1 - L_2$			788.74	-----	-388	313	-95	71	-221	-33	-100	-29	0.780	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_2 - L_3$			664.55	-----	-330	284	-81	61	-142	-18	-22	92	0.786	0.213	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_3 - L_4$			601.62	-----	-181	139	-66	14	-147	-48	144	-41	0.802	0.196	1.00	Yes	0.441	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_4 - L_5$			430.25	-108.39	-132	108	0	-36	-142	-35	-18	-172	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.268	0.102	0.37	Yes	0.229	0.169	0.40	Yes	1.00	**4.32**
		$U_5 - L_6$			433.62	-284.10	-122	79	63	-108	-133	-50	-119	-194	0.780	0.212	1.00	Yes	0.429	0.116	0.55	Yes	0.671	0.170	0.85	Yes	0.601	0.155	0.76	Yes	1.00	**5.53**
		$U_6 - L_7$			48.57	-384.69	-33	-6	45	-101	-104	-156	59	-300	0.079	0.193	0.28	Yes	0.043	0.106	0.15	Yes	0.824	0.172	1.00	Yes	0.737	0.115	0.86	Yes	1.00	**3.39**
		$U_8 - L_7$			588.16	-----	-177	146	-25	-26	-267	-405	-268	-207	0.750	0.241	1.00	Yes	0.472	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_8 - L_9$			707.72	-----	-324	244	-119	32	-397	-378	-386	-239	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		$U_{10} - L_9$			790.56	-----	-311	222	-132	55	-442	-464	-473	-223	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{11} - L_{10}$			872.02	-----	-339	278	-133	101	-395	-446	-241	-195	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{12} - L_{11}$			870.43	-----	-362	351	-133	147	-322	-361	-232	-98	0.793	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		$U_{13} - L_{12}$			751.86	-----	-429	375	-153	154	-176	-183	332	127	0.744	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_{14} - L_{13}$			755.63	-----	-277	425	-36	149	-202	-161	367	183	0.748	0.252	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{14} - L_{15}$			639.73	-----	-221	350	23	73	100	207	211	-44	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{15} - L_{16}$			633.91	-----	-376	345	-63	69	-172	-100	-13	21	0.749	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{16} - L_{17}$			716.99	-----	-327	344	-69	96	-268	269	-150	62	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_{17} - L_{18}$			665.15	-----	-289	296	-65	78	-33	233	-27	101	0.786	0.210	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{18} - L_{19}$			677.10	-----	-279	273	-70	62	100	211	61	0	0.801	0.196	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_{19} - L_{20}$			624.25	-----	-196	193	-38	1	95	114	138	-20	0.796	0.203	1.00	Yes	0.438	0.114	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
	Structure 3	$U_{20} - L_{21}$			449.06	-39.37	-123	118	-7	-13	40	52	28	-92	0.808	0.184	1.00	Yes	0.444	0.101	0.55	Yes	0.093	0.060	0.16	Yes	0.083	0.157	0.25	Yes	1.00	**3.86**
		$U_{21} - L_{22}$			444.82	-257.39	-106	73	15	-88	17	3	199	-168	0.800	0.192	1.00	Yes	0.440	0.106	0.55	Yes	0.608	0.130	0.74	Yes	0.545	0.135	0.68	Yes	1.00	**5.88**
		$U_{23} - L_{22}$			434.91	-296.27	-108	65	59	-102	-256	-256	-202	-29	0.782	0.212	1.00	Yes	0.430	0.117	0.55	Yes	0.706	0.198	0.91	Yes	0.627	0.138	0.77	Yes	1.00	**6.05**
		$U_{24} - L_{23}$			426.73	-51.52	-119	106	4	-23	-259	-227	-235	-60	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	0.123	0.127	0.26	Yes	0.109	0.152	0.27	Yes	1.00	**3.69**
		$U_{25} - L_{24}$			584.55	-----	-189	181	-31	5	-375	-323	-402	-137	0.745	0.251	1.00	Yes	0.410	0.142	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{26} - L_{25}$			653.00	-----	-276	257	-46	36	-306	-355	-180	-84	0.772	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{27} - L_{26}$			663.01	-----	-287	285	-45	58	-259	-283	177	69	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{28} - L_{27}$			707.64	-----	-341	353	-49	68	-241	-280	200	110	0.766	0.226	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_{29} - L_{28}$			635.59	-----	-362	340	-74	74	-111	-164	208	100	0.751	0.243	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{30} - L_{29}$			643.92	-----	-224	356	-14	77	-137	-139	189	106	0.761	0.236	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{30} - L_{31}$			759.13	-----	-288	439	14	72	181	91	298	0	0.751	0.248	1.00	Yes	0.413	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{31} - L_{32}$			772.37	-----	-441	392	-71	75	-181	177	14	49	0.764	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		$U_{32} - L_{33}$			890.09	-----	-352	358	-57	93	-251	218	-148	142	0.811	0.186	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{33} - L_{34}$			892.72	-----	-345	296	-111	76	-37	269	64	123	0.813	0.183	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{34} - L_{35}$			826.26	-----	-297	255	-107	38	135	162	251	-17	0.817	0.175	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{35} - L_{36}$			751.61	-----	-327	273	-106	22	29	25	47	-110	0.814	0.185	1.00	Yes	0.448	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{36} - L_{37}$			620.86	-----	-180	176	-49	-17	-42	-1	153	-226	0.792	0.207	1.00	Yes	0.498	0.117	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{38} - L_{37}$			40.17	-389.33	-30	-4	70	-102	-184	-215	-184	-82	0.065	0.172	0.24	Yes	0.036	0.095	0.14	Yes	0.841	0.158	1.00	Yes	0.746	0.116	0.87	Yes	1.00	**3.43**
		$U_{38} - L_{39}$			368.37	-321.13	-106	61	89	-125	-302	-272	-301	-111	0.663	0.247	0.91	Yes	0.364	0.136	0.51	Yes	0.765	0.232	1.00	Yes	0.679	0.160	0.84	Yes	1.00	**5.34**
		$U_{40} - L_{39}$			396.57	-140.20	-132	94	12	-45	-335	-316	-402	-117	0.713	0.285	1.00	Yes	0.392	0.157	0.55	Yes	0.336	0.203	0.54	Yes	0.297	0.168	0.47	Yes	1.00	**4.23**
		$U_{41} - L_{40}$			568.19	-----	-172	127	-34	0	-380	-362	-300	-185	0.757	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{42} - L_{41}$			626.09	-----	-318	265	-49	32	-422	-416	-67	-64	0.740	0.257	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{43} - L_{42}$			750.96	-----	-388	305	-66	45	-470	-451	-6	-47	0.743	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{44} - L_{43}$			733.94	-----	-318	328	-94	80	-808	-433	55	-21	0.726	0.273	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_0 - L_1$			626.15	-----	-407	309	-113	95	-664	-35	-62	-53	0.678	0.318	1.00	Yes	0.373	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_1 - L_2$			717.02	-----	-338	265	-99	66	-281	-130	-126	-45	0.777	0.219	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_2 - L_3$			649.11	-----	-328	254	-97	63	-230	78	-48	80	0.767	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		$U_3 - L_4$			555.54	-----	-148	117	-39	3	-128	-74	81	-25	0.815	0.180	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		$U_4 - L_5$			430.29	-105.94	-131	100	-14	-33	-185	-19	-7	-183	0.774	0.221	1.00	Yes	0.426	0.122	0.55	Yes	0.251	0.104	0.36	Yes	0.224	0.168	0.40	Yes	1.00	**4.09**
		$U_5 - L_6$			336.43	-332.21	-74	19	34	-112	-154	-195	-87	-313	0.605	0.233	0.84	Yes	0.333	0.128	0.47	Yes	0.778	0.217	1.00	Yes	0.703	0.143	0.85	Yes	1.00	**5.13**
		$U_7 - L_6$			444.19	-74.45	-83	45	2	-52	-221	-275	-307	-202	0.799	0.195	1.00	Yes	0.439	0.107	0.55	Yes	0.173	0.152	0.33	Yes	0.158	0.106	0.27	Yes	1.00	**4.40**
		$U_8 - L_7$			590.44	-----	-191	151	-70	2	-413	-377	-544	-231	0.720	0.273	1.00	Yes	0.453	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_9 - L_8$			766.65	-----	-233	111	-139	-29	-535	-514	-845	-454	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_{10} - L_9$			890.97	-----	-219	179	-151	45	-567	-555	-1068	-415	0.753	0.241	1.00	Yes	0.466	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{11} - L_{10}$			1000.03	-----	-300	258	-95	85	-480	-432	53	-20	0.799	0.195	1.00	Yes	0.495	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_{12} - L_{11}$			987.79	-----	-112	356	-10	129	-328	-298	240	118	0.790	0.201	1.00	Yes	0.489	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{12} - L_{13}$			659.41	-----	-106	308	23	71	200	91	228	-24	0.780	0.217	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_{13} - L_{14}$			680.47	-----	-285	259	-25	55	-81	158	-81	23	0.804	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{14} - L_{15}$			698.35	-----	-174	244	-23	39	-59	192	133	61	0.826	0.174	1.00	Yes	0.454	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{15} - L_{16}$			609.32	-----	-83	72	-47	-16	-63	32	47	88	0.894	0.104	1.00	Yes	0.491	0.057	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_{17} - L_{16}$			-----	-294.08	31	1	-88	-121	368	224	-532	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.321	1.00	Yes	0.622	0.155	0.78	Yes	1.00	**7.20**
		$U_{18} - L_{17}$			237.03	-289.36	-65	17	-65	-83	-244	-178	-868	-126	0.426	0.358	0.79	Yes	0.234	0.197	0.44	Yes	0.666	0.330	1.00	Yes	0.612	0.107	0.72	Yes	1.00	**5.63**
		$U_{19} - L_{18}$			427.24	-133.84	-93	31	26	-20	-386	-334	165	128	0.768	0.230	1.00	Yes	0.423	0.127	0.55	Yes	0.307	0.215	0.53	Yes	0.283	0.119	0.41	Yes	1.00	**4.10**
		$U_{20} - L_{19}$			590.72	-----	-52	40	58	-7	-603	-402	462	-1	0.775	0.220	1.00	Yes	0.468	0.121	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension					Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-507.39	-151	79	55	-1140	17	-11	18	-432	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.309	1	Yes	0.684	0.271	0.96	Yes	1.00	**4.81**
		$U_1 - U_2$	26.24	-566.29	-52	75	-163	-872	3	46	-32	-6	0.030	0.215	0.25	Yes	0.021	0.148	0.17	Yes	0.771	0.227	1	Yes	0.764	0.207	0.98	Yes	1.00	**3.15**
		$U_2 - U_3$	108.79	-555.13	-101	237	-296	-732	10	-90	162	-148	0.125	0.202	0.33	Yes	0.084	0.131	0.22	Yes	0.755	0.244	1	Yes	0.749	0.174	0.93	Yes	1.00	**3.09**
		$U_3 - U_4$	-----	-534.27	-385	255	-239	-901	87	-33	-18	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.271	1	Yes	0.720	0.214	0.94	Yes	1.00	**3.94**
		$U_4 - U_5$	442.13	-550.94	134	348	-51	-887	-123	51	-257	-261	0.507	0.255	0.77	Yes	0.348	0.175	0.53	Yes	0.750	0.244	1	Yes	0.743	0.211	0.96	Yes	1.00	**7.00**
		$U_5 - U_6$	-----	-567.58	-857	678	-293	-640	44	-347	-270	-457	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.227	1	Yes	0.765	0.204	0.97	Yes	1.00	**8.60**
		$U_6 - U_7$	242.07	-425.80	-244	524	34	-2405	-723	-431	-638	-461	0.231	0.611	0.85	Yes	0.162	0.418	0.59	Yes	0.484	0.284	0.77	Yes	0.479	0.511	1.00	Yes	1.00	**16.20**
		$U_7 - U_8$	453.15	-----	-2359	4019	-50	675	-707	194	-247	157	0.314	0.681	1.00	Yes	0.219	0.464	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.77**
		$U_8 - U_9$	718.79	-----	757	15	2094	-2222	-153	29	58	285	0.589	0.407	1.00	Yes	0.403	0.278	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.64**
		$U_9 - U_{10}$	579.93	-485.66	221	271	34	-1213	74	306	222	571	0.629	0.363	1.00	Yes	0.426	0.244	0.67	Yes	0.625	0.251	0.88	Yes	0.620	0.272	0.90	Yes	1.00	**7.80**
		$U_{10} - U_{11}$	115.96	-589.44	212	-83	170	-1076	212	55	296	72	0.126	0.289	0.42	Yes	0.084	0.185	0.27	Yes	0.759	0.211	0.97	Yes	0.752	0.241	1.00	Yes	1.00	**4.05**
		$U_{11} - U_{12}$	-----	-872.63	158	-117	7	-1036	156	58	233	80	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.819	0.172	1.00	Yes	1.00	**3.47**
		$U_{12} - U_{13}$	-----	-1174.45	-35	-165	-161	-1263	223	-37	239	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.200	1	Yes	0.784	0.174	0.96	Yes	1.00	**3.79**
		$U_{13} - U_{14}$	-----	-1310.02	-516	-338	-245	-1861	286	23	107	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1	Yes	0.751	0.205	0.96	Yes	1.00	**3.73**
		$U_{14} - U_{15}$	-----	-1320.03	-235	-175	-455	-1528	186	-46	106	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.227	1	Yes	0.757	0.169	0.93	Yes	1.00	**4.55**
		$U_{15} - U_{16}$	-----	-1331.91	-486	-327	-217	-1724	288	-79	-90	-471	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.764	0.190	0.96	Yes	1.00	**4.37**
		$U_{16} - U_{17}$	-----	-1375.42	-434	-108	-1181	-1210	178	-282	-260	-372	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.201	1	Yes	0.788	0.133	0.93	Yes	1.00	**4.88**
		$U_{17} - U_{18}$	-----	-1070.55	-747	185	-401	-601	-82	-300	-183	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.143	1	Yes	0.838	0.121	0.96	Yes	1.00	**4.20**
		$U_{18} - U_{19}$	-----	-691.65	-301	188	-459	-577	-223	-260	0	-499	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.778	0.116	0.90	Yes	1.00	**6.83**
		$U_{19} - U_{20}$	-----	-542.50	-1258	1216	-493	-1934	-213	-132	256	-855	-----	-----	-----	-----	-----	-----	-----	-----	0.616	0.337	0.96	Yes	0.610	0.389	1.00	Yes	1.00	**10.03**
	Structure 2	$U_0 - U_1$	-----	-568.64	170	-138	698	-1907	94	183	14	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.238	0.92	Yes	0.672	0.324	1.00	Yes	1.00	**7.41**
		$U_1 - U_2$	-----	-755.04	-103	-151	-187	-1249	337	638	227	330	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.729	0.189	0.92	Yes	1.00	**3.86**
		$U_2 - U_3$	-----	-1099.81	-79	-233	-24	-1869	601	4	466	2	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.781	0.190	0.98	Yes	1.00	**3.88**
		$U_3 - U_4$	-----	-1309.00	-383	-289	-885	-2105	206	-256	221	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.244	1	Yes	0.745	0.188	0.94	Yes	1.00	**3.67**
		$U_4 - U_5$	-----	-1408.21	-370	-339	-820	-2556	-55	-348	19	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.269	1	Yes	0.723	0.212	0.94	Yes	1.00	**3.74**
		$U_5 - U_6$	-----	-1570.25	-1161	21	-1006	-1904	143	-226	-81	-402	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1	Yes	0.806	0.158	0.97	Yes	1.00	**4.48**
		$U_6 - U_7$	-----	-1250.43	-289	-95	-812	-2257	-73	-256	-45	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.279	1	Yes	0.712	0.201	0.92	Yes	1.00	**3.48**
		$U_7 - U_8$	-----	-1326.94	-134	-168	-1087	-1715	-201	-227	-302	-451	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.232	1	Yes	0.756	0.153	0.91	Yes	1.00	**4.80**
		$U_8 - U_9$	-----	-1128.59	-290	165	-510	-1376	-159	-108	-196	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.222	1	Yes	0.765	0.146	0.92	Yes	1.00	**5.46**
		$U_9 - U_{10}$	241.22	-953.34	-35	388	-851	-1044	-178	-24	-224	-270	0.177	0.156	0.34	Yes	0.120	0.106	0.23	Yes	0.828	0.164	1	Yes	0.823	0.127	0.95	Yes	1.00	**6.14**
		$U_{10} - U_{11}$	642.07	-777.13	178	452	-725	-1181	-200	-62	-329	-334	0.542	0.207	0.75	Yes	0.369	0.134	0.51	Yes	0.777	0.214	1	Yes	0.772	0.167	0.94	Yes	1.00	**8.10**
		$U_{11} - U_{12}$	-----	-756.03	-1701	1332	-380	-1754	-245	-775	-528	-746	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.203	0.96	Yes	0.751	0.247	1.00	Yes	1.00	**19.04**
		$U_{12} - U_{13}$	759.31	-----	131	194	-82	-3090	-784	-1016	-803	-302	0.513	0.486	1.00	Yes	0.365	0.330	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.29**
		$U_{13} - U_{14}$	519.88	-----	-3872	7228	-456	1412	-1092	-233	-594	-277	0.256	0.744	1.00	Yes	0.181	0.487	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.94**
		$U_{14} - U_{15}$	1044.81	-----	1551	188	4774	-3359	-525	-159	-69	482	0.514	0.478	1.00	Yes	0.364	0.313	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		$U_{15} - U_{16}$	1039.89	-----	215	527	-610	-2578	-116	272	479	894	0.629	0.369	1.00	Yes	0.447	0.248	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.36**
		$U_{16} - U_{17}$	867.48	-219.93	616	284	512	-2310	200	73	584	339	0.639	0.352	1.00	Yes	0.425	0.232	0.66	Yes	0.192	0.331	0.53	Yes	0.191	0.290	0.49	Yes	1.00	**8.11**
		$U_{17} - U_{18}$	660.73	-464.28	444	310	398	-1825	-24	2	166	97	0.663	0.334	1.00	Yes	0.442	0.222	0.67	Yes	0.552	0.348	0.9	Yes	0.548	0.310	0.86	Yes	1.00	**7.25**
		$U_{18} - U_{19}$	419.09	-612.22	429	176	216	-1628	18	38	115	-63	0.421	0.293	0.72	Yes	0.276	0.186	0.47	Yes	0.727	0.137	0.87	Yes	0.723	0.276	1.00	Yes	1.00	**5.56**
		$U_{19} - U_{20}$	226.18	-703.46	269	141	-187	-1394	14	139	69	23	0.212	0.242	0.46	Yes	0.141	0.159	0.30	Yes	0.781	0.203	0.99	Yes	0.776	0.223	1.00	Yes	1.00	**4.75**
		$U_{20} - U_{21}$	47.62	-838.21	-36	119	-12	-1586	64	-93	121	-199	0.037	0.251	0.29	Yes	0.026	0.161	0.19	Yes	0.771	0.222	1	Yes	0.765	0.230	1.00	Yes	1.00	**4.80**
		$U_{21} - U_{22}$	35.02	-785.30	-23	5	-490	-1661	-10	-49	1	-77	0.027	0.249	0.28	Yes	0.019	0.165	0.19	Yes	0.722	0.277	1	Yes	0.717	0.241	0.96	Yes	1.00	**4.11**
		$U_{22} - U_{23}$	77.23	-796.83	-5	-11	-355	-1543	-85	-103	-89	-249	0.060	0.251	0.32	Yes	0.042	0.167	0.21	Yes	0.733	0.261	1	Yes	0.727	0.224	0.96	Yes	1.00	**5.24**
		$U_{23} - U_{24}$	-----	-809.26	-858	170	32	-1611	78	-146	-217	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.254	1	Yes	0.739	0.233	0.98	Yes	1.00	**6.14**
		$U_{24} - U_{25}$	232.68	-655.59	131	260	-465	-1228	-252	-29	-174	-204	0.218	0.231	0.45	Yes	0.145	0.151	0.30	Yes	0.728	0.269	1	Yes	0.723	0.197	0.92	Yes	1.00	**5.37**
		$U_{25} - U_{26}$	-----	-688.09	-1005	620	-585	-1065	-63	-39	-194	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.117	0.94	Yes	0.813	0.181	1.00	Yes	1.00	**7.43**
		$U_{26} - U_{27}$	-----	-594.51	-1487	833	28	-1705	-199	-115	-331	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.194	0.91	Yes	0.702	0.289	1.00	Yes	1.00	**11.64**
		$U_{27} - U_{28}$	-----	-681.67	-3176	1995	-883	-2584	-417	-633	-577	-854	-----	-----	-----	-----	-----	-----	-----	-----	0.595	0.322	0.92	Yes	0.591	0.399	1.00	Yes	1.00	**19.24**
		$U_{28} - U_{29}$	937.42	-----	-110	302	-258	-3151	-708	-443	-772	-299	0.567	0.424	1.00	Yes	0.403	0.284	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.34**
		$U_{29} - U_{30}$	722.79	-----	-2511	6256	-138	1250	-878	198	-111	333	0.355	0.639	1.00	Yes	0.252	0.419	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.53**
		$U_{30} - U_{31}$	1096.40	-----	1487	124	4600	-3819	-464	-225	199	483	0.539	0.459	1.00	Yes	0.382	0.300	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.16**
		$U_{31} - U_{32}$	1012.96	-44.78	128	463	-644	-1818	-32	230	552	882	0.684	0.313	1.00	Yes	0.488	0.213	0.71	Yes	0.036	0.399	0.44	Yes	0.036	0.229	0.27	Yes	1.00	**8.35**
		$U_{32} - U_{33}$	750.31	-407.62	505	253	426	-2044	206	57	587	92	0.634	0.360	1.00	Yes	0.426	0.240	0.67	Yes	0.408	0.181	0.59	Yes	0.405	0.288	0.70	Yes	1.00	**7.17**
		$U_{33} - U_{34}$	481.62	-750.62	351	197	-224	-1732	84	39	227	61	0.407	0.272	0.68	Yes	0.277	0.175	0.46	Yes	0.750	0.220	0.98	Yes	0.746	0.244	1.00	Yes	1.00	**6.12**
		$U_{34} - U_{35}$	194.72	-892.35	336	-34	-91	-1834	118	-11	171	-23	0.143	0.242	0.39	Yes	0.097	0.164	0.27	Yes	0.775	0.185	0.96	Yes	0.770	0.223	1.00	Yes	1.00	**4.64**
		$U_{35} - U_{36}$	-----	-1195.51	129	-233	-161	-1692	81	22	125	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.181	1	Yes	0.811	0.180	1.00	Yes	1.00	**4.61**
		$U_{36} - U_{37}$	-----	-1283.41	-149	-60	-557	-2422	163	-54	186	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1	Yes	0.731	0.216	0.95	Yes	1.00	**3.93**
		$U_{37} - U_{38}$	-----	-1360.87	-1	-136	-560	-2133	15	-278	-19	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1	Yes	0.775	0.190	0.97	Yes	1.00	**5.19**
		$U_{38} - U_{39}$	-----	-1456.00	79	-381	123	-2858	84	-96	66	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.246	1	Yes	0.748	0.237	0.99	Yes	1.00	**5.38**
		$U_{39} - U_{40}$	-----	-1383.78	-796	-380	-1054	-2398	88	-179	-223	-390	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.277	1	Yes	0.710	0.199	0.91	Yes	1.00	**4.69**
		$U_{40} - U_{41}$	-----	-1265.35	-434	-401	-1061	-2068	18	-257	-329	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.274	1	Yes	0.721	0.184	0.91	Yes	1.00	**4.63**
		$U_{41} - U_{42}$	-----	-1206.21	-1133	216	-668	-1213	-102	-199	-174	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.135	1	Yes	0.856	0.124	0.98	Yes	1.00	**5.71**
		$U_{42} - U_{43}$	-----	-810.52	-442	201	-775	-1021	27	-200	217	-392	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.206	1	Yes	0.782	0.155	0.94	Yes	1.00	**9.13**
		$U_{43} - U_{44}$	-----	-494.34	-1179	1068	-204	-2222	-257	-134	84	-892	-----	-----	-----	-----	-----	-----	-----	-----	0.587	0.405	1	Yes	0.584	0.377	0.97	Yes	1.00	**9.31**
	Structure 3	$U_0 - U_1$	-----	-577.89	-727	-138	790	-1707	322	141	2	-504	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.258	0.92	Yes	0.650	0.343	1.00	Yes	1.00	**7.53**
		$U_1 - U_2$	-----	-673.40	-67	-117	-70	-817	252	511	209	266	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.233	1	Yes	0.758	0.164	0.93	Yes	1.00	**3.30**
		$U_2 - U_3$	-----	-981.66	-77	-123	2	-1107	520	9	516	22	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.212	1	Yes	0.768	0.180	0.95	Yes	1.00	**3.57**
		$U_3 - U_4$	-----	-1346.63	-142	-205	-354	-1711	137	-246	210	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.216	1	Yes	0.772	0.189	0.97	Yes	1.00	**4.22**
		$U_4 - U_5$	-----	-1383.95	-871	-1	-469	-1476	338	-166	11	-416	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1	Yes	0.793	0.163	0.96	Yes	1.00	**4.13**
		$U_5 - U_6$	-----	-1283.29	-155	-231	-604	-1833	-47	-206	-98	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.252	1	Yes	0.736	0.202	0.94	Yes	1.00	**3.74**
		$U_6 - U_7$	-----	-1288.33	-287	-62	-346	-1439	-117	-242	-104	-391	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.739	0.159	0.90	Yes	1.00	**5.29**
		$U_7 - U_8$	-----	-1154.36	-625	65	-313	-973	63	-168	-248	-484	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1	Yes	0.771	0.134	0.91	Yes	1.00	**4.42**
		$U_8 - U_9$	-----	-881.58	-460	229	-552	-650	63	-212	-209	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.160	1	Yes	0.827	0.108	0.94	Yes	1.00	**5.07**
		$U_9 - U_{10}$	-----	-637.73	-807	422	-366	-485	-143	-334	-228	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.171	1	Yes	0.814	0.181	1.00	Yes	1.00	**7.96**
		$U_{10} - U_{11}$	-----	-561.45	-724	590	-388	-1227	-526	-284	-440	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.238	0.97	Yes	0.716	0.275	1.00	Yes	1.00	**15.38**
		$U_{11} - U_{12}$	359.78	-----	-2735	3690	-152	606	-639	5	-272	28	0.295	0.697	1.00	Yes	0.202	0.475	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.28**
		$U_{12} - U_{13}$	843.55	-----	848	101	2428	-1980	-418	-83	-104	252	0.584	0.410	1.00	Yes	0.408	0.280	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		$U_{13} - U_{14}$	745.41	-243.96	208	341	-113	-999	-140	268	147	488	0.713	0.279	1.00	Yes	0.498	0.192	0.69	Yes	0.277	0.296	0.58	Yes	0.274	0.212	0.49	Yes	1.00	**6.39**
		$U_{14} - U_{15}$	537.78	-481.37	363	209	232	-1081	60	135	316	98	0.616	0.310	0.93	Yes	0.416	0.202	0.62	Yes	0.655	0.336	1	Yes	0.649	0.257	0.91	Yes	1.00	**5.49**
		$U_{15} - U_{16}$	286.02	-560.14	240	123	-6	-1027	-4	135	80	84	0.328	0.267	0.60	Yes	0.225	0.183	0.41	Yes	0.762	0.197	0.96	Yes	0.755	0.244	1.00	Yes	1.00	**4.29**
		$U_{16} - U_{17}$	358.78	-530.32	327	92	200	-1190	30	80	43	-75	0.411	0.296	0.71	Yes	0.282	0.204	0.49	Yes	0.722	0.165	0.89	Yes	0.715	0.283	1.00	Yes	1.00	**5.62**
		$U_{17} - U_{18}$	-----	-549.84	-116	-83	-90	-1084	45	-241	-64	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.223	0.98	Yes	0.741	0.258	1.00	Yes	1.00	**4.51**
		$U_{18} - U_{19}$	-----	-557.11	-95	33	-647	-653	13	72	172	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1	Yes	0.751	0.155	0.91	Yes	1.00	**4.53**
		$U_{19} - U_{20}$	-----	-419.84	-607	652	-145	-1533	60	-54	125	-657	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.422	1	Yes	0.566	0.364	0.94	Yes	1.00	**7.21**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1			-----	-132.85	-246	139	1111	-2518	39	142	-190	-699	-----	-----	-----	-----	-----	-----	-----	-----	0.241	0.611	0.86	Yes	0.239	0.756	1.00	Yes	1.00	**20.44**
		L_1 - L_2			445.10	-38.52	44	21	310	-1023	32	14	-31	-30	0.681	0.314	1.00	Yes	0.416	0.213	0.63	Yes	0.070	0.175	0.25	Yes	0.069	0.307	0.38	Yes	1.00	**5.33**
		L_2 - L_3			619.14	-100.20	-18	89	-234	-1073	6	-11	-170	-35	0.712	0.286	1.00	Yes	0.412	0.172	0.59	Yes	0.137	0.284	0.43	Yes	0.136	0.259	0.40	Yes	1.00	**5.37**
		L_3 - L_4			595.73	-215.86	56	258	-83	-1196	-23	32	-143	18	0.685	0.312	1.00	Yes	0.407	0.202	0.61	Yes	0.295	0.246	0.55	Yes	0.292	0.289	0.59	Yes	1.00	**5.49**
		L_4 - L_5			580.75	-23.76	-647	708	-584	-711	-27	21	-307	-105	0.752	0.243	1.00	Yes	0.451	0.158	0.61	Yes	0.037	0.137	0.18	Yes	0.036	0.188	0.23	Yes	1.00	**7.09**
		L_5 - L_6			688.52	-376.84	-777	1082	-881	-1220	62	347	-83	-85	0.675	0.316	1.00	Yes	0.437	0.192	0.63	Yes	0.440	0.216	0.66	Yes	0.435	0.270	0.71	Yes	1.00	**13.45**
		L_6 - L_7			-----	-889.47	-1093	1010	-975	-1784	59	-181	33	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.122	0.85	Yes	0.716	0.280	1.00	Yes	1.00	**14.08**
		L_7 - L_8			-----	-1121.67	-416	2176	-22	577	55	140	32	75	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.273	1	Yes	0.710	0.288	1.00	Yes	1.00	**8.37**
		L_8 - L_9			-----	-1153.41	845	102	2004	-1028	-6	-35	-53	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.226	0.97	Yes	0.730	0.265	1.00	Yes	1.00	**10.33**
		L_9 - L_{10}			-----	-944.58	194	161	485	-1462	46	49	41	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.099	0.87	Yes	0.760	0.230	1.00	Yes	1.00	**9.98**
		L_{10} - L_{11}			182.38	-503.27	443	-13	182	-878	88	20	-82	70	0.236	0.248	0.49	Yes	0.138	0.150	0.29	Yes	0.774	0.116	0.89	Yes	0.767	0.232	1.00	Yes	1.00	**6.87**
		L_{11} - L_{12}			554.13	-161.56	359	-171	438	-960	-25	14	-110	39	0.718	0.273	1.00	Yes	0.431	0.180	0.62	Yes	0.248	0.114	0.37	Yes	0.246	0.254	0.51	Yes	1.00	**5.40**
		L_{12} - L_{13}			1030.91	-----	85	-89	-193	-953	-23	-39	-142	-51	0.814	0.186	1.00	Yes	0.520	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		L_{13} - L_{14}			1237.28	-----	227	-389	251	-1811	-106	61	-202	74	0.728	0.266	1.00	Yes	0.471	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_{14} - L_{15}			1617.78	-----	-1448	85	-1221	-1502	-22	147	-282	-47	0.790	0.201	1.00	Yes	0.514	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		L_{15} - L_{16}			1581.34	-----	-345	-314	-1020	-1727	50	176	-161	-132	0.773	0.220	1.00	Yes	0.496	0.128	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		L_{16} - L_{17}			1262.68	-----	-798	324	-1203	-765	-37	4	-197	-40	0.798	0.194	1.00	Yes	0.518	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{17} - L_{18}			949.43	-----	-583	304	-685	-516	-27	54	-123	-316	0.827	0.172	1.00	Yes	0.529	0.104	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		L_{18} - L_{19}			400.05	-----	-914	587	-482	-40	-141	-59	-217	518	0.612	0.382	1.00	Yes	0.414	0.242	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		L_{19} - L_{20}			244.01	-39.21	-1449	735	-221	33	902	202	1	0	0.373	0.622	1.00	Yes	0.228	0.411	0.64	Yes	0.071	0.368	0.44	Yes	0.071	0.435	0.51	Yes	1.00	**10.63**
	Structure 2	L_0 - L_1			0.32	-61.75	-174	108	903	-3707	17	59	-414	-1437	0.000	0.990	1.00	Yes	0.000	0.630	0.64	Yes	0.089	0.707	0.8	Yes	0.088	0.754	0.85	Yes	1.00	**22.96**
		L_1 - L_2			551.26	-----	151	-193	550	-1367	80	101	-124	300	0.670	0.328	1.00	Yes	0.398	0.210	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.50**
		L_2 - L_3			997.96	-----	-18	-137	-210	-1319	123	164	-5	10	0.787	0.208	1.00	Yes	0.516	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_3 - L_4			1304.76	-----	57	-325	-536	-1765	44	124	-55	220	0.767	0.224	1.00	Yes	0.516	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		L_4 - L_5			1668.17	-----	-233	-217	-681	-2213	16	-11	-54	-25	0.778	0.213	1.00	Yes	0.515	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		L_5 - L_6			1776.55	-----	-33	-344	-1358	-2497	-93	58	-252	61	0.762	0.237	1.00	Yes	0.512	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		L_6 - L_7			1730.77	-----	-357	-64	-1230	-2944	54	-19	-133	21	0.733	0.267	1.00	Yes	0.487	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_7 - L_8			1405.08	-----	-1469	336	-1089	-1488	-49	196	-336	-87	0.806	0.192	1.00	Yes	0.529	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		L_8 - L_9			1166.71	-----	-773	647	-1176	-842	37	69	-177	-40	0.816	0.175	1.00	Yes	0.550	0.109	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_9 - L_{10}			868.51	-----	-1205	644	-936	-845	41	202	-98	-137	0.775	0.217	1.00	Yes	0.451	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		L_{10} - L_{11}			681.51	-----	-1613	1231	-1019	-876	-79	-5	-266	-152	0.680	0.318	1.00	Yes	0.399	0.200	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.58**
		L_{11} - L_{12}			556.68	-831.00	-1968	2304	-1874	-1897	183	438	-270	-393	0.388	0.355	0.75	Yes	0.258	0.212	0.47	Yes	0.687	0.200	0.89	Yes	0.681	0.314	1.00	Yes	1.00	**21.44**
		L_{12} - L_{13}			-----	-1002.38	-139	164	-1776	-2970	-476	-444	-60	58	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.393	1	Yes	0.600	0.295	0.90	Yes	1.00	**11.09**
		L_{13} - L_{14}			-----	-1247.32	-1691	4207	-476	1312	-63	-31	-202	-273	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.256	0.89	Yes	0.628	0.367	1.00	Yes	1.00	**8.90**
		L_{14} - L_{15}			-----	-1240.89	1438	-361	4277	-3145	275	239	-221	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.237	0.87	Yes	0.624	0.374	1.00	Yes	1.00	**10.34**
		L_{15} - L_{16}			-----	-1226.99	-385	485	-2312	-2119	-50	146	-23	147	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.251	1	Yes	0.734	0.230	0.97	Yes	1.00	**10.83**
		L_{16} - L_{17}			-----	-1091.95	1061	145	1071	-1598	178	49	-115	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.136	0.94	Yes	0.795	0.197	1.00	Yes	1.00	**8.66**
		L_{17} - L_{18}			-----	-777.03	481	205	549	-1126	15	-42	-21	35	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.090	0.92	Yes	0.816	0.180	1.00	Yes	1.00	**6.10**
		L_{18} - L_{19}			89.18	-605.31	608	78	526	-998	-42	-74	-58	-43	0.101	0.204	0.31	Yes	0.058	0.122	0.19	Yes	0.812	0.142	0.96	Yes	0.807	0.193	1.00	Yes	1.00	**5.95**
		L_{19} - L_{20}			596.96	-532.42	503	160	260	-1470	-31	-30	-189	76	0.676	0.313	0.99	Yes	0.400	0.200	0.60	Yes	0.714	0.206	0.93	Yes	0.710	0.284	1.00	Yes	1.00	**7.39**
		L_{20} - L_{21}			923.16	-352.67	369	4	-663	-1696	1	-38	-87	-16	0.736	0.257	1.00	Yes	0.483	0.152	0.64	Yes	0.333	0.212	0.55	Yes	0.331	0.248	0.58	Yes	1.00	**7.06**
		L_{21} - L_{22}			778.82	-88.00	94	-77	38	-2386	-52	58	-219	61	0.621	0.372	1.00	Yes	0.415	0.232	0.65	Yes	0.083	0.261	0.35	Yes	0.083	0.348	0.44	Yes	1.00	**5.89**
		L_{22} - L_{23}			926.07	-----	-1358	204	-1170	-1593	-26	57	-185	107	0.738	0.252	1.00	Yes	0.494	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{23} - L_{24}			943.84	-----	-508	353	-1045	-1519	79	209	-155	-42	0.753	0.244	1.00	Yes	0.494	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		L_{24} - L_{25}			696.45	-----	-613	532	-933	-851	114	84	-157	124	0.789	0.204	1.00	Yes	0.467	0.130	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		L_{25} - L_{26}			639.57	-----	-1088	966	-721	-1231	115	223	-165	-162	0.725	0.272	1.00	Yes	0.418	0.162	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.68**
		L_{26} - L_{27}			706.72	-498.65	-1863	1916	-1765	-2009	148	148	-333	-168	0.631	0.361	1.00	Yes	0.367	0.225	0.60	Yes	0.527	0.193	0.72	Yes	0.524	0.321	0.85	Yes	1.00	**18.39**
		L_{27} - L_{28}			51.84	-963.01	-1599	2382	-1531	-1141	203	441	-119	-458	0.032	0.332	0.37	Yes	0.021	0.197	0.22	Yes	0.707	0.228	0.94	Yes	0.701	0.294	1.00	Yes	1.00	**15.11**
		L_{28} - L_{29}			-----	-1066.57	114	55	-1258	-3353	-67	-194	-105	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.352	1	Yes	0.638	0.333	0.98	Yes	1.00	**11.16**
		L_{29} - L_{30}			-----	-1232.22	-2069	4291	-496	1163	67	178	99	134	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.246	0.88	Yes	0.620	0.375	1.00	Yes	1.00	**9.21**
		L_{30} - L_{31}			-----	-1283.34	1150	-254	4005	-2956	-378	-271	-75	3	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.237	0.89	Yes	0.646	0.350	1.00	Yes	1.00	**10.30**
		L_{31} - L_{32}			-----	-1204.22	-192	317	-821	-1864	-163	-41	56	224	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.269	1	Yes	0.720	0.185	0.91	Yes	1.00	**9.01**
		L_{32} - L_{33}			-----	-993.95	929	80	761	-1302	17	-38	24	155	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.143	0.97	Yes	0.815	0.177	1.00	Yes	1.00	**7.52**
		L_{33} - L_{34}			53.67	-671.34	505	101	684	-1171	-19	11	-26	141	0.054	0.224	0.28	Yes	0.031	0.141	0.18	Yes	0.794	0.084	0.88	Yes	0.789	0.205	1.00	Yes	1.00	**5.82**
		L_{34} - L_{35}			756.44	-684.95	700	-6	262	-1738	-9	-66	-35	-9	0.675	0.286	0.97	Yes	0.393	0.179	0.58	Yes	0.724	0.139	0.87	Yes	0.719	0.278	1.00	Yes	1.00	**8.51**
		L_{35} - L_{36}			1098.53	-309.04	511	-72	-34	-1505	-80	14	-213	139	0.768	0.223	1.00	Yes	0.518	0.139	0.66	Yes	0.256	0.118	0.38	Yes	0.254	0.203	0.46	Yes	1.00	**6.57**
		L_{36} - L_{37}			1257.25	-62.71	340	-51	226	-2463	15	-7	-79	86	0.721	0.279	1.00	Yes	0.474	0.162	0.64	Yes	0.043	0.216	0.26	Yes	0.042	0.272	0.32	Yes	1.00	**6.26**
		L_{37} - L_{38}			1734.55	-----	9	-448	-1074	-2784	-82	46	-199	13	0.734	0.257	1.00	Yes	0.488	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		L_{38} - L_{39}			1804.87	-----	-365	-70	-1874	-2395	-3	-57	-143	-21	0.774	0.221	1.00	Yes	0.520	0.134	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{39} - L_{40}			1648.63	-----	-1142	-79	-1319	-2275	82	197	-151	-181	0.769	0.228	1.00	Yes	0.509	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{40} - L_{41}			1375.69	-----	-1104	368	-1446	-1216	-44	33	-203	-25	0.808	0.185	1.00	Yes	0.544	0.115	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		L_{41} - L_{42}			1045.92	-----	-760	391	-987	-909	33	128	-99	-222	0.824	0.166	1.00	Yes	0.541	0.099	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_{42} - L_{43}			508.23	-----	-1145	619	-976	-341	61	7	-168	883	0.617	0.378	1.00	Yes	0.367	0.238	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		L_{43} - L_{44}			27.95	-67.77	-3099	1051	-53	-65	2035	594	-49	-14	0.034	0.965	1.00	Yes	0.020	0.608	0.63	Yes	0.097	0.667	0.77	Yes	0.097	0.631	0.73	Yes	1.00	**20.93**
	Structure 3	L_0 - L_1			36.38	-159.42	-48	-17	1148	-2232	0	0	-286	-1296	0.056	0.939	1.00	Yes	0.034	0.621	0.66	Yes	0.290	0.577	0.87	Yes	0.287	0.670	0.96	Yes	1.00	**17.36**
		L_1 - L_2			414.24	-----	147	-166	518	-1052	38	58	-11	222	0.634	0.362	1.00	Yes	0.429	0.226	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_2 - L_3			902.37	-----	-24	-137	92	-1021	85	127	14	20	0.786	0.213	1.00	Yes	0.503	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_3 - L_4			1204.85	-----	46	-306	-200	-1422	30	118	-49	219	0.762	0.228	1.00	Yes	0.494	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		L_4 - L_5			1594.27	-----	-264	-124	-727	-1729	26	12	-77	-13	0.779	0.214	1.00	Yes	0.500	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		L_5 - L_6			1443.34	-----	-31	-303	-116	-2273	-64	132	-222	149	0.705	0.290	1.00	Yes	0.458	0.175	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_6 - L_7			1328.54	-----	-1417	532	-856	-1011	59	161	-207	114	0.781	0.212	1.00	Yes	0.506	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_7 - L_8			1055.19	-----	-357	105	-617	-766	63	235	-66	20	0.833	0.163	1.00	Yes	0.533	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_8 - L_9			626.08	-----	-642	446	-458	-311	37	-23	-96	-58	0.811	0.187	1.00	Yes	0.486	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_9 - L_{10}			444.81	-557.20	-23	503	-566	-459	-18	27	-27	71	0.576	0.162	0.74	Yes	0.335	0.098	0.44	Yes	0.857	0.101	0.96	Yes	0.849	0.150	1.00	Yes	1.00	**7.48**
		L_{10} - L_{11}			-----	-931.02	-1474	1286	-818	-1557	383	-145	79	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.086	0.85	Yes	0.749	0.245	1.00	Yes	1.00	**17.43**
		L_{11} - L_{12}			-----	-1199.17	-419	1776	-57	532	-38	-63	-90	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.217	0.99	Yes	0.759	0.235	1.00	Yes	1.00	**8.06**
		L_{12} - L_{13}			-----	-1153.57	891	85	2025	-1009	-317	-257	-169	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.256	1	Yes	0.731	0.268	1.00	Yes	1.00	**9.21**
		L_{13} - L_{14}			-----	-1010.42	125	250	486	-1176	-118	-67	-45	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.085	0.91	Yes	0.813	0.185	1.00	Yes	1.00	**7.94**
		L_{14} - L_{15}			-----	-719.03	556	146	240	-768	47	-48	-80	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.152	1	Yes	0.830	0.170	1.00	Yes	1.00	**6.07**
		L_{15} - L_{16}			226.67	-477.14	437	121	356	-1014	4	-66	-52	139	0.294	0.293	0.59	Yes	0.176	0.193	0.37	Yes	0.734	0.215	0.95	Yes	0.727	0.268	1.00	Yes	1.00	**4.84**
		L_{16} - L_{17}			615.77	-----	-488	58	-65	-1091	62	6	-146	96	0.708	0.287	1.00	Yes	0.421	0.186	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_{17} - L_{18}			624.26	-----	-32	-25	-516	-944	127	310	10	74	0.718	0.278	1.00	Yes	0.416	0.166	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		L_{18} - L_{19}			440.67	-----	-537	223	-436	-775	60	-105	-24	420	0.674	0.323	1.00	Yes	0.411	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_{19} - L_{20}			8.35	-25.17	-2349	1253	52	-151	1280	348	-132	-36	0.013	0.980	1.00	Yes	0.008	0.593	0.61	Yes	0.046	0.629	0.68	Yes	0.045	0.705	0.76	Yes	1.00	**17.65**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 LL Factor: 1.300

				Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
								Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
						Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
						(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$		-----	-346.28	-136	196	-21	45	-430	-138	-97	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.224	1	Yes	0.733	0.251	0.99	Yes	1.00	**1.85**
		$U_1 - L_1$		25.49	-312.69	-263	247	24	-18	156	120	52	23	0.046	0.381	0.43	Yes	0.025	0.210	0.24	Yes	0.683	0.133	0.82	Yes	0.662	0.336	1.00	Yes	1.00	**4.43**
		$U_2 - L_2$		-----	-280.84	-278	314	108	-84	-36	70	-233	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.169	0.79	Yes	0.594	0.402	1.00	Yes	1.00	**5.95**
		$U_3 - L_3$		252.22	-272.54	-307	325	320	-310	209	287	-136	-9	0.454	0.499	0.96	Yes	0.249	0.274	0.53	Yes	0.597	0.156	0.76	Yes	0.577	0.415	1.00	Yes	1.00	**8.22**
		$U_4 - L_4$		24.76	-192.29	-170	139	459	-444	-15	55	117	14	0.045	0.620	0.67	Yes	0.024	0.341	0.37	Yes	0.423	0.161	0.59	Yes	0.407	0.586	1.00	Yes	1.00	**10.39**
		$U_5 - L_5$		-----	-428.06	20	-39	229	-251	-107	-23	-123	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.103	0.88	Yes	0.738	0.255	1.00	Yes	1.00	**3.62**
		$U_6 - L_6$		-----	-516.55	47	-58	266	-287	-85	32	75	67	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.085	0.87	Yes	0.741	0.251	1.00	Yes	1.00	**3.67**
		$U_7 - L_7$		-----	-441.71	118	-131	295	-316	-129	46	-120	58	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.121	0.86	Yes	0.681	0.312	1.00	Yes	1.00	**2.49**
		$U_8 - L_8$		-----	-1291.08	-421	500	445	-527	-188	-41	-261	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.054	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.52**
		$U_9 - L_9$		-----	-659.53	-393	444	-165	189	-245	-191	-224	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.127	0.92	Yes	0.745	0.247	1.00	Yes	1.00	**3.22**
		$U_{10} - L_{10}$		-----	-794.96	-407	416	-116	93	-215	-172	-262	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.109	0.94	Yes	0.784	0.216	1.00	Yes	1.00	**5.71**
		$U_{11} - L_{11}$		-----	-662.08	-387	480	-81	131	-102	23	-176	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.097	0.9	Yes	0.771	0.223	1.00	Yes	1.00	**4.89**
		$U_{12} - L_{12}$		-----	-516.20	-336	333	-40	43	26	144	-174	3	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.104	0.85	Yes	0.708	0.287	1.00	Yes	1.00	**4.43**
		$U_{13} - L_{13}$		-----	-362.79	-249	267	1	12	-56	119	-90	91	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.106	0.84	Yes	0.695	0.305	1.00	Yes	1.00	**3.69**
		$U_{14} - L_{14}$		17.73	-29.42	-678	709	366	-392	122	207	-167	-49	0.032	0.966	1.00	Yes	0.018	0.532	0.55	Yes	0.066	0.274	0.34	Yes	0.062	0.907	0.97	Yes	1.00	**16.20**
		$U_{15} - L_{15}$		222.90	-315.31	-172	169	239	-253	-115	-131	45	-155	0.401	0.368	0.77	Yes	0.220	0.202	0.43	Yes	0.707	0.155	0.87	Yes	0.667	0.323	1.00	Yes	1.00	**5.29**
		$U_{16} - L_{16}$		96.37	-324.14	-52	34	237	-245	-82	-117	-102	-172	0.173	0.363	0.54	Yes	0.095	0.200	0.30	Yes	0.730	0.151	0.89	Yes	0.686	0.313	1.00	Yes	1.00	**4.29**
		$U_{17} - L_{17}$		-----	-441.61	38	-56	212	-230	-117	-172	-128	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.133	0.96	Yes	0.762	0.233	1.00	Yes	1.00	**3.37**
		$U_{18} - L_{18}$		-----	-536.29	124	-129	432	-443	-162	-61	150	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.093	0.88	Yes	0.746	0.251	1.00	Yes	1.00	**3.70**
		$U_{19} - L_{19}$		-----	-651.30	138	-151	498	-512	-66	11	236	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.089	0.91	Yes	0.758	0.237	1.00	Yes	1.00	**4.21**
		$U_{20} - L_{20}$		-----	-587.83	166	-214	403	-483	30	4	713	93	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.223	1	Yes	0.684	0.224	0.91	Yes	1.00	**2.85**
	Structure 2	$U_0 - L_0$		-----	-623.78	-402	513	-114	180	-1042	-177	-261	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.250	1	Yes	0.668	0.218	0.89	Yes	1.00	**3.27**
		$U_1 - L_1$		-----	-720.97	-508	527	-115	123	-419	-46	35	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.132	0.96	Yes	0.773	0.224	1.00	Yes	1.00	**4.66**
		$U_2 - L_2$		-----	-578.10	-500	495	-85	94	-92	57	92	42	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.082	0.86	Yes	0.737	0.256	1.00	Yes	1.00	**4.59**
		$U_3 - L_3$		-----	-489.58	-242	251	-46	53	-40	113	16	126	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.095	0.93	Yes	0.768	0.228	1.00	Yes	1.00	**3.95**
		$U_4 - L_4$		50.52	-338.57	-218	217	19	-3	8	148	-104	60	0.091	0.322	0.42	Yes	0.050	0.177	0.23	Yes	0.768	0.103	0.88	Yes	0.716	0.279	1.00	Yes	1.00	**3.98**
		$U_5 - L_5$		191.65	-320.18	-234	249	131	-123	-112	125	-116	98	0.345	0.355	0.70	Yes	0.190	0.195	0.39	Yes	0.723	0.118	0.85	Yes	0.677	0.319	1.00	Yes	1.00	**5.51**
		$U_6 - L_6$		366.04	-215.62	-232	233	217	-227	-32	136	-135	84	0.658	0.337	1.00	Yes	0.362	0.185	0.55	Yes	0.485	0.094	0.58	Yes	0.456	0.297	0.76	Yes	1.00	**6.38**
		$U_7 - L_7$		54.89	-----	-302	322	572	-658	-121	30	-192	-115	0.099	0.896	1.00	Yes	0.054	0.493	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.39**
		$U_8 - L_8$		-----	-464.88	16	-35	366	-372	-134	-110	-177	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.121	0.8	Yes	0.670	0.325	1.00	Yes	1.00	**4.18**
		$U_9 - L_9$		-----	-695.19	103	-124	566	-585	-133	-102	-185	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.087	0.87	Yes	0.745	0.248	1.00	Yes	1.00	**5.08**
		$U_{10} - L_{10}$		-----	-799.12	104	-139	539	-563	-66	-42	41	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.080	0.87	Yes	0.747	0.249	1.00	Yes	1.00	**5.40**
		$U_{11} - L_{11}$		-----	-821.87	166	-171	503	-517	-66	-81	-102	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.078	0.91	Yes	0.768	0.228	1.00	Yes	1.00	**4.95**
		$U_{12} - L_{12}$		-----	-885.18	170	-154	520	-530	-15	109	27	67	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.078	0.93	Yes	0.767	0.227	1.00	Yes	1.00	**4.90**
		$U_{13} - L_{13}$		-----	-743.92	244	-243	571	-559	-83	44	69	78	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.110	0.94	Yes	0.717	0.273	1.00	Yes	1.00	**3.67**
		$U_{14} - L_{14}$		-----	-1301.33	-612	568	661	-632	-106	137	-61	11	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.044	1	Yes	0.863	0.117	0.98	Yes	1.00	**6.57**
		$U_{15} - L_{15}$		-----	-717.87	-635	615	-165	167	-145	-96	-81	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.142	0.95	Yes	0.692	0.304	1.00	Yes	1.00	**4.85**
		$U_{16} - L_{16}$		-----	-724.17	-514	507	-129	103	-271	-142	-167	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.110	0.95	Yes	0.776	0.218	1.00	Yes	1.00	**4.58**
		$U_{17} - L_{17}$		-----	-631.86	-553	542	-130	126	-128	-40	-99	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.087	0.87	Yes	0.735	0.257	1.00	Yes	1.00	**4.76**
		$U_{18} - L_{18}$		-----	-579.22	-497	509	-91	99	-117	-4	-161	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.089	0.87	Yes	0.738	0.261	1.00	Yes	1.00	**4.44**
		$U_{19} - L_{19}$		-----	-477.44	-296	288	-32	40	-41	52	-160	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.094	0.82	Yes	0.713	0.285	1.00	Yes	1.00	**4.05**
		$U_{20} - L_{20}$		27.37	-372.60	-243	245	10	-4	-122	39	-157	16	0.045	0.321	0.37	Yes	0.025	0.176	0.21	Yes	0.764	0.111	0.88	Yes	0.714	0.280	1.00	Yes	1.00	**4.17**
		$U_{21} - L_{21}$		75.54	-319.26	-239	248	53	-47	-123	55	-142	26	0.136	0.358	0.50	Yes	0.075	0.197	0.28	Yes	0.721	0.122	0.85	Yes	0.676	0.317	1.00	Yes	1.00	**4.32**
		$U_{22} - L_{22}$		122.58	-----	-522	550	433	-475	-36	37	-242	-88	0.220	0.773	1.00	Yes	0.121	0.425	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.47**
		$U_{23} - L_{23}$		148.83	-322.24	-103	96	238	-247	-96	-45	-108	-109	0.268	0.347	0.62	Yes	0.147	0.191	0.34	Yes	0.728	0.125	0.86	Yes	0.682	0.315	1.00	Yes	1.00	**4.77**
		$U_{24} - L_{24}$		35.02	-378.79	-33	19	226	-235	-48	-25	-103	-89	0.057	0.295	0.36	Yes	0.031	0.162	0.20	Yes	0.777	0.105	0.89	Yes	0.726	0.268	1.00	Yes	1.00	**4.06**
		$U_{25} - L_{25}$		-----	-476.45	22	-35	299	-297	-82	-29	10	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.081	0.8	Yes	0.711	0.288	1.00	Yes	1.00	**3.96**
		$U_{26} - L_{26}$		-----	-567.10	76	-106	495	-525	-73	32	-116	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.087	0.85	Yes	0.723	0.268	1.00	Yes	1.00	**4.35**
		$U_{27} - L_{27}$		-----	-635.01	147	-148	544	-552	-148	1	-106	5	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.083	0.87	Yes	0.739	0.256	1.00	Yes	1.00	**4.23**
		$U_{28} - L_{28}$		-----	-711.16	145	-132	552	-552	-51	42	129	88	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.074	0.9	Yes	0.762	0.234	1.00	Yes	1.00	**4.33**
		$U_{29} - L_{29}$		-----	-712.13	206	-211	635	-624	-113	26	-68	49	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.120	0.92	Yes	0.687	0.304	1.00	Yes	1.00	**4.51**
		$U_{30} - L_{30}$		-----	-1287.19	-590	526	596	-594	-148	74	-20	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.941	0.053	1	Yes	0.854	0.105	0.96	Yes	1.00	**6.27**
		$U_{31} - L_{31}$		-----	-758.48	-547	536	-183	179	-174	-90	-120	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.138	0.99	Yes	0.731	0.262	1.00	Yes	1.00	**4.26**
		$U_{32} - L_{32}$		-----	-884.29	-528	513	-128	102	-264	-122	-185	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.127	0.98	Yes	0.766	0.227	1.00	Yes	1.00	**5.77**
		$U_{33} - L_{33}$		-----	-830.15	-500	499	-162	144	-121	2	-136	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.082	0.92	Yes	0.776	0.221	1.00	Yes	1.00	**5.37**
		$U_{34} - L_{34}$		-----	-808.86	-538	549	-96	117	38	134	-206	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.088	0.89	Yes	0.756	0.242	1.00	Yes	1.00	**6.03**
		$U_{35} - L_{35}$		-----	-693.68	-588	587	-84	109	-101	115	-188	57	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.074	0.85	Yes	0.743	0.249	1.00	Yes	1.00	**5.70**
		$U_{36} - L_{36}$		-----	-471.13	-360	365	-35	52	-76	108	-142	70	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.095	0.78	Yes	0.679	0.320	1.00	Yes	1.00	**4.14**
		$U_{37} - L_{37}$		52.22	-----	-599	668	231	-254	-71	95	-177	-37	0.094	0.905	1.00	Yes	0.052	0.498	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.06**
		$U_{38} - L_{38}$		359.02	-138.65	-234	242	138	-139	-100	-104	-37	-137	0.646	0.349	1.00	Yes	0.355	0.192	0.55	Yes	0.312	0.120	0.44	Yes	0.293	0.309	0.61	Yes	1.00	**5.02**
		$U_{39} - L_{39}$		209.93	-331.82	-183	163	210	-231	-79	-55	-106	-150	0.378	0.339	0.72	Yes	0.208	0.186	0.40	Yes	0.750	0.155	0.91	Yes	0.702	0.295	1.00	Yes	1.00	**5.46**
		$U_{40} - L_{40}$		96.71	-339.47	-51	30	216	-218	-92	-74	-8	-87	0.174	0.305	0.48	Yes	0.096	0.168	0.27	Yes	0.770	0.113	0.89	Yes	0.718	0.278	1.00	Yes	1.00	**4.18**
		$U_{41} - L_{41}$		-----	-484.73	46	-53	241	-255	-105	-44	-78	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.100	0.93	Yes	0.760	0.232	1.00	Yes	1.00	**4.06**
		$U_{42} - L_{42}$		-----	-585.99	107	-117	482	-491	-85	-48	51	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.079	0.87	Yes	0.747	0.251	1.00	Yes	1.00	**4.25**
		$U_{43} - L_{43}$		-----	-710.32	141	-158	537	-557	-36	-14	511	44	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.136	0.95	Yes	0.761	0.236	1.00	Yes	1.00	**4.35**
		$U_{44} - L_{44}$		-----	-680.64	194	-240	469	-587	-29	-5	496	84	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.179	1	Yes	0.729	0.249	0.98	Yes	1.00	**3.44**
	Structure 3	$U_0 - L_0$		-----	-556.46	-338	417	-107	171	-969	-127	-250	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.257	1	Yes	0.648	0.194	0.85	Yes	1.00	**2.55**
		$U_1 - L_1$		-----	-658.51	-491	497	-112	119	-165	10	1	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.091	0.92	Yes	0.766	0.231	1.00	Yes	1.00	**4.52**
		$U_2 - L_2$		-----	-549.98	-391	408	-94	100	-144	47	82	30	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.087	0.9	Yes	0.765	0.231	1.00	Yes	1.00	**3.90**
		$U_3 - L_3$		-----	-438.61	-223	234	-34	45	-45	139	-1	119	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.105	0.93	Yes	0.757	0.237	1.00	Yes	1.00	**3.87**
		$U_4 - L_4$		66.79	-326.31	-235	240	30	-19	-128	148	-168	79	0.120	0.355	0.48	Yes	0.066	0.195	0.27	Yes	0.735	0.099	0.84	Yes	0.690	0.306	1.00	Yes	1.00	**4.21**
		$U_5 - L_5$		198.06	-314.94	-246	261	131	-129	-30	148	-157	66	0.356	0.379	0.74	Yes	0.196	0.208	0.41	Yes	0.706	0.129	0.84	Yes	0.666	0.333	1.00	Yes	1.00	**5.23**
		$U_6 - L_6$		100.79	-84.50	-419	431	529	-572	-109	111	-281	-102	0.181	0.812	1.00	Yes	0.100	0.447	0.55	Yes	0.189	0.252	0.45	Yes	0.179	0.731	0.91	Yes	1.00	**14.73**
		$U_7 - L_7$		-----	-368.51	-26	10	238	-256	-155	-110	-197	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.149	0.9	Yes	0.706	0.292	1.00	Yes	1.00	**3.57**
		$U_8 - L_8$		-----	-515.03	16	-19	335	-337	-155	-132	-59	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.112	0.86	Yes	0.707	0.288	1.00	Yes	1.00	**4.47**
		$U_9 - L_9$		-----	-659.66	53	-113	381	-488	-102	-21	-174	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.102	0.9	Yes	0.768	0.226	1.00	Yes	1.00	**4.90**
		$U_{10} - L_{10}$		-----	-788.35	85	-99	388	-425	-20	4	-54	39	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.070	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.18**
		$U_{11} - L_{11}$		-----	-649.51	182	-211	422	-476	-50	62	68	120	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.101	0.88	Yes	0.734	0.265	1.00	Yes	1.00	**3.17**
		$U_{12} - L_{12}$		-----	-1290.13	-483	523	427	-561	-47	41	33	31	-----	-----	-----	-----	-----	-----	-----	-----	0.931	0.042	0.98	Yes	0.894	0.104	1.00	Yes	1.00	**5.72**
		$U_{13} - L_{13}$		-----	-450.10	-287	303	-105	115	-148	-109	-113	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.138	0.9	Yes	0.694	0.298	1.00	Yes	1.00	**2.75**
		$U_{14} - L_{14}$		-----	-534.93	-245	264	-50	48	-258	-152	-205	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.128	0.94	Yes	0.767	0.231	1.00	Yes	1.00	**3.81**
		$U_{15} - L_{15}$		-----	-441.25	-205	230	-28	36	-31	30	-167	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.108	0.91	Yes	0.761	0.233	1.00	Yes	1.00	**3.70**
		$U_{16} - L_{16}$		8.32	-25.47	-686	661	176	-158	22	211	-364	-214	0.015	0.983	1.00	Yes	0.008	0.540	0.55	Yes	0.056	0.285	0.35	Yes	0.054	0.877	0.94	Yes	1.00	**14.00**
		$U_{17} - L_{17}$		265.19	-253.58	-357	354	230	-252	-38	-13	-70	-178	0.477	0.508	0.99	Yes	0.262	0.279	0.55	Yes	0.556	0.156	0.72	Yes	0.537	0.456	1.00	Yes	1.00	**7.25**
		$U_{18} - L_{18}$		98.21	-294.21	-130	132	253	-293	-31	-20	-77	-117	0.177	0.408	0.59	Yes	0.097	0.224	0.33	Yes	0.643	0.143	0.79	Yes	0.623	0.374	1.00	Yes	1.00	**5.76**
		$U_{19} - L_{19}$		13.36	-325.28	-28	16	234	-239	-165	-86	101	-16	0.024	0.353	0.38	Yes	0.013	0.194	0.21	Yes	0.711	0.133	0.85	Yes	0.688	0.305	1.00	Yes	1.00	**3.90**
		$U_{20} - L_{20}$		-----	-333.94	47	-54	176	-229	-175	-56	220	71	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.164	0.91	Yes	0.707	0.292	1.00	Yes	1.00	**1.98**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	380.24	-47.20	-212	102	10	-11	-996	-176	-40	-13	0.499	0.499	1.00	Yes	0.301	0.275	0.58	Yes	0.081	0.348	0.43	Yes	0.073	0.248	0.33	Yes	1.00	**5.87**
		$U_1 - L_2$	368.10	-----	-73	42	-26	-45	0	-128	-834	-401	0.662	0.334	1.00	Yes	0.364	0.184	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		$U_2 - L_3$	275.07	-327.60	-53	35	-39	-87	-124	-324	-386	-197	0.495	0.223	0.72	Yes	0.272	0.123	0.40	Yes	0.754	0.245	1	Yes	0.693	0.111	0.81	Yes	1.00	**6.69**
		$U_3 - L_4$	-----	-381.79	0	-10	13	-64	-177	-154	-216	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.125	1	Yes	0.808	0.082	0.89	Yes	1.00	**3.58**
		$U_4 - L_4$	554.08	-----	-62	83	-140	-35	-37	-172	-131	-183	0.813	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		$U_5 - L_5$	715.03	-----	-186	225	-8	31	60	-71	95	62	0.845	0.145	1.00	Yes	0.465	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_6 - L_6$	655.50	-----	-276	242	-77	85	349	153	294	169	0.775	0.221	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_7 - L_7$	650.77	-----	-109	305	-8	115	311	210	241	173	0.769	0.230	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		$U_8 - L_8$	995.63	-----	-104	366	-2	135	261	218	95	110	0.796	0.196	1.00	Yes	0.493	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		$U_9 - L_{10}$	1030.73	-----	-296	275	-156	83	216	177	331	246	0.824	0.174	1.00	Yes	0.510	0.098	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.35**
		$U_{10} - L_{11}$	1029.21	-----	-238	203	-103	23	-91	-151	-106	-91	0.869	0.130	1.00	Yes	0.538	0.072	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{11} - L_{12}$	837.52	-----	-239	147	-104	-41	-353	-360	-302	-236	0.829	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{12} - L_{13}$	628.86	-----	-186	173	-54	-8	-360	-339	-270	-282	0.767	0.232	1.00	Yes	0.482	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{13} - L_{14}$	443.14	-46.10	-77	53	-12	-35	-296	-334	-287	-314	0.797	0.195	1.00	Yes	0.438	0.107	0.55	Yes	0.107	0.158	0.27	Yes	0.098	0.098	0.20	Yes	1.00	**3.79**
		$U_{15} - L_{14}$	211.37	-337.32	-47	9	58	-102	-192	-318	-228	-301	0.380	0.223	0.61	Yes	0.209	0.122	0.34	Yes	0.790	0.207	1	Yes	0.714	0.131	0.85	Yes	1.00	**4.40**
		$U_{16} - L_{15}$	423.64	-184.86	-124	94	31	-65	-227	-263	-172	-176	0.762	0.235	1.00	Yes	0.419	0.129	0.55	Yes	0.438	0.173	0.62	Yes	0.391	0.158	0.55	Yes	1.00	**5.01**
		$U_{17} - L_{16}$	538.71	-----	-148	106	-12	-23	-145	-219	-128	-134	0.790	0.201	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_{18} - L_{17}$	648.62	-----	-334	261	-113	54	-171	-167	-232	-78	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		$U_{19} - L_{18}$	727.58	-----	-353	264	-93	65	-49	-151	-147	-14	0.788	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{20} - L_{19}$	700.54	-----	-377	319	-127	106	-264	-188	1	34	0.759	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
	Structure 2	$U_0 - L_1$	715.10	-----	-377	346	-69	79	-750	-232	-122	48	0.707	0.287	1.00	Yes	0.389	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_1 - L_2$	791.83	-----	-405	304	-89	60	-60	-158	40	10	0.783	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_2 - L_3$	654.72	-----	-315	274	-65	49	-203	-232	-76	-178	0.774	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_3 - L_4$	576.07	-----	-170	139	-41	-6	-338	-305	-323	-217	0.768	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_4 - L_5$	411.99	-142.18	-121	90	16	-46	-335	-252	-220	-217	0.741	0.252	1.00	Yes	0.408	0.139	0.55	Yes	0.351	0.196	0.55	Yes	0.301	0.155	0.46	Yes	1.00	**4.32**
		$U_5 - L_6$	347.36	-312.23	-94	69	65	-108	-404	-299	-370	-246	0.625	0.255	0.88	Yes	0.344	0.140	0.49	Yes	0.737	0.256	1	Yes	0.661	0.138	0.80	Yes	1.00	**5.33**
		$U_6 - L_7$	38.19	-375.50	-21	-5	56	-94	-298	-259	-288	-253	0.062	0.185	0.25	Yes	0.034	0.102	0.14	Yes	0.804	0.190	1	Yes	0.719	0.108	0.83	Yes	1.00	**3.24**
		$U_8 - L_7$	620.52	-60.08	-169	165	5	-45	-139	-277	-151	-245	0.791	0.207	1.00	Yes	0.498	0.117	0.62	Yes	0.100	0.095	0.2	Yes	0.090	0.151	0.25	Yes	1.00	**5.70**
		$U_8 - L_8$	736.72	-----	-327	266	-84	0	-85	-187	-116	-153	0.798	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		$U_{10} - L_9$	834.63	-----	-309	240	-98	39	-59	-147	-81	-64	0.826	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{11} - L_{10}$	913.79	-----	-353	299	-107	81	114	-34	92	32	0.832	0.165	1.00	Yes	0.458	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		$U_{12} - L_{11}$	885.56	-----	-369	347	-112	126	158	65	199	133	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_{13} - L_{12}$	742.64	-----	-424	370	-199	168	281	130	444	224	0.735	0.263	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_{14} - L_{13}$	759.49	-----	-274	434	-67	177	289	136	231	137	0.751	0.245	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{14} - L_{15}$	648.01	-----	-226	364	-3	104	152	81	53	38	0.766	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{15} - L_{16}$	647.05	-----	-373	343	-111	104	121	91	61	69	0.765	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_{16} - L_{17}$	748.78	-----	-350	348	-75	99	13	-6	11	6	0.811	0.181	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{17} - L_{18}$	684.03	-----	-294	302	-78	74	-77	-70	-19	-23	0.809	0.185	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		$U_{18} - L_{19}$	680.75	-----	-275	260	-53	30	-151	-147	-163	-110	0.805	0.185	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{19} - L_{20}$	607.68	-41.58	-189	199	-16	-14	-229	-204	-146	-151	0.775	0.224	1.00	Yes	0.426	0.126	0.56	Yes	0.069	0.100	0.17	Yes	0.062	0.178	0.24	Yes	1.00	**5.34**
		$U_{20} - L_{21}$	436.97	-68.49	-113	111	-1	-22	-208	-180	-220	-153	0.786	0.208	1.00	Yes	0.432	0.115	0.55	Yes	0.163	0.104	0.27	Yes	0.145	0.145	0.29	Yes	1.00	**4.22**
		$U_{21} - L_{22}$	430.61	-343.30	-89	78	39	-86	-253	-273	-286	-262	0.774	0.197	0.98	Yes	0.426	0.108	0.54	Yes	0.811	0.183	1	Yes	0.726	0.114	0.85	Yes	1.00	**6.33**
		$U_{23} - L_{22}$	396.12	-354.91	-88	73	77	-103	-79	-240	-110	-218	0.712	0.201	0.92	Yes	0.392	0.111	0.51	Yes	0.845	0.146	1	Yes	0.751	0.132	0.89	Yes	1.00	**6.87**
		$U_{24} - L_{23}$	448.24	-133.78	-119	109	26	-44	-30	-125	-61	-85	0.806	0.188	1.00	Yes	0.443	0.104	0.55	Yes	0.320	0.056	0.38	Yes	0.283	0.152	0.44	Yes	1.00	**4.82**
		$U_{25} - L_{24}$	625.68	-31.10	-198	180	-2	-23	10	-96	-66	-55	0.798	0.197	1.00	Yes	0.439	0.110	0.55	Yes	0.052	0.056	0.11	Yes	0.047	0.177	0.23	Yes	1.00	**5.03**
		$U_{26} - L_{25}$	686.36	-----	-284	264	-25	19	110	-25	62	20	0.811	0.181	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{27} - L_{26}$	672.73	-----	-301	287	-66	65	146	33	128	70	0.795	0.197	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{28} - L_{27}$	718.05	-----	-343	353	-85	106	195	80	187	111	0.778	0.212	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{29} - L_{28}$	632.05	-----	-357	332	-125	119	269	115	218	111	0.747	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_{30} - L_{29}$	631.90	-----	-219	363	-38	128	208	91	178	102	0.747	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{30} - L_{31}$	773.25	-----	-283	452	-26	133	125	69	63	38	0.765	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{31} - L_{32}$	785.80	-----	-450	383	-131	131	55	38	36	47	0.777	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_{32} - L_{33}$	908.08	-----	-359	357	-103	115	-113	-97	15	-21	0.827	0.168	1.00	Yes	0.455	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{33} - L_{34}$	895.10	-----	-336	300	-121	70	-295	-250	-262	-161	0.815	0.183	1.00	Yes	0.448	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		$U_{34} - L_{35}$	825.48	-----	-284	250	-95	33	-317	-312	-202	-242	0.817	0.179	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{35} - L_{36}$	712.08	-----	-301	263	-111	17	-369	-303	-398	-281	0.771	0.219	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_{36} - L_{37}$	600.62	-58.97	-162	172	-21	-31	-348	-369	-349	-336	0.766	0.229	1.00	Yes	0.482	0.130	0.62	Yes	0.097	0.130	0.23	Yes	0.088	0.154	0.25	Yes	1.00	**5.29**
		$U_{38} - L_{37}$	21.91	-390.72	-16	-9	79	-103	-123	-225	-130	-219	0.036	0.176	0.22	Yes	0.020	0.097	0.12	Yes	0.844	0.147	1	Yes	0.749	0.118	0.87	Yes	1.00	**3.48**
		$U_{39} - L_{38}$	287.17	-346.72	-81	52	92	-120	-161	-224	-140	-183	0.516	0.219	0.74	Yes	0.284	0.120	0.41	Yes	0.826	0.173	1	Yes	0.734	0.154	0.89	Yes	1.00	**5.08**
		$U_{40} - L_{39}$	431.91	-196.49	-127	93	37	-67	-124	-184	-136	-108	0.777	0.215	1.00	Yes	0.427	0.118	0.55	Yes	0.470	0.141	0.62	Yes	0.416	0.162	0.58	Yes	1.00	**4.89**
		$U_{41} - L_{40}$	602.81	-----	-180	136	-20	-17	-61	-141	-70	-59	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_{42} - L_{41}$	664.00	-----	-339	274	-75	50	-94	-87	0	-4	0.785	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		$U_{43} - L_{42}$	797.68	-----	-397	314	-96	65	-103	-152	-5	-28	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{44} - L_{43}$	762.32	-----	-404	372	-139	122	-340	-199	34	6	0.754	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
	Structure 3	$U_0 - L_1$	568.85	-----	-403	304	-70	72	-1046	-34	-131	45	0.616	0.378	1.00	Yes	0.339	0.208	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_1 - L_2$	724.03	-----	-360	267	-91	56	-66	-149	38	14	0.784	0.209	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_2 - L_3$	653.65	-----	-318	253	-78	48	-225	-242	-72	-168	0.773	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_3 - L_4$	528.68	-----	-138	111	-24	-20	-327	-318	-336	-235	0.775	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_4 - L_5$	404.17	-199.99	-116	94	15	-56	-406	-306	-349	-239	0.727	0.265	1.00	Yes	0.400	0.146	0.55	Yes	0.474	0.220	0.7	Yes	0.423	0.148	0.58	Yes	1.00	**4.65**
		$U_5 - L_6$	230.79	-317.10	-44	16	42	-94	-380	-361	-296	-312	0.415	0.230	0.65	Yes	0.228	0.126	0.36	Yes	0.743	0.251	1	Yes	0.671	0.120	0.80	Yes	1.00	**4.31**
		$U_7 - L_6$	451.70	-89.28	-81	50	12	-43	-101	-275	-132	-262	0.812	0.183	1.00	Yes	0.447	0.101	0.55	Yes	0.207	0.119	0.33	Yes	0.189	0.104	0.30	Yes	1.00	**4.28**
		$U_8 - L_7$	643.32	-1.34	-189	155	-41	-15	-156	-223	-198	-164	0.784	0.209	1.00	Yes	0.493	0.118	0.62	Yes	0.002	0.098	0.1	Yes	0.002	0.166	0.17	Yes	1.00	**4.43**
		$U_8 - L_9$	854.97	-----	-259	135	-110	-46	-12	-176	-183	-139	0.846	0.148	1.00	Yes	0.465	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{10} - L_9$	1021.93	-----	-248	189	-70	23	153	-14	111	62	0.863	0.135	1.00	Yes	0.534	0.075	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_{11} - L_{10}$	965.04	-----	-294	241	-101	80	411	246	703	458	0.771	0.220	1.00	Yes	0.478	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{12} - L_{11}$	982.35	-----	-104	361	-14	141	420	274	280	210	0.785	0.215	1.00	Yes	0.486	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{13} - L_{12}$	665.17	-----	-107	312	-3	106	191	136	113	91	0.786	0.213	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_{13} - L_{14}$	682.19	-----	-288	245	-70	76	137	95	97	122	0.807	0.189	1.00	Yes	0.444	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{14} - L_{15}$	696.35	-----	-164	244	-17	23	-107	-175	63	-10	0.823	0.171	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{15} - L_{16}$	575.05	-27.21	-66	82	-28	-25	-247	-278	-188	-151	0.843	0.148	1.00	Yes	0.464	0.081	0.55	Yes	0.051	0.103	0.16	Yes	0.047	0.083	0.14	Yes	1.00	**5.13**
		$U_{17} - L_{16}$	7.94	-334.24	-1	-4	-94	-119	-8	-127	-424	-378	0.014	0.274	0.29	Yes	0.008	0.151	0.16	Yes	0.764	0.235	1	Yes	0.707	0.152	0.86	Yes	1.00	**8.63**
		$U_{18} - L_{17}$	200.64	-353.35	-44	26	-53	-81	-2	-211	-390	-128	0.361	0.217	0.58	Yes	0.198	0.119	0.32	Yes	0.813	0.177	1	Yes	0.748	0.104	0.86	Yes	1.00	**5.93**
		$U_{19} - L_{18}$	468.44	-64.29	-89	41	24	-47	84	-127	91	-52	0.843	0.151	1.00	Yes	0.463	0.083	0.55	Yes	0.147	0.076	0.23	Yes	0.136	0.114	0.25	Yes	1.00	**6.72**
		$U_{20} - L_{19}$	223.94	-91.06	-296	168	-12	-6	-1393	-2	46	-14	0.294	0.697	1.00	Yes	0.177	0.384	0.57	Yes	0.156	0.440	0.6	Yes	0.141	0.346	0.49	Yes	1.00	**9.48**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$			6.37	-545.54	-97	54	339	-1095	-45	104	-90	-818	0.007	0.398	0.41	Yes	0.005	0.273	0.28	Yes	0.742	0.210	0.96	Yes	0.736	0.260	1.00	Yes	1.00	**6.37**
		$U_1 - U_2$			13.16	-529.70	-106	79	-299	-763	-153	115	-134	-460	0.015	0.259	0.28	Yes	0.010	0.177	0.19	Yes	0.721	0.274	1	Yes	0.714	0.181	0.90	Yes	1.00	**3.60**
		$U_2 - U_3$			155.54	-560.56	-99	284	-523	-468	-115	111	-160	-559	0.178	0.219	0.40	Yes	0.120	0.144	0.27	Yes	0.763	0.227	1	Yes	0.756	0.124	0.89	Yes	1.00	**4.20**
		$U_3 - U_4$			511.35	-578.44	157	426	-328	-772	-223	-3	-415	-319	0.586	0.254	0.84	Yes	0.402	0.174	0.58	Yes	0.787	0.206	1	Yes	0.780	0.184	0.97	Yes	1.00	**6.92**
		$U_4 - U_5$			564.90	-598.44	234	448	-514	-534	-84	0	-538	490	0.647	0.218	0.87	Yes	0.444	0.149	0.60	Yes	0.814	0.185	1	Yes	0.807	0.127	0.94	Yes	1.00	**7.65**
		$U_5 - U_6$			723.72	-80.20	297	514	-284	41	103	148	-218	260	0.830	0.166	1.00	Yes	0.560	0.109	0.67	Yes	0.109	0.146	0.26	Yes	0.108	0.122	0.24	Yes	1.00	**6.93**
		$U_6 - U_7$			854.41	-----	395	217	204	-244	316	267	-127	678	0.817	0.177	1.00	Yes	0.571	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		$U_7 - U_8$			815.31	-----	-797	2165	138	593	367	685	975	842	0.565	0.427	1.00	Yes	0.394	0.292	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		$U_8 - U_9$			808.58	-----	1038	-126	1622	-1030	248	486	195	-502	0.663	0.334	1.00	Yes	0.453	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_9 - U_{10}$			629.99	-357.88	243	254	174	-893	-5	305	-117	-706	0.683	0.313	1.00	Yes	0.463	0.210	0.68	Yes	0.461	0.171	0.64	Yes	0.457	0.200	0.66	Yes	1.00	**8.44**
		$U_{10} - U_{11}$			68.93	-620.47	250	-173	132	-922	46	107	-74	-544	0.075	0.294	0.37	Yes	0.050	0.190	0.24	Yes	0.799	0.189	0.99	Yes	0.792	0.206	1.00	Yes	1.00	**4.29**
		$U_{11} - U_{12}$			-----	-902.13	154	-208	-52	-810	12	102	162	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.140	1	Yes	0.846	0.134	0.99	Yes	1.00	**3.21**
		$U_{12} - U_{13}$			-----	-1233.77	-52	-269	-235	-838	81	6	-118	-510	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.159	1	Yes	0.824	0.116	0.94	Yes	1.00	**3.62**
		$U_{13} - U_{14}$			-----	-1367.00	-196	-506	-451	-1507	-43	-9	-225	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.206	1	Yes	0.784	0.166	0.95	Yes	1.00	**3.43**
		$U_{14} - U_{15}$			-----	-1411.46	-389	-282	-1081	-931	43	-273	-287	100	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1	Yes	0.809	0.119	0.93	Yes	1.00	**4.15**
		$U_{15} - U_{16}$			-----	-1402.10	-252	-424	-471	-1153	-28	-235	-403	88	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.804	0.127	0.94	Yes	1.00	**4.65**
		$U_{16} - U_{17}$			-----	-1411.07	-375	-191	-920	-855	-10	-228	-189	332	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1	Yes	0.809	0.102	0.92	Yes	1.00	**5.31**
		$U_{17} - U_{18}$			-----	-1109.59	-686	108	-572	-264	-31	-222	-411	579	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.120	1	Yes	0.868	0.112	0.98	Yes	1.00	**5.11**
		$U_{18} - U_{19}$			-----	-731.37	-680	121	-403	-55	186	-298	643	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.164	1	Yes	0.823	0.137	0.96	Yes	1.00	**5.34**
		$U_{19} - U_{20}$			-----	-682.32	-1050	499	-351	-193	-260	-126	373	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.218	1	Yes	0.768	0.211	0.98	Yes	1.00	**12.71**
	Structure 2	$U_0 - U_1$			-----	-589.57	274	-311	1158	-1777	77	47	174	-709	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.155	0.86	Yes	0.696	0.302	1.00	Yes	1.00	**8.51**
		$U_1 - U_2$			-----	-803.36	-150	-324	-203	-1127	-17	18	-45	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.210	1	Yes	0.775	0.171	0.95	Yes	1.00	**4.10**
		$U_2 - U_3$			-----	-1126.21	-130	-435	-204	-1456	-33	-63	-97	-660	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.188	1	Yes	0.799	0.148	0.95	Yes	1.00	**3.89**
		$U_3 - U_4$			-----	-1337.70	-534	-549	-1017	-1607	-114	-41	-61	-471	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.223	1	Yes	0.762	0.143	0.91	Yes	1.00	**3.40**
		$U_4 - U_5$			-----	-1468.57	-586	-564	-994	-1809	-120	-89	-312	-687	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.238	1	Yes	0.754	0.150	0.91	Yes	1.00	**3.59**
		$U_5 - U_6$			-----	-1546.29	-579	-20	-1303	-1338	-194	-51	-491	-692	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1	Yes	0.794	0.111	0.91	Yes	1.00	**4.00**
		$U_6 - U_7$			-----	-1365.95	-326	-214	-1195	-1433	-169	-97	-175	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.214	1	Yes	0.778	0.128	0.91	Yes	1.00	**4.05**
		$U_7 - U_8$			-----	-1368.12	-307	-147	-939	-1316	-72	-166	-514	116	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1	Yes	0.779	0.117	0.90	Yes	1.00	**5.23**
		$U_8 - U_9$			26.52	-1196.78	-298	292	-1152	-850	2	-167	-665	338	0.015	0.178	0.20	Yes	0.011	0.118	0.13	Yes	0.818	0.174	1	Yes	0.812	0.122	0.94	Yes	1.00	**6.12**
		$U_9 - U_{10}$			431.14	-914.93	-3	634	-1228	-495	-106	-192	-812	70	0.316	0.238	0.56	Yes	0.214	0.160	0.38	Yes	0.794	0.196	1	Yes	0.790	0.149	0.94	Yes	1.00	**7.59**
		$U_{10} - U_{11}$			874.59	-635.81	367	640	-970	-499	-162	-80	-993	343	0.739	0.258	1.00	Yes	0.503	0.171	0.68	Yes	0.636	0.305	0.95	Yes	0.632	0.137	0.77	Yes	1.00	**9.23**
		$U_{11} - U_{12}$			-----	-535.22	-2903	1852	-1059	-1240	-881	-1369	-1374	2441	-----	-----	-----	-----	-----	-----	-----	-----	0.535	0.459	1	Yes	0.532	0.410	0.95	Yes	1.00	**36.64**
		$U_{12} - U_{13}$			1051.24	-----	685	296	-214	-1279	662	879	-1055	1294	0.710	0.284	1.00	Yes	0.506	0.196	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.66**
		$U_{13} - U_{14}$			1144.31	-----	-1175	3893	-97	1505	506	1033	708	1024	0.563	0.431	1.00	Yes	0.398	0.283	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.42**
		$U_{14} - U_{15}$			1255.13	-----	2359	-59	3636	-1623	525	646	594	-227	0.617	0.381	1.00	Yes	0.437	0.250	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		$U_{15} - U_{16}$			1320.59	-----	142	405	-564	-1352	174	416	254	-565	0.798	0.201	1.00	Yes	0.568	0.136	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.89**
		$U_{16} - U_{17}$			1014.55	-----	649	197	571	-1253	-29	305	-264	-863	0.748	0.248	1.00	Yes	0.497	0.163	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		$U_{17} - U_{18}$			717.32	-275.64	471	240	233	-1169	-58	277	-124	-529	0.720	0.276	1.00	Yes	0.479	0.183	0.67	Yes	0.328	0.218	0.55	Yes	0.326	0.198	0.53	Yes	1.00	**6.20**
		$U_{18} - U_{19}$			533.71	-670.82	559	139	-27	-1148	4	150	149	-805	0.536	0.313	0.85	Yes	0.351	0.201	0.56	Yes	0.797	0.201	1	Yes	0.792	0.195	0.99	Yes	1.00	**6.71**
		$U_{19} - U_{20}$			222.47	-724.82	259	95	-150	-1063	-55	129	-192	-396	0.209	0.224	0.44	Yes	0.138	0.147	0.29	Yes	0.805	0.195	1	Yes	0.800	0.170	0.97	Yes	1.00	**4.88**
		$U_{20} - U_{21}$			72.22	-832.89	-63	45	-400	-977	-77	-11	-175	-653	0.056	0.213	0.27	Yes	0.039	0.140	0.18	Yes	0.766	0.230	1	Yes	0.760	0.141	0.91	Yes	1.00	**4.66**
		$U_{21} - U_{22}$			70.87	-814.31	-79	-35	-665	-1185	-184	-99	-107	-211	0.055	0.195	0.25	Yes	0.039	0.130	0.17	Yes	0.749	0.247	1	Yes	0.743	0.172	0.92	Yes	1.00	**4.31**
		$U_{22} - U_{23}$			136.20	-833.02	20	-57	-617	-1009	-29	-149	-312	244	0.106	0.180	0.29	Yes	0.075	0.121	0.20	Yes	0.766	0.229	1	Yes	0.760	0.146	0.91	Yes	1.00	**5.63**
		$U_{23} - U_{24}$			282.61	-816.30	-76	242	-474	-982	10	-56	-532	278	0.219	0.200	0.42	Yes	0.153	0.131	0.29	Yes	0.750	0.243	1	Yes	0.745	0.142	0.89	Yes	1.00	**6.19**
		$U_{24} - U_{25}$			364.93	-719.07	223	367	-874	-679	-12	-70	-589	346	0.342	0.219	0.57	Yes	0.227	0.144	0.38	Yes	0.798	0.194	1	Yes	0.793	0.140	0.94	Yes	1.00	**6.98**
		$U_{25} - U_{26}$			778.15	-491.84	262	717	-434	-502	30	-15	-645	523	0.781	0.216	1.00	Yes	0.512	0.139	0.66	Yes	0.584	0.166	0.75	Yes	0.581	0.122	0.71	Yes	1.00	**10.40**
		$U_{26} - U_{27}$			-----	-544.45	-1217	1029	-734	-1139	-690	-347	-1608	1787	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.350	1	Yes	0.643	0.207	0.85	Yes	1.00	**20.40**
		$U_{27} - U_{28}$			840.21	-60.26	-1500	2193	-1155	-479	-213	-646	-994	664	0.619	0.380	1.00	Yes	0.412	0.250	0.67	Yes	0.053	0.252	0.31	Yes	0.052	0.276	0.33	Yes	1.00	**21.27**
		$U_{28} - U_{29}$			1308.37	-----	86	238	237	-943	-14	279	-220	1142	0.791	0.204	1.00	Yes	0.563	0.140	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.68**
		$U_{29} - U_{30}$			1132.74	-----	-910	3843	70	1552	570	1065	948	1267	0.557	0.442	1.00	Yes	0.394	0.291	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		$U_{30} - U_{31}$			1260.74	-----	2352	-215	3570	-1598	586	609	635	-293	0.620	0.374	1.00	Yes	0.439	0.245	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		$U_{31} - U_{32}$			1170.32	-----	81	341	-268	-1117	200	376	-111	-702	0.790	0.208	1.00	Yes	0.563	0.142	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		$U_{32} - U_{33}$			823.53	-235.62	581	132	330	-1264	9	217	-94	-1009	0.696	0.301	1.00	Yes	0.467	0.201	0.67	Yes	0.236	0.175	0.42	Yes	0.234	0.178	0.42	Yes	1.00	**6.69**
		$U_{33} - U_{34}$			574.99	-796.17	458	138	-191	-1406	-24	208	213	-612	0.486	0.273	0.76	Yes	0.331	0.178	0.51	Yes	0.796	0.201	1	Yes	0.791	0.198	0.99	Yes	1.00	**7.03**
		$U_{34} - U_{35}$			58.22	-949.85	363	-212	-11	-1376	43	35	-106	-519	0.043	0.224	0.27	Yes	0.029	0.151	0.19	Yes	0.825	0.166	1	Yes	0.820	0.167	0.99	Yes	1.00	**4.52**
		$U_{35} - U_{36}$			-----	-1195.71	77	-477	-297	-1430	-19	81	-86	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.811	0.152	0.97	Yes	1.00	**3.68**
		$U_{36} - U_{37}$			-----	-1401.85	-303	-325	-914	-1444	-23	-123	99	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1	Yes	0.798	0.129	0.93	Yes	1.00	**3.62**
		$U_{37} - U_{38}$			-----	-1407.15	-176	-403	-598	-1514	-93	-193	-418	49	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.192	1	Yes	0.801	0.135	0.94	Yes	1.00	**4.37**
		$U_{38} - U_{39}$			-----	-1533.87	-141	-624	-758	-1840	10	-205	-460	123	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1	Yes	0.788	0.152	0.94	Yes	1.00	**4.40**
		$U_{39} - U_{40}$			-----	-1530.82	-623	-513	-1512	-1584	22	-114	-350	324	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.203	1	Yes	0.786	0.131	0.92	Yes	1.00	**4.82**
		$U_{40} - U_{41}$			-----	-1422.04	-514	-490	-1225	-1325	78	-165	92	226	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.184	1	Yes	0.810	0.118	0.93	Yes	1.00	**4.53**
		$U_{41} - U_{42}$			-----	-1207.05	-1182	98	-868	-613	139	-200	-331	677	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.132	1	Yes	0.857	0.120	0.98	Yes	1.00	**6.17**
		$U_{42} - U_{43}$			-----	-865.88	-913	51	-684	-174	16	-378	-259	742	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.150	1	Yes	0.836	0.138	0.98	Yes	1.00	**6.39**
		$U_{43} - U_{44}$			-----	-593.98	-1314	635	-695	-258	-340	-158	645	2	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.287	1	Yes	0.701	0.223	0.93	Yes	1.00	**12.54**
	Structure 3	$U_0 - U_1$			-----	-592.85	365	-301	596	-1620	91	71	317	-1232	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.205	0.88	Yes	0.667	0.326	1.00	Yes	1.00	**10.03**
		$U_1 - U_2$			-----	-709.99	-82	-227	-27	-774	-21	6	-68	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.799	0.156	0.96	Yes	1.00	**3.86**
		$U_2 - U_3$			-----	-1024.90	-53	-241	38	-843	-33	-60	-145	-684	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.802	0.137	0.94	Yes	1.00	**3.74**
		$U_3 - U_4$			-----	-1345.76	-220	-371	-472	-1353	-107	-37	-223	-558	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1	Yes	0.771	0.149	0.93	Yes	1.00	**3.98**
		$U_4 - U_5$			-----	-1410.55	-440	-127	-661	-852	-93	-53	-338	-765	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.179	1	Yes	0.809	0.094	0.91	Yes	1.00	**4.10**
		$U_5 - U_6$			-----	-1330.19	-255	-376	-575	-1452	-186	-149	-399	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.228	1	Yes	0.763	0.160	0.93	Yes	1.00	**3.84**
		$U_6 - U_7$			-----	-1362.89	-503	-159	-1093	-782	-121	-301	-435	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.209	1	Yes	0.781	0.121	0.91	Yes	1.00	**3.63**
		$U_7 - U_8$			-----	-1191.58	-243	18	-733	-472	-113	-320	-476	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.185	1	Yes	0.796	0.101	0.90	Yes	1.00	**3.90**
		$U_8 - U_9$			-----	-849.17	-113	278	-543	-213	-215	-181	-530	268	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.188	1	Yes	0.797	0.090	0.89	Yes	1.00	**5.02**
		$U_9 - U_{10}$			665.70	-613.68	118	571	-640	-192	31	129	-493	788	0.722	0.270	1.00	Yes	0.481	0.176	0.66	Yes	0.790	0.187	0.98	Yes	0.783	0.143	0.93	Yes	1.00	**13.16**
		$U_{10} - U_{11}$			45.28	-436.02	-725	830	-598	-769	-792	-322	-2594	3089	0.049	0.683	0.74	Yes	0.033	0.457	0.50	Yes	0.561	0.435	1	Yes	0.556	0.186	0.75	Yes	1.00	**29.48**
		$U_{11} - U_{12}$			727.71	-----	-816	1794	-35	646	208	448	793	778	0.596	0.398	1.00	Yes	0.408	0.271	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.90**
		$U_{12} - U_{13}$			938.34	-----	1124	-4	1792	-1018	78	472	-42	-715	0.650	0.344	1.00	Yes	0.454	0.235	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		$U_{13} - U_{14}$			829.77	-26.78	219	355	83	-627	-101	374	-232	-513	0.794	0.204	1.00	Yes	0.555	0.140	0.70	Yes	0.030	0.208	0.24	Yes	0.030	0.133	0.17	Yes	1.00	**6.66**
		$U_{14} - U_{15}$			579.83	-420.42	427	199	259	-821	-55	237	-262	-808	0.665	0.332	1.00	Yes	0.448	0.219	0.67	Yes	0.572	0.268	0.85	Yes	0.567	0.195	0.77	Yes	1.00	**6.33**
		$U_{15} - U_{16}$			288.84	-586.73	260	113	-149	-855	-77	187	38	192	0.331	0.236	0.57	Yes	0.227	0.162	0.39	Yes	0.798	0.181	0.98	Yes	0.791	0.203	1.00	Yes	1.00	**5.07**
		$U_{16} - U_{17}$			360.24	-594.39	368	61	-285	-782	189	-58	111	476	0.413	0.266	0.68	Yes	0.283	0.182	0.47	Yes	0.809	0.182	1	Yes	0.802	0.186	0.99	Yes	1.00	**6.34**
		$U_{17} - U_{18}$			97.90	-600.47	232	-169	-268	-787	68	36	-202	146	0.112	0.221	0.34	Yes	0.076	0.144	0.22	Yes	0.817	0.150	0.97	Yes	0.810	0.187	1.00	Yes	1.00	**4.98**
		$U_{18} - U_{19}$			18.33	-524.99	44	-67	-601	-308	179	-199	-207	592	0.021	0.243	0.27	Yes	0.014	0.166	0.19	Yes	0.714	0.281	1	Yes	0.708	0.143	0.86	Yes	1.00	**5.64**
		$U_{19} - U_{20}$			-----	-531.75	-406	-49	-617	-539	-190	-96	747	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.274	1	Yes	0.717	0.147	0.87	Yes	1.00	**7.36**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1			19.20	-36.08	-152	13	751	-1237	63	231	-759	-2791	0.029	0.970	1.00	Yes	0.017	0.576	0.60	Yes	0.066	0.796	0.87	Yes	0.065	0.371	0.44	Yes	1.00	**13.71**
		L_1 - L_2			401.77	-12.22	-5	9	141	-868	352	-157	-556	403	0.615	0.380	1.00	Yes	0.375	0.251	0.63	Yes	0.022	0.220	0.25	Yes	0.022	0.261	0.29	Yes	1.00	**5.23**
		L_2 - L_3			620.84	-102.61	-43	62	-540	-679	-179	121	156	-712	0.714	0.278	1.00	Yes	0.413	0.164	0.58	Yes	0.140	0.253	0.4	Yes	0.139	0.164	0.31	Yes	1.00	**4.92**
		L_3 - L_4			621.88	-304.05	19	358	-315	-734	303	-235	-617	31	0.715	0.276	1.00	Yes	0.425	0.175	0.60	Yes	0.415	0.236	0.66	Yes	0.412	0.177	0.59	Yes	1.00	**6.07**
		L_4 - L_5			50.25	-550.72	95	465	-357	100	-67	193	-37	-655	0.065	0.240	0.31	Yes	0.039	0.152	0.20	Yes	0.847	0.147	1	Yes	0.839	0.123	0.97	Yes	1.00	**4.00**
		L_5 - L_6			-----	-750.23	125	591	-180	214	160	-240	-130	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.121	1	Yes	0.866	0.131	1.00	Yes	1.00	**3.92**
		L_6 - L_7			-----	-1008.54	-443	555	-179	-608	442	1084	-798	-1885	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.174	1	Yes	0.812	0.096	0.91	Yes	1.00	**9.77**
		L_7 - L_8			-----	-1273.26	-80	1123	-8	625	299	430	497	221	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.181	1	Yes	0.806	0.149	0.96	Yes	1.00	**4.32**
		L_8 - L_9			-----	-1117.76	991	11	1265	-283	175	324	197	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.277	1	Yes	0.708	0.168	0.88	Yes	1.00	**4.75**
		L_9 - L_{10}			-----	-1015.47	147	226	451	-1112	438	-330	-1546	525	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.121	0.95	Yes	0.817	0.175	1.00	Yes	1.00	**10.88**
		L_{10} - L_{11}			46.19	-519.31	479	-64	259	-763	-277	47	9	-884	0.060	0.357	0.42	Yes	0.035	0.212	0.25	Yes	0.798	0.152	0.96	Yes	0.791	0.202	1.00	Yes	1.00	**6.96**
		L_{11} - L_{12}			511.37	-103.91	356	-234	291	-825	132	-90	-630	402	0.662	0.328	1.00	Yes	0.397	0.211	0.61	Yes	0.160	0.149	0.31	Yes	0.158	0.218	0.38	Yes	1.00	**4.89**
		L_{12} - L_{13}			1009.39	-----	58	-155	-356	-647	-160	120	-159	-728	0.797	0.200	1.00	Yes	0.509	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{13} - L_{14}			1257.16	-----	200	-513	237	-1633	147	16	-399	151	0.739	0.258	1.00	Yes	0.479	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		L_{14} - L_{15}			1520.87	-----	-568	-152	-1467	-759	-153	159	-358	-1097	0.743	0.254	1.00	Yes	0.483	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_{15} - L_{16}			1588.08	-----	-304	-369	-916	-1417	108	-139	-671	2	0.776	0.218	1.00	Yes	0.498	0.129	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		L_{16} - L_{17}			1141.16	-----	-1047	235	-1101	-310	543	451	-391	-1288	0.722	0.276	1.00	Yes	0.468	0.173	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_{17} - L_{18}			920.31	-----	-644	226	-556	-205	149	-92	-538	-57	0.801	0.193	1.00	Yes	0.513	0.118	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.65**
		L_{18} - L_{19}			408.46	-----	-899	544	-401	142	68	232	-131	-461	0.625	0.365	1.00	Yes	0.423	0.231	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.62**
		L_{19} - L_{20}			52.62	-348.88	-1213	781	-170	67	124	28	140	31	0.081	0.393	0.48	Yes	0.049	0.266	0.32	Yes	0.634	0.202	0.84	Yes	0.628	0.364	1.00	Yes	1.00	**13.56**
	Structure 2	L_0 - L_1			45.59	-151.25	-57	-141	727	-2449	37	127	-774	-2690	0.055	0.940	1.00	Yes	0.033	0.586	0.62	Yes	0.217	0.664	0.89	Yes	0.216	0.498	0.72	Yes	1.00	**17.48**
		L_1 - L_2			471.30	-----	188	-335	600	-1417	156	-63	-181	788	0.572	0.418	1.00	Yes	0.340	0.264	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		L_2 - L_3			977.25	-----	-48	-267	60	-1093	-74	155	31	-667	0.770	0.229	1.00	Yes	0.505	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		L_3 - L_4			1298.16	-----	-13	-502	-19	-1626	182	-7	-518	566	0.763	0.235	1.00	Yes	0.514	0.147	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_4 - L_5			1719.33	-----	-438	-399	-1261	-1548	-80	163	206	-746	0.802	0.197	1.00	Yes	0.531	0.119	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		L_5 - L_6			1747.50	-----	-224	-511	-1087	-1991	188	-89	-1099	-21	0.750	0.245	1.00	Yes	0.503	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_6 - L_7			1821.27	-----	-556	-192	-1870	-1714	-161	218	91	-977	0.771	0.225	1.00	Yes	0.512	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_7 - L_8			1396.94	-76.75	-274	434	-1251	-990	229	-141	-649	88	0.801	0.191	1.00	Yes	0.526	0.115	0.65	Yes	0.052	0.144	0.2	Yes	0.052	0.138	0.19	Yes	1.00	**6.34**
		L_8 - L_9			976.69	-336.82	-122	578	-1104	-72	-86	175	-290	-1729	0.683	0.312	1.00	Yes	0.460	0.201	0.67	Yes	0.279	0.253	0.54	Yes	0.277	0.149	0.43	Yes	1.00	**6.19**
		L_9 - L_{10}			513.93	-815.93	-112	873	-743	-207	149	-126	-474	-83	0.459	0.197	0.66	Yes	0.267	0.121	0.39	Yes	0.863	0.092	0.96	Yes	0.857	0.140	1.00	Yes	1.00	**8.07**
		L_{10} - L_{11}			369.68	-----	-1531	1203	-1113	-133	869	645	-449	-2626	0.369	0.621	1.00	Yes	0.216	0.377	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.27**
		L_{11} - L_{12}			-----	-1026.51	-75	1101	-458	556	61	-368	-296	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.120	0.97	Yes	0.842	0.150	1.00	Yes	1.00	**4.93**
		L_{12} - L_{13}			-----	-1254.04	-406	-101	-341	-1421	-80	433	-551	-1065	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.239	1	Yes	0.750	0.141	0.90	Yes	1.00	**7.60**
		L_{13} - L_{14}			-----	-1485.31	-1226	2781	-435	1301	-60	164	686	593	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.204	0.96	Yes	0.747	0.243	1.00	Yes	1.00	**6.71**
		L_{14} - L_{15}			-----	-1285.89	1546	-485	2771	-1191	373	351	101	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.343	1	Yes	0.647	0.242	0.89	Yes	1.00	**3.86**
		L_{15} - L_{16}			-----	-1439.39	-939	424	-682	-1332	213	-359	-261	548	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.128	1	Yes	0.861	0.132	1.00	Yes	1.00	**10.29**
		L_{16} - L_{17}			-----	-1124.49	1163	51	747	-929	-404	-6	-144	-1142	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.168	1	Yes	0.819	0.143	0.97	Yes	1.00	**7.53**
		L_{17} - L_{18}			-----	-809.57	517	171	696	-910	126	-193	-193	586	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.090	0.95	Yes	0.850	0.146	1.00	Yes	1.00	**5.76**
		L_{18} - L_{19}			137.45	-635.32	713	32	229	-791	-210	61	181	-630	0.156	0.249	0.41	Yes	0.090	0.146	0.24	Yes	0.852	0.132	0.99	Yes	0.847	0.153	1.00	Yes	1.00	**6.25**
		L_{19} - L_{20}			529.88	-437.03	491	106	113	-1144	149	-170	-1131	432	0.600	0.394	1.00	Yes	0.355	0.244	0.60	Yes	0.586	0.178	0.77	Yes	0.582	0.221	0.81	Yes	1.00	**6.62**
		L_{20} - L_{21}			895.53	-281.84	399	-81	-499	-1252	-184	70	39	-895	0.714	0.279	1.00	Yes	0.468	0.171	0.64	Yes	0.266	0.195	0.47	Yes	0.264	0.183	0.45	Yes	1.00	**7.30**
		L_{21} - L_{22}			824.27	-10.94	-26	-212	-442	-1988	137	-148	-480	74	0.657	0.342	1.00	Yes	0.440	0.215	0.66	Yes	0.010	0.278	0.29	Yes	0.010	0.290	0.31	Yes	1.00	**5.58**
		L_{22} - L_{23}			869.72	-89.40	-288	131	-1219	-950	-52	211	-244	-1193	0.694	0.306	1.00	Yes	0.464	0.196	0.66	Yes	0.084	0.229	0.32	Yes	0.084	0.178	0.27	Yes	1.00	**5.91**
		L_{23} - L_{24}			920.74	-354.38	-49	479	-1122	-1062	165	-140	-870	-16	0.734	0.257	1.00	Yes	0.482	0.158	0.64	Yes	0.335	0.167	0.51	Yes	0.332	0.164	0.50	Yes	1.00	**8.32**
		L_{24} - L_{25}			542.75	-582.47	223	550	-791	-296	-99	146	24	-1515	0.615	0.384	1.00	Yes	0.364	0.235	0.60	Yes	0.781	0.166	0.95	Yes	0.776	0.153	0.93	Yes	1.00	**9.13**
		L_{25} - L_{26}			29.55	-641.79	29	728	-455	-56	102	-167	-484	-146	0.033	0.215	0.25	Yes	0.019	0.126	0.15	Yes	0.861	0.125	0.99	Yes	0.855	0.141	1.00	Yes	1.00	**6.30**
		L_{26} - L_{27}			-----	-691.46	-931	1020	-765	20	697	553	-311	-1594	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.261	1	Yes	0.726	0.163	0.89	Yes	1.00	**9.99**
		L_{27} - L_{28}			-----	-1136.93	-368	1375	-293	587	430	-199	-58	29	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.138	0.98	Yes	0.828	0.170	1.00	Yes	1.00	**7.07**
		L_{28} - L_{29}			-----	-1394.42	42	-307	-294	-1454	-108	403	-390	-807	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.153	1	Yes	0.834	0.145	0.98	Yes	1.00	**6.10**
		L_{29} - L_{30}			-----	-1510.53	-1011	2678	-562	1342	464	447	744	850	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.206	0.98	Yes	0.760	0.234	1.00	Yes	1.00	**6.51**
		L_{30} - L_{31}			-----	-1320.20	1709	-503	2559	-995	498	423	65	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.329	1	Yes	0.664	0.223	0.89	Yes	1.00	**2.89**
		L_{31} - L_{32}			-----	-1410.39	-481	90	-534	-1018	247	-260	-284	245	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.146	1	Yes	0.844	0.101	0.95	Yes	1.00	**5.72**
		L_{32} - L_{33}			-----	-1037.04	1081	-39	866	-819	-384	-4	157	-493	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.123	0.99	Yes	0.850	0.147	1.00	Yes	1.00	**5.56**
		L_{33} - L_{34}			-----	-719.33	578	-18	599	-880	100	-130	-354	582	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.091	0.95	Yes	0.845	0.154	1.00	Yes	1.00	**4.96**
		L_{34} - L_{35}			478.95	-727.73	818	-110	435	-1448	-213	98	481	-1077	0.428	0.361	0.79	Yes	0.249	0.221	0.47	Yes	0.769	0.149	0.92	Yes	0.764	0.232	1.00	Yes	1.00	**8.94**
		L_{35} - L_{36}			1010.95	-372.11	617	-115	520	-1598	171	-137	-735	775	0.707	0.289	1.00	Yes	0.476	0.182	0.66	Yes	0.309	0.142	0.46	Yes	0.306	0.216	0.53	Yes	1.00	**8.35**
		L_{36} - L_{37}			1278.87	-----	283	-271	-406	-1711	-201	154	197	-880	0.733	0.261	1.00	Yes	0.482	0.157	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.83**
		L_{37} - L_{38}			1706.05	-----	-335	-657	-1039	-2471	106	-172	-901	27	0.722	0.273	1.00	Yes	0.480	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_{38} - L_{39}			1730.29	-----	-618	-225	-1996	-1397	-101	172	-275	-1271	0.742	0.256	1.00	Yes	0.498	0.160	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		L_{39} - L_{40}			1710.07	-----	-435	-316	-1326	-1813	127	-122	-405	404	0.797	0.199	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.05**
		L_{40} - L_{41}			1245.01	-----	-1223	202	-1347	-566	517	488	-337	-1335	0.732	0.264	1.00	Yes	0.493	0.168	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		L_{41} - L_{42}			963.96	-----	-893	307	-957	-433	382	-20	-927	-267	0.760	0.237	1.00	Yes	0.498	0.146	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.29**
		L_{42} - L_{43}			519.04	-----	-1194	598	-578	86	438	492	17	-718	0.630	0.361	1.00	Yes	0.375	0.228	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.75**
		L_{43} - L_{44}			116.78	-280.39	-2927	1233	-16	-95	1401	409	-83	-24	0.142	0.826	0.97	Yes	0.084	0.524	0.61	Yes	0.403	0.548	0.96	Yes	0.401	0.596	1.00	Yes	1.00	**31.77**
	Structure 3	L_0 - L_1			21.42	-345.85	27	-141	608	-1170	25	115	-239	-1085	0.033	0.576	0.61	Yes	0.020	0.377	0.40	Yes	0.628	0.368	1	Yes	0.623	0.351	0.98	Yes	1.00	**9.88**
		L_1 - L_2			310.43	-----	217	-251	592	-1180	151	-31	-429	794	0.475	0.519	1.00	Yes	0.321	0.330	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		L_2 - L_3			828.35	-----	-9	-218	-39	-788	-59	166	-167	-915	0.721	0.269	1.00	Yes	0.462	0.165	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		L_3 - L_4			1115.87	-----	31	-415	-118	-1281	189	8	-1190	309	0.706	0.294	1.00	Yes	0.458	0.183	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		L_4 - L_5			1597.62	-----	-387	-234	-1095	-1211	-47	214	152	-976	0.781	0.214	1.00	Yes	0.501	0.128	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**
		L_5 - L_6			1479.05	-----	-139	-420	-203	-1999	253	-46	-140	460	0.723	0.273	1.00	Yes	0.470	0.166	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_6 - L_7			1194.45	-----	-1369	347	-1250	-278	567	322	-264	-1219	0.702	0.290	1.00	Yes	0.455	0.180	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_7 - L_8			1050.87	-82.85	-84	196	-581	-530	153	-168	-576	13	0.829	0.170	1.00	Yes	0.530	0.104	0.64	Yes	0.078	0.134	0.22	Yes	0.077	0.103	0.19	Yes	1.00	**7.35**
		L_8 - L_9			474.41	-----	-727	465	-559	-5	281	307	-102	-1085	0.614	0.382	1.00	Yes	0.369	0.242	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		L_9 - L_{10}			-----	-563.78	-67	523	-389	80	124	-169	-258	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.075	0.95	Yes	0.859	0.138	1.00	Yes	1.00	**6.05**
		L_{10} - L_{11}			-----	-940.20	-545	753	-239	-369	176	743	-762	-2129	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.234	1	Yes	0.757	0.118	0.88	Yes	1.00	**9.88**
		L_{11} - L_{12}			-----	-1257.00	-84	1170	-6	617	204	359	559	158	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.190	1	Yes	0.796	0.155	0.96	Yes	1.00	**5.28**
		L_{12} - L_{13}			-----	-1105.61	933	-13	1338	-221	-120	71	-81	-330	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.284	1	Yes	0.700	0.177	0.88	Yes	1.00	**3.34**
		L_{13} - L_{14}			-----	-1070.71	43	198	293	-670	227	-249	-431	137	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.120	1	Yes	0.862	0.105	0.97	Yes	1.00	**5.29**
		L_{14} - L_{15}			-----	-717.25	564	106	139	-441	-261	85	-193	-928	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.156	1	Yes	0.828	0.125	0.96	Yes	1.00	**5.01**
		L_{15} - L_{16}			231.81	-506.01	457	107	333	-851	253	-207	-912	356	0.300	0.388	0.69	Yes	0.180	0.247	0.43	Yes	0.778	0.202	0.99	Yes	0.771	0.225	1.00	Yes	1.00	**5.15**
		L_{16} - L_{17}			611.56	-----	-14	-70	-358	-831	-99	409	-146	-545	0.704	0.288	1.00	Yes	0.418	0.183	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_{17} - L_{18}			644.45	-58.07	29	-101	-569	-805	108	-110	-394	270	0.741	0.258	1.00	Yes	0.429	0.154	0.59	Yes	0.079	0.239	0.32	Yes	0.079	0.194	0.28	Yes	1.00	**6.54**
		L_{18} - L_{19}			397.77	-----	-651	124	-372	-195	370	544	100	-879	0.609	0.384	1.00	Yes	0.371	0.249	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		L_{19} - L_{20}			-----	-111.53	-2225	2049	376	-484	-1909	-519	266	72	-----	-----	-----	-----	-----	-----	-----	-----	0.203	0.790	1	Yes	0.201	0.668	0.87	Yes	1.00	**43.52**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-281.79	-109	168	-13	52	-976	-313	201	65	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.367	1	Yes	0.596	0.215	0.82	Yes	1.00	**1.88**
		$U_1 - L_1$			18.92	-322.84	-243	233	27	-20	-694	-224	571	208	0.034	0.511	0.55	Yes	0.019	0.281	0.30	Yes	0.705	0.263	0.97	Yes	0.683	0.310	1.00	Yes	1.00	**4.82**
		$U_2 - L_2$			86.32	-215.86	-134	174	81	-88	-1649	-528	753	233	0.155	0.700	0.86	Yes	0.085	0.385	0.48	Yes	0.472	0.524	1	Yes	0.457	0.223	0.68	Yes	1.00	**5.80**
		$U_3 - L_3$			159.67	-107.96	-107	123	208	-201	-301	-18	-1533	-729	0.287	0.709	1.00	Yes	0.158	0.390	0.55	Yes	0.237	0.454	0.7	Yes	0.228	0.265	0.50	Yes	1.00	**9.20**
		$U_4 - L_4$			-----	-199.58	27	-31	313	-308	1011	352	-1696	-815	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.560	1	Yes	0.422	0.400	0.83	Yes	1.00	**10.01**
		$U_5 - L_5$			-----	-370.39	78	-85	189	-212	1031	582	251	283	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.326	1	Yes	0.639	0.215	0.86	Yes	1.00	**3.85**
		$U_6 - L_6$			-----	-417.44	77	-66	206	-217	1479	736	415	275	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.362	1	Yes	0.599	0.189	0.79	Yes	1.00	**4.00**
		$U_7 - L_7$			-----	-379.84	105	-119	256	-276	1268	305	272	137	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.360	1	Yes	0.586	0.271	0.86	Yes	1.00	**3.47**
		$U_8 - L_8$			-----	-1225.38	-517	616	248	-305	-857	-512	388	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.106	1	Yes	0.850	0.115	0.97	Yes	1.00	**7.73**
		$U_9 - L_9$			-----	-657.57	-414	456	-231	257	-296	-51	695	338	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.196	0.99	Yes	0.743	0.253	1.00	Yes	1.00	**3.59**
		$U_{10} - L_{10}$			-----	-770.67	-407	446	-165	145	-286	-15	708	315	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.191	0.99	Yes	0.760	0.231	1.00	Yes	1.00	**5.27**
		$U_{11} - L_{11}$			-----	-629.41	-335	447	-167	218	-1011	-142	628	362	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.236	1	Yes	0.733	0.208	0.95	Yes	1.00	**4.56**
		$U_{12} - L_{12}$			-----	-522.38	-316	325	-125	133	-406	-18	328	273	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.165	0.92	Yes	0.717	0.278	1.00	Yes	1.00	**5.28**
		$U_{13} - L_{13}$			-----	-368.80	-224	250	-66	85	-364	96	230	147	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.194	0.94	Yes	0.707	0.285	1.00	Yes	1.00	**4.50**
		$U_{14} - L_{14}$			-----	-176.22	-343	374	175	-186	-579	-759	-1365	-781	-----	-----	-----	-----	-----	-----	-----	-----	0.393	0.602	1	Yes	0.373	0.478	0.86	Yes	1.00	**16.89**
		$U_{15} - L_{15}$			67.10	-312.01	-67	54	237	-261	116	-475	-575	-119	0.121	0.500	0.63	Yes	0.066	0.275	0.35	Yes	0.699	0.245	0.95	Yes	0.660	0.334	1.00	Yes	1.00	**7.86**
		$U_{16} - L_{16}$			-----	-322.55	45	-50	237	-247	473	107	-487	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.222	0.95	Yes	0.682	0.316	1.00	Yes	1.00	**5.26**
		$U_{17} - L_{17}$			-----	-417.37	80	-93	203	-221	504	200	38	82	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1	Yes	0.720	0.224	0.95	Yes	1.00	**3.59**
		$U_{18} - L_{18}$			-----	-535.85	172	-179	436	-449	677	171	197	44	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.183	0.97	Yes	0.745	0.254	1.00	Yes	1.00	**5.07**
		$U_{19} - L_{19}$			-----	-527.68	197	-210	391	-408	601	117	674	129	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.336	1	Yes	0.614	0.189	0.81	Yes	1.00	**3.04**
		$U_{20} - L_{20}$			-----	-483.61	245	-296	373	-444	460	60	436	57	-----	-----	-----	-----	-----	-----	-----	-----	0.639	0.358	1	Yes	0.563	0.206	0.77	Yes	1.00	**2.14**
	Structure 2	$U_0 - L_0$			-----	-624.03	-324	469	-160	267	-1042	-177	40	7	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1	Yes	0.669	0.199	0.87	Yes	1.00	**2.71**
		$U_1 - L_1$			-----	-709.74	-545	547	-208	215	-344	-12	629	162	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.147	0.96	Yes	0.761	0.232	1.00	Yes	1.00	**4.63**
		$U_2 - L_2$			-----	-595.13	-444	465	-155	170	-506	108	622	285	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.178	0.98	Yes	0.758	0.238	1.00	Yes	1.00	**4.23**
		$U_3 - L_3$			-----	-456.75	-216	232	-75	86	101	236	545	265	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.213	1	Yes	0.716	0.212	0.93	Yes	1.00	**3.64**
		$U_4 - L_4$			-----	-323.00	-198	206	-20	30	-239	101	562	235	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1	Yes	0.683	0.263	0.95	Yes	1.00	**4.69**
		$U_5 - L_5$			67.12	-271.97	-163	189	76	-57	-977	1	-125	-108	0.121	0.524	0.65	Yes	0.066	0.288	0.36	Yes	0.614	0.383	1	Yes	0.575	0.242	0.82	Yes	1.00	**6.75**
		$U_6 - L_6$			347.04	-89.97	-116	125	196	-202	-358	-21	-374	-296	0.624	0.367	1.00	Yes	0.343	0.202	0.55	Yes	0.202	0.159	0.37	Yes	0.190	0.258	0.45	Yes	1.00	**8.97**
		$U_7 - L_7$			-----	-191.97	12	-11	353	-404	-190	-179	-46	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.434	0.561	1	Yes	0.406	0.516	0.93	Yes	1.00	**12.07**
		$U_8 - L_8$			-----	-472.64	151	-170	335	-358	420	45	-430	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.156	0.85	Yes	0.681	0.313	1.00	Yes	1.00	**4.38**
		$U_9 - L_9$			-----	-696.93	269	-277	581	-596	760	359	-423	2	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.164	0.94	Yes	0.747	0.253	1.00	Yes	1.00	**5.71**
		$U_{10} - L_{10}$			-----	-747.40	233	-234	508	-530	1171	687	82	263	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.699	0.234	0.94	Yes	1.00	**5.68**
		$U_{11} - L_{11}$			-----	-735.29	226	-220	452	-459	1174	660	95	404	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.257	1	Yes	0.687	0.203	0.90	Yes	1.00	**4.66**
		$U_{12} - L_{12}$			-----	-720.64	187	-169	415	-410	1474	644	775	451	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.302	1	Yes	0.625	0.178	0.81	Yes	1.00	**4.58**
		$U_{13} - L_{13}$			-----	-625.58	224	-222	496	-483	1161	311	581	205	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.299	1	Yes	0.603	0.237	0.85	Yes	1.00	**4.88**
		$U_{14} - L_{14}$			-----	-1233.88	-586	545	449	-432	-717	-322	630	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.095	1	Yes	0.818	0.104	0.93	Yes	1.00	**9.34**
		$U_{15} - L_{15}$			-----	-647.54	-557	542	-265	258	-1022	-3	970	61	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.272	1	Yes	0.624	0.266	0.90	Yes	1.00	**4.61**
		$U_{16} - L_{16}$			-----	-702.36	-567	555	-202	171	60	131	818	179	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.185	1	Yes	0.753	0.241	1.00	Yes	1.00	**4.85**
		$U_{17} - L_{17}$			-----	-641.16	-524	529	-198	198	-617	61	595	194	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.159	0.96	Yes	0.746	0.245	1.00	Yes	1.00	**4.72**
		$U_{18} - L_{18}$			-----	-579.87	-479	502	-158	164	-79	96	622	214	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.168	0.95	Yes	0.739	0.257	1.00	Yes	1.00	**4.84**
		$U_{19} - L_{19}$			-----	-477.26	-289	287	-88	90	-317	92	520	196	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.168	0.89	Yes	0.713	0.278	1.00	Yes	1.00	**4.47**
		$U_{20} - L_{20}$			-----	-366.73	-203	216	-41	46	-595	-57	516	182	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.238	1	Yes	0.703	0.246	0.95	Yes	1.00	**4.71**
		$U_{21} - L_{21}$			40.03	-320.52	-231	250	30	-20	-206	79	5	-109	0.072	0.379	0.46	Yes	0.040	0.208	0.25	Yes	0.724	0.157	0.89	Yes	0.678	0.319	1.00	Yes	1.00	**6.98**
		$U_{22} - L_{22}$			-----	-234.09	-245	259	312	-342	-244	-752	-210	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.527	0.470	1	Yes	0.495	0.438	0.94	Yes	1.00	**16.77**
		$U_{23} - L_{23}$			-----	-322.59	14	-18	228	-245	525	166	-510	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.247	0.98	Yes	0.683	0.313	1.00	Yes	1.00	**5.41**
		$U_{24} - L_{24}$			-----	-369.17	54	-59	222	-232	584	205	-74	43	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.236	1	Yes	0.707	0.265	0.98	Yes	1.00	**4.32**
		$U_{25} - L_{25}$			-----	-474.70	100	-101	299	-297	589	224	107	167	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.183	0.9	Yes	0.709	0.288	1.00	Yes	1.00	**4.44**
		$U_{26} - L_{26}$			-----	-571.06	170	-178	487	-515	708	302	-259	161	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.189	0.96	Yes	0.728	0.263	1.00	Yes	1.00	**4.91**
		$U_{27} - L_{27}$			-----	-634.34	202	-205	553	-559	770	314	213	389	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.194	0.98	Yes	0.738	0.259	1.00	Yes	1.00	**5.45**
		$U_{28} - L_{28}$			-----	-615.34	157	-131	467	-450	1634	551	966	424	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.288	1	Yes	0.659	0.198	0.86	Yes	1.00	**5.15**
		$U_{29} - L_{29}$			-----	-625.52	154	-158	574	-562	1166	196	-165	108	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.301	1	Yes	0.603	0.274	0.88	Yes	1.00	**6.98**
		$U_{30} - L_{30}$			-----	-1220.36	-608	541	305	-318	-675	-318	297	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.099	1	Yes	0.809	0.108	0.92	Yes	1.00	**8.28**
		$U_{31} - L_{31}$			-----	-715.34	-546	524	-305	297	-245	19	509	95	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1	Yes	0.690	0.261	0.96	Yes	1.00	**4.07**
		$U_{32} - L_{32}$			-----	-848.83	-464	463	-219	193	-654	-35	611	189	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.179	1	Yes	0.736	0.199	0.94	Yes	1.00	**4.75**
		$U_{33} - L_{33}$			-----	-824.58	-504	503	-248	231	-249	137	548	237	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.158	0.99	Yes	0.771	0.223	1.00	Yes	1.00	**5.30**
		$U_{34} - L_{34}$			-----	-801.85	-524	546	-243	240	-729	-82	496	227	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.186	0.98	Yes	0.750	0.241	1.00	Yes	1.00	**5.88**
		$U_{35} - L_{35}$			-----	-692.39	-552	576	-255	269	-1118	-131	631	376	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.222	1	Yes	0.742	0.245	0.99	Yes	1.00	**5.57**
		$U_{36} - L_{36}$			-----	-477.74	-328	353	-134	156	-95	106	277	189	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.136	0.83	Yes	0.688	0.309	1.00	Yes	1.00	**4.92**
		$U_{37} - L_{37}$			-----	-190.53	-308	346	19	-17	-1187	-705	-322	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.430	0.561	1	Yes	0.403	0.442	0.85	Yes	1.00	**12.37**
		$U_{38} - L_{38}$			246.11	-120.01	-146	153	122	-129	-60	-252	-1244	-306	0.443	0.556	1.00	Yes	0.243	0.306	0.55	Yes	0.270	0.341	0.62	Yes	0.254	0.196	0.46	Yes	1.00	**7.43**
		$U_{39} - L_{39}$			59.66	-316.45	-62	46	212	-235	318	-290	-664	-66	0.107	0.493	0.61	Yes	0.059	0.271	0.34	Yes	0.715	0.278	1	Yes	0.670	0.301	0.98	Yes	1.00	**7.08**
		$U_{40} - L_{40}$			-----	-325.66	37	-45	216	-220	595	172	71	44	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.689	0.281	0.97	Yes	1.00	**4.69**
		$U_{41} - L_{41}$			-----	-460.30	88	-97	231	-244	578	193	-81	55	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.722	0.222	0.95	Yes	1.00	**3.90**
		$U_{42} - L_{42}$			-----	-581.71	171	-180	494	-502	670	172	62	61	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.173	0.96	Yes	0.741	0.257	1.00	Yes	1.00	**5.24**
		$U_{43} - L_{43}$			-----	-707.94	188	-207	533	-555	622	187	242	154	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.154	0.97	Yes	0.759	0.235	1.00	Yes	1.00	**6.39**
		$U_{44} - L_{44}$			-----	-674.50	249	-307	479	-607	540	92	492	83	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.723	0.258	0.99	Yes	1.00	**5.44**
	Structure 3	$U_0 - L_0$			-----	-581.30	-300	432	-133	235	-678	-89	112	15	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.227	1	Yes	0.677	0.201	0.88	Yes	1.00	**2.87**
		$U_1 - L_1$			-----	-651.03	-518	508	-205	204	-101	86	620	141	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.163	0.98	Yes	0.758	0.240	1.00	Yes	1.00	**4.60**
		$U_2 - L_2$			-----	-543.22	-401	419	-157	169	-245	151	660	305	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.195	1	Yes	0.756	0.237	1.00	Yes	1.00	**4.01**
		$U_3 - L_3$			-----	-406.66	-183	204	-69	85	-295	173	563	271	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1	Yes	0.702	0.207	0.91	Yes	1.00	**3.05**
		$U_4 - L_4$			-----	-318.75	-225	235	-30	36	-237	118	614	223	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.275	1	Yes	0.674	0.301	0.98	Yes	1.00	**5.37**
		$U_5 - L_5$			90.13	-286.02	-224	246	67	-59	-842	-11	-35	-44	0.162	0.558	0.72	Yes	0.089	0.307	0.40	Yes	0.641	0.354	1	Yes	0.605	0.314	0.92	Yes	1.00	**7.79**
		$U_6 - L_6$			-----	-177.10	-110	121	372	-406	-460	-474	-95	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.395	0.601	1	Yes	0.375	0.519	0.90	Yes	1.00	**14.45**
		$U_7 - L_7$			-----	-365.09	74	-92	231	-257	436	-37	-148	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.196	0.94	Yes	0.699	0.293	1.00	Yes	1.00	**4.08**
		$U_8 - L_8$			-----	-504.95	135	-134	325	-327	918	446	18	85	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.265	1	Yes	0.693	0.280	0.98	Yes	1.00	**5.12**
		$U_9 - L_9$			-----	-624.16	164	-219	369	-470	1091	469	10	255	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.243	1	Yes	0.726	0.218	0.95	Yes	1.00	**5.27**
		$U_{10} - L_{10}$			-----	-626.33	152	-140	314	-330	1717	946	852	558	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.346	1	Yes	0.618	0.171	0.79	Yes	1.00	**4.75**
		$U_{11} - L_{11}$			-----	-491.01	214	-248	324	-372	1203	541	744	419	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.414	1	Yes	0.555	0.207	0.77	Yes	1.00	**1.85**
		$U_{12} - L_{12}$			-----	-1198.02	-504	546	293	-395	-971	-400	975	274	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.132	1	Yes	0.831	0.102	0.94	Yes	1.00	**7.93**
		$U_{13} - L_{13}$			-----	-447.31	-278	296	-155	167	-679	-55	649	179	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.690	0.291	0.99	Yes	1.00	**2.65**
		$U_{14} - L_{14}$			-----	-502.72	-266	285	-100	88	27	62	787	279	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.234	1	Yes	0.721	0.250	0.98	Yes	1.00	**4.11**
		$U_{15} - L_{15}$			-----	-417.97	-200	226	-80	87	-535	-62	696	254	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.240	1	Yes	0.721	0.229	0.96	Yes	1.00	**4.37**
		$U_{16} - L_{16}$			-----	-190.55	-304	305	-7	19	-1464	-865	-863	-518	-----	-----	-----	-----	-----	-----	-----	-----	0.419	0.580	1	Yes	0.403	0.390	0.80	Yes	1.00	**11.18**
		$U_{17} - L_{17}$			163.49	-177.09	-202	201	129	-151	428	-211	-1516	-557	0.294	0.697	1.00	Yes	0.162	0.383	0.55	Yes	0.388	0.435	0.83	Yes	0.375	0.258	0.64	Yes	1.00	**9.36**
		$U_{18} - L_{18}$			94.04	-298.51	-100	108	244	-287	479	153	-840	-449	0.169	0.610	0.78	Yes	0.093	0.336	0.43	Yes	0.652	0.337	0.99	Yes	0.632	0.367	1.00	Yes	1.00	**8.65**
		$U_{19} - L_{19}$			-----	-327.30	-23	7	227	-236	432	221	78	53	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.213	0.93	Yes	0.693	0.301	1.00	Yes	1.00	**5.98**
		$U_{20} - L_{20}$			-----	-322.60	80	-92	192	-241	605	194	302	97	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.273	1	Yes	0.683	0.307	1.00	Yes	1.00	**3.52**

Moment (End) AB Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$			425.82	-----	-111	60	9	-11	-1214	-450	13	90	0.559	0.435	1.00	Yes	0.337	0.240	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_1 - L_2$			318.68	-----	-75	21	-19	-25	-367	-173	-1132	-397	0.573	0.424	1.00	Yes	0.315	0.233	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		$U_2 - L_3$			155.20	-202.94	-56	2	-38	-69	-234	-206	-1737	-361	0.279	0.591	0.87	Yes	0.154	0.325	0.48	Yes	0.467	0.524	1	Yes	0.429	0.088	0.52	Yes	1.00	**7.53**
		$U_3 - L_4$			-----	-317.38	25	-13	11	-63	472	264	-660	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.267	1	Yes	0.672	0.080	0.76	Yes	1.00	**4.19**
		$U_4 - L_4$			481.94	-----	-3	83	-135	5	-118	132	395	632	0.707	0.285	1.00	Yes	0.389	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		$U_4 - L_5$			625.28	-----	-163	212	-56	90	-365	208	734	63	0.739	0.254	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_5 - L_6$			582.13	-----	-256	235	-41	86	-328	45	-872	-83	0.688	0.304	1.00	Yes	0.379	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_6 - L_7$			613.96	-----	-87	293	29	83	-133	131	-538	-321	0.726	0.265	1.00	Yes	0.399	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		$U_8 - L_9$			937.35	-----	-85	363	-31	172	-242	-246	625	160	0.749	0.241	1.00	Yes	0.464	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_9 - L_{10}$			1011.71	-----	-306	257	-122	116	-383	-278	367	152	0.809	0.185	1.00	Yes	0.501	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_{10} - L_{11}$			890.63	-----	-219	177	-131	81	-544	-587	-1064	-499	0.752	0.241	1.00	Yes	0.466	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{11} - L_{12}$			705.36	-----	-220	93	-167	13	-457	-390	-1313	-713	0.698	0.298	1.00	Yes	0.384	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{12} - L_{13}$			572.17	-----	-193	143	-103	41	-380	-478	-678	-310	0.697	0.301	1.00	Yes	0.439	0.172	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{13} - L_{14}$			355.13	-----	-73	29	-37	-24	-112	-187	-900	-326	0.639	0.354	1.00	Yes	0.351	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_{15} - L_{16}$			296.61	-257.62	-81	2	22	-112	-283	-406	688	-210	0.533	0.342	0.88	Yes	0.293	0.188	0.49	Yes	0.604	0.393	1	Yes	0.545	0.143	0.69	Yes	1.00	**9.30**
		$U_{16} - L_{15}$			404.81	-41.80	-138	94	-21	-22	-322	-34	69	-158	0.728	0.270	1.00	Yes	0.400	0.149	0.55	Yes	0.099	0.164	0.27	Yes	0.088	0.177	0.27	Yes	1.00	**6.81**
		$U_{17} - L_{18}$			524.70	-----	-144	98	-60	22	-356	-86	207	-100	0.769	0.229	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{18} - L_{17}$			612.86	-----	-319	250	-132	90	-484	-52	-399	-111	0.725	0.268	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{19} - L_{18}$			688.64	-----	-332	252	-132	96	-451	-158	-455	-203	0.746	0.244	1.00	Yes	0.410	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{20} - L_{19}$			681.55	-----	-389	323	-178	144	-339	-95	-259	-140	0.738	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
	Structure 2	$U_0 - L_1$			701.98	-----	-308	318	-100	128	-1048	-635	-155	6	0.694	0.304	1.00	Yes	0.382	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_1 - L_2$			749.07	-----	-392	305	-161	115	-410	-458	149	-26	0.741	0.250	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_2 - L_3$			602.37	-----	-316	254	-117	87	-336	-578	129	-24	0.712	0.284	1.00	Yes	0.392	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_3 - L_4$			567.43	-----	-176	126	-49	22	-380	-334	180	18	0.756	0.241	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_4 - L_5$			374.34	-35.54	-131	88	-21	-21	-365	-452	-535	-152	0.673	0.323	1.00	Yes	0.370	0.178	0.55	Yes	0.088	0.163	0.26	Yes	0.075	0.168	0.25	Yes	1.00	**6.27**
		$U_5 - L_6$			280.82	-254.40	-86	35	53	-112	-391	-190	-1190	-185	0.505	0.487	1.00	Yes	0.278	0.268	0.55	Yes	0.601	0.303	0.91	Yes	0.538	0.143	0.69	Yes	1.00	**8.17**
		$U_6 - L_7$			-----	-383.94	-6	-37	48	-102	10	-109	-394	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.170	1	Yes	0.736	0.117	0.86	Yes	1.00	**4.11**
		$U_8 - L_7$			598.14	-----	-187	149	-86	36	-316	-9	326	-148	0.763	0.233	1.00	Yes	0.480	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_8 - L_9$			731.54	-----	-337	252	-178	111	-192	4	-114	-59	0.792	0.204	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{10} - L_9$			833.44	-----	-313	254	-157	120	-141	167	90	40	0.825	0.170	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		$U_{11} - L_{10}$			887.33	-----	-339	307	-171	159	-310	160	136	146	0.808	0.186	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		$U_{12} - L_{11}$			851.01	-----	-337	345	-132	175	-562	267	-563	61	0.775	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{13} - L_{12}$			733.74	-----	-412	379	-160	163	-498	73	-535	0	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		$U_{14} - L_{13}$			763.08	-----	-261	440	-16	122	-137	39	-220	-124	0.755	0.237	1.00	Yes	0.415	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		$U_{14} - L_{15}$			565.05	-----	-182	331	-49	163	132	-218	759	359	0.668	0.325	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{15} - L_{16}$			607.58	-----	-358	325	-175	164	184	-303	429	104	0.718	0.281	1.00	Yes	0.395	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{16} - L_{17}$			696.85	-----	-333	356	-127	153	-18	-294	373	110	0.755	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{17} - L_{18}$			648.83	-----	-288	280	-110	127	-66	-314	358	88	0.767	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{18} - L_{19}$			649.66	-----	-282	267	-79	93	-241	-373	294	81	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		$U_{19} - L_{20}$			576.06	-----	-191	164	-69	38	-311	-311	-425	-129	0.735	0.258	1.00	Yes	0.404	0.146	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{20} - L_{21}$			370.64	-----	-112	99	-29	0	-162	-197	-654	-81	0.667	0.333	1.00	Yes	0.367	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{21} - L_{22}$			193.48	-257.46	-46	49	21	-95	287	67	-1005	-121	0.348	0.412	0.77	Yes	0.191	0.227	0.42	Yes	0.608	0.388	1	Yes	0.545	0.121	0.67	Yes	1.00	**9.27**
		$U_{23} - L_{22}$			389.78	-126.01	-103	60	1	-58	-232	-142	562	-108	0.701	0.295	1.00	Yes	0.386	0.162	0.55	Yes	0.300	0.232	0.54	Yes	0.267	0.132	0.40	Yes	1.00	**7.86**
		$U_{24} - L_{23}$			436.56	-----	-126	108	-30	14	-182	115	-43	-44	0.785	0.214	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{25} - L_{24}$			597.81	-----	-191	176	-42	50	-186	55	-299	-80	0.762	0.232	1.00	Yes	0.419	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{26} - L_{25}$			672.55	-----	-281	277	-79	97	-119	168	-253	-57	0.795	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{27} - L_{26}$			650.92	-----	-284	290	-107	126	-292	206	-340	-6	0.770	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{28} - L_{27}$			675.87	-----	-302	341	-96	149	-513	199	-534	38	0.732	0.262	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{29} - L_{28}$			595.04	-----	-348	330	-94	107	-336	119	-540	-41	0.703	0.295	1.00	Yes	0.387	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{30} - L_{29}$			634.75	-----	-197	365	32	71	-129	170	-222	-188	0.750	0.247	1.00	Yes	0.413	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		$U_{30} - L_{31}$			735.94	-----	-257	439	-66	219	-79	-156	423	186	0.728	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_{31} - L_{32}$			736.46	-----	-422	376	-233	216	-11	-170	458	120	0.729	0.264	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_{32} - L_{33}$			844.95	-----	-344	338	-161	192	-231	-551	281	56	0.770	0.221	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{33} - L_{34}$			873.39	-----	-330	291	-175	153	-442	-367	95	-93	0.796	0.201	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{34} - L_{35}$			779.26	-----	-294	235	-175	118	-448	-543	-560	-295	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_{35} - L_{36}$			648.65	-----	-295	224	-190	99	-330	-259	-840	-349	0.703	0.289	1.00	Yes	0.386	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{36} - L_{37}$			526.75	-----	-169	142	-81	19	-219	-374	-849	-280	0.672	0.324	1.00	Yes	0.423	0.187	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		$U_{38} - L_{37}$			-----	-370.56	-19	-29	45	-98	-289	-215	268	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.193	1	Yes	0.710	0.112	0.83	Yes	1.00	**4.67**
		$U_{39} - L_{38}$			331.46	-203.19	-103	49	33	-91	-217	-155	909	-128	0.596	0.395	1.00	Yes	0.328	0.217	0.55	Yes	0.484	0.397	0.89	Yes	0.430	0.132	0.57	Yes	1.00	**8.06**
		$U_{40} - L_{39}$			408.37	-----	-134	93	-17	-14	-316	62	-154	-103	0.734	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		$U_{41} - L_{40}$			563.08	-----	-174	127	-57	30	-383	-107	-412	-179	0.751	0.245	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{42} - L_{41}$			621.93	-----	-321	261	-122	92	-433	1	-402	-168	0.735	0.261	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_{43} - L_{42}$			768.81	-----	-377	307	-136	103	-391	-72	-376	-193	0.761	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{44} - L_{43}$			800.13	-----	-381	375	-162	154	-92	60	-173	6	0.792	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
	Structure 3	$U_0 - L_1$			568.62	-----	-297	263	-79	104	-1410	-304	-158	-1	0.616	0.384	1.00	Yes	0.339	0.211	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		$U_1 - L_2$			689.08	-----	-354	264	-155	105	-423	-398	174	-32	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_2 - L_3$			599.70	-----	-312	252	-122	83	-454	-587	138	-22	0.709	0.283	1.00	Yes	0.390	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_3 - L_4$			505.95	-----	-141	92	-41	19	-382	-468	159	-22	0.742	0.252	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_4 - L_5$			343.35	-58.24	-121	85	-28	-21	-384	-366	-765	-191	0.618	0.376	1.00	Yes	0.340	0.207	0.55	Yes	0.138	0.228	0.37	Yes	0.123	0.155	0.28	Yes	1.00	**6.21**
		$U_5 - L_6$			123.61	-205.11	-40	-15	9	-93	-126	-93	-1140	-284	0.222	0.448	0.68	Yes	0.122	0.247	0.37	Yes	0.481	0.519	1	Yes	0.434	0.118	0.56	Yes	1.00	**5.48**
		$U_7 - L_6$			416.47	-----	-85	38	-38	-14	-225	-211	468	-120	0.749	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_8 - L_7$			640.70	-----	-207	163	-89	45	-189	43	40	-70	0.781	0.218	1.00	Yes	0.491	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		$U_8 - L_9$			845.65	-----	-258	127	-116	22	-221	42	227	138	0.837	0.154	1.00	Yes	0.460	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{10} - L_9$			928.05	-----	-217	192	-94	81	-207	250	855	229	0.784	0.213	1.00	Yes	0.485	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_{11} - L_{10}$			951.12	-----	-277	280	-78	106	-473	38	-891	-160	0.760	0.238	1.00	Yes	0.471	0.135	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		$U_{12} - L_{11}$			938.90	-----	-58	373	19	129	-286	120	-608	-244	0.751	0.244	1.00	Yes	0.465	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		$U_{12} - L_{13}$			613.20	-----	-90	292	-19	143	54	-295	566	159	0.725	0.269	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{13} - L_{14}$			639.96	-----	-279	247	-113	114	-149	-69	444	157	0.757	0.240	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{14} - L_{15}$			610.81	-----	-173	202	-89	92	-158	-353	-867	-302	0.722	0.272	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_{15} - L_{16}$			347.01	-----	-8	83	-103	-16	467	240	-1631	-876	0.509	0.485	1.00	Yes	0.280	0.266	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{17} - L_{16}$			-----	-292.37	42	-12	-50	-90	-247	-27	795	123	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.331	1	Yes	0.619	0.115	0.74	Yes	1.00	**7.99**
		$U_{18} - L_{17}$			347.50	-----	-112	18	-121	-80	-348	-313	737	257	0.625	0.368	1.00	Yes	0.344	0.203	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.49**
		$U_{19} - L_{18}$			415.34	-----	-82	18	-61	-25	-323	-335	490	421	0.747	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		$U_{20} - L_{19}$			575.02	-----	-133	80	-32	7	-339	-74	-58	13	0.754	0.241	1.00	Yes	0.456	0.133	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi DL Factor: 1.30 DL Factor: 1.30

Condition: As-Inspected Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

North Truss - Upper Chord

Location	Member	Member Forces from STAAD D (kips)	LL+ (kips)	LL- (kips)	Pedestrian LL+	Pedestrian LL-	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL+	Lane Reduction and Impact LL-	Impact & Pedestrian LL+	Impact & Pedestrian LL-	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension A_deduct (in²) **	A_gross (in²)	A_net (in²)	C_Nominal (kips)	Member Capacity in Compression C_c	L (feet)	r_min (in)	KL/r_min ***	F_crit **** (ksi)	C_nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_2	-71.60	14.84	-81.03			0.90	1.24	16.52	-90.21	0.00	0.00	Vehicle	Vehicle	-----	-210.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.47	5.47
	U_2 - U_3	-90.76	29.95	-130.16			0.90	1.24	33.34	-144.90	0.00	0.00	Vehicle	Vehicle	-----	-306.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.28	3.28
	U_3 - U_4	-61.05	44.47	-147.69			0.90	1.24	49.51	-164.43	0.00	0.00	Vehicle	Vehicle	-----	-293.11	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.07	3.07
	U_4 - U_5	10.82	58.26	-137.25			0.90	1.24	64.86	-152.80	0.00	0.00	Vehicle	Vehicle	98.38	-184.58	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.18	10.18	3.77	3.77
	U_5 - U_6	12.98	58.57	-136.79			0.90	1.24	65.21	-152.29	0.00	0.00	Vehicle	Vehicle	101.65	-181.10	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.09	10.09	3.80	3.80
	U_6 - U_7	121.44	67.82	-104.14			0.90	1.24	75.50	-115.94	0.00	0.00	Vehicle	Vehicle	256.03	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	7.28	7.28	-----	-----
	U_7 - U_8	249.52	75.05	-62.11			0.90	1.24	83.56	-69.15	0.00	0.00	Vehicle	Vehicle	433.00	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	6.64	6.64	-----	-----
	U_8 - U_9	376.85	76.60	-20.91			0.90	1.24	85.28	-23.28	0.00	0.00	Vehicle	Vehicle	600.77	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	8.60	8.60	-----	-----
	U_9 - U_{10}	319.70	82.09	-19.70			0.90	1.20	88.51	-21.24	0.00	0.00	Vehicle	Vehicle	530.67	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	6.99	6.99	-----	-----
	U_{10} - U_{11}	128.80	76.33	-60.65			0.90	1.20	82.30	-65.39	0.00	0.00	Vehicle	Vehicle	274.43	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	7.05	7.05	-----	-----
	U_{11} - U_{12}	-70.81	68.73	-98.82			0.90	1.20	74.10	-106.54	0.00	0.00	Vehicle	Vehicle	4.27	-230.56	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	10.53	10.53	4.94	4.94
	U_{12} - U_{13}	-252.85	60.82	-143.68			0.90	1.20	65.58	-154.91	0.00	0.00	Vehicle	Vehicle	-----	-530.08	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.61	3.61
	U_{13} - U_{14}	-391.81	52.12	-178.99			0.90	1.20	56.19	-192.98	0.00	0.00	Vehicle	Vehicle	-----	-760.22	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.86	3.86
	U_{14} - U_{15}	-482.83	43.39	-197.46			0.90	1.20	46.78	-212.90	0.00	0.00	Vehicle	Vehicle	-----	-904.45	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.97	3.97
	U_{15} - U_{16}	-484.28	43.22	-197.46			0.90	1.20	46.60	-212.90	0.00	0.00	Vehicle	Vehicle	-----	-906.34	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.96	3.96
	U_{16} - U_{17}	-501.86	33.25	-196.85			0.90	1.20	35.85	-212.24	0.00	0.00	Vehicle	Vehicle	-----	-928.32	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.89	3.89
	U_{17} - U_{18}	-467.82	24.20	-182.97			0.90	1.20	26.09	-197.28	0.00	0.00	Vehicle	Vehicle	-----	-864.62	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.36	4.36
	U_{18} - U_{19}	-368.70	14.98	-143.89			0.90	1.20	16.15	-155.14	0.00	0.00	Vehicle	Vehicle	-----	-681.00	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	3.88	3.88
	U_{19} - U_{20}	-251.42	7.48	-95.79			0.90	1.20	8.07	-103.28	0.00	0.00	Vehicle	Vehicle	-----	-461.11	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.13	4.13
	U_{20} - U_{21}	-117.77	1.86	-42.81			0.90	1.20	2.00	-46.16	0.00	0.00	Vehicle	Vehicle	-----	-213.10	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	12.13	12.13
Structure 2	U_1 - U_2	-118.16	5.78	-49.19			0.90	1.18	6.15	-52.37	0.00	0.00	Vehicle	Vehicle	-----	-221.69	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.10	10.10
	U_2 - U_3	-239.45	13.23	-97.41			0.90	1.18	14.08	-103.71	0.00	0.00	Vehicle	Vehicle	-----	-446.10	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.32	5.32
	U_3 - U_4	-350.29	22.08	-143.08			0.90	1.18	23.51	-152.33	0.00	0.00	Vehicle	Vehicle	-----	-653.41	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.77	4.77
	U_4 - U_5	-448.96	32.92	-180.67			0.90	1.18	35.05	-192.36	0.00	0.00	Vehicle	Vehicle	-----	-833.71	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.64	4.64
	U_5 - U_6	-483.05	42.60	-207.98			0.90	1.18	46.72	-216.11	0.00	0.00	Vehicle	Vehicle	-----	-908.91	15.19	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.65	4.65
	U_6 - U_7	-485.65	55.52	-213.38			0.90	1.18	59.11	-227.19	0.00	0.00	Vehicle	Vehicle	-----	-926.68	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.41	4.41
	U_7 - U_8	-428.66	65.79	-200.64			0.90	1.18	70.05	-213.62	0.00	0.00	Vehicle	Vehicle	-----	-834.96	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.27	4.27
	U_8 - U_9	-428.18	65.95	-200.46			0.90	1.18	70.22	-213.43	0.00	0.00	Vehicle	Vehicle	-----	-834.09	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.28	4.28
	U_9 - U_{10}	-335.25	75.64	-186.45			0.90	1.18	80.53	-198.51	0.00	0.00	Vehicle	Vehicle	-----	-693.89	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.98	3.98
	U_{10} - U_{11}	-200.15	81.85	-154.12			0.90	1.18	87.15	-164.09	0.00	0.00	Vehicle	Vehicle	-----	-473.52	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.18	4.18
	U_{11} - U_{12}	-52.03	86.90	-114.30			0.90	1.18	92.52	-121.69	0.00	0.00	Vehicle	Vehicle	52.63	-225.84	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	10.41	10.41	5.89	5.89
	U_{12} - U_{13}	107.09	86.74	-77.49			0.90	1.18	92.36	-82.50	0.00	0.00	Vehicle	Vehicle	259.27	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	8.70	8.70	-----	-----
	U_{13} - U_{14}	259.37	85.94	-43.00			0.90	1.17	91.50	-45.78	0.00	0.00	Vehicle	Vehicle	456.14	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.61	9.61	-----	-----
	U_{14} - U_{15}	391.99	80.93	-16.32			0.90	1.18	86.17	-17.38	0.00	0.00	Vehicle	Vehicle	621.60	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	13.61	13.61	-----	-----
	U_{15} - U_{16}	439.43	81.31	-14.17			0.90	1.17	85.55	-14.91	0.00	0.00	Vehicle	Vehicle	682.43	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	13.15	13.15	-----	-----
	U_{16} - U_{17}	369.68	80.01	-29.92			0.90	1.17	84.18	-31.48	0.00	0.00	Vehicle	Vehicle	590.01	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	10.72	10.72	-----	-----
	U_{17} - U_{18}	271.42	77.07	-56.96			0.90	1.17	81.08	-59.93	0.00	0.00	Vehicle	Vehicle	458.25	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	9.53	9.53	-----	-----
	U_{18} - U_{19}	171.80	73.41	-84.36			0.90	1.17	77.23	-88.75	0.00	0.00	Vehicle	Vehicle	323.73	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	7.70	7.70	-----	-----
	U_{19} - U_{20}	72.84	66.91	-112.80			0.90	1.17	70.40	-118.67	0.00	0.00	Vehicle	Vehicle	186.21	-59.59	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	9.85	9.85	6.07	6.07
	U_{20} - U_{21}	-8.04	59.60	-141.91			0.90	1.17	62.70	-149.30	0.00	0.00	Vehicle	Vehicle	71.06	-204.55	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.21	13.21	4.59	4.59
	U_{21} - U_{22}	-60.07	50.36	-159.27			0.90	1.17	52.98	-167.57	0.00	0.00	Vehicle	Vehicle	-----	-295.93	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.63	4.63
	U_{22} - U_{23}	-82.15	40.03	-166.02			0.90	1.17	42.12	-174.67	0.00	0.00	Vehicle	Vehicle	-----	-333.87	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.32	4.32
	U_{23} - U_{24}	-82.37	39.89	-166.14			0.90	1.17	41.96	-174.79	0.00	0.00	Vehicle	Vehicle	-----	-334.32	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.32	4.32
	U_{24} - U_{25}	-65.94	49.48	-165.59			0.90	1.17	52.05	-174.22	0.00	0.00	Vehicle	Vehicle	-----	-312.20	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.42	4.42
	U_{25} - U_{26}	-61.58	59.00	-151.31			0.90	1.17	62.07	-159.19	0.00	0.00	Vehicle	Vehicle	57.32	-230.33	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.50	13.50	4.24	4.24
	U_{26} - U_{27}	54.95	67.03	-123.21			0.90	1.17	70.53	-129.63	0.00	0.00	Vehicle	Vehicle	163.12	-97.08	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	10.09	10.09	5.42	5.42
	U_{27} - U_{28}	135.89	73.70	-97.03			0.90	1.17	77.54	-102.06	0.00	0.00	Vehicle	Vehicle	277.47	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	8.13	8.13	-----	-----
	U_{28} - U_{29}	216.69	76.87	-65.45			0.90	1.17	80.87	-68.86	0.00	0.00	Vehicle	Vehicle	386.83	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	10.23	10.23	-----	-----
	U_{29} - U_{30}	293.53	78.67	-37.33			0.90	1.17	82.77	-39.28	0.00	0.00	Vehicle	Vehicle	489.19	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	11.83	11.83	-----	-----
	U_{30} - U_{31}	357.86	77.74	-19.42			0.90	1.17	81.78	-20.43	0.00	0.00	Vehicle	Vehicle	571.54	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	14.75	14.75	-----	-----
	U_{31} - U_{32}	339.12	88.31	-22.16			0.90	1.18	94.02	-23.60	0.00	0.00	Vehicle	Vehicle	563.09	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	13.03	13.03	-----	-----
	U_{32} - U_{33}	251.34	88.11	-33.66			0.90	1.18	93.81	-35.84	0.00	0.00	Vehicle	Vehicle	448.69	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.46	9.46	-----	-----
	U_{33} - U_{34}	136.30	86.78	-61.58			0.90	1.18	92.39	-65.57	0.00	0.00	Vehicle	Vehicle	297.30	----

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Inspected Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.73	5.62	-4.04			0.90	1.24	6.26	-4.50	0.00	0.00	Vehicle	Vehicle	14.27	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**79.59**	**79.59**	-----	-----
	L_1 - L_2	74.19	77.66	-17.02			0.90	1.24	86.46	-18.95	0.00	0.00	Vehicle	Vehicle	208.84	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**4.96**	**4.96**	-----	-----
	L_2 - L_3	97.64	123.80	-32.15			0.90	1.24	137.82	-35.79	0.00	0.00	Vehicle	Vehicle	306.10	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.14**	**4.14**	-----	-----
	L_3 - L_4	66.79	142.12	-46.56			0.90	1.24	158.22	-51.83	0.00	0.00	Vehicle	Vehicle	292.51	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.80**	**3.80**	-----	-----
	L_4 - L_5	-108.59	100.68	-69.91			0.90	1.24	112.09	-77.84	0.00	0.00	Vehicle	Vehicle	4.55	-242.35	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	**6.27**	**6.27**	**5.03**	**5.03**
	L_5 - L_6	-237.42	59.42	-77.15			0.90	1.24	66.15	-85.89	0.00	0.00	Vehicle	Vehicle	-----	-420.31	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.91**	**4.91**
	L_6 - L_7	-362.38	18.09	-80.61			0.90	1.24	20.14	-89.75	0.00	0.00	Vehicle	Vehicle	-----	-587.77	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.49**	**6.49**
	L_7 - L_8	-478.62	1.77	-88.42			0.90	1.24	1.97	-98.44	0.00	0.00	Vehicle	Vehicle	-----	-750.18	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.32**	**7.32**
	L_8 - L_9	-476.97	0.23	-88.94			0.90	1.20	0.25	-95.89	0.00	0.00	Vehicle	Vehicle	-----	-744.72	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.53**	**7.53**
	L_9 - L_{10}	-301.47	13.46	-76.05			0.90	1.20	14.51	-82.00	0.00	0.00	Vehicle	Vehicle	-----	-498.51	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.85**	**7.85**
	L_{10} - L_{11}	-104.56	48.22	-67.23			0.90	1.20	51.99	-72.48	0.00	0.00	Vehicle	Vehicle	-----	-230.15	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.46**	**5.46**
	L_{11} - L_{12}	96.98	84.06	-59.36			0.90	1.20	90.63	-64.00	0.00	0.00	Vehicle	Vehicle	243.90	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.48**	**5.48**	-----	-----
	L_{12} - L_{13}	268.60	121.73	-51.51			0.90	1.20	131.25	-55.54	0.00	0.00	Vehicle	Vehicle	519.80	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.38**	**5.38**	-----	-----
	L_{13} - L_{14}	405.49	155.02	-43.47			0.90	1.20	167.14	-46.87	0.00	0.00	Vehicle	Vehicle	744.43	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.40**	**5.40**	-----	-----
	L_{14} - L_{15}	502.59	163.03	-24.32			0.90	1.20	175.77	-26.22	0.00	0.00	Vehicle	Vehicle	881.88	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.10**	**6.10**	-----	-----
	L_{15} - L_{16}	469.06	150.40	-19.79			0.90	1.20	162.16	-21.34	0.00	0.00	Vehicle	Vehicle	820.59	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.82**	**6.82**	-----	-----
	L_{16} - L_{17}	365.26	109.35	-13.47			0.90	1.20	117.90	-14.52	0.00	0.00	Vehicle	Vehicle	628.10	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**7.22**	**7.22**	-----	-----
	L_{17} - L_{18}	248.52	67.77	-10.14			0.90	1.20	73.07	-10.93	0.00	0.00	Vehicle	Vehicle	418.07	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.69**	**8.69**	-----	-----
	L_{18} - L_{19}	112.87	34.54	-28.56			0.90	1.20	37.24	-30.80	0.00	0.00	Vehicle	Vehicle	195.14	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**10.47**	**10.47**	-----	-----
	L_{19} - L_{20}	-14.36	27.27	-57.09			0.90	1.20	29.40	-61.55	0.00	0.00	Vehicle	Vehicle	19.56	-98.68	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**17.58**	**17.58**	**6.65**	**6.65**
Structure 2	L_0- L_1	15.25	8.75	-9.03			0.90	1.18	9.32	-9.62	0.00	0.00	Vehicle	Vehicle	31.94	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**66.32**	**66.32**	-----	-----
	L_1 - L_2	136.09	43.79	-5.85			0.90	1.18	46.62	-6.22	0.00	0.00	Vehicle	Vehicle	237.53	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**10.67**	**10.67**	-----	-----
	L_2 - L_3	262.77	86.64	-11.78			0.90	1.18	92.24	-12.54	0.00	0.00	Vehicle	Vehicle	461.52	-----	6.20	37.95	31.7500	1252.35	131.71	10.7370	6.1375	15.74	32.76	-1056.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.60**	**7.60**	-----	-----
	L_3 - L_4	373.14	128.75	-20.46			0.90	1.18	137.08	-21.79	0.00	0.00	Vehicle	Vehicle	663.29	-----	9.45	51.08	41.6250	1685.48	131.71	10.7370	5.7282	16.87	32.73	-1420.90	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.74**	**6.74**	-----	-----
	L_4 - L_5	456.43	164.42	-30.83			0.90	1.18	175.06	-32.82	0.00	0.00	Vehicle	Vehicle	821.12	-----	11.08	65.00	54.1000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.82**	**6.82**	-----	-----
	L_5 - L_6	489.37	186.77	-41.68			0.90	1.18	198.86	-44.37	0.00	0.00	Vehicle	Vehicle	894.70	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.55**	**6.55**	-----	-----
	L_6 - L_7	479.01	196.18	-52.82			0.90	1.18	208.87	-56.24	0.00	0.00	Vehicle	Vehicle	894.24	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**6.41**	**6.41**	-----	-----
	L_7 - L_8	330.07	171.20	-72.49			0.90	1.18	182.28	-77.18	0.00	0.00	Vehicle	Vehicle	666.06	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**5.55**	**5.55**	-----	-----
	L_8 - L_9	188.98	137.53	-78.40			0.90	1.18	146.43	-83.47	0.00	0.00	Vehicle	Vehicle	436.03	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**6.22**	**6.22**	-----	-----
	L_9 - L_{10}	39.77	100.52	-83.55			0.90	1.18	107.02	-88.95	0.00	0.00	Vehicle	Vehicle	190.83	-63.93	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**7.68**	**7.68**	**8.63**	**8.63**
	L_{10} - L_{11}	-127.39	64.87	-84.24			0.90	1.18	69.06	-89.69	0.00	0.00	Vehicle	Vehicle	-----	-282.20	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.83**	**5.83**
	L_{11} - L_{12}	-282.64	33.30	-83.54			0.90	1.18	35.46	-88.95	0.00	0.00	Vehicle	Vehicle	-----	-483.06	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.29**	**7.29**
	L_{12} - L_{13}	-426.73	19.76	-80.77			0.90	1.18	21.04	-86.00	0.00	0.00	Vehicle	Vehicle	-----	-666.55	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.87**	**9.87**
	L_{13} - L_{14}	-536.42	18.38	-103.23			0.90	1.18	19.57	-109.91	0.00	0.00	Vehicle	Vehicle	-----	-840.23	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.91**	**8.91**
	L_{14} - L_{15}	-537.75	21.94	-89.59			0.90	1.17	23.08	-94.26	0.00	0.00	Vehicle	Vehicle	-----	-821.61	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.37**	**10.37**
	L_{15} - L_{16}	-475.65	20.27	-87.81			0.90	1.17	21.33	-92.38	0.00	0.00	Vehicle	Vehicle	-738.44	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**8.66**	**8.66**	-----	-----
	L_{16} - L_{17}	-384.35	22.28	-79.44			0.90	1.17	23.44	-83.58	0.00	0.00	Vehicle	Vehicle	-608.31	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**7.93**	**7.93**	-----	-----
	L_{17} - L_{18}	-281.86	46.49	-76.28			0.90	1.17	48.92	-80.25	0.00	0.00	Vehicle	Vehicle	-470.74	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.55**	**5.55**
	L_{18} - L_{19}	-175.17	69.22	-69.57			0.90	1.17	72.83	-73.20	0.00	0.00	Vehicle	Vehicle	-322.87	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**5.44**	**5.44**
	L_{19} - L_{20}	-76.53	94.73	-62.99			0.90	1.17	99.67	-66.27	0.00	0.00	Vehicle	Vehicle	30.07	-185.65	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.58**	**7.58**	**7.50**	**7.50**
	L_{20} - L_{21}	4.38	117.23	-53.60			0.90	1.17	123.34	-56.40	0.00	0.00	Vehicle	Vehicle	166.03	-67.62	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.68**	**7.68**	**14.33**	**14.33**
	L_{21} - L_{22}	55.94	133.20	-44.37			0.90	1.17	140.14	-46.68	0.00	0.00	Vehicle	Vehicle	254.90	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.39**	**6.39**	-----	-----
	L_{22} - L_{23}	62.99	128.50	-28.45			0.90	1.17	135.19	-29.93	0.00	0.00	Vehicle	Vehicle	257.64	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.58**	**6.58**	-----	-----
	L_{23} - L_{24}	15.54	113.58	-37.93			0.90	1.17	119.49	-39.91	0.00	0.00	Vehicle	Vehicle	175.54	-31.68	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.84**	**7.84**	**20.52**	**20.52**
	L_{24} - L_{25}	-56.00	82.18	-42.95			0.90	1.17	86.46	-45.19	0.00	0.00	Vehicle	Vehicle	39.59	-131.55	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.50**	**8.50**	**11.46**	**11.46**
	L_{25} - L_{26}	-119.57	60.97	-49.57			0.90	1.17	64.14	-52.15	0.00	0.00	Vehicle	Vehicle	-----	-245.08	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.38**	**8.38**
	L_{26} - L_{27}	-217.73	34.66	-68.57			0.90	1.17	36.46	-72.15	0.00	0.00	Vehicle	Vehicle	-376.84	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.07**	**7.07**
	L_{27} - L_{28}	-296.25	28.82	-96.39			0.90	1.17	30.32	-101.41	0.00	0.00	Vehicle	Vehicle	-----	-516.97	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.41**	**7.41**
	L_{28} - L_{29}	-364.18	34.71	-127.85			0.90	1.17	36.52	-134.51	0.00	0.00	Vehicle	Vehicle	-----	-648.31	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.77**	**6.77**
	L_{29} - L_{30}	-418.23	37.10	-147.84			0.90	1.17	39.04	-155.55	0.00	0.00	Vehicle	Vehicle	-----	-745.91	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.05**	**7.05**
	L_{30} - L_{31}	-350.38	18.37	-97.17			0.90	1.18	19.56	-103.45	0.00	0.00	Vehicle	Vehicle	-----	-589.98	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.25**	**11.25**
	L_{31} - L_{32}	-275.46	18.83	-78.78			0.90	1.18	20.05	-83.88	0.00	0.00	Vehicle	Vehicle	-----	-467.13	9.73	59.10	49.3700	1950.30	131.71	11.1432	5.8186	17.24	32.72	-1643.56	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.79**	**11.79**
	L_{32} - L_{33}	-179.08	20.54

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Inspected Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																															
Structure 1	U_0 - L_0	-77.19	13.30	-85.67			0.90	1.24	14.81	-95.37	0.00	0.00	Vehicle	Vehicle	------	-224.33	1.63	15.26	13.6300	503.58	131.71	9.3438	1.9120	43.98	31.16	-404.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.45	2.45
	U_1 - L_1	-33.88	11.96	-64.48			0.90	1.24	13.31	-71.78	0.00	0.00	Vehicle	Vehicle	------	-137.36	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.43	4.43
	U_2 - L_2	10.43	11.27	-50.00			0.90	1.24	12.55	-55.66	0.00	0.00	Vehicle	Vehicle	29.87	-58.80	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	33.26	33.26	6.51	6.51
	U_3 - L_3	44.39	15.93	-35.72			0.90	1.24	17.74	-39.77	0.00	0.00	Vehicle	Vehicle	80.76	------	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	21.61	21.61	------	------
	U_4 - L_4	-16.67	1.30	-57.77			0.90	1.24	1.45	-64.31	0.00	0.00	Vehicle	Vehicle	------	-105.27	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	5.18	5.18
	U_5 - L_5	-109.51	2.76	-69.81			0.90	1.24	3.08	-77.72	0.00	0.00	Vehicle	Vehicle	------	-243.39	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	------	------	4.06	4.06
	U_6 - L_6	-143.60	0.48	-85.10			0.90	1.24	0.54	-94.74	0.00	0.00	Vehicle	Vehicle	------	-309.85	3.13	23.61	20.4794	779.11	131.71	9.9479	2.0237	44.24	31.14	-624.88	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	3.56	3.56
	U_7 - L_7	-142.61	2.57	-87.27			0.90	1.24	2.86	-97.15	0.00	0.00	Vehicle	Vehicle	------	-311.70	2.88	21.86	18.9794	721.36	131.71	11.7292	1.9657	53.70	30.26	-562.19	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	2.98	2.98
	U_8 - L_8	-391.97	3.22	-104.12			0.90	1.24	3.58	-115.91	0.00	0.00	Vehicle	Vehicle	------	-660.25	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	------	------	5.81	5.81
	U_9 - L_9	-223.13	8.43	-85.31			0.90	1.20	9.09	-91.98	0.00	0.00	Vehicle	Vehicle	------	-409.64	3.50	30.81	27.3125	1016.81	131.71	12.1563	2.5246	43.34	31.21	-817.50	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	45.00	Pass	9.60	12.00	Pass	------	------	------	------	------	------	------	4.41	4.41
	U_{10} - L_{10}	-225.77	5.78	-79.69			0.90	1.20	6.24	-85.92	0.00	0.00	Vehicle	Vehicle	------	-405.20	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	------	------	5.65	5.65
	U_{11} - L_{11}	-198.79	5.89	-79.52			0.90	1.20	6.35	-85.74	0.00	0.00	Vehicle	Vehicle	------	-369.89	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	5.16	5.16
	U_{12} - L_{12}	-154.77	9.72	-68.04			0.90	1.20	10.48	-73.36	0.00	0.00	Vehicle	Vehicle	------	-296.56	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	5.15	5.15
	U_{13} - L_{13}	-109.04	16.68	-60.19			0.90	1.20	17.98	-64.89	0.00	0.00	Vehicle	Vehicle	------	-226.11	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	4.18	4.18
	U_{14} - L_{14}	-12.30	1.67	-49.05			0.90	1.20	1.80	-52.89	0.00	0.00	Vehicle	Vehicle	------	-84.75	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	6.29	6.29
	U_{15} - L_{15}	-5.62	24.28	-48.46			0.90	1.20	26.16	-52.25	0.00	0.00	Vehicle	Vehicle	26.70	-75.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	16.56	16.56	6.46	6.46
	U_{16} - L_{16}	-51.74	16.79	-56.85			0.90	1.20	18.10	-61.30	0.00	0.00	Vehicle	Vehicle	------	-146.94	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	4.72	4.72
	U_{17} - L_{17}	-127.31	9.95	-77.12			0.90	1.20	10.73	-83.15	0.00	0.00	Vehicle	Vehicle	------	-273.59	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	------	------	3.42	3.42
	U_{18} - L_{18}	-159.89	9.18	-88.06			0.90	1.20	9.90	-94.94	0.00	0.00	Vehicle	Vehicle	------	-331.28	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	------	------	3.85	3.85
	U_{19} - L_{19}	-191.17	7.78	-90.52			0.90	1.20	8.39	-97.60	0.00	0.00	Vehicle	Vehicle	------	-375.39	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	4.36	4.36
	U_{20} - L_{20}	-211.94	7.78	-97.32			0.90	1.20	8.38	-104.93	0.00	0.00	Vehicle	Vehicle	------	-411.93	0.00	29.13	29.1305	961.31	131.71	20.3229	2.8884	63.32	29.19	-722.67	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	3.28	3.28
Structure 2	U_0 - L_0	-206.53	9.82	-93.62			0.90	1.18	10.45	-99.68	0.00	0.00	Vehicle	Vehicle	------	-398.07	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	4.08	4.08
	U_1 - L_1	-188.72	10.08	-84.98			0.90	1.18	10.74	-90.48	0.00	0.00	Vehicle	Vehicle	------	-362.96	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	5.35	5.35
	U_2 - L_2	-155.84	10.64	-78.82			0.90	1.18	11.33	-83.92	0.00	0.00	Vehicle	Vehicle	------	-311.69	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	4.99	4.99
	U_3 - L_3	-134.53	12.06	-77.48			0.90	1.18	12.84	-82.49	0.00	0.00	Vehicle	Vehicle	------	-282.12	0.00	22.75	22.7330	750.10	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	------	------	3.85	3.85
	U_4 - L_4	-64.47	14.10	-57.76			0.90	1.18	15.01	-61.50	0.00	0.00	Vehicle	Vehicle	------	-163.76	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	4.47	4.47
	U_5 - L_5	-19.94	23.90	-52.58			0.90	1.18	25.45	-55.99	0.00	0.00	Vehicle	Vehicle	7.16	-98.70	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	17.59	17.59	5.73	5.73
	U_6 - L_6	40.07	34.02	-39.48			0.90	1.18	36.22	-42.04	0.00	0.00	Vehicle	Vehicle	99.18	-2.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	10.70	10.70	9.08	9.08
	U_7 - L_7	-26.03	0.43	-52.85			0.90	1.18	0.46	-56.27	0.00	0.00	Vehicle	Vehicle	------	-106.99	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	5.59	5.59
	U_8 - L_8	-125.22	18.13	-61.25			0.90	1.18	19.31	-65.22	0.00	0.00	Vehicle	Vehicle	------	-247.57	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	------	------	6.22	6.22
	U_9 - L_9	-174.50	6.92	-76.67			0.90	1.18	7.36	-81.63	0.00	0.00	Vehicle	Vehicle	------	-332.96	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	6.33	6.33
	U_{10} - L_{10}	-202.62	3.68	-86.67			0.90	1.18	3.91	-92.28	0.00	0.00	Vehicle	Vehicle	------	-383.37	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	6.24	6.24
	U_{11} - L_{11}	-229.48	2.35	-92.90			0.90	1.18	2.51	-98.91	0.00	0.00	Vehicle	Vehicle	------	-426.91	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	5.41	5.41
	U_{12} - L_{12}	-250.80	3.34	-96.73			0.90	1.18	3.55	-102.99	0.00	0.00	Vehicle	Vehicle	------	-459.92	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	5.35	5.35
	U_{13} - L_{13}	-223.27	10.16	-95.69			0.90	1.18	10.82	-101.88	0.00	0.00	Vehicle	Vehicle	------	-422.70	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	4.58	4.58
	U_{14} - L_{14}	-343.24	2.09	-96.10			0.90	1.18	2.23	-102.32	0.00	0.00	Vehicle	Vehicle	------	-579.23	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	------	------	6.93	6.93
	U_{15} - L_{15}	-123.12	9.77	-83.63			0.90	1.17	10.28	-87.99	0.00	0.00	Vehicle	Vehicle	------	-274.44	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	6.44	6.44
	U_{16} - L_{16}	-156.68	7.59	-81.55			0.90	1.17	7.99	-85.80	0.00	0.00	Vehicle	Vehicle	------	-315.22	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	5.94	5.94
	U_{17} - L_{17}	-147.89	7.34	-82.65			0.90	1.17	7.72	-86.95	0.00	0.00	Vehicle	Vehicle	------	-305.30	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	5.47	5.47
	U_{18} - L_{18}	-142.21	9.21	-80.70			0.90	1.17	9.68	-84.90	0.00	0.00	Vehicle	Vehicle	------	-295.24	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	5.12	5.12
	U_{19} - L_{19}	-111.47	10.29	-73.51			0.90	1.17	10.82	-77.34	0.00	0.00	Vehicle	Vehicle	------	-245.45	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	5.17	5.17
	U_{20} - L_{20}	-76.56	17.33	-63.25			0.90	1.17	18.23	-66.55	0.00	0.00	Vehicle	Vehicle	------	-186.04	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	4.49	4.49
	U_{21} - L_{21}	-44.33	21.25	-57.31			0.90	1.17	22.36	-60.30	0.00	0.00	Vehicle	Vehicle	------	-136.02	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	4.91	4.91
	U_{22} - L_{22}	-21.25	1.41	-53.57			0.90	1.17	1.48	-56.36	0.00	0.00	Vehicle	Vehicle	------	-100.89	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	5.69	5.69
	U_{23} - L_{23}	-39.04	26.35	-48.66			0.90	1.17	27.72	-51.19	0.00	0.00	Vehicle	Vehicle	------	-117.30	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	------	------	5.89	5.89
	U_{24} - L_{24}	-74.80	17.42	-59.67			0.90	1.17	18.33	-62.77	0.00	0.00	Vehicle	Vehicle	------	-178.85	0.00	16.85	16.8486	556.00	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	------	------	4.79	4.79
	U_{25} - L_{25}	-103.21	12.59	-75.63			0.90	1.17	13.24	-79.57	0.00	0.00	Vehicle	Vehicle	------	-237.62	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	------	------	5.13	5.13
	U_{26} - L_{26}	-120.15	11.87	-80.33			0.90	1.17	12.49	-84.52	0.00	0.00	Vehicle	Vehicle	------	-266.06	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	5.41	5.41
	U_{27} - L_{27}	-123.87	9.81	-87.21			0.90	1.17	10.32	-91.75	0.00	0.00	Vehicle	Vehicle	------	-280.30	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	------	------	5.44	5.44
	U_{28} - L_{28}	-135.49	8.92	-94.35			0.90	1.17	9.38	-99.27	0.00	0.00	Vehicle	Vehicle	------	-305.18	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	------	------	5.34	5.34
	U_{29} - L_{29}	-116.90	5.22	-87.99			0.90	1.17	5.49	-92.58	0.00	0.00	Vehicle	Vehicle	------	-272.31	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	------	------	6.19	6.19
	U_{30} - L_{30}	-261.40	3.77	-95.90			0.90	1.18	4.01	-102.10	0.00	0.00	Vehicle	Vehicle	------	-472.56	11.02	52.76	41.7400	1741.08	131.71	25.6094	4.0676	56.66	29.95	-1342.96	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	------	------	7.56	7.56
	U_{31} - L_{31}	-156.06	12.29	-82.45			0.90	1.18	13.09	-87.78	0.00	0.00	Vehicle	Vehicle	------	-316.99	2.57	36.98	34.

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals Structure 1	U$_1$ - L$_1$	87.39	98.74	-18.67			0.90	1.24	109.93	-20.79	0.00	0.00	Vehicle	Vehicle	256.52	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U$_1$ - L$_2$	23.29	79.42	-18.65			0.90	1.24	88.42	-20.76	0.00	0.00	Vehicle	Vehicle	145.23	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.57**	**4.57**	-----	-----
	U$_2$ - L$_3$	-37.87	53.51	-25.15			0.90	1.24	59.57	-28.00	0.00	0.00	Vehicle	Vehicle	28.21	-85.63	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.82**	**7.82**	**10.58**	**10.58**
	U$_3$ - L$_4$	-92.23	32.76	-56.14			0.90	1.24	36.47	-62.50	0.00	0.00	Vehicle	Vehicle	-----	-201.15	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**----**	**----**	**3.91**	**3.91**
	U$_3$ - L$_4$	143.29	78.33	-16.04			0.90	1.24	87.21	-17.86	0.00	0.00	Vehicle	Vehicle	299.65	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
	U$_3$ - L$_5$	177.89	93.91	-3.23			0.90	1.24	104.55	-3.59	0.00	0.00	Vehicle	Vehicle	367.17	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.52**	**4.52**	-----	-----
	U$_5$ - L$_6$	184.40	105.20	-2.26			0.90	1.24	117.12	-2.51	0.00	0.00	Vehicle	Vehicle	391.98	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.98**	**3.98**	-----	-----
	U$_6$ - L$_7$	179.98	97.30	-3.61			0.90	1.24	108.33	-4.01	0.00	0.00	Vehicle	Vehicle	374.80	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.34**	**4.34**	-----	-----
	U$_8$ - L$_9$	268.90	92.63	-9.79			0.90	1.20	99.88	-10.55	0.00	0.00	Vehicle	Vehicle	479.41	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
	U$_9$ - L$_{10}$	278.76	94.04	-9.45			0.90	1.20	101.40	-10.18	0.00	0.00	Vehicle	Vehicle	494.20	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.74**	**6.74**	-----	-----
	U$_{10}$ - L$_{11}$	284.98	100.00	-7.43			0.90	1.20	107.82	-8.01	0.00	0.00	Vehicle	Vehicle	510.64	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**5.80**	**5.80**	-----	-----
	U$_{11}$ - L$_{12}$	250.55	91.88	-12.01			0.90	1.20	99.07	-12.95	0.00	0.00	Vehicle	Vehicle	454.50	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
	U$_{12}$ - L$_{13}$	189.62	83.69	-22.95			0.90	1.20	90.24	-24.75	0.00	0.00	Vehicle	Vehicle	363.81	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**4.89**	**4.89**	-----	-----
	U$_{13}$ - L$_{14}$	123.30	70.55	-30.55			0.90	1.20	76.06	-32.94	0.00	0.00	Vehicle	Vehicle	259.17	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.00**	**4.00**	-----	-----
	U$_{14}$ - L$_{14}$	-24.40	48.25	-47.03			0.90	1.20	52.02	-50.71	0.00	0.00	Vehicle	Vehicle	35.90	-97.65	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.69**	**8.69**	**5.99**	**5.99**
	U$_{15}$ - L$_{15}$	48.54	66.48	-32.15			0.90	1.20	71.68	-34.67	0.00	0.00	Vehicle	Vehicle	156.28	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U$_{16}$ - L$_{16}$	146.57	84.42	-13.60			0.90	1.20	91.02	-14.66	0.00	0.00	Vehicle	Vehicle	308.87	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.15**	**4.15**	-----	-----
	U$_{16}$ - L$_{17}$	182.43	92.09	-11.72			0.90	1.20	99.29	-12.64	0.00	0.00	Vehicle	Vehicle	366.24	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U$_{18}$ - L$_{18}$	223.79	100.62	-9.82			0.90	1.20	108.49	-10.59	0.00	0.00	Vehicle	Vehicle	431.97	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.48**	**4.48**	-----	-----
	U$_{20}$ - L$_{19}$	232.63	95.52	-8.22			0.90	1.20	102.98	-8.86	0.00	0.00	Vehicle	Vehicle	436.30	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.64**	**4.64**	-----	-----
Structure 2	U$_1$ - L$_1$	213.47	88.08	-10.48			0.90	1.18	93.77	-11.16	0.00	0.00	Vehicle	Vehicle	399.41	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.02**	**6.02**	-----	-----
	U$_1$ - L$_2$	200.39	89.45	-12.31			0.90	1.18	95.24	-13.10	0.00	0.00	Vehicle	Vehicle	384.32	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
	U$_3$ - L$_3$	172.76	88.42	-13.78			0.90	1.18	94.14	-14.67	0.00	0.00	Vehicle	Vehicle	346.96	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.08**	**5.08**	-----	-----
	U$_3$ - L$_4$	147.11	81.10	-16.20			0.90	1.18	86.35	-17.25	0.00	0.00	Vehicle	Vehicle	303.50	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**4.98**	**4.98**	-----	-----
	U$_5$ - L$_5$	49.07	67.75	-28.82			0.90	1.18	72.13	-30.68	0.00	0.00	Vehicle	Vehicle	157.57	-----	0.00	16.85	16.8486	556.00	131.71	13.3954	1.9682	61.41	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.25**	**5.25**	-----	-----
	U$_6$ - L$_6$	2.97	60.80	-37.63			0.90	1.18	64.73	-40.06	0.00	0.00	Vehicle	Vehicle	88.00	-48.22	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.56**	**6.56**	**8.20**	**8.20**
	U$_8$ - L$_7$	-85.72	38.77	-58.15			0.90	1.18	41.27	-61.91	0.00	0.00	Vehicle	Vehicle	-----	-191.91	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**----**	**----**	**4.42**	**4.42**
	U$_8$ - L$_8$	140.27	73.35	-31.82			0.90	1.18	78.09	-33.88	0.00	0.00	Vehicle	Vehicle	283.86	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.93**	**5.93**	-----	-----
	U$_8$ - L$_9$	204.17	87.58	-15.38			0.90	1.18	93.25	-16.38	0.00	0.00	Vehicle	Vehicle	386.64	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U$_{10}$ - L$_9$	234.82	93.88	-7.65			0.90	1.18	99.95	-8.14	0.00	0.00	Vehicle	Vehicle	435.21	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
	U$_{11}$ - L$_{10}$	263.04	105.94	-2.41			0.90	1.18	112.79	-2.56	0.00	0.00	Vehicle	Vehicle	488.58	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.15**	**5.15**	-----	-----
	U$_{11}$ - L$_{11}$	273.97	101.73	-2.95			0.90	1.18	108.31	-3.14	0.00	0.00	Vehicle	Vehicle	496.96	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.27**	**5.27**	-----	-----
	U$_{13}$ - L$_{12}$	254.88	100.13	-10.53			0.90	1.18	106.61	-11.21	0.00	0.00	Vehicle	Vehicle	469.93	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.90**	**4.90**	-----	-----
	U$_{13}$ - L$_{13}$	217.66	90.53	-12.17			0.90	1.18	96.39	-12.96	0.00	0.00	Vehicle	Vehicle	408.26	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.81**	**5.81**	-----	-----
	U$_{15}$ - L$_{15}$	110.03	75.65	-10.27			0.90	1.17	79.59	-10.81	0.00	0.00	Vehicle	Vehicle	246.50	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
	U$_{16}$ - L$_{16}$	132.28	78.50	-10.95			0.90	1.17	82.59	-11.52	0.00	0.00	Vehicle	Vehicle	279.30	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
	U$_{17}$ - L$_{17}$	172.87	87.70	-7.70			0.90	1.17	92.27	-8.10	0.00	0.00	Vehicle	Vehicle	344.68	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
	U$_{17}$ - L$_{18}$	160.16	90.84	-9.17			0.90	1.17	95.57	-9.64	0.00	0.00	Vehicle	Vehicle	332.46	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.13**	**5.13**	-----	-----
	U$_{19}$ - L$_{19}$	152.33	85.70	-11.99			0.90	1.17	90.16	-12.61	0.00	0.00	Vehicle	Vehicle	315.24	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.53**	**5.53**	-----	-----
	U$_{20}$ - L$_{20}$	120.67	83.64	-18.14			0.90	1.17	88.00	-19.08	0.00	0.00	Vehicle	Vehicle	271.27	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
	U$_{20}$ - L$_{21}$	76.10	72.75	-26.18			0.90	1.17	76.54	-27.54	0.00	0.00	Vehicle	Vehicle	198.43	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.59**	**4.59**	-----	-----
	U$_{21}$ - L$_{22}$	31.50	57.97	-37.10			0.90	1.17	60.98	-39.03	0.00	0.00	Vehicle	Vehicle	120.22	-9.79	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.50**	**6.50**	**9.15**	**9.15**
	U$_{23}$ - L$_{22}$	24.27	56.54	-45.92			0.90	1.17	59.49	-48.32	0.00	0.00	Vehicle	Vehicle	108.88	-31.26	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.78**	**6.78**	**7.19**	**7.19**
	U$_{23}$ - L$_{23}$	72.21	65.96	-33.78			0.90	1.17	69.40	-35.54	0.00	0.00	Vehicle	Vehicle	184.10	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.12**	**5.12**	-----	-----
	U$_{24}$ - L$_{24}$	112.05	82.35	-18.28			0.90	1.17	86.64	-19.23	0.00	0.00	Vehicle	Vehicle	258.30	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U$_{25}$ - L$_{25}$	127.76	92.30	-15.16			0.90	1.17	97.13	-15.94	0.00	0.00	Vehicle	Vehicle	292.36	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
	U$_{26}$ - L$_{26}$	132.58	92.55	-12.27			0.90	1.17	97.38	-12.91	0.00	0.00	Vehicle	Vehicle	298.94	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
	U$_{26}$ - L$_{27}$	137.86	95.49	-10.58			0.90	1.17	100.46	-11.13	0.00	0.00	Vehicle	Vehicle	309.81	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
	U$_{28}$ - L$_{27}$	122.74	94.61	-6.24			0.90	1.17	99.64	-6.57	0.00	0.00	Vehicle	Vehicle	288.97	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
	U$_{28}$ - L$_{29}$	102.60	82.63	-7.78			0.90	1.17	86.93	-8.19	0.00	0.00	Vehicle	Vehicle	246.39	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
	U$_{30}$ - L$_{31}$	139.84	74.21	-12.68			0.90	1.18	79.01	-13.50	0.00	0.00	Vehicle	Vehicle	284.50	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.07**	**8.07**	-----	-----
	U$_{31}$ - L$_{32}$	166.63	82.19	-13.97			0.90	1.18	87.51	-14.87	0.00	0.00	Vehicle	Vehicle	330.38	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
	U$_{32}$ - L$_{33}$	202.12	95.91	-8.22			0.90	1.18	102.12	-8.75	0.00	0.00	Vehicle	Vehicle	395.51	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
	U$_{33}$ - L$_{34}$	201.72	93.99	-8.28			0.90	1.18	100.07	-8.81	0.00	0.00	Vehicle	Vehicle	392.32	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.42**	**6.42**	-----	-----
	U$_{35}$ - L$_{35}$	180.72	94.64	-9.38			0.90	1.18	100.76	-9.99	0.00	0.00	Vehicle	Vehicle	365.92	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1							0.00																																									
		U_0 - U_1	-52.70	15.65	-84.66			0.75	1.24	14.52	-78.54	0.00	0.00	Vehicle	Vehicle	-----	-170.62	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.53	6.53
		U_1 - U_2	-61.66	27.96	-127.87			0.75	1.24	25.94	-118.63	0.00	0.00	Vehicle	Vehicle	-----	-234.37	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.25	4.25
		U_2 - U_3	-27.05	38.64	-139.63			0.75	1.24	35.85	-129.54	0.00	0.00	Vehicle	Vehicle	11.44	-203.57	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	19.48	19.48	4.16	4.16
		U_3 - U_4	32.90	49.54	-121.60			0.75	1.24	45.96	-112.81	0.00	0.00	Vehicle	Vehicle	102.53	-103.88	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.89	13.89	5.30	5.30
		U_4 - U_5	34.76	49.78	-121.29			0.75	1.24	46.18	-112.52	0.00	0.00	Vehicle	Vehicle	105.22	-101.10	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.78	13.78	5.33	5.33
		U_5 - U_6	124.19	59.10	-100.06			0.75	1.24	54.83	-92.83	0.00	0.00	Vehicle	Vehicle	232.72	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	9.97	9.97	-----	-----
		U_6 - U_7	223.31	69.82	-69.37			0.75	1.24	64.77	-64.36	0.00	0.00	Vehicle	Vehicle	374.51	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.97	8.97	-----	-----
		U_7 - U_8	331.92	78.92	-28.61			0.75	1.24	73.22	-26.54	0.00	0.00	Vehicle	Vehicle	526.67	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.63	10.63	-----	-----
		U_8 - U_9	267.71	68.29	-26.83			0.75	1.20	61.36	-24.11	0.00	0.00	Vehicle	Vehicle	427.79	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	10.94	10.94	-----	-----
		U_9 - U_{10}	89.12	59.69	-67.25			0.75	1.20	53.63	-60.43	0.00	0.00	Vehicle	Vehicle	185.58	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	11.56	11.56	-----	-----
		U_{10} - U_{11}	-76.89	51.20	-103.45			0.75	1.20	46.00	-92.95	0.00	0.00	Vehicle	Vehicle	-----	-220.79	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.60	5.60
		U_{11} - U_{12}	-230.86	43.42	-141.46			0.75	1.20	39.01	-127.10	0.00	0.00	Vehicle	Vehicle	-----	-465.36	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.58	4.58
		U_{12} - U_{13}	-342.15	36.72	-165.50			0.75	1.20	32.99	-148.70	0.00	0.00	Vehicle	Vehicle	-----	-638.10	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.35	5.35
		U_{13} - U_{14}	-421.98	30.64	-176.79			0.75	1.20	27.53	-158.85	0.00	0.00	Vehicle	Vehicle	-----	-755.08	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.70	5.70
		U_{14} - U_{15}	-422.87	30.51	-176.77			0.75	1.20	27.41	-158.83	0.00	0.00	Vehicle	Vehicle	-----	-756.21	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.70	5.70
		U_{15} - U_{16}	-440.39	23.81	-185.70			0.75	1.20	21.39	-166.86	0.00	0.00	Vehicle	Vehicle	-----	-789.42	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.32	5.32
		U_{16} - U_{17}	-422.93	18.10	-175.18			0.75	1.20	16.26	-157.40	0.00	0.00	Vehicle	Vehicle	-----	-754.43	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.75	5.75
		U_{17} - U_{18}	-341.45	12.14	-145.45			0.75	1.20	10.91	-130.68	0.00	0.00	Vehicle	Vehicle	-----	-613.77	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	4.82	4.82
		U_{18} - U_{19}	-247.63	7.38	-100.00			0.75	1.20	6.63	-89.85	0.00	0.00	Vehicle	Vehicle	-----	-438.71	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.78	4.78
		U_{19} - U_{20}	-132.06	3.66	-47.63			0.75	1.20	3.29	-42.79	0.00	0.00	Vehicle	Vehicle	-----	-227.30	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	12.75	12.75
		U_0 - U_1	-131.63	8.00	-57.56			0.75	1.18	7.09	-51.07	0.00	0.00	Vehicle	Vehicle	-----	-237.51	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.10	10.10
		U_1 - U_2	-247.12	17.11	-106.21			0.75	1.18	15.18	-94.24	0.00	0.00	Vehicle	Vehicle	-----	-443.76	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.77	5.77
		U_2 - U_3	-347.28	26.52	-145.12			0.75	1.18	23.53	-128.75	0.00	0.00	Vehicle	Vehicle	-----	-618.84	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.67	5.67
		U_3 - U_4	-437.20	37.14	-175.23			0.75	1.18	32.95	-155.48	0.00	0.00	Vehicle	Vehicle	-----	-770.48	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.82	5.82
		U_4 - U_5	-468.83	45.49	-188.73			0.75	1.18	40.36	-167.45	0.00	0.00	Vehicle	Vehicle	-----	-827.16	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.08	6.08
		U_5 - U_6	-471.14	53.80	-186.98			0.75	1.18	47.73	-165.90	0.00	0.00	Vehicle	Vehicle	-----	-828.15	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.12	6.12
		U_6 - U_7	-414.50	59.99	-177.24			0.75	1.18	53.23	-157.25	0.00	0.00	Vehicle	Vehicle	-----	-743.28	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.89	5.89
		U_7 - U_8	-413.54	60.07	-176.91			0.75	1.18	53.30	-156.96	0.00	0.00	Vehicle	Vehicle	-----	-741.65	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
		U_8 - U_9	-322.06	65.70	-162.29			0.75	1.18	58.29	-143.99	0.00	0.00	Vehicle	Vehicle	-----	-605.86	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.58	5.58
		U_9 - U_{10}	-182.16	69.16	-138.58			0.75	1.18	61.36	-122.96	0.00	0.00	Vehicle	Vehicle	-----	-396.65	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.73	5.73
		U_{10} - U_{11}	-32.61	73.29	-106.67			0.75	1.18	65.03	-94.64	0.00	0.00	Vehicle	Vehicle	42.14	-165.43	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.51	14.51	7.78	7.78
		U_{11} - U_{12}	133.57	75.74	-78.54			0.75	1.18	67.20	-69.68	0.00	0.00	Vehicle	Vehicle	261.00	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	11.56	11.56	-----	-----
		U_{12} - U_{13}	289.98	78.15	-47.40			0.75	1.18	69.34	-42.05	0.00	0.00	Vehicle	Vehicle	467.12	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	12.25	12.25	-----	-----
		U_{13} - U_{14}	434.77	79.69	-20.39			0.75	1.18	70.70	-18.09	0.00	0.00	Vehicle	Vehicle	657.12	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.98	15.98	-----	-----
		U_{14} - U_{15}	474.48	67.76	-17.18			0.75	1.17	59.41	-15.06	0.00	0.00	Vehicle	Vehicle	694.05	-----	13.75	61.63	47.8750	2033.63	131.71	10.6302	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	18.35	18.35	-----	-----
		U_{15} - U_{16}	383.31	65.42	-40.53			0.75	1.17	57.36	-35.54	0.00	0.00	Vehicle	Vehicle	572.87	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	15.50	15.50	-----	-----
		U_{16} - U_{17}	279.61	61.48	-65.73			0.75	1.17	53.91	-57.63	0.00	0.00	Vehicle	Vehicle	433.57	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	14.18	14.18	-----	-----
		U_{17} - U_{18}	172.67	57.00	-84.34			0.75	1.17	49.97	-73.95	0.00	0.00	Vehicle	Vehicle	289.43	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	11.88	11.88	-----	-----
		U_{18} - U_{19}	74.40	50.88	-111.86			0.75	1.17	44.61	-98.07	0.00	0.00	Vehicle	Vehicle	154.70	-30.78	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.51	15.51	7.36	7.36
		U_{19} - U_{20}	-9.98	44.51	-129.41			0.75	1.17	39.03	-113.46	0.00	0.00	Vehicle	Vehicle	37.76	-160.47	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.27	21.27	6.02	6.02
	Structure 2							0.00																																							
		U_{20} - U_{21}	-62.02	37.32	-140.12			0.75	1.17	32.72	-122.85	0.00	0.00	Vehicle	Vehicle	-----	-240.32	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.31	6.31
		U_{21} - U_{22}	-88.69	32.23	-143.17			0.75	1.17	28.26	-125.52	0.00	0.00	Vehicle	Vehicle	-----	-278.47	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U_{22} - U_{23}	-88.87	32.37	-143.12			0.75	1.17	28.38	-125.48	0.00	0.00	Vehicle	Vehicle	-----	-278.65	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U_{23} - U_{24}	-76.60	39.69	-144.89			0.75	1.17	34.80	-127.03	0.00	0.00	Vehicle	Vehicle	-----	-264.72	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.98	5.98
		U_{24} - U_{25}	-37.55	46.27	-132.63			0.75	1.17	40.57	-116.29	0.00	0.00	Vehicle	Vehicle	3.92	-199.99	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.15	21.15	5.64	5.64
		U_{25} - U_{26}	37.36	52.12	-114.10			0.75	1.17	45.70	-100.04	0.00	0.00	Vehicle	Vehicle	107.97	-81.49	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.95	15.95	6.84	6.84
		U_{26} - U_{27}	128.18	58.05	-91.62			0.75	1.17	50.90	-80.33	0.00	0.00	Vehicle	Vehicle	232.80	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.54	12.54	-----	-----
		U_{27} - U_{28}	233.91	62.00	-66.29			0.75	1.17	54.36	-58.12	0.00	0.00	Vehicle	Vehicle	374.75	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	14.90	14.90	-----	-----
		U_{28} - U_{29}	337.95	65.49	-41.70			0.75	1.17	57.42	-36.56	0.00	0.00	Vehicle	Vehicle	513.97	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	16.27	16.27	-----	-----
		U_{29} - U_{30}	437.48	67.83	-16.09			0.75	1.17	59.47	-14.10	0.00	0.00	Vehicle	Vehicle	646.03	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	18.95	18.95	-----	-----
		U_{30} - U_{31}	420.86	80.88	-18.94			0.75	1.18	71.76	-16.80	0.00	0.00	Vehicle	Vehicle	640.40	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.94	15.94	-----	-----
		U_{31} - U_{32}	300.88	79.54	-46.51			0.75	1.18	70.57	-41.26	0.00	0.00	Vehicle	Vehicle	482.88	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Center Truss - Lower Chord

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1		L_0- L_1	8.48	12.37	-9.16			0.75	1.24	11.48	-8.50	0.00	0.00	Vehicle	Vehicle	25.95	-0.02	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**43.05**	**43.05**	**50.86**	**50.86**
		L_1 - L_2	50.83	82.65	-16.27			0.75	1.24	76.67	-15.09	0.00	0.00	Vehicle	Vehicle	165.76	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.89**	**5.89**	-----	-----
		L_2 - L_3	61.27	116.69	-27.74			0.75	1.24	108.26	-25.74	0.00	0.00	Vehicle	Vehicle	220.38	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.61**	**5.61**	-----	-----
		L_3 - L_4	25.72	127.68	-38.34			0.75	1.24	118.46	-35.57	0.00	0.00	Vehicle	Vehicle	187.43	-12.80	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**5.43**	**5.43**	**16.55**	**16.55**
		L_4 - L_5	-118.55	90.57	-56.17			0.75	1.24	84.03	-52.11	0.00	0.00	Vehicle	Vehicle	-----	-221.87	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**7.33**	**7.33**
		L_5 - L_6	-217.97	60.94	-67.23			0.75	1.24	56.53	-62.37	0.00	0.00	Vehicle	Vehicle	-----	-364.44	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**7.08**	**7.08**
		L_6 - L_7	-320.57	26.06	-77.27			0.75	1.24	24.18	-71.68	0.00	0.00	Vehicle	Vehicle	-----	-509.93	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.71**	**8.71**
		L_7 - L_8	-417.42	0.21	-83.45			0.75	1.24	0.19	-77.42	0.00	0.00	Vehicle	Vehicle	-----	-643.29	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**10.10**	**10.10**
		L_8 - L_9	-411.08	0.04	-89.49			0.75	1.20	0.03	-80.40	0.00	0.00	Vehicle	Vehicle	-----	-638.93	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**9.81**	**9.81**
		L_9 - L_{10}	-247.97	23.82	-64.71			0.75	1.20	21.40	-58.14	0.00	0.00	Vehicle	Vehicle	-----	-397.94	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**11.99**	**11.99**
		L_{10} - L_{11}	-65.37	59.00	-56.30			0.75	1.20	53.01	-50.58	0.00	0.00	Vehicle	Vehicle	-----	-150.74	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**8.60**	**8.60**
		L_{11} - L_{12}	101.81	95.82	-47.98			0.75	1.20	86.09	-43.11	0.00	0.00	Vehicle	Vehicle	244.27	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.72**	**5.72**	-----	-----
		L_{12} - L_{13}	264.06	130.12	-41.20			0.75	1.20	116.91	-37.01	0.00	0.00	Vehicle	Vehicle	495.27	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.08**	**6.08**	-----	-----
		L_{13} - L_{14}	373.80	154.00	-34.62			0.75	1.20	138.37	-31.11	0.00	0.00	Vehicle	Vehicle	665.81	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.75**	**6.75**	-----	-----
		L_{14} - L_{15}	476.54	168.48	-22.57			0.75	1.20	151.38	-20.28	0.00	0.00	Vehicle	Vehicle	816.30	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.25**	**7.25**	-----	-----
		L_{15} - L_{16}	460.23	157.07	-16.85			0.75	1.20	141.12	-15.14	0.00	0.00	Vehicle	Vehicle	781.76	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.90**	**7.90**	-----	-----
		L_{16} - L_{17}	381.61	125.92	-11.20			0.75	1.20	113.14	-10.06	0.00	0.00	Vehicle	Vehicle	643.17	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**7.38**	**7.38**	-----	-----
		L_{17} - L_{18}	289.18	83.90	-7.67			0.75	1.20	75.38	-6.89	0.00	0.00	Vehicle	Vehicle	473.93	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**7.88**	**7.88**	-----	-----
		L_{18} - L_{19}	176.31	35.53	-6.51			0.75	1.20	31.92	-5.84	0.00	0.00	Vehicle	Vehicle	270.70	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**10.22**	**10.22**	-----	-----
		L_{19} - L_{20}	69.72	13.98	-22.09			0.75	1.20	12.56	-19.85	0.00	0.00	Vehicle	Vehicle	106.97	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**34.45**	**34.45**	-----	-----
Structure 2		L_0- L_1	24.42	8.23	-9.84			0.75	1.18	7.30	-8.73	0.00	0.00	Vehicle	Vehicle	41.23	-----	1.88	20.08	18.2000	662.64	131.71	10.8828	6.9064	14.18	32.81	-559.98	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**66.49**	**66.49**	-----	-----
		L_1 - L_2	138.42	57.97	-8.87			0.75	1.18	51.44	-7.87	0.00	0.00	Vehicle	Vehicle	246.82	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.62**	**9.62**	-----	-----
		L_2 - L_3	252.76	109.49	-18.54			0.75	1.18	97.14	-16.45	0.00	0.00	Vehicle	Vehicle	454.88	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.45**	**7.45**	-----	-----
		L_3 - L_4	352.26	142.73	-27.97			0.75	1.18	126.63	-24.81	0.00	0.00	Vehicle	Vehicle	622.56	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.56**	**7.56**	-----	-----
		L_4 - L_5	447.15	165.66	-38.67			0.75	1.18	146.98	-34.31	0.00	0.00	Vehicle	Vehicle	772.38	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.18**	**8.18**	-----	-----
		L_5 - L_6	477.91	175.21	-47.00			0.75	1.18	155.45	-41.70	0.00	0.00	Vehicle	Vehicle	823.37	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.46**	**8.46**	-----	-----
		L_6 - L_7	482.67	176.09	-55.27			0.75	1.18	156.23	-49.04	0.00	0.00	Vehicle	Vehicle	830.57	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.54**	**8.54**	-----	-----
		L_7 - L_8	336.57	152.21	-66.73			0.75	1.18	135.05	-59.21	0.00	0.00	Vehicle	Vehicle	613.10	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**7.44**	**7.44**	-----	-----
		L_8 - L_9	196.00	127.06	-69.56			0.75	1.18	112.73	-61.72	0.00	0.00	Vehicle	Vehicle	401.35	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**8.02**	**8.02**	-----	-----
		L_9 - L_{10}	45.53	94.87	-73.23			0.75	1.18	84.17	-64.97	0.00	0.00	Vehicle	Vehicle	168.62	-25.27	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**9.70**	**9.70**	**11.90**	**11.90**
		L_{10} - L_{11}	-126.32	68.36	-75.01			0.75	1.18	60.65	-66.56	0.00	0.00	Vehicle	Vehicle	-----	-250.74	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	**7.88**	**7.88**	-----	-----
		L_{11} - L_{12}	-284.95	39.13	-77.38			0.75	1.18	34.72	-68.66	0.00	0.00	Vehicle	Vehicle	-----	-459.69	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.41**	**9.41**
		L_{12} - L_{13}	-433.89	21.98	-83.21			0.75	1.18	19.50	-73.83	0.00	0.00	Vehicle	Vehicle	-----	-660.04	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.40**	**11.40**
		L_{13} - L_{14}	-552.76	21.39	-84.62			0.75	1.18	18.98	-75.08	0.00	0.00	Vehicle	Vehicle	-----	-816.18	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.82**	**12.82**
		L_{14} - L_{15}	-573.53	21.25	-89.63			0.75	1.17	18.63	-78.58	0.00	0.00	Vehicle	Vehicle	-----	-847.74	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.98**	**11.98**
		L_{15} - L_{16}	-493.00	18.53	-70.89			0.75	1.17	16.24	-62.15	0.00	0.00	Vehicle	Vehicle	-----	-721.69	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.59**	**12.59**
		L_{16} - L_{17}	-395.34	35.40	-66.27			0.75	1.17	31.03	-58.10	0.00	0.00	Vehicle	Vehicle	-----	-589.47	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**11.22**	**11.22**
		L_{17} - L_{18}	-288.08	56.27	-62.20			0.75	1.17	49.34	-54.53	0.00	0.00	Vehicle	Vehicle	-----	-445.40	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**8.06**	**8.06**
		L_{18} - L_{19}	-175.85	79.27	-57.60			0.75	1.17	69.50	-50.50	0.00	0.00	Vehicle	Vehicle	-----	-294.25	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**7.88**	**7.88**
		L_{19} - L_{20}	-78.08	102.22	-51.51			0.75	1.17	89.62	-45.16	0.00	0.00	Vehicle	Vehicle	15.01	-160.21	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.45**	**8.45**	**10.97**	**10.97**
		L_{20} - L_{21}	7.59	121.72	-45.29			0.75	1.17	106.71	-39.70	0.00	0.00	Vehicle	Vehicle	148.60	-41.74	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.97**	**8.97**	**20.70**	**20.70**
		L_{21} - L_{22}	59.10	134.39	-38.06			0.75	1.17	117.83	-33.37	0.00	0.00	Vehicle	Vehicle	230.01	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.69**	**7.69**	-----	-----
		L_{22} - L_{23}	72.03	136.16	-40.62			0.75	1.17	119.38	-35.62	0.00	0.00	Vehicle	Vehicle	248.83	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.48**	**7.48**	-----	-----
		L_{23} - L_{24}	33.57	121.92	-47.13			0.75	1.17	106.89	-41.32	0.00	0.00	Vehicle	Vehicle	182.60	-10.08	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.71**	**8.71**	**20.52**	**20.52**
		L_{24} - L_{25}	-45.06	98.28	-52.37			0.75	1.17	86.16	-45.92	0.00	0.00	Vehicle	Vehicle	53.44	-118.27	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.40**	**8.40**	**11.51**	**11.51**
		L_{25} - L_{26}	-134.95	75.92	-57.49			0.75	1.17	66.56	-50.40	0.00	0.00	Vehicle	Vehicle	-----	-240.96	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.70**	**8.70**
		L_{26} - L_{27}	-245.92	49.19	-60.54			0.75	1.17	43.12	-53.08	0.00	0.00	Vehicle	Vehicle	-----	-388.70	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.07**	**9.07**
		L_{27} - L_{28}	-351.86	29.58	-63.84			0.75	1.17	25.94	-55.97	0.00	0.00	Vehicle	Vehicle	-----	-530.19	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**12.43**	**12.43**
		L_{28} - L_{29}	-458.41	15.29	-74.43			0.75	1.17	13.40	-65.26	0.00	0.00	Vehicle	Vehicle	-----	-680.77	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.52**	**12.52**
		L_{29} - L_{30}	-542.36	17.49	-95.25			0.75	1.17	15.34	-83.51	0.00	0.00	Vehicle	Vehicle	-----	-813.63	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**11.65**	**11.65**
		L_{30} - L_{31}	-514.21	20.82	-82.85			0.75	1.18	18.48	-73.50	0.00	0.00	Vehicle	Vehicle	-----	-764.03	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**13.61**	**13.61**
		L_{31} - L_{32}	-411.27	21.52	-77.41			0.75	1.18	19.09	-68.69	0.00	0.00	Vehicle	Vehicle	-----	-623.94	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	P

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_0 - L_0	-67.68	11.01	-154.98			0.75	1.24	10.21	-143.78	0.00	0.00	Vehicle	Vehicle	-----	-274.90	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	44.62	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.92	1.92
	U_1 - L_1	-24.09	10.63	-68.68			0.75	1.24	9.86	-63.72	0.00	0.00	Vehicle	Vehicle	-----	-114.14	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.15	5.15
	U_2 - L_2	12.87	8.91	-54.88			0.75	1.24	8.26	-50.91	0.00	0.00	Vehicle	Vehicle	27.48	-49.45	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	50.19	50.19	7.17	7.17
	U_3 - L_3	37.37	23.94	-42.57			0.75	1.24	22.21	-39.50	0.00	0.00	Vehicle	Vehicle	77.45	-2.76	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	17.58	17.58	9.83	9.83
	U_4 - L_4	-15.55	7.36	-67.31			0.75	1.24	6.83	-62.45	0.00	0.00	Vehicle	Vehicle	-----	-101.40	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.35	5.35
	U_5 - L_5	-92.59	13.06	-70.50			0.75	1.24	12.11	-65.41	0.00	0.00	Vehicle	Vehicle	-----	-205.40	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.08	5.08
	U_6 - L_6	-117.07	3.54	-82.38			0.75	1.24	3.28	-76.43	0.00	0.00	Vehicle	Vehicle	-----	-251.55	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.11	5.11
	U_7 - L_7	-127.52	0.32	-92.55			0.75	1.24	0.29	-85.86	0.00	0.00	Vehicle	Vehicle	-----	-277.39	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	3.87	3.87
	U_8 - L_8	-368.71	3.51	-137.42			0.75	1.24	3.25	-127.49	0.00	0.00	Vehicle	Vehicle	-----	-645.06	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.46	5.46
	U_9 - L_9	-214.56	5.21	-106.66			0.75	1.20	4.68	-95.83	0.00	0.00	Vehicle	Vehicle	-----	-403.51	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.49	4.49
	U_{10} - L_{10}	-198.68	1.58	-96.24			0.75	1.20	1.42	-86.48	0.00	0.00	Vehicle	Vehicle	-----	-370.70	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.29	6.29
	U_{11} - L_{11}	-171.40	10.34	-87.60			0.75	1.20	9.29	-78.71	0.00	0.00	Vehicle	Vehicle	-----	-325.14	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.97	5.97
	U_{12} - L_{12}	-128.37	19.87	-75.52			0.75	1.20	17.85	-67.85	0.00	0.00	Vehicle	Vehicle	-----	-255.08	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.96	5.96
	U_{13} - L_{13}	-96.65	24.93	-68.48			0.75	1.20	22.40	-61.53	0.00	0.00	Vehicle	Vehicle	-----	-205.63	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.61	4.61
	U_{14} - L_{14}	-11.04	7.60	-58.89			0.75	1.20	6.83	-52.92	0.00	0.00	Vehicle	Vehicle	-----	-83.15	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.31	6.31
	U_{15} - L_{15}	-2.47	36.65	-50.53			0.75	1.20	32.93	-45.40	0.00	0.00	Vehicle	Vehicle	39.60	-62.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.06	13.06	7.51	7.51
	U_{16} - L_{16}	-31.27	28.76	-56.49			0.75	1.20	25.84	-50.76	0.00	0.00	Vehicle	Vehicle	-----	-106.64	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.11	6.11
	U_{17} - L_{17}	-105.05	10.98	-77.58			0.75	1.20	9.87	-69.70	0.00	0.00	Vehicle	Vehicle	-----	-227.18	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.39	4.39
	U_{18} - L_{18}	-126.74	5.13	-85.91			0.75	1.20	4.61	-77.19	0.00	0.00	Vehicle	Vehicle	-----	-265.12	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.16	5.16
	U_{19} - L_{19}	-166.77	4.80	-88.57			0.75	1.20	4.31	-79.58	0.00	0.00	Vehicle	Vehicle	-----	-320.25	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.65	5.65
	U_{20} - L_{20}	-184.59	4.46	-104.57			0.75	1.20	4.01	-93.96	0.00	0.00	Vehicle	Vehicle	-----	-362.11	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.23	4.23
Structure 2	U_0 - L_0	-203.59	11.96	-117.95			0.75	1.18	10.61	-104.65	0.00	0.00	Vehicle	Vehicle	-----	-400.71	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.19	4.19
	U_1 - L_1	-176.11	12.91	-94.85			0.75	1.18	11.46	-84.15	0.00	0.00	Vehicle	Vehicle	-----	-338.34	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.90	5.90
	U_2 - L_2	-137.55	12.22	-91.34			0.75	1.18	10.84	-81.04	0.00	0.00	Vehicle	Vehicle	-----	-284.17	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.39	5.39
	U_3 - L_3	-117.62	12.68	-82.21			0.75	1.18	11.25	-72.94	0.00	0.00	Vehicle	Vehicle	-----	-247.72	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.58	4.58
	U_4 - L_4	-50.97	25.45	-64.52			0.75	1.18	22.58	-57.24	0.00	0.00	Vehicle	Vehicle	-----	-140.68	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.03	5.03
	U_5 - L_5	-13.78	33.01	-59.33			0.75	1.18	29.29	-52.64	0.00	0.00	Vehicle	Vehicle	20.16	-86.35	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.07	15.07	6.21	6.21
	U_6 - L_6	45.47	41.70	-47.37			0.75	1.18	36.99	-42.03	0.00	0.00	Vehicle	Vehicle	107.21	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.33	10.33	-----	-----
	U_7 - L_7	-22.33	4.32	-67.75			0.75	1.18	3.83	-60.11	0.00	0.00	Vehicle	Vehicle	-----	-107.18	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.29	5.29
	U_8 - L_8	-120.08	29.85	-64.13			0.75	1.18	26.48	-56.90	0.00	0.00	Vehicle	Vehicle	-----	-230.07	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	7.21	7.21
	U_9 - L_9	-177.03	19.81	-79.43			0.75	1.18	17.58	-70.48	0.00	0.00	Vehicle	Vehicle	-----	-321.75	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	7.30	7.30
	U_{10} - L_{10}	-205.88	17.73	-85.36			0.75	1.18	15.73	-75.74	0.00	0.00	Vehicle	Vehicle	-----	-366.10	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	7.56	7.56
	U_{11} - L_{11}	-239.23	9.57	-89.41			0.75	1.18	8.49	-79.33	0.00	0.00	Vehicle	Vehicle	-----	-414.13	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.63	6.63
	U_{12} - L_{12}	-257.95	5.60	-97.20			0.75	1.18	4.97	-86.24	0.00	0.00	Vehicle	Vehicle	-----	-447.45	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.31	6.31
	U_{13} - L_{13}	-243.82	6.14	-100.98			0.75	1.18	5.44	-89.60	0.00	0.00	Vehicle	Vehicle	-----	-433.45	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.98	4.98
	U_{14} - L_{14}	-420.85	6.10	-127.69			0.75	1.18	5.41	-113.29	0.00	0.00	Vehicle	Vehicle	-----	-694.39	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.57	5.57
	U_{15} - L_{15}	-158.83	10.09	-105.28			0.75	1.17	8.85	-92.30	0.00	0.00	Vehicle	Vehicle	-----	-326.48	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.76	5.76
	U_{16} - L_{16}	-174.02	7.85	-95.52			0.75	1.17	6.89	-83.75	0.00	0.00	Vehicle	Vehicle	-----	-335.10	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.88	5.88
	U_{17} - L_{17}	-156.46	9.50	-95.80			0.75	1.17	8.33	-83.99	0.00	0.00	Vehicle	Vehicle	-----	-312.59	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.56	5.56
	U_{18} - L_{18}	-142.21	14.30	-86.21			0.75	1.17	12.53	-75.58	0.00	0.00	Vehicle	Vehicle	-----	-283.12	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.76	5.76
	U_{19} - L_{19}	-113.66	20.78	-78.68			0.75	1.17	18.22	-68.98	0.00	0.00	Vehicle	Vehicle	-----	-237.44	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.76	5.76
	U_{20} - L_{20}	-76.51	26.70	-70.92			0.75	1.17	23.41	-62.18	0.00	0.00	Vehicle	Vehicle	-----	-180.30	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	4.80	4.80
	U_{21} - L_{21}	-45.77	28.06	-62.21			0.75	1.17	24.60	-54.55	0.00	0.00	Vehicle	Vehicle	-----	-130.42	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.40	5.40
	U_{22} - L_{22}	-17.72	7.31	-65.75			0.75	1.17	6.41	-57.64	0.00	0.00	Vehicle	Vehicle	-----	-97.97	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.62	5.62
	U_{23} - L_{23}	-30.69	34.73	-51.98			0.75	1.17	30.45	-45.58	0.00	0.00	Vehicle	Vehicle	-----	-99.14	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.80	6.80
	U_{24} - L_{24}	-62.06	27.15	-64.48			0.75	1.17	23.80	-56.53	0.00	0.00	Vehicle	Vehicle	-----	-154.18	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.54	5.54
	U_{25} - L_{25}	-103.15	22.25	-75.86			0.75	1.17	19.50	-66.51	0.00	0.00	Vehicle	Vehicle	-----	-220.56	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.14	6.14
	U_{26} - L_{26}	-134.38	16.16	-79.14			0.75	1.17	14.17	-69.38	0.00	0.00	Vehicle	Vehicle	-----	-264.89	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.38	6.38
	U_{27} - L_{27}	-156.03	9.16	-89.59			0.75	1.17	8.03	-78.55	0.00	0.00	Vehicle	Vehicle	-----	-304.95	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.95	5.95
	U_{28} - L_{28}	-179.40	6.75	-96.97			0.75	1.17	5.92	-85.02	0.00	0.00	Vehicle	Vehicle	-----	-343.75	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.72	5.72
	U_{29} - L_{29}	-171.60	4.76	-95.14			0.75	1.17	4.18	-83.41	0.00	0.00	Vehicle	Vehicle	-----	-331.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	6.22	6.22
	U_{30} - L_{30}	-393.29	8.89	-125.90			0.75	1.18	7.88	-111.70	0.00	0.00	Vehicle	Vehicle	-----	-656.49	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5.90	5.90
	U_{31} - L_{31}	-203.49	10.17	-102.71			0.75	1.18	9.03	-91.13	0.00	0.00	Vehicle	Vehicle	-----	-383.00	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	5

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors DL Factor: 1.30 Pedestrian Load Factors DL Factor: 1.30

Condition: As-Inspected Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.29	105.40	-16.56			0.75	1.24	97.79	-15.36	0.00	0.00	Vehicle	Vehicle	196.40	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**5.45**	**5.45**	-----	-----
		U_1 - L_2	10.80	80.25	-15.21			0.75	1.24	74.45	-14.11	0.00	0.00	Vehicle	Vehicle	110.83	-4.30	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**5.60**	**5.60**	**24.53**	**24.53**
		U_2 - L_3	-44.05	63.00	-37.40			0.75	1.24	58.45	-34.70	0.00	0.00	Vehicle	Vehicle	18.71	-102.37	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.07**	**8.07**	**8.36**	**8.36**
		U_3 - L_4	-76.77	46.24	-65.64			0.75	1.24	42.90	-60.90	0.00	0.00	Vehicle	Vehicle	-----	-178.97	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**4.26**	**4.26**
		U_4 - L_5	118.48	79.28	-37.27			0.75	1.24	73.55	-34.58	0.00	0.00	Vehicle	Vehicle	249.65	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.52**	**5.52**	-----	-----
		U_5 - L_6	137.62	94.36	-16.96			0.75	1.24	87.55	-15.74	0.00	0.00	Vehicle	Vehicle	292.71	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
		U_6 - L_7	157.39	97.53	-3.12			0.75	1.24	90.48	-2.89	0.00	0.00	Vehicle	Vehicle	322.23	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.45**	**5.45**	-----	-----
		U_7 - L_8	149.33	101.97	-0.35			0.75	1.24	94.60	-0.33	0.00	0.00	Vehicle	Vehicle	317.11	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
		U_8 - L_9	249.21	114.84	-5.92			0.75	1.20	103.19	-5.32	0.00	0.00	Vehicle	Vehicle	458.12	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
		U_9 - L_{10}	260.39	112.39	-4.80			0.75	1.20	100.99	-4.32	0.00	0.00	Vehicle	Vehicle	469.79	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.95**	**6.95**	-----	-----
		U_{10} - L_{11}	236.43	109.33	-13.04			0.75	1.20	98.23	-11.72	0.00	0.00	Vehicle	Vehicle	435.06	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**6.86**	**6.86**	-----	-----
		U_{11} - L_{12}	212.05	96.51	-26.74			0.75	1.20	86.72	-24.02	0.00	0.00	Vehicle	Vehicle	388.40	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
		U_{12} - L_{13}	151.78	92.89	-34.56			0.75	1.20	83.46	-31.05	0.00	0.00	Vehicle	Vehicle	305.82	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**5.74**	**5.74**	-----	-----
		U_{13} - L_{14}	108.73	78.04	-42.78			0.75	1.20	70.12	-38.44	0.00	0.00	Vehicle	Vehicle	232.50	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.55**	**4.55**	-----	-----
		U_{14} - L_{14}	-24.56	58.63	-65.31			0.75	1.20	52.68	-58.68	0.00	0.00	Vehicle	Vehicle	36.55	-108.22	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.58**	**8.58**	**5.18**	**5.18**
		U_{15} - L_{15}	23.90	68.94	-49.24			0.75	1.20	61.94	-44.25	0.00	0.00	Vehicle	Vehicle	111.60	-26.45	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.52**	**6.52**	**7.87**	**7.87**
		U_{17} - L_{16}	120.04	80.87	-29.58			0.75	1.20	72.67	-26.58	0.00	0.00	Vehicle	Vehicle	250.51	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.57**	**5.57**	-----	-----
		U_{18} - L_{17}	144.84	92.40	-13.11			0.75	1.20	83.02	-11.78	0.00	0.00	Vehicle	Vehicle	296.22	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_{19} - L_{18}	193.27	94.31	-6.20			0.75	1.20	84.74	-5.57	0.00	0.00	Vehicle	Vehicle	361.42	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.10**	**6.10**	-----	-----
		U_{20} - L_{19}	193.75	93.37	-5.07			0.75	1.20	83.89	-4.55	0.00	0.00	Vehicle	Vehicle	360.94	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
		U_0 - L_1	202.60	98.40	-13.47			0.75	1.18	87.30	-11.95	0.00	0.00	Vehicle	Vehicle	376.87	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U_1 - L_2	190.84	98.94	-15.07			0.75	1.18	87.78	-13.37	0.00	0.00	Vehicle	Vehicle	362.21	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_2 - L_3	155.90	93.46	-14.64			0.75	1.18	82.92	-12.99	0.00	0.00	Vehicle	Vehicle	310.46	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
		U_3 - L_4	134.06	84.91	-26.99			0.75	1.18	75.33	-23.94	0.00	0.00	Vehicle	Vehicle	272.21	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**5.88**	**5.88**	-----	-----
		U_4 - L_5	46.01	73.70	-40.53			0.75	1.18	65.39	-35.96	0.00	0.00	Vehicle	Vehicle	144.82	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_5 - L_6	3.43	64.15	-51.56			0.75	1.18	56.92	-45.75	0.00	0.00	Vehicle	Vehicle	78.45	-55.02	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.45**	**7.45**	**7.20**	**7.20**
		U_6 - L_7	-84.31	49.56	-71.06			0.75	1.18	43.98	-63.05	0.00	0.00	Vehicle	Vehicle	-----	-191.57	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.36**	**4.36**
		U_7 - L_8	137.33	80.72	-45.73			0.75	1.18	71.62	-40.57	0.00	0.00	Vehicle	Vehicle	271.63	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.51**	**6.51**	-----	-----
		U_8 - L_9	210.92	86.02	-35.97			0.75	1.18	76.32	-31.92	0.00	0.00	Vehicle	Vehicle	373.41	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
		U_{10} - L_9	236.39	96.65	-23.53			0.75	1.18	85.76	-20.87	0.00	0.00	Vehicle	Vehicle	418.79	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.31**	**6.31**	-----	-----
		U_{11} - L_{10}	274.65	99.14	-19.75			0.75	1.18	87.97	-17.52	0.00	0.00	Vehicle	Vehicle	471.40	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
		U_{12} - L_{11}	281.09	97.83	-10.33			0.75	1.18	86.80	-9.16	0.00	0.00	Vehicle	Vehicle	478.26	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
		U_{13} - L_{12}	278.14	96.50	-6.70			0.75	1.18	85.62	-5.94	0.00	0.00	Vehicle	Vehicle	472.89	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_{14} - L_{13}	235.47	94.92	-8.27			0.75	1.18	84.22	-7.34	0.00	0.00	Vehicle	Vehicle	415.60	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{15} - L_{14}	143.01	93.71	-9.91			0.75	1.17	82.16	-8.68	0.00	0.00	Vehicle	Vehicle	292.73	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{16} - L_{15}	171.90	93.55	-9.94			0.75	1.17	82.02	-8.72	0.00	0.00	Vehicle	Vehicle	330.09	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_{17} - L_{16}	181.04	100.44	-10.00			0.75	1.17	88.06	-8.77	0.00	0.00	Vehicle	Vehicle	349.83	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{17} - L_{18}	171.16	92.70	-16.46			0.75	1.17	81.27	-14.43	0.00	0.00	Vehicle	Vehicle	328.16	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.90**	**5.90**	-----	-----
		U_{18} - L_{19}	150.64	91.16	-23.91			0.75	1.17	79.93	-20.96	0.00	0.00	Vehicle	Vehicle	299.74	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.26**	**6.26**	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	86.62	-33.70			0.75	1.17	75.94	-29.54	0.00	0.00	Vehicle	Vehicle	262.34	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
		U_{20} - L_{21}	76.04	78.09	-35.22			0.75	1.17	68.47	-30.87	0.00	0.00	Vehicle	Vehicle	187.86	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.14**	**5.14**	-----	-----
		U_{21} - L_{22}	38.33	63.21	-54.52			0.75	1.17	55.42	-47.80	0.00	0.00	Vehicle	Vehicle	121.87	-12.30	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.03**	**7.03**	**7.61**	**7.61**
		U_{23} - L_{22}	18.05	61.28	-60.91			0.75	1.17	53.72	-53.40	0.00	0.00	Vehicle	Vehicle	93.31	-45.95	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.63**	**7.63**	**6.39**	**6.39**
		U_{24} - L_{23}	58.57	69.83	-45.30			0.75	1.17	61.22	-39.72	0.00	0.00	Vehicle	Vehicle	155.74	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.03**	**6.03**	-----	-----
		U_{25} - L_{24}	114.98	83.10	-35.17			0.75	1.17	72.85	-30.83	0.00	0.00	Vehicle	Vehicle	244.18	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.70**	**6.70**	-----	-----
		U_{26} - L_{25}	143.00	92.34	-26.42			0.75	1.17	80.95	-23.16	0.00	0.00	Vehicle	Vehicle	291.13	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.27**	**6.27**	-----	-----
		U_{27} - L_{26}	173.82	88.46	-18.39			0.75	1.17	77.55	-16.12	0.00	0.00	Vehicle	Vehicle	326.78	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_{28} - L_{27}	186.60	97.77	-10.14			0.75	1.17	85.72	-8.89	0.00	0.00	Vehicle	Vehicle	354.01	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
		U_{29} - L_{28}	190.75	95.72	-5.77			0.75	1.17	83.92	-5.06	0.00	0.00	Vehicle	Vehicle	357.07	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U_{30} - L_{29}	161.86	88.46	-7.56			0.75	1.17	77.55	-6.63	0.00	0.00	Vehicle	Vehicle	311.24	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
		U_{30} - L_{31}	191.72	92.47	-9.95			0.75	1.18	82.04	-8.83	0.00	0.00	Vehicle	Vehicle	355.89	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_{31} - L_{32}	226.45	100.51	-10.95			0.75	1.18	89.18	-9.71	0.00	0.00	Vehicle	Vehicle	410.31	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{32} - L_{33}	243.42	103.31	-7.28			0.75	1.18	91.66	-6.46	0.00	0.00	Vehicle	Vehicle	435.61	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U_{33} - L_{34}	239.13	97.40	-15.73			0.75	1.18	86.42	-13.95	0.00	0.00	Vehicle	Vehicle	423.21	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
		U_{34} - L_{35}	222.16	99.96	-21.94			0.75	1.18	88.69	-19.47	0.00	0.00	Vehicle	Vehicle	404.11	-----	0.00	30.63	30.6305	1010.81

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1							0.00																																							
	U_0 - U_1	-66.70	10.20	-49.76	2.21	-8.83	0.90	1.24	11.36	-55.39	2.21	-8.83	Vehicle	Vehicle	-----	-158.73	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.00	9.00
	U_1 - U_2	-86.55	24.21	-79.94	6.01	-16.34	0.90	1.24	26.95	-89.00	6.01	-16.34	Vehicle	Vehicle	-----	-228.21	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.38	5.38
	U_2 - U_3	-48.14	35.89	-81.83	9.46	-19.05	0.90	1.24	39.95	-91.10	9.46	-19.05	Vehicle	Vehicle	-----	-181.01	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.68	5.68
	U_3 - U_4	36.58	46.30	-69.90	12.74	-17.47	0.90	1.24	51.55	-77.82	12.74	-17.47	Vehicle	Vehicle	114.57	-53.60	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.31	12.31	7.74	7.74
	U_4 - U_5	38.93	46.45	-69.29	12.80	-17.38	0.90	1.24	51.72	-77.15	12.80	-17.38	Vehicle	Vehicle	117.84	-49.68	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.22	12.22	7.83	7.83
	U_5 - U_6	154.60	52.18	-45.43	15.16	-12.03	0.90	1.24	58.10	-50.58	15.16	-12.03	Vehicle	Vehicle	276.50	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.89	8.89	-----	-----
	U_6 - U_7	288.38	56.74	-22.63	17.14	-4.31	0.90	1.24	63.16	-25.20	17.14	-4.31	Vehicle	Vehicle	457.00	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.17	8.17	-----	-----
	U_7 - U_8	410.94	58.07	-3.57	22.63	0.00	0.90	1.24	64.65	-3.98	22.63	0.00	Pedestrian	Vehicle	647.67	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	8.01	8.01	-----	-----
	U_8 - U_9	311.57	44.22	-8.40	19.08	0.00	0.90	1.20	47.68	-9.06	19.08	0.00	Pedestrian	Vehicle	491.84	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	9.40	9.40	-----	-----
	U_9 - U_{10}	78.52	44.67	-38.87	12.28	-6.79	0.90	1.20	48.16	-41.91	12.28	-6.79	Vehicle	Vehicle	164.68	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	13.10	13.10	-----	-----
	U_{10} - U_{11}	-141.43	42.12	-72.58	11.10	-18.41	0.90	1.20	45.42	-78.26	11.10	-18.41	Vehicle	Vehicle	-----	-285.59	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.83	5.83
	U_{11} - U_{12}	-338.03	38.82	-102.78	9.77	-27.93	0.90	1.20	41.85	-110.81	9.77	-27.93	Vehicle	Vehicle	-----	-583.50	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.28	4.28
	U_{12} - U_{13}	-480.08	33.99	-120.20	8.23	-34.32	0.90	1.20	36.65	-129.60	8.23	-34.32	Vehicle	Vehicle	-----	-792.59	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.07	5.07
	U_{13} - U_{14}	-570.65	28.87	-130.14	6.68	-37.21	0.90	1.20	31.13	-140.32	6.68	-37.21	Vehicle	Vehicle	-----	-924.26	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.39	5.39
	U_{14} - U_{15}	-571.07	28.73	-130.10	6.65	-37.22	0.90	1.20	30.98	-140.27	6.65	-37.22	Vehicle	Vehicle	-----	-924.74	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.39	5.39
	U_{15} - U_{16}	-581.88	22.43	-124.19	4.98	-36.12	0.90	1.20	24.19	-133.90	4.98	-36.12	Vehicle	Vehicle	-----	-930.51	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.57	5.57
	U_{16} - U_{17}	-539.46	16.75	-109.41	3.52	-31.85	0.90	1.20	18.06	-117.97	3.52	-31.85	Vehicle	Vehicle	-----	-854.66	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.68	6.68
	U_{17} - U_{18}	-422.33	10.84	-81.09	2.26	-25.05	0.90	1.20	11.69	-87.43	2.26	-25.05	Vehicle	Vehicle	-----	-662.68	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	6.27	6.27
	U_{18} - U_{19}	-286.19	6.12	-51.61	1.28	-16.96	0.90	1.20	6.59	-55.64	1.28	-16.96	Vehicle	Vehicle	-----	-444.38	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.03	7.03
	U_{19} - U_{20}	-140.84	2.59	-22.88	0.55	-8.68	0.90	1.20	2.79	-24.67	0.55	-8.68	Vehicle	Pedestrian	-----	-226.44	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	16.09	16.09
	Structure 2																																															
	U_0 - U_1	-147.44	5.15	-33.77	0.45	-4.88	0.90	1.18	5.48	-35.95	0.45	-4.88	Vehicle	Vehicle	-----	-238.41	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	13.91	13.91
	U_1 - U_2	-319.06	10.92	-68.47	1.96	-13.36	0.90	1.18	11.62	-72.90	1.96	-13.36	Vehicle	Vehicle	-----	-509.54	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.48	6.48
	U_2 - U_3	-460.91	19.58	-97.92	3.77	-20.95	0.90	1.18	20.85	-104.26	3.77	-20.95	Vehicle	Vehicle	-----	-734.72	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
	U_3 - U_4	-580.03	29.79	-123.88	5.92	-27.68	0.90	1.18	31.72	-131.90	5.92	-27.68	Vehicle	Vehicle	-----	-925.51	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.77	5.77
	U_4 - U_5	-616.49	38.67	-134.14	7.86	-31.35	0.90	1.18	41.17	-142.82	7.86	-31.35	Vehicle	Vehicle	-----	-987.10	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.10	6.10
	U_5 - U_6	-604.71	47.61	-137.44	9.87	-32.88	0.90	1.18	50.69	-146.33	9.87	-32.88	Vehicle	Vehicle	-----	-976.35	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.03	6.03
	U_6 - U_7	-514.78	54.44	-124.49	11.56	-31.23	0.90	1.18	57.96	-132.54	11.56	-31.23	Vehicle	Vehicle	-----	-841.52	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.24	6.24
	U_7 - U_8	-512.83	54.49	-124.20	11.57	-31.18	0.90	1.18	58.01	-132.24	11.57	-31.18	Vehicle	Vehicle	-----	-838.58	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.27	6.27
	U_8 - U_9	-373.51	60.54	-107.58	13.16	-27.41	0.90	1.18	64.46	-114.54	13.16	-27.41	Vehicle	Vehicle	-----	-634.46	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.57	6.57
	U_9 - U_{10}	-181.05	63.46	-81.75	14.25	-21.42	0.90	1.18	67.57	-87.04	14.25	-21.42	Vehicle	Vehicle	-----	-348.52	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.10	8.10
	U_{10} - U_{11}	26.18	65.78	-56.83	15.21	-14.40	0.90	1.18	70.03	-60.50	15.21	-14.40	Vehicle	Vehicle	125.08	-44.62	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.63	12.63	13.15	13.15
	U_{11} - U_{12}	237.39	64.45	-30.55	15.56	-6.85	0.90	1.18	68.62	-32.53	15.56	-6.85	Vehicle	Vehicle	397.81	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	9.81	9.81	-----	-----
	U_{12} - U_{13}	435.89	63.26	-16.73	18.37	0.00	0.90	1.18	67.35	-17.81	18.37	0.00	Vehicle	Vehicle	654.21	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	10.44	10.44	-----	-----
	U_{13} - U_{14}	595.84	60.31	-15.63	24.32	0.00	0.90	1.18	64.21	-16.64	24.32	0.00	Pedestrian	Vehicle	889.67	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	10.94	10.94	-----	-----
	U_{14} - U_{15}	615.53	54.29	-13.55	24.37	0.00	0.90	1.17	57.11	-14.25	24.37	0.00	Pedestrian	Vehicle	906.12	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	11.64	11.64	-----	-----
	U_{15} - U_{16}	486.15	56.66	-21.51	18.61	0.00	0.90	1.17	59.61	-22.63	18.61	0.00	Vehicle	Vehicle	709.49	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.19	13.19	-----	-----
	U_{16} - U_{17}	339.27	56.35	-39.11	14.66	-2.95	0.90	1.17	59.29	-41.15	14.66	-2.95	Vehicle	Vehicle	518.13	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	11.89	11.89	-----	-----
	U_{17} - U_{18}	192.13	55.12	-61.92	15.12	-9.49	0.90	1.17	57.99	-65.15	15.12	-9.49	Vehicle	Vehicle	325.16	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	9.90	9.90	-----	-----
	U_{18} - U_{19}	53.83	50.51	-80.65	15.12	-15.34	0.90	1.17	53.14	-84.85	15.12	-15.34	Vehicle	Vehicle	139.06	-40.33	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	13.41	13.41	8.26	8.26
	U_{19} - U_{20}	-58.94	44.80	-97.00	15.07	-19.84	0.90	1.17	47.13	-102.05	15.07	-19.84	Vehicle	Vehicle	-----	-209.30	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.21	6.21
	Structure 3																																															
	U_0 - U_1	-120.93	2.62	-30.96	0.28	-5.10	0.90	1.20	2.82	-33.38	0.28	-5.10	Vehicle	Vehicle	-----	-200.61	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	16.68	16.68
	U_1 - U_2	-276.62	6.25	-64.80	1.13	-14.58	0.90	1.20	6.74	-69.86	1.13	-14.58	Vehicle	Vehicle	-----	-450.42	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.74	5.74
	U_2 - U_3	-409.97	12.23	-93.90	2.28	-23.49	0.90	1.20	13.18	-101.25	2.28	-23.49	Vehicle	Vehicle	-----	-664.58	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.54	5.54
	U_3 - U_4	-521.37	19.46	-119.60	3.72	-31.20	0.90	1.20	20.98	-128.96	3.72	-31.20	Vehicle	Vehicle	-----	-845.43	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.25	6.25
	U_4 - U_5	-556.38	25.82	-126.73	5.28	-35.33	0.90	1.20	27.83	-136.64	5.28	-35.33	Vehicle	Vehicle	-----	-900.92	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.64	5.64
	U_5 - U_6	-535.38	32.57	-122.45	7.07	-36.15	0.90	1.20	35.11	-132.02	7.07	-36.15	Vehicle	Vehicle	-----	-867.62	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.00	6.00
	U_6 - U_7	-533.59	32.65	-122.11	7.10	-36.10	0.90	1.20	35.20	-131.65	7.10	-36.10	Vehicle	Vehicle	-----	-864.82	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.03	6.03
	U_7 - U_8	-436.11	36.82	-105.89	8.76	-32.90	0.90	1.20	39.70	-114.17	8.76	-32.90	Vehicle	Vehicle	-----	-715.37	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.14	6.14
	U_8 - U_9	-286.48	40.51	-82.23	10.46	-26.28	0.90	1.20	43.67	-88.66	10.46	-26.28	Vehicle	Vehicle	-----	-487.67	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.93	5.93
	U_9 - U_{10}	-88.11	42.31	-51.87	12.15	-17.18	0.90	1.20	45.62	-55.93	12.15	-17.18	Vehicle	Vehicle	-----	-187.25	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	9.11	9.11

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

South Truss - Lower Chord

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1		L_0- L_1	-1.94	9.17	-6.91	0.37	-2.06	0.90	1.24	10.21	-7.69	0.37	-2.06	Vehicle	Vehicle	10.75	-12.52	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**49.41**	**49.41**	**54.84**	**54.84**
		L_1 - L_2	67.93	48.79	-13.34	9.23	-3.35	0.90	1.24	54.31	-14.85	9.23	-3.35	Vehicle	Vehicle	158.92	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.00**	**8.00**	-----	-----
		L_2 - L_3	78.83	84.17	-28.90	15.48	-7.39	0.90	1.24	93.70	-32.18	15.48	-7.39	Vehicle	Vehicle	224.29	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**6.29**	**6.29**	-----	-----
		L_3 - L_4	39.11	85.44	-40.43	18.09	-10.83	0.90	1.24	95.12	-45.01	18.09	-10.83	Vehicle	Vehicle	174.50	-7.68	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**6.62**	**6.62**	**13.38**	**13.38**
		L_4 - L_5	-166.44	51.98	-58.48	10.96	-16.91	0.90	1.24	57.87	-65.10	10.96	-16.91	Vehicle	Vehicle	-----	-301.00	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.13**	**5.13**
		L_5 - L_6	-301.30	26.47	-63.20	3.24	-18.94	0.90	1.24	29.47	-70.36	3.24	-18.94	Vehicle	Vehicle	-----	-483.15	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.09**	**5.09**
		L_6 - L_7	-439.01	6.22	-67.95	0.00	-26.52	0.90	1.24	6.92	-75.64	0.00	-26.52	Vehicle	Pedestrian	-----	-703.51	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.95**	**4.95**
		L_7 - L_8	-551.71	3.58	-68.18	0.00	-35.56	0.90	1.24	3.98	-75.90	0.00	-35.56	Vehicle	Pedestrian	-----	-862.12	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.81**	**5.81**
		L_8 - L_9	-570.55	8.37	-75.38	0.00	-37.48	0.90	1.20	9.02	-81.27	0.00	-37.48	Vehicle	Pedestrian	-----	-896.08	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.30**	**5.30**
		L_9 - L_{10}	-355.55	9.40	-44.23	0.00	-24.70	0.90	1.20	10.14	-47.69	0.00	-24.70	Vehicle	Pedestrian	-----	-556.31	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.15**	**8.15**
		L_{10} - L_{11}	-118.56	34.91	-37.46	0.00	-12.42	0.90	1.20	37.64	-40.39	0.00	-12.42	Vehicle	Vehicle	-----	-206.63	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.45**	**9.45**
		L_{11} - L_{12}	103.33	64.05	-34.80	9.97	-9.47	0.90	1.20	69.06	-37.52	9.97	-9.47	Vehicle	Vehicle	224.11	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.10**	**7.10**	-----	-----
		L_{12} - L_{13}	300.47	97.48	-32.31	17.86	-8.15	0.90	1.20	105.10	-34.83	17.86	-8.15	Vehicle	Vehicle	527.24	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.42**	**6.42**	-----	-----
		L_{13} - L_{14}	441.01	112.63	-27.53	24.18	-6.62	0.90	1.20	121.44	-29.68	24.18	-6.62	Vehicle	Vehicle	731.19	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.14**	**7.14**	-----	-----
		L_{14} - L_{15}	546.80	118.88	-17.66	24.61	-3.50	0.90	1.20	128.18	-19.05	24.61	-3.50	Vehicle	Vehicle	877.47	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.02**	**8.02**	-----	-----
		L_{15} - L_{16}	505.90	103.05	-16.59	20.37	-2.04	0.90	1.20	111.11	-17.89	20.37	-2.04	Vehicle	Vehicle	802.11	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**9.62**	**9.62**	-----	-----
		L_{16} - L_{17}	398.64	75.94	-14.85	12.78	-0.84	0.90	1.20	81.88	-16.01	12.78	-0.84	Vehicle	Vehicle	624.68	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.99**	**9.99**	-----	-----
		L_{17} - L_{18}	263.76	46.38	-12.15	4.87	0.00	0.90	1.20	50.00	-13.10	4.87	0.00	Vehicle	Vehicle	407.89	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**12.39**	**12.39**	-----	-----
		L_{18} - L_{19}	118.86	37.09	-9.50	0.70	-3.28	0.90	1.20	39.99	-10.25	0.70	-3.28	Vehicle	Vehicle	206.50	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.60**	**9.60**	-----	-----
		L_{19} - L_{20}	-23.25	31.80	-9.30	1.27	-12.00	0.90	1.20	34.28	-10.03	1.27	-12.00	Vehicle	Pedestrian	14.34	-58.86	1.95	17.93	15.9750	591.53	131.71	10.8073	5.7170	17.13	32.72	-498.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**13.95**	**13.95**	**16.35**	**16.35**
		L_0- L_1	-35.95	19.68	-13.29	1.33	-5.13	0.90	1.18	20.95	-14.15	1.33	-5.13	Vehicle	Pedestrian	-----	-71.79	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	**25.89**	**25.89**
		L_1 - L_2	132.83	31.94	-5.19	2.94	-0.07	0.90	1.18	34.01	-5.52	2.94	-0.07	Vehicle	Vehicle	216.88	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**14.72**	**14.72**	-----	-----
		L_2 - L_3	304.11	69.93	-10.99	10.53	-1.80	0.90	1.18	74.45	-11.71	10.53	-1.80	Vehicle	Vehicle	492.12	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.03**	**9.03**	-----	-----
		L_3 - L_4	445.92	97.22	-19.75	18.16	-3.63	0.90	1.18	103.50	-21.03	18.16	-3.63	Vehicle	Vehicle	714.25	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.34**	**8.34**	-----	-----
		L_4 - L_5	567.84	125.43	-31.67	24.82	-6.10	0.90	1.18	133.55	-33.71	24.82	-6.10	Vehicle	Vehicle	911.80	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.10**	**8.10**	-----	-----
		L_5 - L_6	603.64	133.84	-40.59	28.47	-8.06	0.90	1.18	142.50	-43.22	28.47	-8.06	Vehicle	Vehicle	969.98	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.34**	**8.34**	-----	-----
		L_6 - L_7	599.48	141.57	-51.41	30.26	-10.41	0.90	1.18	150.73	-54.74	30.26	-10.41	Vehicle	Vehicle	975.28	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.08**	**8.08**	-----	-----
		L_7 - L_8	373.94	111.96	-64.12	24.93	-13.66	0.90	1.18	119.20	-68.27	24.93	-13.66	Vehicle	Vehicle	641.08	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.12**	**8.12**	-----	-----
		L_8 - L_9	195.71	88.99	-69.01	19.52	-15.12	0.90	1.18	94.74	-73.47	19.52	-15.12	Vehicle	Vehicle	377.59	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**9.54**	**9.54**	-----	-----
		L_9 - L_{10}	-13.21	62.60	-71.45	12.45	-16.11	0.90	1.18	66.65	-76.07	12.45	-16.11	Vehicle	Vehicle	69.47	-116.07	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**13.13**	**13.13**	**9.39**	**9.39**
		L_{10} - L_{11}	-217.32	37.35	-72.59	5.50	-17.02	0.90	1.18	39.77	-77.29	5.50	-17.02	Vehicle	Vehicle	-----	-382.99	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.61**	**5.61**
		L_{11} - L_{12}	-419.93	19.65	-71.53	0.00	-23.34	0.90	1.18	20.92	-76.16	0.00	-23.34	Vehicle	Vehicle	-----	-644.91	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.71**	**6.71**
		L_{12} - L_{13}	-591.41	19.72	-73.07	0.00	-30.09	0.90	1.18	21.00	-77.80	0.00	-30.09	Vehicle	Pedestrian	-----	-909.08	9.73	59.10	49.3700	1950.30	131.71	10.9531	5.8186	16.94	32.73	-1644.04	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.24**	**6.24**
		L_{13} - L_{14}	-724.23	18.48	-70.03	0.00	-35.12	0.90	1.18	19.68	-74.56	0.00	-35.12	Vehicle	Pedestrian	-----	-1084.08	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.21**	**7.21**
		L_{14} - L_{15}	-747.05	21.27	-80.57	0.00	-36.29	0.90	1.17	22.38	-84.77	0.00	-36.29	Vehicle	Pedestrian	-----	-1128.53	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.35**	**6.35**
		L_{15} - L_{16}	-632.15	19.55	-66.45	0.00	-31.21	0.90	1.17	20.57	-69.91	0.00	-31.21	Vehicle	Pedestrian	-----	-953.26	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.36**	**6.36**
		L_{16} - L_{17}	-488.62	19.09	-47.50	0.00	-25.39	0.90	1.17	20.09	-49.98	0.00	-25.39	Vehicle	Pedestrian	-----	-733.20	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.41**	**7.41**
		L_{17} - L_{18}	-336.98	33.77	-47.11	0.00	-18.12	0.90	1.17	35.53	-49.56	0.00	-18.12	Vehicle	Pedestrian	-----	-526.06	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.77**	**5.77**
		L_{18} - L_{19}	-183.61	55.45	-46.38	4.48	-11.34	0.90	1.17	58.34	-48.80	4.48	-11.34	Vehicle	Vehicle	-----	-302.13	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**7.99**	**7.99**
		L_{19} - L_{20}	-45.77	71.05	-41.72	8.92	-9.58	0.90	1.17	74.75	-43.90	8.92	-9.58	Vehicle	Vehicle	37.68	-116.56	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.70**	**9.70**	**12.03**	**12.03**
Structure 2		L_{20} - L_{21}	68.00	89.92	-37.08	11.57	-9.12	0.90	1.17	94.61	-39.02	11.57	-9.12	Vehicle	Vehicle	211.38	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.48**	**9.48**	-----	-----
		L_{21} - L_{22}	133.90	96.60	-29.66	13.61	-8.82	0.90	1.17	101.63	-31.20	13.61	-8.82	Vehicle	Vehicle	306.19	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.17**	**8.17**	-----	-----
		L_{22} - L_{23}	122.50	92.01	-32.69	11.79	-7.58	0.90	1.17	96.80	-34.39	11.79	-7.58	Vehicle	Vehicle	285.10	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.70**	**8.70**	-----	-----
		L_{23} - L_{24}	46.70	78.16	-36.53	8.09	-7.09	0.90	1.17	82.24	-38.44	8.09	-7.09	Vehicle	Vehicle	167.61	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.16**	**11.16**	-----	-----
		L_{24} - L_{25}	-66.76	60.67	-40.67	3.32	-6.24	0.90	1.17	63.84	-42.79	3.32	-6.24	Vehicle	Vehicle	-----	-142.41	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**11.85**	**11.85**
		L_{25} - L_{26}	-205.83	41.91	-43.50	0.00	-11.78	0.90	1.17	44.09	-45.76	0.00	-11.78	Vehicle	Vehicle	-----	-327.07	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.04**	**8.04**
		L_{26} - L_{27}	-350.61	39.20	-44.31	0.00	-18.88	0.90	1.17	41.24	-46.62	0.00	-18.88	Vehicle	Pedestrian	-----	-540.93	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.76**	**5.76**
		L_{27} - L_{28}	-494.76	32.87	-44.13	0.00	-25.89	0.90	1.17	34.58	-46.43	0.00	-25.89	Vehicle	Pedestrian	-----	-737.21	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.64**	**7.64**
		L_{28} - L_{29}	-620.88	28.19	-49.55	0.00	-31.79	0.90	1.17	29.66	-52.13	0.00	-31.79	Vehicle	Pedestrian	-----	-916.24	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.80**	**7.80**
		L_{29} - L_{30}	-716.82	22.18	-59.35	0.00	-36.30	0.90	1.17	23.33	-62.44	0.00	-36.30	Vehicle	Pedestrian	-----	-1060.22	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.09**	**8.09**
		$L_

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U$_0$ - L$_0$	-93.63	13.21	-58.73	3.44	-12.32	0.90	1.24	14.70	-65.39	3.44	-12.32	Vehicle	Vehicle	-----	-206.72	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.84	3.84
		U$_1$ - L$_1$	-46.50	11.37	-42.82	2.93	-9.05	0.90	1.24	12.66	-47.67	2.93	-9.05	Vehicle	Vehicle	-----	-122.42	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.41	6.41
		U$_2$ - L$_2$	-0.07	10.30	-27.49	2.84	-5.68	0.90	1.24	11.46	-30.60	2.84	-5.68	Vehicle	Vehicle	14.81	-39.87	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	37.32	37.32	11.50	11.50			
		U$_3$ - L$_3$	39.61	9.08	-16.43	2.70	-2.12	0.90	1.24	10.11	-18.29	2.70	-2.12	Vehicle	Vehicle	64.64	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	38.38	38.38	-----	-----
		U$_4$ - L$_4$	-30.21	1.54	-24.50	0.00	-3.47	0.90	1.24	1.71	-27.28	0.00	-3.47	Vehicle	Vehicle	-----	-74.73	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.72	11.72
		U$_5$ - L$_5$	-130.50	3.73	-36.02	0.00	-10.24	0.90	1.24	4.15	-40.10	0.00	-10.24	Vehicle	Vehicle	-----	-221.79	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.35	7.35
		U$_6$ - L$_6$	-158.19	6.54	-36.61	0.00	-13.06	0.90	1.24	7.28	-40.75	0.00	-13.06	Vehicle	Vehicle	-----	-258.62	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.58	8.58
		U$_7$ - L$_7$	-152.33	11.52	-36.15	0.00	-13.25	0.90	1.24	12.82	-40.25	0.00	-13.25	Vehicle	Vehicle	-----	-250.35	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.65	7.65
		U$_8$ - L$_8$	-455.44	13.93	-58.16	0.00	-31.72	0.90	1.24	15.51	-64.75	0.00	-31.72	Vehicle	Pedestrian	-----	-717.48	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.28	6.28
		U$_9$ - L$_9$	-287.50	3.10	-58.92	0.00	-18.21	0.90	1.20	3.34	-63.52	0.00	-18.21	Vehicle	Vehicle	-----	-456.33	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	5.63	5.63
		U$_{10}$ - L$_{10}$	-276.27	1.50	-56.67	0.00	-17.55	0.90	1.20	1.61	-61.10	0.00	-17.55	Vehicle	Vehicle	-----	-438.57	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.63	7.63
		U$_{11}$ - L$_{11}$	-232.54	1.54	-51.12	0.00	-14.42	0.90	1.20	1.66	-55.12	0.00	-14.42	Vehicle	Vehicle	-----	-373.96	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.42	7.42
		U$_{12}$ - L$_{12}$	-178.38	1.04	-43.03	0.00	-11.20	0.90	1.20	1.13	-46.39	0.00	-11.20	Vehicle	Vehicle	-----	-292.21	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.63	7.63
		U$_{13}$ - L$_{13}$	-127.70	4.49	-34.25	0.00	-7.88	0.90	1.20	4.84	-36.93	0.00	-7.88	Vehicle	Vehicle	-----	-214.01	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	6.85	6.85
		U$_{14}$ - L$_{14}$	-30.38	0.95	-28.45	0.00	-3.03	0.90	1.20	1.02	-30.67	0.00	-3.03	Vehicle	Vehicle	-----	-79.37	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.25	10.25
		U$_{15}$ - L$_{15}$	-28.93	9.50	-25.57	1.55	-4.53	0.90	1.20	10.25	-27.57	1.55	-4.53	Vehicle	Vehicle	-----	-73.45	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.40	11.40
		U$_{16}$ - L$_{16}$	-75.99	6.84	-30.36	1.39	-7.07	0.90	1.20	7.37	-32.73	1.39	-7.07	Vehicle	Vehicle	-----	-141.34	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.11	8.11
		U$_{17}$ - L$_{17}$	-161.81	6.22	-41.15	1.30	-10.66	0.90	1.20	6.71	-44.36	1.30	-10.66	Vehicle	Vehicle	-----	-268.02	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.62	5.62
		U$_{18}$ - L$_{18}$	-190.09	5.33	-40.55	1.12	-12.69	0.90	1.20	5.75	-43.72	1.12	-12.69	Vehicle	Vehicle	-----	-303.96	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.67	7.67
		U$_{19}$ - L$_{19}$	-228.09	4.57	-40.34	0.97	-14.99	0.90	1.20	4.93	-43.49	0.97	-14.99	Vehicle	Pedestrian	-----	-372.54	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.64	6.64
		U$_{20}$ - L$_{20}$	-242.54	4.14	-41.31	0.95	-15.62	0.90	1.20	4.46	-44.54	0.95	-15.62	Vehicle	Pedestrian	-----	-393.50	0.00	27.86	27.8600	919.38	131.71	20.3229	2.7881	65.60	28.91	-684.53	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.72	4.72
		U$_0$ - L$_0$	-302.99	10.08	-61.26	2.22	-15.08	0.90	1.18	10.74	-65.23	2.22	-15.08	Vehicle	Vehicle	-----	-478.69	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.20	5.20
		U$_1$ - L$_1$	-268.80	10.26	-59.20	2.12	-13.67	0.90	1.18	10.92	-63.03	2.12	-13.67	Vehicle	Vehicle	-----	-431.38	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.40	6.40
		U$_2$ - L$_2$	-220.88	11.05	-53.33	2.34	-12.32	0.90	1.18	11.76	-56.78	2.34	-12.32	Vehicle	Vehicle	-----	-360.96	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.23	6.23
		U$_3$ - L$_3$	-175.24	11.84	-48.70	2.49	-10.35	0.90	1.18	12.60	-51.85	2.49	-10.35	Vehicle	Vehicle	-----	-295.23	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.34	5.34
		U$_4$ - L$_4$	-82.09	10.26	-35.98	2.21	-6.62	0.90	1.18	10.92	-38.31	2.21	-6.62	Vehicle	Vehicle	-----	-156.51	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.71	6.71
		U$_5$ - L$_5$	-19.91	10.31	-26.91	2.23	-4.16	0.90	1.18	10.97	-28.65	2.23	-4.16	Vehicle	Vehicle	-----	-63.12	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.19	11.19
		U$_6$ - L$_6$	60.32	21.63	-15.09	1.75	-0.47	0.90	1.18	23.03	-16.06	1.75	-0.47	Vehicle	Vehicle	108.35	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	15.96	15.96	-----	-----
		U$_7$ - L$_7$	-41.78	1.45	-23.72	0.00	-2.50	0.90	1.18	1.54	-25.26	0.00	-2.50	Vehicle	Vehicle	-----	-87.14	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.83	11.83
		U$_8$ - L$_8$	-189.01	4.82	-37.43	0.00	-8.38	0.90	1.18	5.14	-39.85	0.00	-8.38	Vehicle	Vehicle	-----	-297.51	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.57	8.57
		U$_9$ - L$_9$	-254.00	1.94	-46.43	0.00	-10.55	0.90	1.18	2.07	-49.44	0.00	-10.55	Vehicle	Vehicle	-----	-394.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.84	8.84
		U$_{10}$ - L$_{10}$	-290.02	3.54	-47.12	0.00	-12.18	0.90	1.18	3.77	-50.17	0.00	-12.18	Vehicle	Vehicle	-----	-442.24	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.74	9.74
		U$_{11}$ - L$_{11}$	-312.19	7.62	-51.05	0.00	-12.59	0.90	1.18	8.11	-54.36	0.00	-12.59	Vehicle	Vehicle	-----	-476.51	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.33	8.33
		U$_{12}$ - L$_{12}$	-327.27	11.01	-46.54	0.00	-13.75	0.90	1.18	11.72	-49.55	0.00	-13.75	Vehicle	Vehicle	-----	-489.86	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.58	9.58
		U$_{13}$ - L$_{13}$	-277.23	14.79	-39.30	0.45	-12.38	0.90	1.18	15.74	-41.84	0.45	-12.38	Vehicle	Vehicle	-----	-414.80	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.87	9.87
		U$_{14}$ - L$_{14}$	-505.47	18.97	-51.08	0.00	-21.42	0.90	1.18	20.19	-54.38	0.00	-21.42	Vehicle	Pedestrian	-----	-755.65	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	7.21	7.21
		U$_{15}$ - L$_{15}$	-232.92	5.27	-54.65	1.67	-12.16	0.90	1.17	5.55	-57.50	1.67	-12.16	Vehicle	Vehicle	-----	-377.55	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.95	7.95
		U$_{16}$ - L$_{16}$	-260.09	6.04	-57.67	0.83	-13.04	0.90	1.17	6.35	-60.67	0.83	-13.04	Vehicle	Vehicle	-----	-416.98	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.69	6.69
		U$_{17}$ - L$_{17}$	-228.20	6.81	-53.95	0.66	-11.76	0.90	1.17	7.16	-56.76	0.66	-11.76	Vehicle	Vehicle	-----	-370.45	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.96	6.96
		U$_{18}$ - L$_{18}$	-209.23	8.18	-49.33	0.00	-11.28	0.90	1.17	8.61	-51.90	0.00	-11.28	Vehicle	Vehicle	-----	-339.47	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.09	7.09
		U$_{19}$ - L$_{19}$	-166.51	8.76	-45.54	0.00	-9.53	0.90	1.17	9.22	-47.91	0.00	-9.53	Vehicle	Vehicle	-----	-278.74	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.20	7.20
	Structure 2	U$_{20}$ - L$_{20}$	-113.91	8.79	-34.53	0.00	-7.50	0.90	1.17	9.25	-36.33	0.00	-7.50	Vehicle	Vehicle	-----	-195.31	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.19	7.19
		U$_{21}$ - L$_{21}$	-62.73	12.73	-27.53	0.00	-5.22	0.90	1.17	13.39	-28.96	0.00	-5.22	Vehicle	Vehicle	-----	-119.19	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.59	9.59
		U$_{22}$ - L$_{22}$	-38.93	1.34	-26.06	0.00	-2.15	0.90	1.17	1.41	-27.41	0.00	-2.15	Vehicle	Vehicle	-----	-86.25	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.05	11.05
		U$_{23}$ - L$_{23}$	-74.45	9.45	-30.54	0.48	-6.10	0.90	1.17	9.94	-32.13	0.48	-6.10	Vehicle	Vehicle	-----	-138.55	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.28	8.28
		U$_{24}$ - L$_{24}$	-121.37	9.12	-35.78	0.37	-8.17	0.90	1.17	9.60	-37.65	0.37	-8.17	Vehicle	Vehicle	-----	-206.72	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U$_{25}$ - L$_{25}$	-169.10	8.78	-42.15	0.43	-9.94	0.90	1.17	9.23	-44.35	0.43	-9.94	Vehicle	Vehicle	-----	-277.48	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.72	7.72
		U$_{26}$ - L$_{26}$	-207.93	7.94	-44.81	0.14	-11.42	0.90	1.17	8.35	-47.14	0.14	-11.42	Vehicle	Vehicle	-----	-331.59	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.83	7.83
		U$_{27}$ - L$_{27}$	-219.90	6.54	-46.73	0.16	-11.49	0.90	1.17	6.88	-49.16	0.16	-11.49	Vehicle	Vehicle	-----	-349.77	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.21	8.21
		U$_{28}$ - L$_{28}$	-240.66	9.42	-42.88	0.00	-12.59	0.90	1.17	9.91	-45.11	0.00	-12.59	Vehicle	Vehicle	-----	-371.50	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.43	9.43
		U$_{29}$ - L$_{29}$	-202.76	14.48	-37.94	0.00	-10.35	0.90	1.17	15.24	-39.92	0.00	-10.35	Vehicle	Vehicle	-----	-315.47	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	12.21	12.21
		U$_{30}$ - L$_{30}$	-516.45	15.29	-51.67	0.00	-22.02	0.90	1.18	16.28	-55.02	0.00	-22.02	Vehicle	Pedestrian	-----	-771.53	11.02	51.81	40.7900	1709.73	131.71	25.6094	4.0330	57.15	29.89	-1316.46	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.44	6.44
		U$_{

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	65.56	-17.84	14.00	-4.60	0.90	1.24	72.99	-19.86	14.00	-4.60	Vehicle	Vehicle	208.78	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**6.83**	**6.83**	-----	-----
		U_1 - L_2	23.84	46.12	-17.48	9.20	-4.72	0.90	1.24	51.34	-19.46	9.20	-4.72	Vehicle	Vehicle	97.74	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.87**	**7.87**	-----	-----
		U_2 - L_3	-49.05	25.61	-14.65	3.33	-4.33	0.90	1.24	28.51	-16.31	3.33	-4.33	Vehicle	Vehicle	-----	-84.96	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**17.49**	**17.49**
		U_3 - L_4	-108.90	13.01	-29.02	0.00	-6.31	0.90	1.24	14.48	-32.30	0.00	-6.31	Vehicle	Vehicle	-----	-183.56	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**7.04**	**7.04**
		U_4 - L_5	153.14	46.47	-5.96	10.12	0.00	0.90	1.24	51.74	-6.63	10.12	0.00	Vehicle	Vehicle	266.35	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.18**	**7.18**	-----	-----
		U_5 - L_5	186.37	48.38	-4.79	13.44	0.00	0.90	1.24	53.86	-5.33	13.44	0.00	Vehicle	Vehicle	312.30	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.62**	**8.62**	-----	-----
		U_6 - L_6	177.53	44.69	-10.88	14.14	0.00	0.90	1.24	49.76	-12.12	14.14	0.00	Vehicle	Vehicle	295.47	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.51**	**9.51**	-----	-----
		U_7 - L_7	173.15	40.35	-12.75	13.87	0.00	0.90	1.24	44.93	-14.20	13.87	0.00	Vehicle	Vehicle	283.50	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.63**	**10.63**	-----	-----
		U_8 - L_8	328.03	64.65	-3.95	19.45	-0.14	0.90	1.20	69.70	-4.26	19.45	-0.14	Vehicle	Vehicle	517.04	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**9.10**	**9.10**	-----	-----
		U_9 - L_{10}	339.64	69.18	-2.80	19.75	0.00	0.90	1.20	74.59	-3.02	19.75	0.00	Vehicle	Vehicle	538.50	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.35**	**8.35**	-----	-----
		U_{10} - L_{11}	313.15	64.96	-2.03	18.15	0.00	0.90	1.20	70.04	-2.19	18.15	0.00	Vehicle	Vehicle	498.15	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**8.53**	**8.53**	-----	-----
		U_{11} - L_{12}	270.62	61.07	-2.05	14.84	0.00	0.90	1.20	65.84	-2.21	14.84	0.00	Vehicle	Vehicle	437.40	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.70**	**7.70**	-----	-----
		U_{12} - L_{13}	194.11	46.28	-6.24	10.79	0.00	0.90	1.20	49.90	-6.73	10.79	0.00	Vehicle	Vehicle	317.21	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.76**	**8.76**	-----	-----
		U_{13} - L_{14}	123.52	36.36	-13.11	5.97	0.00	0.90	1.20	39.20	-14.13	5.97	0.00	Vehicle	Vehicle	211.53	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.76**	**7.76**	-----	-----
		U_{14} - L_{15}	-16.31	29.46	-21.38	1.47	-2.35	0.90	1.20	31.77	-23.05	1.47	-2.35	Vehicle	Vehicle	20.09	-51.17	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**13.98**	**13.98**	**13.54**	**13.54**
		U_{15} - L_{15}	59.11	35.15	-12.69	6.08	-2.09	0.90	1.20	37.89	-13.68	6.08	-2.09	Vehicle	Vehicle	126.10	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
		U_{17} - L_{16}	172.05	49.41	-8.68	9.93	-1.86	0.90	1.20	53.28	-9.36	9.93	-1.86	Vehicle	Vehicle	292.93	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.62**	**6.62**	-----	-----
		U_{18} - L_{17}	210.69	49.17	-7.36	12.50	-1.53	0.90	1.20	53.01	-7.93	12.50	-1.53	Vehicle	Vehicle	342.82	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.30**	**8.30**	-----	-----
		U_{19} - L_{18}	242.30	48.21	-5.87	13.72	-1.21	0.90	1.20	51.98	-6.33	13.72	-1.21	Vehicle	Vehicle	382.57	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.00**	**9.00**	-----	-----
		U_{20} - L_{19}	257.77	42.58	-4.82	15.71	-1.03	0.90	1.20	45.91	-5.20	15.71	-1.03	Pedestrian	Vehicle	415.21	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U_0 - L_1	299.01	61.48	-10.70	14.21	-2.21	0.90	1.18	65.46	-11.39	14.21	-2.21	Vehicle	Vehicle	473.80	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.31**	**7.31**	-----	-----
		U_1 - L_2	284.23	62.85	-12.74	14.05	-2.66	0.90	1.18	66.92	-13.56	14.05	-2.66	Vehicle	Vehicle	456.49	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.37**	**7.37**	-----	-----
		U_2 - L_3	221.45	56.49	-13.59	11.83	-2.85	0.90	1.18	60.14	-14.46	11.83	-2.85	Vehicle	Vehicle	366.06	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_3 - L_4	178.33	55.11	-15.34	10.08	-3.23	0.90	1.18	58.68	-16.33	10.08	-3.23	Vehicle	Vehicle	308.11	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U_4 - L_5	53.52	35.11	-13.11	5.38	-2.87	0.90	1.18	37.38	-13.96	5.38	-2.87	Vehicle	Vehicle	118.16	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.01**	**10.01**	-----	-----
		U_5 - L_6	-16.50	29.26	-20.59	2.23	-2.92	0.90	1.18	31.15	-21.92	2.23	-2.92	Vehicle	Vehicle	19.05	-49.95	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**14.26**	**14.26**	**14.11**	**14.11**
		U_6 - L_7	-133.20	14.11	-37.31	0.00	-5.36	0.90	1.18	15.02	-39.73	0.00	-5.36	Vehicle	Vehicle	-----	-224.80	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**5.69**	**5.69**
		U_7 - L_7	208.77	43.69	-10.11	8.33	0.00	0.90	1.18	46.52	-10.76	8.33	0.00	Vehicle	Vehicle	331.87	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.48**	**8.48**	-----	-----
		U_8 - L_8	289.58	55.91	-2.34	10.70	0.00	0.90	1.18	59.53	-2.49	10.70	0.00	Vehicle	Vehicle	453.84	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
		U_{10} - L_9	327.97	56.85	-2.28	12.66	0.00	0.90	1.18	60.53	-2.42	12.66	0.00	Vehicle	Vehicle	505.05	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.43**	**7.43**	-----	-----
		U_{11} - L_{10}	349.27	59.36	-8.05	12.70	0.00	0.90	1.18	63.20	-8.58	12.70	0.00	Vehicle	Vehicle	536.21	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.83**	**7.83**	-----	-----
		U_{12} - L_{11}	358.20	56.00	-8.57	13.52	0.00	0.90	1.18	59.62	-9.12	13.52	0.00	Vehicle	Vehicle	543.16	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**8.16**	**8.16**	-----	-----
		U_{13} - L_{12}	307.76	46.34	-16.16	12.26	-0.24	0.90	1.18	49.34	-17.21	12.26	-0.24	Vehicle	Vehicle	464.23	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.52**	**9.52**	-----	-----
		U_{14} - L_{13}	260.25	37.50	-13.75	11.73	-1.50	0.90	1.18	39.93	-14.64	11.73	-1.50	Vehicle	Vehicle	390.23	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**12.96**	**12.96**	-----	-----
		U_{15} - L_{14}	208.41	50.47	-6.91	11.04	-2.52	0.90	1.17	53.10	-7.27	11.04	-2.52	Vehicle	Pedestrian	339.97	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.33**	**8.33**	-----	-----
		U_{16} - L_{15}	243.53	58.73	-4.78	11.54	-1.48	0.90	1.17	61.79	-5.03	11.54	-1.48	Vehicle	Vehicle	396.92	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U_{17} - L_{16}	255.83	57.14	-7.17	12.23	-0.85	0.90	1.17	60.11	-7.54	12.23	-0.85	Vehicle	Vehicle	410.72	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.56**	**7.56**	-----	-----
		U_{17} - L_{18}	235.25	58.51	-8.40	11.35	-0.75	0.90	1.17	61.56	-8.84	11.35	-0.75	Vehicle	Vehicle	385.85	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
		U_{18} - L_{19}	212.06	53.82	-10.25	11.09	0.00	0.90	1.17	56.62	-10.79	11.09	0.00	Vehicle	Vehicle	349.29	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
		U_{19} - L_{20}	168.18	48.33	-11.35	9.14	0.00	0.90	1.17	50.85	-11.94	9.14	0.00	Vehicle	Vehicle	284.75	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
	Structure 2	U_{20} - L_{21}	97.21	36.34	-15.57	6.66	0.00	0.90	1.17	38.24	-16.38	6.66	0.00	Vehicle	Vehicle	176.08	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U_{21} - L_{22}	30.55	29.72	-23.44	3.66	-2.18	0.90	1.17	31.27	-24.66	3.66	-2.18	Vehicle	Vehicle	80.37	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**12.70**	**12.70**	-----	-----
		U_{23} - L_{22}	49.81	34.28	-17.74	5.11	-0.95	0.90	1.17	36.07	-18.66	5.11	-0.95	Vehicle	Vehicle	111.65	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.48**	**10.48**	-----	-----
		U_{24} - L_{23}	115.09	41.35	-12.37	8.00	-0.72	0.90	1.17	43.50	-13.02	8.00	-0.72	Vehicle	Vehicle	206.18	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.19**	**7.19**	-----	-----
		U_{25} - L_{24}	179.20	50.90	-12.03	10.10	-0.73	0.90	1.17	53.55	-12.66	10.10	-0.73	Vehicle	Vehicle	302.58	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.92**	**7.92**	-----	-----
		U_{26} - L_{25}	220.95	51.63	-10.55	11.89	-0.57	0.90	1.17	54.32	-11.10	11.89	-0.57	Vehicle	Vehicle	357.85	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.91**	**7.91**	-----	-----
		U_{27} - L_{26}	234.79	54.08	-8.40	11.44	-0.35	0.90	1.17	56.90	-8.83	11.44	-0.35	Vehicle	Vehicle	379.19	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.31**	**7.31**	-----	-----
		U_{28} - L_{27}	253.01	51.28	-7.57	12.25	-0.28	0.90	1.17	53.95	-7.96	12.25	-0.28	Vehicle	Vehicle	399.05	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.47**	**8.47**	-----	-----
		U_{29} - L_{28}	215.83	41.43	-16.12	10.20	0.00	0.90	1.17	43.59	-16.95	10.20	0.00	Vehicle	Vehicle	337.24	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.98**	**9.98**	-----	-----
		U_{30} - L_{29}	179.92	35.66	-13.67	8.89	-0.93	0.90	1.17	37.51	-14.38	8.89	-0.93	Vehicle	Vehicle	282.66	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.55**	**12.55**	-----	-----
		U_{30} - L_{31}	294.37	51.65	-8.21	12.88	-1.65	0.90	1.18	54.99	-8.74	12.88	-1.65	Vehicle	Vehicle	454.16	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.79**	**8.79**	-----	-----
		U_{31} - L_{32}	342.78	58.73	-7.25	13.71	-0.55	0.90	1.18	62.53	-7.71	13.71	-0.55	Vehicle	Vehicle	526.90	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.95**	**6.95**	-----	-----
		U_{32} - L_{33}	363.31	61.11	-3.76	14.15	0.00	0.90	1.18	65.07	-4.01	14.15	0.00	Vehicle	Vehicle	556.89	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-inspected**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I_z (in^4)	I_{bb} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$*S_{bb} (k-in)	M_u (k-in)	Equivalent Mom. Factor: a	Equivalent Mom. Factor: $C_{b(LL)}$	Equivalent Mom. Factor: $C_{b(DL)}$	Pass
Structure 1	U_0–L_1	-131.25	-22.60	-0.20	1.35	-0.20	-12.07	-2.61	18.04	-2.61	-161.20	0.00	0.00	0.00	0.00	-174.01	-5.94	-174.01	-238.94	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.728	0.89	0.893
	L_1–U_2	-54.49	-51.15	0.21	2.31	-1.33	-76.47	2.82	30.85	-17.74	-220.02	0.00	0.00	-67.17	-26.39	-93.90	-352.52	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.266	0.71	0.71	-4.45	-58.42	-0.03	0.87	0.12	-2.65
	U_2–L_3	-39.97	-34.72	0.37	3.45	-4.36	-16.12	12.49	45.44	-57.95	-215.33	0.00	0.00	-54.55	-11.72	-248.65	-221.72	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.307	0.83	0.83	-2.22	-27.84	-0.15	1.03	0.31	-1.33
	L_3–U_4	-52.26	-61.06	2.10	3.38	-5.78	-16.23	28.06	49.09	-77.15	-216.83	0.00	0.00	0.00	0.00	-31.47	-137.99	-168.24	-202.92	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.831	0.93	0.93	51.88	38.10	-0.94	-0.24	1.56	-0.29
	U_4–L_5	-28.29	-50.99	2.25	3.42	-4.43	-12.36	31.38	54.42	-236.36	-87.49	0.00	0.00	0.00	0.00	-4.03	-4.03	-4.03	-4.03	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.992	0.62	0.62	38.35	-8.80	-0.69	-0.28	0.72	-0.72
	L_5–U_6	36.25	41.09	1.75	3.08	-12.77	-0.41	36.25	41.09	-170.63	-5.48	0.00	0.00	0.00	0.00	50.54	242.09	-219.06	181.54	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.209	0.68	0.68	19.66	-22.91	-0.29	-0.43	0.58	0.00
	U_6–L_7	94.63	69.27	2.93	1.85	-10.77	-4.24	39.17	24.77	-143.84	56.68	0.00	0.00	0.00	0.00	174.19	36.25	43.72	9.46	91.1	97.11	78.18	142.56	2586	1649.1	1.41	4704	0.99880041	3201.5	0.503	0.62	0.62	22.42	-11.72	-2.65	-0.43	1.44	-0.55
	L_7–U_8	-69.32	603.38	1.68	4.43	-18.63	14.39	22.48	59.18	-222.14	192.26	0.00	0.00	0.00	0.00	-61.67	861.34	-379.68	1034.33	138.2	138.17	111.77	198.97	3942	2197.7	1.45	6999	0.99894	4564.8	-0.367	0.45	0.45	-185.44	-89.56	-2.72	1.29	0.34	-0.32
	U_8–L_9	531.73	-129.19	6.70	0.75	9.77	-12.61	86.64	9.70	126.38	-163.10	0.00	0.00	0.00	0.00	803.88	-155.34	855.55	-379.98	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99890	4292.8	-0.444	0.42	0.42	-182.47	-92.09	-1.90	-1.27	-0.10	1.31
	L_9–U_{10}	68.54	43.95	1.94	2.76	-2.24	-9.46	23.85	34.01	-3.09	-122.45	0.00	0.00	0.00	0.00	120.10	103.95	80.08	102.04	95.6	96.61	79.12	139.29	2172	1307.8	1.40	4465	0.99873	3184.1	-0.880	0.50	0.50	-37.57	114.09	-1.36	-0.60	1.15	0.50
	U_{10}–L_{11}	100.48	-176.70	2.99	2.39	-0.50	-11.94	38.72	30.87	-11.59	-154.46	0.00	0.00	0.00	0.00	180.96	-189.57	115.55	-430.50	96.6	96.61	83.55	139.29	2174	1387.9	1.40	4465	0.99873	3184.1	-0.268	0.45	0.49	-19.19	1.85	-29.76	30.57	0.00	0.00	0.00
	L_{11}–U_{12}	72.28	-160.18	2.42	2.34	-0.36	-15.62	44.22	28.63	-15.03	-153.12	0.00	0.00	0.00	0.00	116.32	-174.96	36.14	-400.90	96.6	96.61	83.55	139.29	2174	1387.9	1.40	4465	0.99873	3184.1	-0.268	0.45	0.49	92.30	64.86	-1.48	0.14	2.30	2.36
	U_{12}–L_{13}	-56.66	-218.08	2.66	0.90	-1.73	-16.74	34.44	11.64	-22.36	-216.58	0.00	0.00	0.00	0.00	-80.89	-268.36	-154.73	-569.05	151.8	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905	5003.4	0.274	0.71	0.71	314.63	172.08	-1.42	-0.22	3.76	4.48
	L_{13}–U_{14}	-113.90	-344.73	2.73	1.58	-3.57	-25.17	32.64	11.42	-37.36	-325.07	0.00	0.00	0.00	0.00	-196.85	-432.30	-322.54	-917.82	151.8	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905	5003.4	0.404	0.76	0.76	322.68	183.66	-0.78	-0.21	1.80	1.98
	U_{14}–L_{15}	-287.80	-237.44	2.30	-25.29	-10.06	29.20	16.85	-327.24	-130.21	0.00	0.00	0.00	0.00	0.00	-336.18	-286.77	-799.05	-477.94	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99895	6214.6	0.598	0.94	0.94	201.33	32.80	-1.07	-0.25	8.50	3.62
	L_{15}–U_{16}	-196.20	-337.71	2.24	0.15	-18.98	-11.76	29.02	1.95	-245.56	-152.14	0.00	0.00	0.00	0.00	-217.34	-436.49	-514.29	-636.81	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99895	6214.6	0.902	0.96	0.96	98.34	21.19	-0.95	0.22	7.38	4.01
	U_{16}–L_{17}	-295.83	-154.75	0.85	-16.18	-24.83	-7.85	29.20	0.00	-327.24	-101.50	0.00	0.00	0.00	0.00	-370.33	-203.87	-852.27	-333.13	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99895	6214.6	0.415	0.77	0.77	128.67	-48.78	-0.58	0.24	3.19	1.51
	L_{17}–U_{18}	-189.93	-29.96	0.74	-0.69	-15.25	0.16	9.59	-8.91	-197.31	2.04	0.00	0.00	0.00	0.00	-234.44	-60.54	-503.41	-36.35	127.3	127.32	110.40	186.23	3668	2528.5	1.46	6146	0.99907	4197.7	0.072	0.63	0.63	27.68	-63.87	-0.79	0.19	8.28	1.84
	U_{18}–L_{19}	-179.63	-39.55	0.66	-0.35	-13.05	-0.67	8.57	-8.45	-186.52	2.04	0.00	0.00	0.00	0.00	-222.26	-67.33	-419.33	-62.75	104.8	104.75	86.43	153.33	2008	1554.5	1.44	4971	0.99885	3452.8	0.151	0.66	0.66	47.83	-108.59	-0.72	0.43	5.51	-0.54
	L_{19}–U_{20}	-249.78	258.69	0.49	-0.30	-10.99	9.43	6.34	-3.94	-142.22	121.96	0.00	0.00	0.00	0.00	-316.47	331.30	-508.59	494.84	104.8	104.75	86.43	152.63	2589	1554.3	1.44	4971	0.99885	3452.8	-0.971	0.21	0.21	64.72	-122.10	0.14	0.27	3.28	-3.65
	U_{20}–L_{21}	-28.62	-172.11	-0.46	1.09	4.11	-12.73	-5.92	13.98	52.46	-162.66	0.00	0.00	0.00	0.00	-44.89	-226.58	31.00	-435.20	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861	4212.5	-0.071	0.57	0.57	-2.25	-62.11	0.05	-0.03	0.77	2.06
	L_{21}–U_{22}	-24.91	-195.34	-0.22	0.97	4.63	-13.79	-5.37	-4.35	-237.77	-28.19	0.00	0.00	0.00	0.00	-39.97	-257.04	31.00	-493.97	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861	4212.5	-0.071	0.57	0.57	-2.25	-62.11	0.05	-0.03	0.77	2.06
	U_{22}–L_{23}	-43.33	-283.30	-0.50	1.49	1.39	-21.88	-6.36	19.08	17.76	-279.48	0.00	0.00	0.00	0.00	-77.21	-343.49	-45.85	-731.61	212.0	212.09	172.03	297.57	4967	2491.6	1.40	9920	0.99917	7005.5	0.063	0.63	0.63	-19.06	239.87	-0.07	0.94	1.08	1.83
	L_{23}–U_{24}	-39.66	-284.91	-0.33	1.23	4.75	-27.74	4.11	-14.70	-47.76	-272.29	0.00	0.00	0.00	0.00	-73.16	-343.16	-45.85	-731.61	212.0	212.09	172.03	297.57	4967	2491.6	1.40	9920	0.99917	7005.5	0.063	0.63	0.63	-19.06	239.87	-0.07	0.94	1.08	1.83
	U_{24}–L_{25}	-360.46	-389.97	0.14	2.48	-9.29	-34.21	1.73	-31.71	-118.69	-437.09	0.00	0.00	0.00	0.00	-466.32	-465.73	-622.95	-1075.18	251.7	251.73	219.41	363.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.579	0.83	0.83	14.64	33.21	-0.54	0.55	1.33	1.33
	L_{25}–U_{26}	-403.42	-377.73	1.85	4.76	-8.34	-16.22	-6.97	-4.34	-165.74	-206.73	0.00	0.00	0.00	0.00	-453.72	-178.58	-642.16	-1075.18	251.7	251.73	219.41	363.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.579	0.83	0.83	14.64	33.21	-0.54	0.55	1.33	1.33
	U_{26}–L_{27}	-349.63	-208.07	3.45	3.41	-8.98	-34.81	44.12	-43.57	-114.69	-444.76	0.00	0.00	0.00	0.00	-397.16	-214.64	-653.62	-849.46	232.2	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885	7670.6	0.711	0.88	0.88	-31.19	68.18	-0.92	-1.17	7.99	5.44
	L_{27}–U_{28}	-253.78	-280.71	2.68	3.71	-35.29	-12.40	34.25	47.36	-450.85	-158.45	0.00	0.00	0.00	0.00	-285.39	-303.35	-816.08	-570.91	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885	7670.6	0.623	0.85	0.85	-14.53	-15.04	62.68	67.06	0.00	0.00	0.00
	L_{29}–U_{30}	-132.32	-33.84	3.86	4.88	-21.50	-5.29	36.27	57.24	-297.65	-70.14	0.00	0.00	0.00	0.00	-381.67	-72.32	-783.91	-168.85	168.85	168.85	140.65	244.02	4866	3046.5	1.46	8046	0.99895	5555.5	0.351	0.74	0.74	-20.67	-112.43	0.76	0.31	3.68	2.46
	L_{31}–U_{32}	-237.02	-39.91	3.86	4.88	-21.50	-5.29	49.29	62.32	-274.64	-67.59	0.00	0.00	0.00	0.00	-244.02	-132.38	-663.13	-36.50	181.9	181.87	147.20	249.02	3787	2047.8	1.37	8218	0.99847	5992.8	0.055	0.62	0.62	-38.55	-61.62	-1.49	-0.78	5.76	1.91
	L_{33}–U_{34}	-132.32	-33.84	3.86	4.88	-21.50	-5.29	60.87	74.04	-297.65	-70.14	0.00	0.00	0.00	0.00	-118.89	-53.34	-439.35	-4.52	194.7	194.70	154.72	214.61	3887	2193.1	1.37	7089	0.99854	5168.9	-0.424	0.43	0.43	-24.68	21.84	-0.59	0.31	2.47	1.03
	L_{35}–U_{36}	-116.69	150.75	4.12	3.52	-17.21	-2.20	52.64	42.40	-219.82	-28.15	0.00	0.00	0.00	0.00	-83.27	277.10	-437.46	185.39	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854	5168.9	-0.424	0.43	0.43	-81.76	-55.57	-2.40	-0.56	7.67	1.69
	L_{37}–U_{38}	-59.31	-50.84	4.07	3.52	-17.21	-2.20	43.67	33.43	-183.67	-8.72	0.00	0.00	0.00	0.00	-74.19	-74.19	-389.39	-74.19	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854	5168.9	-0.424	0.43	0.43	-74.19	-74.19	-2.36	-1.05	7.56	1.69
	L_{39}–U_{40}	-311.04	-121.68	2.87	4.75	-5.48	-0.48	38.00	60.10	-274.75	-6.17	0.00	0.00	0.00	0.00	-224.96	150.09	-281.81	410.16	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893	7310.6	-0.009	0.60	0.60	-45.75	-0.96	1.19	1.40	11.26	6.21
	L_{41}–U_{42}	1028.71	-26.69	11.39	1.35	-0.91	0.06	143.76	14.99	-11.51	0.80	0.00	0.00	0.00	0.00	1524.21	-12.61	1322.35	-33.66	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893	7310.6	-0.009	0.60	0.60	-420.73	-332.01	-3.58	-3.14	-0.96	-0.27
	L_{43}–U_{44}	1.97	3.65	1.74	1.85	-1.36	-16.22	13.96	32.50	-97.76	-204.77	0.00	0.00	0.00	0.00	30.99	-229.77	-5.48	-229.77	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893	7310.6	-0.009	0.60	0.60	-33.47	-5.15	-2.76	-0.55	7.77	-2.07
	L_{45}–U_{46}	251.39	25.19	2.83	2.65	1.36	-17.16	35.67	33.48	-17.15	-216.61	0.00	0.00	0.00	0.00	-599.15	76.27	375.09	-248.85	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99892	5702.3	0.151	0.68	0.68	51.01	55.30	-2.65	-0.95	4.49	3.74
	L_{47}–U_{48}	1.97	3.65	1.74	1.85	-1.36	-16.22	42.13	38.25	-102.78	-183.74	0.00	0.00	0.00	0.00	-229.01	-229.01	-122.46	-183.74	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99892	5702.3	0.151	0.68	0.68	51.01	55.30	-2.65	-0.95	4.49	3.74
	L_{49}–U_{50}	156.55	-8.67	3.88	2.96	1.29	-17.96	49.00	37.41	-16.25	-226.74	0.00	0.00	0.00	0.00	-267.21	37.37	224.63	-306.02	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861	4212.5	-0.734	0.31	0.31	179.96	113.29	-1.58	-0.39	3.28	4.03
	L_{51}–U_{52}	48.55	11.41	3.86	3.11	-4.70	-19.82	48.71	39.23	-69.36	-250.21	0.00	0.00	0.00	0.00	126.43	65.82	-14.06	314.44	134.9	134.91	109.37	186.26	3012	1688.1	1.40	6245	0.99887	4446.1	0.045	0.62	0.62	80.36	-7.49	-1.28	-1.22	1.91	1.40
	L_{53}–U_{54}	-92.57	-47.49	3.57	3.11	-17.27	-4.01	19.58	21.35	-79.37	-330.91	0.00	0.00	0.00	0.00	-94.89	-97.85	-223.53	-515.65	144.8	144.84	120.31	209.19	3613	2101.0	1.44	6903	0.99888	4774.4	0.433	0.77	0.77	-13.17	-4.86	40.27	74.75	0.00	0.00
	L_{55}–U_{56}	-58.44	-51.61	3.57	3.11	-17.27	-4.01	19.58	21.35	-79.37	-330.91	0.00	0.00	0.00	0.00	-33.16	-33.16	-254.46	-33.16	144.8	144.84	120.31	209.19	3613	2101.0	1.44	6903	0.99888	4774.4	0.434	0.77	0.77	-7.78	-6.27	62.53	32.04	0.00	0.00
	L_{57}–U_{58}	-48.31	-31.52	0.11	3.15	-20.47	-8.06	1.39	39.72	-258.45	-101.71	0.00	0.00	0.00	0.00	-61.00	10.67	-398.79	-173.19	144.8	144.84	120.49	209.19	3613	2101.0	1.44	6903	0.99888	4774.4	0.434	0.77	0.77	-13.68	6.24	62.53	32.04	0.00	0.00
	L_{59}–U_{60}	10.77	-137.63	2.89	3.58	-18.11	-4.19	30.35	49.22	-228.65	-52.85	0.00	0.00	0.00	0.00	63.45	237.71	-283.29	110.22	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861	4212.5	-0.389	0.44	0.44	-60.95	-53.60	-1.04	-0.09	0.86	0.73
	L_{61}–U_{62}	58.57	-122.85	3.06	2.70	-18.05	-1.97	38.57	34.04	-227.86	-24.91	0.00	0.00	0.00	0.00	-124.53	203.95	-221.63	321.32	127.8	127.83	103.84	186.51	2762	1538.8	1.40	5891	0.99861	4212.5	-0.574	0.37	0.37	-64.95	-68.32	-1.73	0.22	6.93	0.10
	L_{63}–U_{64}	40.66	-95.76	2.83	2.65	1.36	-17.16	35.67	33.48	-17.15	-216.61	0.00	0.00	0.00	0.00	-599.15	76.27	375.09	-248.85	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99892	5702.3	0.151	0.68	0.68	-21.59	89.01	-2.89	-0.99	2.17	3.26
	L_{65}–U_{66}	85.41	4.86	2.91	1.23	-17.42	-8.35	36.71	13.54	-219.96	-105.42	0.00	0.00	0.00	0.00	158.76	28.52	-174.92	-130.74	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880	6121.2	0.747	0.90	0.90	-79.62	-123.03	-2.17	-0.84	6.20	6.10
	L_{67}–U_{68}	13.52	806.37	1.79	0.24	0.89	-22.86	21.61	13.52	-3.89	-275.71	0.00	0.00	0.00	0.00	21.61	1.79	-3.89	-22.86	185.7	185.70	154.12	268.55	4767	2721.4	1.44	8796	0.99880	6121.2	0.747	0.90	0.90	-79.62	-123.03	-2.17	-0.84	6.20	6.10
	L_{69}–U_{70}	821.42	-89.58	9.49	1.14	-1.19	-5.53	121.30	14.57	-15.23	-6.71	0.00	0.00	0.00	0.00	1225.53	-97.52	1048.04	-125.19	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893	7310.6	-0.080	0.57	0.57	-241.53	-149.88	-2.77	-2.91	0.80	9.99
	L_{71}–U_{72}	25.52	87.61	2.78	3.45	-2.98	-13.78	11.70	47.22	-48.26	-211.10	0.00	0.00	0.00	0.00	11.70	47.22	-48.26	-211.10	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893	7310.6	-0.080	0.57	0.57	-241.53	-149.88	-2.77	-2.91	0.80	9.99
	L_{73}–U_{74}	145.61	-52.49	2.78	3.45	-1.88	-13.78	35.96	44.01	-23.98	-176.05	0.00	0.00	0.00	0.00	235.52	11.01	158.12	-297.09	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854	5168.9	-0.532	0.39	0.39	-32.75	-22.93	-0.93	-0.39	3.39	1.03
	L_{75}–U_{76}	17.52	-88.46	3.69	3.59	-16.31	47.18	49.60	-20.28	-208.38	0.00	0.00	0.00	0.00	0.00	84.11	-92.51	-3.58	-385.89	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854	5168.9	0.009	0.60	0.60	-37.55	-64.22	-0.45	0.15	2.73	1.03
	L_{77}–U_{78}	-25.52	87.61	2.78	3.45	-2.98	-13.78	11.70	47.22	-48.26	-211.10	0.00	0.00	0.00	0.00	11.70	47.22	-48.26	-211.10	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99893	7310.6	-0.080	0.57	0.57	-241.53	-149.88	-2.77	-2.91	0.80	9.99
	L_{79}–U_{80}	-75.13	-230.47	3.89	2.39	-6.85	-18.28	49.69	30.59	-87.54	-233.51	0.00	0.00	0.00	0.00	-33.08	-259.85	-211.48	-603.18	188.9	188.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885	6555.5	0.351	0.74	0.74	158.37	57.41	-1.50	-0.55	2.78	1.83
	L_{81}–U_{82}	-206.03	-41.89	3.89	2.39	-6.85	-18.28	41.89	30.59	-87.54	-233.51	0.00	0.00	0.00	0.00	-213.97	-213.97	-211.48	-603.18	188.9	188.88	169.65	280.08	5137	2713.1	1.43	9408	0.99885	6555.5	0.351	0.74	0.74	-13.76	-57.41	-1.50	-0.55	2.78	1.83
	L_{83}–U_{84}	-84.17	-278.54	3.84	3.33	-31.54	-15.19	49.07	42.56	-403.02	-194.07	0.00	0.00	0.00	0.00	-68.63	-306.77	-646.35	-614.39	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885	7670.6	0.551	0.98	0.98	-98.52	-11.16	-0.60	0.64	4.80	1.52
	L_{85}–U_{86}	-51.31	-189.30	3.84	3.33	-31.54	-15.19	49.07	42.56	-403.02	-194.07	0.00	0.00	0.00	0.00	-68.63	-306.77	-646.35	-614.39	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885	7670.6	0.551	0.98	0.98	-98.52	-11.16	-0.60	0.64	4.80	1.52
	L_{87}–U_{88}	-274.89	-274.53	3.42	3.32	-42.14	-14.11	31.05	4.04	-414.24	-180.28	0.00	0.00	0.00	0.00	-317.50	-331.67	-896.87	-591.28	251.7	251.73	219.41	363.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.660	0.86	0.86	37.25	-51.39	-0.26	0.62	7.72	4.63
	L_{89}–U_{90}	-296.96	-269.01	1.45	0.21	-21.60	-9.31	18.46	2.66	-279.93	-118.99	0.00	0.00	0.00	0.00	-310.05	-348.26	-692.76	-504.40	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885	7670.6	0.728	0.89	0.89	29.54	-111.22	0.18	0.49	9.10	2.23
	L_{91}–U_{92}	-154.04	-269.01	1.45	0.21	-21.60	-9.31	18.46	2.66	-279.93	-118.99	0.00	0.00	0.00	0.00	-184.44	-49.22	-384.30	-53.67	138.2	138.15	119.05	199.70	3434	1950.9	1.45	6990	0.99888	4553.8	0.140	0.66	0.66	-42.75	-106.81	0.23	0.64	5.64	-0.08
	L_{93}–U_{94}	-154.33	-34.80	3.08	-0.24	-11.06	-5.51	12.47	-3.07	-141.27	-6.49	0.00	0.00	0.00	0.00	-184.44	-49.22	-384.30	-53.67	138.2	138.15	119.05	199.70	3434	1950.9	1.45	6990	0.99888	4553.8	0.140	0.66	0.66	-42.75	-106.81	0.23	0.64	5.64	-0.08
	L_{95}–U_{96}	-40.05	-136.56	3.08	0.24	-11.06	-5.51	12.47	-3.07	-141.27	-6.49	0.00	0.00	0.00	0.00	-44.86	-210.96	-144.89	-388.09	104.8	104.75	86.43	152.63	2589	1554.3	1.44	4971	0.99885	3452

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 1.30
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start-In	Dead Load End-In	Live Load (Max) Start-In	Live Load (Max) End-In	Live Load (Min) Start-In	Live Load (Min) End-In	Pedestrian Load (Max)	Pedestrian Load (Min)	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Start-In	Impact Pedestrian Load End-In
Structure 1	L_0-L_1	-49.04	-101.19	0.44	-0.74	3.63	-4.72			5.81	-9.85	48.52	-83.11
	L_1-L_2	-130.93	-112.57	-3.73	-10.13	-0.32	1.86			-19.82	-135.22	4.31	-24.20
	L_2-L_3	-78.47	-79.42	-10.13	-11.16	0.95	2.17			-139.35	-154.49	12.72	28.98
	L_3-L_4	18.53	15.80	-13.11	-11.11	1.05	3.92			-175.08	-148.43	13.99	52.37
	L_4-L_5	68.87	310.29	-11.56	-4.92	1.09	4.10			-154.40	-65.75	40.76	47.01
	L_5-L_6	7.25	228.45	-4.85	-6.49	2.36	4.04			-74.76	184.36	50.34	375.90
	L_6-L_7	204.91	118.77	-1.45	-0.60	-0.99	2.72			-242.05	-268.11	249.73	-156.03
	L_7-L_8	168.38	-118.38	-3.39	-5.30	4.10	1.54			-43.01	-68.61	53.06	25.11
	L_8-L_9	234.93	-237.13	-2.75	-6.24	2.67	1.35			-48.01	-93.43	3.88	22.44
	L_9-L_{10}	-19.53	-128.46	-6.34	-8.39	2.54	1.25			-82.64	-108.53	32.90	16.21
	L_{10}-L_{11}	175.75	-425.11	-7.61	-15.78	1.98	1.72			-98.00	-203.84	25.57	22.28
	L_{11}-L_{12}	-408.18	-267.01	-15.78	-14.53	2.40	2.03			-173.27	-85.54	42.46	27.52
	L_{12}-L_{13}	-209.34	-318.54	-10.15	-16.05	0.69	0.59			-131.34	-207.62	8.95	7.66
	L_{13}-L_{14}	-374.78	83.83	-12.91	-5.37	0.71	0.16			-167.09	-69.49	-0.42	-1.62
	L_{14}-L_{15}	-170.99	-20.48	-4.62	-1.32	-0.56	1.20			-108.90	-17.10	-7.18	15.50
	L_{15}-L_{16}	-207.50	250.73	-2.03	-0.11	-1.05	2.29			-26.30	-26.38	-28.55	29.09
	L_{16}-L_{17}	-99.23	0.16	-1.27	0.52	-3.46	2.63			-16.41	0.74	-44.72	23.96
	L_0-L_{18}	5.36	-218.26	0.44	-1.31	2.69	-3.88			5.65	-16.69	34.34	-75.07
	L_{18}-L_{19}	16.16	-247.31	0.79	-1.97	3.25	-4.13			19.97	-235.28	41.49	-73.24
	L_{19}-L_{20}	1.07	-191.80	-2.24	-9.93	-0.43	0.87			-28.56	-136.83	-9.49	11.16
	L_{20}-L_{21}	-57.10	-153.43	-5.63	-8.33	-1.61	0.65			-57.10	-153.43	-5.63	-8.33
	L_{21}-L_{22}	-286.08	-298.86	-14.23	-16.36	-6.17	1.56			-181.76	-209.00	-2.11	53.10
	L_{22}-L_{23}	-142.96	-430.12	-16.36	-18.58	-7.27	2.12			-227.46	-222.52	-5.68	56.64
	L_{23}-L_{24}	-467.27	-273.20	-25.58	-16.17	2.26	3.37			-326.82	-206.59	28.93	43.06
	L_{24}-L_{25}	-310.47	-76.78	-16.25	-16.33	2.78	5.12			-207.59	-208.63	35.49	65.40
	L_{25}-L_{26}	-272.10	237.01	-16.33	-16.41	5.12	6.87			-173.27	-85.54	42.46	27.52
	L_{26}-L_{27}	-261.82	188.40	-7.22	-9.22	2.45	5.05			-92.28	-117.77	31.46	64.51
	L_{27}-L_{28}	-267.38	956.22	-9.20	-4.30	2.19	3.33			-275.50	297.46	-2.53	43.42
	L_{28}-L_{29}	-131.41	389.19	-8.89	-4.99	2.82	5.09			-113.59	-63.72	36.07	66.01
	L_{29}-L_{30}	-164.24	-140.43	-1.09	-10.01	4.40	-1.83			-13.89	-0.16	56.19	-23.38
	L_{30}-L_{31}	-267.38	956.22	-9.20	-4.30	2.19	3.33			-275.50	297.46	-2.53	43.42
	L_{31}-L_{32}	-911.85	-326.76	-0.49	-0.37	6.70	0.39			-6.14	-4.66	84.99	-0.37
	L_{32}-L_{33}	-289.04	-42.03	-0.78	-0.79	3.95	2.66			-55.27	-49.62	51.97	-8.97
	L_{33}-L_{34}	-515.61	-35.20	-4.38	-5.51	5.38	1.67			-55.27	-49.62	51.97	21.13
	L_{34}-L_{35}	-515.61	-35.20	-4.38	-5.51	5.38	1.67			-55.27	-49.62	51.97	21.13
	L_{35}-L_{36}	-252.11	-256.04	-7.08	-3.74	4.75	2.07			-89.37	-97.66	59.91	26.11
	L_{36}-L_{37}	-230.58	-46.22	-5.15	-12.83	2.79	3.15			-65.03	-162.03	35.03	39.76
	L_{37}-L_{38}	-43.89	-183.34	-14.89	-17.56	2.26	2.03			-187.93	-226.78	28.56	25.60
	L_{38}-L_{39}	-43.89	-183.34	-14.89	-17.56	2.26	2.03			-187.93	-226.78	28.56	25.60
	L_{39}-L_{40}	-184.07	-0.84	-11.63	-13.92	1.75	1.57			-196.53	-175.65	25.63	19.77
	L_{40}-L_{41}	-104.37	-8.61	-13.92	-13.19	1.39	3.80			-175.68	-166.46	17.50	48.03
	L_{41}-L_{42}	-26.26	-8.23	-13.19	-9.94	3.80	4.09			-166.46	-137.61	48.03	51.18
	L_{42}-L_{43}	-65.51	172.40	-7.93	-8.58	1.82	4.21			-100.16	-108.34	23.91	52.69
	L_{43}-L_{44}	-30.91	151.01	-6.22	-4.95	-1.57	4.55			-78.53	-81.37	-19.81	57.44
	L_{44}-L_{45}	-27.03	33.84	-4.95	-3.56	-1.61	3.96			-81.37	-78.53	57.44	-19.81
	L_{45}-L_{46}	-19.86	-197.53	-0.83	-0.74	0.41	2.35			-10.42	-9.33	5.23	29.64
	L_{46}-L_{47}	-297.47	-128.66	-2.35	-3.89	2.11	4.16			-144.43	-144.43	29.64	29.64
	L_{47}-L_{48}	-747.52	-264.15	-1.04	0.09	9.08	-0.54			-13.31	1.10	116.06	-6.89
	L_{48}-L_{49}	-140.80	-80.21	0.20	-0.84	2.81	0.05			2.61	-10.73	35.91	0.99
	L_{49}-L_{50}	-140.80	-80.21	0.20	-0.84	2.81	0.05			2.61	-10.73	35.91	0.99
	L_{50}-L_{51}	-78.36	-190.62	-0.58	-1.39	1.53	0.13			-39.15	-99.40	24.94	44.05
	L_{51}-L_{52}	-150.40	-145.70	-3.06	-7.78	1.95	3.45			-39.15	-99.40	24.94	44.05
	L_{52}-L_{53}	-95.69	-212.39	-6.87	-11.64	2.76	2.82			-74.97	-148.74	35.25	36.08
	L_{53}-L_{54}	-78.36	-190.62	-0.58	-1.39	1.53	0.13			-39.15	-99.40	24.94	44.05
	L_{54}-L_{55}	-182.72	-415.49	-12.20	-18.58	2.36	2.26			-160.83	-365.16	30.17	28.87
	L_{55}-L_{56}	-370.16	-165.14	-22.69	-19.72	2.23	0.48			-289.83	-252.00	28.52	6.18
	L_{56}-L_{57}	-370.16	-165.14	-22.69	-19.72	2.23	0.48			-253.32	-178.58	13.85	6.22
	L_{57}-L_{58}	-304.14	-22.17	-18.02	-9.95	1.09	-0.25			-204.73	-127.18	13.91	-3.14
	L_{58}-L_{59}	-304.14	-22.17	-18.02	-9.95	1.09	-0.25			-133.85	-97.98	7.19	-2.93
	L_{59}-L_{60}	-222.88	-59.03	-11.50	-5.02	0.69	-0.31			-146.89	-0.28	8.85	-3.91
	L_{60}-L_{61}	-222.88	-59.03	-11.50	-5.02	0.69	-0.31			-146.89	-0.28	8.85	-3.91
	L_{61}-L_{62}	-78.62	63.88	-3.13	-1.91	0.76	-0.34			-19.01	8.76	-34.03	4.64
	L_{62}-L_{63}	-42.77	-120.03	0.26	-3.11	3.25	-4.47			3.40	-14.34	-42.08	-57.77
	L_{63}-L_{64}	-192.98	-177.52	0.41	-1.94	1.15	-1.29			5.24	-25.06	14.87	-16.69
	L_{64}-L_{65}	-51.91	-52.23	0.20	-0.61	0.41	-0.61			-26.61	-26.53	24.84	-24.84
	L_{65}-L_{66}	55.38	-320.81	-5.19	-11.45	-0.13	0.62			-67.19	-148.11	-1.63	8.10
	L_{66}-L_{67}	-37.08	-189.04	-10.56	-7.31	0.61	0.42			-67.19	-148.11	-1.63	8.10
	L_{67}-L_{68}	-64.00	-370.85	-11.68	-19.26	0.00	1.89			-151.12	-249.21	-0.03	24.43
	L_{68}-L_{69}	-370.60	82.40	-16.34	-6.07	1.27	2.14			-210.11	-104.72	16.39	27.68
	L_{69}-L_{70}	-370.60	82.40	-16.34	-6.07	1.27	2.14			-210.11	-104.72	16.39	27.68
	L_{70}-L_{71}	-200.72	-149.84	-6.75	-6.73	1.57	2.52			-87.33	-61.15	20.26	32.54
	L_{71}-L_{72}	-200.72	-149.84	-6.75	-6.73	1.57	2.52			-87.33	-61.15	20.26	32.54
	L_{72}-L_{73}	-131.75	-166.74	-6.15	-4.76	1.73	3.82			-66.68	-61.64	-22.33	49.40
	L_{73}-L_{74}	-131.75	-166.74	-6.15	-4.76	1.73	3.82			-66.68	-61.64	-22.33	49.40
	L_{74}-L_{75}	-361.79	-179.60	-0.03	0.00	7.56	0.12			-0.43	0.05	100.74	1.62
	L_{75}-L_{76}	-361.79	-179.60	-0.03	0.00	7.56	0.12			-0.43	0.05	100.74	1.62
	L_{76}-L_{77}	-57.39	-37.09	-4.27	-1.61	2.56	1.41			-57.10	-61.30	-16.88	39.28
	L_{77}-L_{78}	-189.89	5.64	-4.30	-10.47	3.14	3.34			-57.47	-139.89	41.98	44.57
	L_{78}-L_{79}	-189.89	5.64	-4.30	-10.47	3.14	3.34			-57.47	-139.89	41.98	44.57
	L_{79}-L_{80}	-38.98	-56.51	-8.76	-14.35	2.39	1.12			-116.96	-191.74	31.89	15.02
	L_{80}-L_{81}	-38.98	-56.51	-8.76	-14.35	2.39	1.12			-116.96	-191.74	31.89	15.02
	L_{81}-L_{82}	-66.65	-75.29	-9.50	-3.43	2.96	1.62			-12.29	-12.05	49.78	39.37

YY Axis Moments from STAAD

Location	Member	Dead Load Start-In	Dead Load End-In	Live Load (Max) Start-In	Live Load (Max) End-In	Live Load (Min) Start-In	Live Load (Min) End-In	Pedestrian Load (Max)	Pedestrian Load (Min)	Lane Reduction & Impact Live Load Start-In	Lane Reduction & Impact Live Load End-In	Impact Pedestrian Load Start-In	Impact Pedestrian Load End-In
Structure 1	L_0-L_1	-2.40	-8.84	2.11	7.76	0.00	0.00	0.00	0.00	-6.02	-22.08	-0.15	-0.50
	L_1-L_2	-94.60	-37.43	3.29	-6.72	0.00	0.00	0.00	0.00	-165.96	-50.73	-38.71	-12.80
	L_2-L_3	-25.34	-27.04	-2.63	0.63	0.00	0.00	0.00	0.00	-64.37	-11.62	-24.32	-4.22
	L_3-L_4	54.60	4.30	15.48	1.96	0.00	0.00	0.00	0.00	63.36	66.54	12.51	63.50
	L_4-L_5	-40.90	91.97	-25.51	-3.44	0.00	0.00	0.00	0.00	-64.70	-52.00	-158.3	155.31
	L_5-L_6	30.54	-14.63	7.11	1.70	0.00	0.00	0.00	0.00	76.60	99.53	46.14	122.76
	L_6-L_7	5.42	-113.52	0.75	-4.41	0.00	0.00	0.00	0.00	57.92	-89.33	8.67	-83.61
	L_7-L_8	-6.52	-6.30	2.50	-16.14	0.00	0.00	0.00	0.00	-72.93	-83.54	-47.71	-96.25
	L_8-L_9	-6.52	-6.30	2.50	-16.14	0.00	0.00	0.00	0.00	-72.93	-83.54	-47.71	-96.25
	L_9-L_{10}	57.04	-89.33	8.67	-83.61	0.00	0.00	0.00	0.00	76.60	99.53	46.14	122.76
	L_{10}-L_{11}	-40.90	91.97	-25.51	-3.44	0.00	0.00	0.00	0.00	-64.70	-52.00	-158.3	155.31
	L_{11}-L_{12}	54.60	4.30	15.48	1.96	0.00	0.00	0.00	0.00	63.36	66.54	12.51	63.50
	L_{12}-L_{13}	-25.34	-27.04	-2.63	0.63	0.00	0.00	0.00	0.00	-64.37	-11.62	-24.32	-4.22
	L_{13}-L_{14}	-94.60	-37.43	3.29	-6.72	0.00	0.00	0.00	0.00	-165.96	-50.73	-38.71	-12.80
	L_{14}-L_{15}	-2.40	-8.84	2.11	7.76	0.00	0.00	0.00	0.00	-6.02	-22.08	-0.15	-0.50
	L_0-L_{18}	-2.34	-8.61	2.06	7.56	0.00	0.00	0.00	0.00	-5.86	-21.52	-0.15	-0.49
	L_{18}-L_{19}	-25.74	-27.04	-2.63	0.63	0.00	0.00	0.00	0.00	-64.37	-11.62	-24.32	-4.22
	L_{19}-L_{20}	-16.08	-12.12	-1.63	1.08	0.00	0.00	0.00	0.00	-40.21	-30.38	-15.20	-7.59
	L_{20}-L_{21}	-4.56	-66.88	4.09	0.32	1.16	0.15			63.36	66.54	12.51	63.50
	L_{21}-L_{22}	-40.90	91.97	-25.51	-3.44	0.00	0.00	0.00	0.00	-64.70	-52.00	-158.3	155.31
	L_{22}-L_{23}	30.54	-14.63	7.11	1.70	0.00	0.00	0.00	0.00	76.60	99.53	46.14	122.76
	L_{23}-L_{24}	5.42	-113.52	0.75	-4.41	0.00	0.00	0.00	0.00	57.92	-89.33	8.67	-83.61
	L_{24}-L_{25}	-6.52	-6.30	2.50	-16.14	0.00	0.00	0.00	0.00	-72.93	-83.54	-47.71	-96.25
	L_{25}-L_{26}	-6.52	-6.30	2.50	-16.14	0.00	0.00	0.00	0.00	-72.93	-83.54	-47.71	-96.25
	L_{26}-L_{27}	57.04	-89.33	8.67	-83.61	0.00	0.00	0.00	0.00	76.60	99.53	46.14	122.76
	L_{27}-L_{28}	-40.90	91.97	-25.51	-3.44	0.00	0.00	0.00	0.00	-64.70	-52.00	-158.3	155.31
	L_{28}-L_{29}	54.60	4.30	15.48	1.96	0.00	0.00	0.00	0.00	63.36	66.54	12.51	63.50
	L_{29}-L_{30}	-25.34	-27.04	-2.63	0.63	0.00	0.00	0.00	0.00	-64.37	-11.62	-24.32	-4.22
	L_{30}-L_{31}	-94.60	-37.43	3.29	-6.72	0.00	0.00	0.00	0.00	-165.96	-50.73	-38.71	-12.80
	L_{31}-L_{32}	-2.40	-8.84	2.11	7.76	0.00	0.00	0.00	0.00	-6.02	-22.08	-0.15	-0.50
	L_{32}-L_{33}	-2.34	-8.61	2.06	7.56	0.00	0.00	0.00	0.00	-5.86	-21.52	-0.15	-0.49
	L_{33}-L_{34}	-25.74	-27.04	-2.63	0.63	0.00	0.00	0.00	0.00	-64.37	-11.62	-24.32	-4.22
	L_{34}-L_{35}	-16.08	-12.12	-1.63	1.08	0.00	0.00	0.00	0.00	-40.21	-30.38	-15.20	-7.59
	L_{35}-L_{36}	-4.56	-66.88	4.09	0.32	1.16	0.15			63.36	66.54	12.51	63.50
	L_{36}-L_{37}	-40.90	91.97	-25.51	-3.44	0.00	0.00	0.00	0.00	-64.70	-52.00	-158.3	155.31
	L_{37}-L_{38}	30.54	-14.63	7.11	1.70	0.00	0.00	0.00	0.00	76.60	99.53	46.14	122.76
	L_{38}-L_{39}	5.42	-113.52	0.75	-4.41	0.00	0.00	0.00	0.00	57.92	-89.33	8.67	-83.61
	L_{39}-L_{40}	-6.52	-6.30	2.50	-16.14	0.00	0.00	0.00	0.00	-72.93	-83.54	-47.71	-96.25
	L_{40}-L_{41}	-6.52	-6.30	2.50	-16.14	0.00	0.00	0.00	0.00	-72.93	-83.54	-47.71	-96.25
	L_{41}-L_{42}	57.04	-89.33	8.67	-83.61	0.00	0.00	0.00	0.00	76.60	99.53	46.14	122.76
	L_{42}-L_{43}	-40.90	91.97	-25.51	-3.44	0.00	0.00	0.00	0.00	-64.70	-52.00	-158.3	155.31
	L_{43}-L_{44}	54.60	4.30	15.48	1.96	0.00	0.00	0.00	0.00	63.36	66.54	12.51	63.50
	L_{44}-L_{45}	-25.34	-27.04	-2.63	0.63	0.00	0.00	0.00	0.00	-64.37	-11.62	-24.32	-4.22
	L_{45}-L_{46}	-94.60	-37.43	3.29	-6.72	0.00	0.00	0.00	0.00	-165.96	-50.73	-38.71	-12.80
	L_{46}-L_{47}	-2.40	-8.84	2.11	7.76	0.00	0.00	0.00	0.00	-6.02	-22.08	-0.15	-0.50
	L_{47}-L_{48}	-13.31	1.85	34.53	30.79	0.00	0.00	0.00	0.00	114.97	43.97	177.16	-11.54
	L_{48}-L_{49}	39.38	11.88	-24.45	3.53	0.00	0.00	0.00	0.00	82.23	33.94	127.72	32.59
	L_{49}-L_{50}	16.34	37.02	-18.88	-3.18	0.00	0.00	0.00	0.00	112.47	99.64	69.29	47.38
	L_{50}-L_{51}	62.63	-5.14	19.87	6.41	0.00	0.00	0.00	0.00	133.11	3.46	52.82	-5.12
	L_{51}-L_{52}	15.39	-54.01	14.56	-0.53	0.00	0.00	0.00	0.00	39.76	-14.86	-2.53	-54.01
	L_{52}-L_{53}	75.21	13.31	-5.44	-5.98	0.00	0.00	0.00	0.00	45.40	24.54	-60.74	-0.54
	L_{53}-L_{54}	-6.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-42.40	-29.62	-51.81	-31.32
	L_{54}-L_{55}	39.79	-16.16	2.42	6.60	0.00	0.00	0.00	0.00	42.43	3.63	-6.43	-13.63
	L_{55}-L_{56}	-31.23	86.09	4.96	-7.37	0.00	0.00	0.00	0.00	40.11	-19.66	-2.53	-54.01
	L_{56}-L_{57}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{57}-L_{58}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{58}-L_{59}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{59}-L_{60}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{60}-L_{61}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{61}-L_{62}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{62}-L_{63}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{63}-L_{64}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{64}-L_{65}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{65}-L_{66}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{66}-L_{67}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{67}-L_{68}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{68}-L_{69}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{69}-L_{70}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{70}-L_{71}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{71}-L_{72}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{72}-L_{73}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{73}-L_{74}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{74}-L_{75}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{75}-L_{76}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{76}-L_{77}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{77}-L_{78}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{78}-L_{79}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{79}-L_{80}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{80}-L_{81}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56
	L_{81}-L_{82}	29.18	-8.61	-1.79	47.42	0.00	0.00	0.00	0.00	180.6	180.6	180.57	174.56

ZZ Axis Moments from STAAD

Location	Member	Wx. Dead Load Start-In	Wx. Dead Load End-In	Wx. Live Load (Max) Start-In	Wx. Live Load (Max) End-In	Wx. Live Load (Min) Start-In	Wx. Live Load (Min) End-In	Wx. Pedestrian Load (Max)	Wx. Pedestrian Load (Min)	Wx. Lane Reduction & Impact Live Load Start-In	Wx. Lane Reduction & Impact Live Load End-In	Wx. Impact Pedestrian Load Start-In	Wx. Impact Pedestrian Load End-In
Structure 2	L_0-L_1	-0.66	-1.19	0.05	0.09	0.00	0.00	0.00	0.00	-0.07	-0.26	-0.02	-0.06
	L_1-L_2	-1.54	-1.32	-0.04	-0.12	-0.00	0.02	0.00	0.00	-0.23	-1.59	-0.05	-0.29
	L_2-L_3	-0.92	-0.93	-0.12	-0.13	0.01	0.03	0.00	0.00	-0.31	-0.34	-0.03	-0.06
	L_3-L_4	0.22	0.18	-0.15	-0.13	0.01	0.05	0.00	0.00	-0.37	-0.28	-0.03	-0.06
	L_4-L_5	-0.48	-3.64	-0.14	-0.06	0.01	0.05	0.00	0.00	-0.18	-0.82	-0.01	-0.06
	L_5-L_6	0.09	-2.68	-0.06	-0.08	0.03	0.05	0.00	0.00	-0.09	-0.44	-0.01	-0.05
	L_6-L_7	-2.41	-1.39	-0.12	-0.07	-0.01	0.03	0.00	0.00	-0.29	-0.19	-0.02	-0.03
	L_7-L_8	1.98	1.39	-0.04	-0.06	0.05	0.02	0.00	0.00	-0.01	-0.06	0.03	-0.01
	L_8-L_9	2.76	2.76	-0.01	-0.07	0.03	0.02	0.00	0.00	-0.01	-0.06	0.03	-0.01
	L_9-L_{10}	0.67	3.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: **4F1**
Condition: **As-inspected**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)
Structure 1	U_0~L_1	-55.75	82.39	0.52	-0.68	-3.20	4.23
	U_1~L_1	-14.37	23.26	0.70	-0.70	-2.72	3.05
	U_1~L_2	-144.53	166.25	0.32	-2.31	-29.80	38.90
	L_1~L_2	36.81	-35.20	1.38	-1.38	-0.95	1.44
	U_2~L_2	49.94	-49.31	2.09	-2.07	-7.73	9.69
	U_2~L_3	57.83	-70.07	-0.08	0.04	3.16	-3.53
	L_2~L_3	67.02	-68.38	0.05	1.26	-8.51	10.68
	U_3~L_3	102.14	-112.44	0.11	0.09	4.49	-4.62
	U_3~L_4	-10.55	7.04	0.18	-0.22	1.60	-1.09
	L_3~L_4	-144.53	166.25	0.32	-2.31	-29.80	38.90
	U_4~L_4	-101.27	95.46	0.15	-0.29	-2.52	3.40
	U_4~L_5	-111.05	108.51	0.31	-0.27	-2.69	4.62
	L_4~L_5	-96.41	93.86	0.47	-0.42	-2.10	2.56
	U_5~L_5	-90.90	75.93	0.84	-0.82	-3.04	3.23
	U_5~L_6	-37.80	43.18	0.72	-0.72	-0.98	3.33
	L_5~L_6	8.32	-15.89	-1.49	1.53	3.13	-3.28
	U_6~L_6	47.73	-50.39	-1.30	1.30	4.41	-4.15
	U_6~L_7	61.54	-72.81	-0.46	0.47	3.27	-3.44
	L_6~L_7	133.07	-138.05	-0.64	0.65	3.91	-3.76
	U_7~L_7	158.01	-154.56	-0.66	0.69	6.27	-6.14
	U_7~L_8	131.43	-213.81	-0.29	0.48	4.40	-5.73
	L_7~L_8	144.68	167.26	0.40	-0.39	-5.76	7.33
	U_8~L_8	-122.98	131.23	0.60	-0.62	-4.41	4.76
	L_8~L_9	153.36	-153.36	0.75	-0.74	-4.72	4.97
	U_9~L_9	-62.37	68.66	0.48	-0.49	-2.31	2.62
	U_9~L_{10}	37.80	-43.18	0.72	-0.72	-0.57	3.01
	L_9~L_{10}	-9.12	15.71	1.38	-1.33	-2.49	2.76
	U_{10}~L_{10}	14.83	-14.93	1.64	-1.74	-1.75	1.90
	U_{10}~L_{11}	39.68	-43.41	1.30	-1.30	-0.94	3.07
	L_{10}~L_{11}	88.70	-97.90	-1.01	1.04	3.87	-4.03
	U_{11}~L_{11}	133.02	-133.02	-0.54	0.54	5.31	-5.37
	U_{11}~L_{12}	140.07	-146.97	-0.18	0.04	4.87	-5.10
	L_{11}~L_{12}	148.94	-153.41	-0.11	0.20	4.78	-4.95
	U_{12}~L_{12}	189.37	-189.37	0.00	0.00	6.59	-6.59
	U_{12}~L_{13}	185.37	-182.48	-0.51	0.48	5.82	-5.56
	L_{12}~L_{13}	72.78	71.71	1.29	-1.29	-7.47	8.30
	U_{13}~L_{13}	-128.23	129.95	0.54	-0.48	-4.72	4.65
	U_{13}~L_{14}	86.17	-82.52	0.33	-0.33	-3.00	2.53
	L_{13}~L_{14}	-125.93	122.62	0.56	-0.52	-5.24	5.42
	U_{14}~L_{14}	-109.68	106.90	0.73	-0.72	-4.43	5.15
	U_{14}~L_{15}	2.80	-2.80	0.00	0.00	0.00	0.00
	L_{14}~L_{15}	-43.26	43.75	0.79	-0.70	-2.72	2.91
	U_{15}~L_{15}	29.16	-34.24	0.70	-0.70	-0.98	3.33
	L_{15}~L_{16}	-3.29	1.62	-1.19	1.40	-0.67	0.70
	U_{16}~L_{16}	18.50	-18.50	-1.50	1.50	1.50	-1.50
	L_{16}~L_{17}	46.56	-51.19	-0.81	0.76	2.94	-3.10
	U_{17}~L_{17}	62.64	-61.32	-0.74	0.71	4.12	-4.08
	L_{17}~L_{18}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	U_{18}~L_{18}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	L_{18}~L_{19}	114.59	-114.85	-0.38	0.32	6.29	-5.96
	U_{19}~L_{19}	112.83	-112.83	-0.48	0.43	6.29	-6.29
	L_{19}~L_{20}	-122.25	119.98	0.60	-0.56	-3.89	3.95
	U_{20}~L_{20}	-93.55	87.71	0.48	-0.66	-3.95	4.12
	L_{20}~L_{21}	52.68	-53.44	0.35	-0.35	-2.03	2.96
	U_{21}~L_{21}	-96.77	103.24	0.23	-0.13	-3.01	3.68
	L_{21}~L_{22}	19.82	-19.82	0.57	-0.57	-0.43	1.53
	U_{22}~L_{22}	-83.45	70.58	0.59	-0.51	-3.29	3.54
	L_{22}~L_{23}	-32.67	38.68	0.50	-0.60	-1.15	1.27
	U_{23}~L_{23}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	L_{23}~L_{24}	4.43	-8.37	-1.57	1.56	2.39	-2.63
	U_{24}~L_{24}	20.07	-19.97	0.51	-0.51	-0.51	1.27
	L_{24}~L_{25}	47.21	-50.58	-0.58	0.59	3.16	-3.29
	U_{25}~L_{25}	104.42	-111.67	-0.83	0.78	6.37	-6.30
	L_{25}~L_{26}	108.14	-102.78	-0.42	0.69	4.10	-6.12
	U_{26}~L_{26}	-123.31	116.05	0.21	-0.15	-2.87	3.05
	L_{26}~L_{27}	-109.30	107.29	0.43	-0.64	-4.66	4.84
	U_{27}~L_{27}	-48.62	58.77	0.36	-0.36	-2.68	2.89
	L_{27}~L_{28}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	U_{28}~L_{28}	-5.41	11.54	0.18	-1.20	-2.01	2.32
	L_{28}~L_{29}	27.84	-30.65	1.42	-1.39	0.09	-0.35
	U_{29}~L_{29}	39.68	-43.41	1.30	-1.30	-0.94	3.07
	L_{29}~L_{30}	88.70	-97.90	-1.01	1.04	3.87	-4.03
	U_{30}~L_{30}	133.02	-133.02	-0.54	0.54	5.31	-5.37
	U_{30}~L_{31}	140.07	-146.97	-0.18	0.04	4.87	-5.10
	L_{30}~L_{31}	148.94	-153.41	-0.11	0.20	4.78	-4.95
	U_{31}~L_{31}	189.37	-189.37	0.00	0.00	6.59	-6.59
	U_{31}~L_{32}	185.37	-182.48	-0.51	0.48	5.82	-5.56
	L_{31}~L_{32}	72.78	71.71	1.29	-1.29	-7.47	8.30
	U_{32}~L_{32}	-128.23	129.95	0.54	-0.48	-4.72	4.65
	U_{32}~L_{33}	86.17	-82.52	0.33	-0.33	-3.00	2.53
	L_{32}~L_{33}	-125.93	122.62	0.56	-0.52	-5.24	5.42
	U_{33}~L_{33}	-109.68	106.90	0.73	-0.72	-4.43	5.15
	U_{33}~L_{34}	2.80	-2.80	0.00	0.00	0.00	0.00
	L_{33}~L_{34}	-43.26	43.75	0.79	-0.70	-2.72	2.91
	U_{34}~L_{34}	29.16	-34.24	0.70	-0.70	-0.98	3.33
	L_{34}~L_{35}	-3.29	1.62	-1.19	1.40	-0.67	0.70
	U_{35}~L_{35}	18.50	-18.50	-1.50	1.50	1.50	-1.50
	L_{35}~L_{36}	46.56	-51.19	-0.81	0.76	2.94	-3.10
	U_{36}~L_{36}	62.64	-61.32	-0.74	0.71	4.12	-4.08
	L_{36}~L_{37}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	U_{37}~L_{37}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	L_{37}~L_{38}	114.59	-114.85	-0.38	0.32	6.29	-5.96
	U_{38}~L_{38}	112.83	-112.83	-0.48	0.43	6.29	-6.29
	L_{38}~L_{39}	-122.25	119.98	0.60	-0.56	-3.89	3.95
	U_{39}~L_{39}	-93.55	87.71	0.48	-0.66	-3.95	4.12
	L_{39}~L_{40}	52.68	-53.44	0.35	-0.35	-2.03	2.96
	U_{40}~L_{40}	-96.77	103.24	0.23	-0.13	-3.01	3.68
	L_{40}~L_{41}	19.82	-19.82	0.57	-0.57	-0.43	1.53
	U_{41}~L_{41}	-83.45	70.58	0.59	-0.51	-3.29	3.54
	L_{41}~L_{42}	-32.67	38.68	0.50	-0.60	-1.15	1.27
	U_{42}~L_{42}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	L_{42}~L_{43}	4.43	-8.37	-1.57	1.56	2.39	-2.63
	U_{43}~L_{43}	20.07	-19.97	0.51	-0.51	-0.51	1.27
	L_{43}~L_{44}	47.21	-50.58	-0.58	0.59	3.16	-3.29
	U_{44}~L_{44}	104.42	-111.67	-0.83	0.78	6.37	-6.30
	L_{44}~L_{45}	108.14	-102.78	-0.42	0.69	4.10	-6.12
	U_{45}~L_{45}	-123.31	116.05	0.21	-0.15	-2.87	3.05
	L_{45}~L_{46}	-109.30	107.29	0.43	-0.64	-4.66	4.84
	U_{46}~L_{46}	-48.62	58.77	0.36	-0.36	-2.68	2.89
	L_{46}~L_{47}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	U_{47}~L_{47}	-5.41	11.54	0.18	-1.20	-2.01	2.32
	L_{47}~L_{48}	27.84	-30.65	1.42	-1.39	0.09	-0.35
	U_{48}~L_{48}	39.68	-43.41	1.30	-1.30	-0.94	3.07
	L_{48}~L_{49}	88.70	-97.90	-1.01	1.04	3.87	-4.03
	U_{49}~L_{49}	133.02	-133.02	-0.54	0.54	5.31	-5.37
	U_{49}~L_{50}	140.07	-146.97	-0.18	0.04	4.87	-5.10
	L_{49}~L_{50}	148.94	-153.41	-0.11	0.20	4.78	-4.95
	U_{50}~L_{50}	189.37	-189.37	0.00	0.00	6.59	-6.59
	U_{50}~L_{51}	185.37	-182.48	-0.51	0.48	5.82	-5.56
	L_{50}~L_{51}	72.78	71.71	1.29	-1.29	-7.47	8.30
	U_{51}~L_{51}	-128.23	129.95	0.54	-0.48	-4.72	4.65
	U_{51}~L_{52}	86.17	-82.52	0.33	-0.33	-3.00	2.53
	L_{51}~L_{52}	-125.93	122.62	0.56	-0.52	-5.24	5.42
	U_{52}~L_{52}	-109.68	106.90	0.73	-0.72	-4.43	5.15
	U_{52}~L_{53}	2.80	-2.80	0.00	0.00	0.00	0.00
	L_{52}~L_{53}	-43.26	43.75	0.79	-0.70	-2.72	2.91
	U_{53}~L_{53}	29.16	-34.24	0.70	-0.70	-0.98	3.33
	L_{53}~L_{54}	-3.29	1.62	-1.19	1.40	-0.67	0.70
	U_{54}~L_{54}	18.50	-18.50	-1.50	1.50	1.50	-1.50
	L_{54}~L_{55}	46.56	-51.19	-0.81	0.76	2.94	-3.10
	U_{55}~L_{55}	62.64	-61.32	-0.74	0.71	4.12	-4.08
	L_{55}~L_{56}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	U_{56}~L_{56}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	L_{56}~L_{57}	114.59	-114.85	-0.38	0.32	6.29	-5.96
	U_{57}~L_{57}	112.83	-112.83	-0.48	0.43	6.29	-6.29
	L_{57}~L_{58}	-122.25	119.98	0.60	-0.56	-3.89	3.95
	U_{58}~L_{58}	-93.55	87.71	0.48	-0.66	-3.95	4.12
	L_{58}~L_{59}	52.68	-53.44	0.35	-0.35	-2.03	2.96
	U_{59}~L_{59}	-96.77	103.24	0.23	-0.13	-3.01	3.68
	L_{59}~L_{60}	19.82	-19.82	0.57	-0.57	-0.43	1.53
	U_{60}~L_{60}	-83.45	70.58	0.59	-0.51	-3.29	3.54
	L_{60}~L_{61}	-32.67	38.68	0.50	-0.60	-1.15	1.27
	U_{61}~L_{61}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	L_{61}~L_{62}	4.43	-8.37	-1.57	1.56	2.39	-2.63
	U_{62}~L_{62}	20.07	-19.97	0.51	-0.51	-0.51	1.27
	L_{62}~L_{63}	47.21	-50.58	-0.58	0.59	3.16	-3.29
	U_{63}~L_{63}	104.42	-111.67	-0.83	0.78	6.37	-6.30
	L_{63}~L_{64}	108.14	-102.78	-0.42	0.69	4.10	-6.12
	U_{64}~L_{64}	-123.31	116.05	0.21	-0.15	-2.87	3.05
	L_{64}~L_{65}	-109.30	107.29	0.43	-0.64	-4.66	4.84
	U_{65}~L_{65}	-48.62	58.77	0.36	-0.36	-2.68	2.89
	L_{65}~L_{66}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	U_{66}~L_{66}	-5.41	11.54	0.18	-1.20	-2.01	2.32
	L_{66}~L_{67}	27.84	-30.65	1.42	-1.39	0.09	-0.35
	U_{67}~L_{67}	39.68	-43.41	1.30	-1.30	-0.94	3.07
	L_{67}~L_{68}	88.70	-97.90	-1.01	1.04	3.87	-4.03
	U_{68}~L_{68}	133.02	-133.02	-0.54	0.54	5.31	-5.37
	U_{68}~L_{69}	140.07	-146.97	-0.18	0.04	4.87	-5.10
	L_{68}~L_{69}	148.94	-153.41	-0.11	0.20	4.78	-4.95
	U_{69}~L_{69}	189.37	-189.37	0.00	0.00	6.59	-6.59
	U_{69}~L_{70}	185.37	-182.48	-0.51	0.48	5.82	-5.56
	L_{69}~L_{70}	72.78	71.71	1.29	-1.29	-7.47	8.30
	U_{70}~L_{70}	-128.23	129.95	0.54	-0.48	-4.72	4.65
	U_{70}~L_{71}	86.17	-82.52	0.33	-0.33	-3.00	2.53
	L_{70}~L_{71}	-125.93	122.62	0.56	-0.52	-5.24	5.42
	U_{71}~L_{71}	-109.68	106.90	0.73	-0.72	-4.43	5.15
	U_{71}~L_{72}	2.80	-2.80	0.00	0.00	0.00	0.00
	L_{71}~L_{72}	-43.26	43.75	0.79	-0.70	-2.72	2.91
	U_{72}~L_{72}	29.16	-34.24	0.70	-0.70	-0.98	3.33
	L_{72}~L_{73}	-3.29	1.62	-1.19	1.40	-0.67	0.70
	U_{73}~L_{73}	18.50	-18.50	-1.50	1.50	1.50	-1.50
	L_{73}~L_{74}	46.56	-51.19	-0.81	0.76	2.94	-3.10
	U_{74}~L_{74}	62.64	-61.32	-0.74	0.71	4.12	-4.08
	L_{74}~L_{75}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	U_{75}~L_{75}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	L_{75}~L_{76}	114.59	-114.85	-0.38	0.32	6.29	-5.96
	U_{76}~L_{76}	112.83	-112.83	-0.48	0.43	6.29	-6.29
	L_{76}~L_{77}	-122.25	119.98	0.60	-0.56	-3.89	3.95
	U_{77}~L_{77}	-93.55	87.71	0.48	-0.66	-3.95	4.12
	L_{77}~L_{78}	52.68	-53.44	0.35	-0.35	-2.03	2.96
	U_{78}~L_{78}	-96.77	103.24	0.23	-0.13	-3.01	3.68
	L_{78}~L_{79}	19.82	-19.82	0.57	-0.57	-0.43	1.53
	U_{79}~L_{79}	-83.45	70.58	0.59	-0.51	-3.29	3.54
	L_{79}~L_{80}	-32.67	38.68	0.50	-0.60	-1.15	1.27
	U_{80}~L_{80}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	L_{80}~L_{81}	4.43	-8.37	-1.57	1.56	2.39	-2.63
	U_{81}~L_{81}	20.07	-19.97	0.51	-0.51	-0.51	1.27
	L_{81}~L_{82}	47.21	-50.58	-0.58	0.59	3.16	-3.29
	U_{82}~L_{82}	104.42	-111.67	-0.83	0.78	6.37	-6.30
	L_{82}~L_{83}	108.14	-102.78	-0.42	0.69	4.10	-6.12
	U_{83}~L_{83}	-123.31	116.05	0.21	-0.15	-2.87	3.05
	L_{83}~L_{84}	-109.30	107.29	0.43	-0.64	-4.66	4.84
	U_{84}~L_{84}	-48.62	58.77	0.36	-0.36	-2.68	2.89
	L_{84}~L_{85}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	U_{85}~L_{85}	-5.41	11.54	0.18	-1.20	-2.01	2.32
	L_{85}~L_{86}	27.84	-30.65	1.42	-1.39	0.09	-0.35
	U_{86}~L_{86}	39.68	-43.41	1.30	-1.30	-0.94	3.07
	L_{86}~L_{87}	88.70	-97.90	-1.01	1.04	3.87	-4.03
	U_{87}~L_{87}	133.02	-133.02	-0.54	0.54	5.31	-5.37
	U_{87}~L_{88}	140.07	-146.97	-0.18	0.04	4.87	-5.10
	L_{87}~L_{88}	148.94	-153.41	-0.11	0.20	4.78	-4.95
	U_{88}~L_{88}	189.37	-189.37	0.00	0.00	6.59	-6.59
	U_{88}~L_{89}	185.37	-182.48	-0.51	0.48	5.82	-5.56
	L_{88}~L_{89}	72.78	71.71	1.29	-1.29	-7.47	8.30
	U_{89}~L_{89}	-128.23	129.95	0.54	-0.48	-4.72	4.65
	U_{89}~L_{90}	86.17	-82.52	0.33	-0.33	-3.00	2.53
	L_{89}~L_{90}	-125.93	122.62	0.56	-0.52	-5.24	5.42
	U_{90}~L_{90}	-109.68	106.90	0.73	-0.72	-4.43	5.15
	U_{90}~L_{91}	2.80	-2.80	0.00	0.00	0.00	0.00
	L_{90}~L_{91}	-43.26	43.75	0.79	-0.70	-2.72	2.91
	U_{91}~L_{91}	29.16	-34.24	0.70	-0.70	-0.98	3.33
	L_{91}~L_{92}	-3.29	1.62	-1.19	1.40	-0.67	0.70
	U_{92}~L_{92}	18.50	-18.50	-1.50	1.50	1.50	-1.50
	L_{92}~L_{93}	46.56	-51.19	-0.81	0.76	2.94	-3.10
	U_{93}~L_{93}	62.64	-61.32	-0.74	0.71	4.12	-4.08
	L_{93}~L_{94}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	U_{94}~L_{94}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	L_{94}~L_{95}	114.59	-114.85	-0.38	0.32	6.29	-5.96
	U_{95}~L_{95}	112.83	-112.83	-0.48	0.43	6.29	-6.29
	L_{95}~L_{96}	-122.25	119.98	0.60	-0.56	-3.89	3.95
	U_{96}~L_{96}	-93.55	87.71	0.48	-0.66	-3.95	4.12
	L_{96}~L_{97}	52.68	-53.44	0.35	-0.35	-2.03	2.96
	U_{97}~L_{97}	-96.77	103.24	0.23	-0.13	-3.01	3.68
	L_{97}~L_{98}	19.82	-19.82	0.57	-0.57	-0.43	1.53
	U_{98}~L_{98}	-83.45	70.58	0.59	-0.51	-3.29	3.54
	L_{98}~L_{99}	-32.67	38.68	0.50	-0.60	-1.15	1.27
	U_{99}~L_{99}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	L_{99}~L_{100}	4.43	-8.37	-1.57	1.56	2.39	-2.63
	U_{100}~L_{100}	20.07	-19.97	0.51	-0.51	-0.51	1.27
	L_{100}~L_{101}	47.21	-50.58	-0.58	0.59	3.16	-3.29
	U_{101}~L_{101}	104.42	-111.67	-0.83	0.78	6.37	-6.30
	L_{101}~L_{102}	108.14	-102.78	-0.42	0.69	4.10	-6.12
	U_{102}~L_{102}	-123.31	116.05	0.21	-0.15	-2.87	3.05
	L_{102}~L_{103}	-109.30	107.29	0.43	-0.64	-4.66	4.84
	U_{103}~L_{103}	-48.62	58.77	0.36	-0.36	-2.68	2.89
	L_{103}~L_{104}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	U_{104}~L_{104}	-5.41	11.54	0.18	-1.20	-2.01	2.32
	L_{104}~L_{105}	27.84	-30.65	1.42	-1.39	0.09	-0.35
	U_{105}~L_{105}	39.68	-43.41	1.30	-1.30	-0.94	3.07
	L_{105}~L_{106}	88.70	-97.90	-1.01	1.04	3.87	-4.03
	U_{106}~L_{106}	133.02	-133.02	-0.54	0.54	5.31	-5.37
	U_{106}~L_{107}	140.07	-146.97	-0.18	0.04	4.87	-5.10
	L_{106}~L_{107}	148.94	-153.41	-0.11	0.20	4.78	-4.95
	U_{107}~L_{107}	189.37	-189.37	0.00	0.00	6.59	-6.59
	U_{107}~L_{108}	185.37	-182.48	-0.51	0.48	5.82	-5.56
	L_{107}~L_{108}	72.78	71.71	1.29	-1.29	-7.47	8.30
	U_{108}~L_{108}	-128.23	129.95	0.54	-0.48	-4.72	4.65
	U_{108}~L_{109}	86.17	-82.52	0.33	-0.33	-3.00	2.53
	L_{108}~L_{109}	-125.93	122.62	0.56	-0.52	-5.24	5.42
	U_{109}~L_{109}	-109.68	106.90	0.73	-0.72	-4.43	5.15
	U_{109}~L_{110}	2.80	-2.80	0.00	0.00	0.00	0.00
	L_{109}~L_{110}	-43.26	43.75	0.79	-0.70	-2.72	2.91
	U_{110}~L_{110}	29.16	-34.24	0.70	-0.70	-0.98	3.33
	L_{110}~L_{111}	-3.29	1.62	-1.19	1.40	-0.67	0.70
	U_{111}~L_{111}	18.50	-18.50	-1.50	1.50	1.50	-1.50
	L_{111}~L_{112}	46.56	-51.19	-0.81	0.76	2.94	-3.10
	U_{112}~L_{112}	62.64	-61.32	-0.74	0.71	4.12	-4.08
	L_{112}~L_{113}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	U_{113}~L_{113}	108.55	-105.78	-0.79	0.76	6.27	-6.46
	L_{113}~L_{114}	114.59	-114.85	-0.38	0.32	6.29	-5.96
	U_{114}~L_{114}	112.83	-112.83	-0.48	0.43	6.29	-6.29
	L_{114}~L_{115}	-122.25	119.98	0.60	-0.56	-3.89	3.95
	U_{115}~L_{115}	-93.55	87.71	0.48	-0.66	-3.95	4.12
	L_{115}~L_{116}	52.68	-53.44	0.35	-0.35	-2.03	2.96
	U_{116}~L_{116}	-96.77	103.24	0.23	-0.13	-3.01	3.68
	L_{116}~L_{117}	19.82	-19.82	0.57	-0.57	-0.43	1.53
	U_{117}~L_{117}	-83.45	70.58	0.59	-0.51	-3.29	3.54
	L_{117}~L_{118}	-32.67	38.68	0.50	-0.60	-1.15	1.27
	U_{118}~L_{118}	-16.12	17.78	0.53	-0.53	-0.41	1.27
	L_{118}~L_{119}	4.43	-8.37	-1.57	1.56	2.39	-2.63
	U_{119}~L_{119}	20.07	-19.97	0.51	-0.51	-0.51	1.27
	L_{119}~L_{120}	47.21	-50.58	-0.58	0.59	3.16	-3.29
	U_{120}~L_{120}	104.42	-111.67	-0.83	0.78	6.37	-6.30
	L_{120}~L_{121}	108.14	-102.78	-0.42	0.69	4.10	-6.12
	U_{121}~L_{121}	-123.31	116.05	0.21	-0.15	-2.87	3.05
	L_{121}~L_{122}	-109.30	107.29	0.43	-0.64	-4.66	4.84
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Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1-L_1	-23.63	-7.60	-1.13	0.67	0.20	-0.17				
	U_1-L_2	-3.36	-8.44	-1.22	0.17	0.28	-0.11				
	U_1-L_3	-7.82	-10.20	-2.14	-0.15	-0.13	-0.56				
	U_1-L_4	7.94	-13.41	-0.63	-0.46	0.11	-0.84				
	U_1-L_5	-14.57	-18.47	-1.32	-0.15	0.65	-0.92				
	U_2-L_2	-37.80	-77.38	-2.63	2.18	-0.03	-0.38				
	U_2-L_3	-78.62	-74.45	-4.21	2.50	0.01	-0.47				
	U_2-L_4	-9.33	-102.64	-1.75	3.41	0.26	0.05				
	U_2-L_5	-5.01	-118.90	-1.21	2.28	0.32	-0.19				
	U_3-L_3	-78.62	-74.45	-2.48	2.50	0.01	-0.11				
	U_3-L_4	-64.28	-73.58	-2.23	1.05	-0.09	-0.27				
	U_3-L_5	-39.98	-73.58	-2.67	0.47	-0.50	-0.27				
	U_4-L_4	-65.20	-48.77	-2.02	1.61	0.02	-0.69				
	U_4-L_5	-24.89	8.62	-1.23	0.35	0.22	-0.69				
	U_5-L_5	-0.81	-2.29	-0.23	0.15	0.05	-0.87				
	L_1-L_2	-25.30	9.99	-1.54	1.25	0.21	-0.70				
	L_2-L_3	-37.80	20.00	-1.93	1.67	0.30	-0.27				
	L_3-L_4	-101.98	74.35	-3.69	3.20	0.42	-0.42				
	L_4-L_5	-115.65	79.79	-4.12	3.41	0.39	-0.35				
	L_1-U_2	-76.53	79.74	2.44	2.88	0.69	-0.21				
	L_2-U_3	-109.78	99.44	-3.26	3.21	0.38	-0.40				
	L_3-U_4	-78.84	77.38	-2.64	2.50	0.01	-0.43				
	L_4-U_5	-90.94	71.81	-3.76	2.84	0.56	-0.48				
	L_1-U_1	-25.14	23.64	-1.07	1.68	0.45	-0.51				
	L_2-U_2	-20.34	9.87	-1.68	1.32	0.37	-0.68				
	L_3-U_3	-1.38	-11.20	-1.45	0.65	0.27	-0.84				
	L_4-U_4	6.85	-23.86	-0.91	0.37	0.64	-1.23				
	L_5-U_5	-44.40	35.30	-1.86	1.20	0.09	-0.92				
	U_1-U_2	-56.54	69.68	-2.32	2.70	0.35	-0.48				
	U_2-U_3	-85.37	67.30	-3.22	2.17	-0.34	-0.52				
	U_3-U_4	-78.84	77.38	-2.64	2.50	0.01	-0.43				
	U_4-U_5	-109.81	116.32	-3.69	3.29	0.32	0.04				
	U_1-L_1	-141.94	130.59	-4.84	4.08	0.62	-0.30				
	U_2-L_2	-80.17	130.59	-2.45	4.08	0.62	-0.30				
	U_3-L_3	-11.95	79.18	-2.61	3.13	0.49	-0.39				
	U_4-L_4	77.25	5.49	-0.04	0.51	0.07	-0.53				
	U_5-L_5	-66.17	89.96	-3.57	3.37	0.25	-0.32				
	L_1-U_1	-25.14	23.64	-1.07	1.68	0.45	-0.51				
	L_2-U_2	-56.05	72.68	-3.46	2.33	0.36	-0.40				
	L_3-U_3	-37.83	37.59	-2.38	1.85	0.04	-0.64				
	L_4-U_4	-10.04	3.78	-1.14	0.60	0.29	-0.96				
	L_5-U_5	-44.40	35.30	-1.86	1.20	0.09	-0.92				
	U_1-L_2	-19.42	19.56	-1.55	1.33	0.03	-0.61				
	U_2-L_3	-40.17	38.90	-2.40	2.40	0.48	-0.54				
	U_3-L_4	-46.48	58.24	-3.40	2.87	0.48	-0.54				
	U_4-L_5	-54.27	68.32	-3.40	3.08	0.40	-0.49				
	L_1-U_2	-51.16	49.42	-2.52	1.92	-0.85	-0.50				
	L_2-U_3	-69.31	71.94	-4.00	4.07	0.27	-0.33				
	L_3-U_4	-17.99	78.84	-2.74	3.29	0.53	-0.39				
	L_4-U_5	-36.18	94.54	-2.71	3.27	0.64	-0.52				
	U_1-U_2	-37.83	37.59	-2.38	1.85	0.04	-0.64				
	U_2-U_3	-77.25	76.49	-4.52	3.77	0.23	-0.33				
	U_3-U_4	-77.08	85.18	-3.45	2.84	0.50	-0.21				
	U_4-U_5	-78.35	71.28	-3.36	2.09	0.44	-0.04				
	L_1-L_2	-25.30	9.99	-1.54	1.25	0.21	-0.70				
	L_2-L_3	-76.62	55.14	-3.47	2.34	-0.08	-0.67				
	L_3-L_4	-78.84	77.38	-2.64	2.50	0.01	-0.43				
	L_4-L_5	-115.65	79.79	-4.12	3.41	0.39	-0.35				
	U_1-L_1	6.27	-17.63	-0.85	0.24	0.79	-1.33				
	U_2-L_2	-3.36	-1.91	-1.21	0.83	0.48	-1.09				
	U_3-L_3	-7.82	-10.20	-2.14	-0.15	-0.13	-0.56				
	U_4-L_4	-33.68	19.58	-2.18	1.73	0.42	-0.37				
	U_5-L_5	-78.90	59.78	-4.41	3.49	0.56	-0.51				
	L_1-U_1	-25.14	23.64	-1.07	1.68	0.45	-0.51				
	L_2-U_2	-68.21	63.59	-3.28	2.93	0.23	-0.22				
	L_3-U_3	-90.31	64.36	-2.56	0.28	-0.26	-0.26				
	L_4-U_4	-38.86	63.71	-3.40	2.48	0.26	-0.26				
	L_5-U_5	-33.50	18.26	-2.04	1.37	0.08	-0.35				
	U_1-L_2	-19.42	19.56	-1.55	1.33	0.03	-0.61				
	U_2-L_3	-1.49	-18.98	-1.11	0.30	0.41	-1.01				
	U_3-L_4	-46.48	58.24	-3.40	2.87	0.48	-0.54				
	U_4-L_5	-53.83	37.97	-2.05	1.61	0.00	-0.73				
	L_1-U_2	-51.79	22.37	-2.59	1.16	-0.84	-0.82				
	L_2-U_3	-69.31	71.94	-4.00	4.07	0.27	-0.33				
	L_3-U_4	-73.25	65.79	-3.03	2.19	0.17	0.04				
	L_4-U_5	-78.35	71.28	-3.36	2.09	0.44	-0.04				
	U_1-U_2	-5.27	64.89	-1.68	2.77	0.25	-0.16				
	U_2-U_3	-38.98	50.40	-2.57	2.50	0.23	-0.22				
	U_3-U_4	-77.08	85.18	-3.45	2.84	0.50	-0.21				
	U_4-U_5	-78.35	71.28	-3.36	2.09	0.44	-0.04				

Location	Member	Start (k-in)	End (k-in)	Start (k-in)	End (k-in)	Start (k-in)	End (k-in)	Start (k-in)	End (k-in)	Start (k-in)	End (k-in)
Structure 1	U_1-L_1	-50.29	21.46	-27.33	6.98	15.6	15.63	15.58	25.96	5	
	U_1-L_2	-25.57	-8.07	0.53	-12.91	15.4	15.42	15.42	23.71	2	
	U_1-L_3	-23.27	-15.14	6.77	-22.39	15.4	15.42	15.42	23.71	2	
	U_1-L_4	-0.62	-25.39	12.16	-31.99	15.4	15.42	15.42	23.71	2	
	U_1-L_5	-41.93	-26.91	18.93	-39.65	15.4	15.42	19.36	19.37	29.83	4
	U_2-L_2	-84.87	-138.47	-68.21	-69.71	84.03	85.1	35.09	35.09	53.13	4
	U_2-L_3	-165.08	155.51	-62.01	42.04	-43.01	21.39	19.4	19.37	29.87	2
	U_2-L_4	-42.59	192.73	-7.64	134.28	35.1	35.09	35.09	53.13	4	
	U_2-L_5	-29.91	192.90	-1.08	151.32	40.7	40.70	40.44	67.92	25	
	U_3-L_3	-143.44	127.43	-57.53	94.90	40.7	40.70	40.44	67.92	25	
	U_3-L_4	-121.09	113.92	-65.01	91.13	39.8	39.77	39.56	65.61	21	
	U_3-L_5	-130.96	48.97	-94.64	39.06	42.74	42.74	42.74	65.30	8	
	U_4-L_4	-118.78	90.52	-84.49	52.54	20.8	20.80	20.67	34.66	7	
	U_4-L_5	-53.03	17.03	-28.59	-0.39	15.4	15.42	15.42	23.71	2	
	U_5-L_5	-18.15	-25.51	-3.12	-43.80	15.4	15.42	15.42	23.71	2	
	L_1-L_2	-58.73	34.00	-29.31	1.27	15.4	15.42	15.42	23.71	2	
	L_2-L_3	-80.63	52.40	-43.01	21.39	19.4	19.37	19.37	29.87	2	
	L_3-L_4	-194.65	192.48	-125.44	89.62	35.1	35.09	35.09	53.51	4	
	L_4-L_5	-219.71	157.72	-143.95	97.63	39.4	38.83	38.83	59.23	4	
	L_1-U_2	-140.53	152.03	-97.99	100.48	38.83	38.83	38.83	59.23	4	
	L_2-U_3	-194.65	192.48	-125.44	89.62	35.1	35.09	35.09	53.51	4	
	L_3-U_4	-219.71	157.72	-143.95	97.63	39.4	38.83	38.83	59.23	4	
	L_4-U_5	-192.01	192.51	-136.34	122.58	42.7	42.74	42.74	65.30	8	
	U_1-L_1	-190.01	191.26	-137.43	134.12	42.7	42.74	42.74	65.30	8	
	U_1-L_2	-180.70	140.50	-108.88	85.31	35.1	35.09	35.09	53.51	4	
	U_2-L_2	-26.14	21.60	5.56	-4.51	0.00	0.00	0.00	0.00	0.00	
	U_2-L_3	-21.43	16.89	-4.68	-8.70	0.00	0.00	0.00	0.00	0.00	
	U_3-L_3	-26.14	21.60	5.56	-4.51	0.00	0.00	0.00	0.00	0.00	
	U_3-L_4	-64.29	34.79	-20.38	1.52	15.4	15.42	15.42	23.71	2	
	U_4-L_4	-18.56	8.87	-12.94	0.00	0.00	0.00	0.00	0.00	0.00	
	U_4-L_5	-6.23	-24.92	-19.65	-51.50	17.32	17.24	17.24	26.54	8.24	
	L_1-L_2	-88.64	65.80	-56.29	30.59	20.5	20.51	20.40	33.89	8	
	L_2-L_3	-160.02	132.65	-138.18	78.33	38.5	38.83	38.83	59.23	4	
	L_3-L_4	-164.48	122.46	-116.68	78.63	42.7	42.74	42.74	65.30	8	
	L_4-L_5	-192.01	192.51	-136.34	122.58	42.7	42.74	42.74	65.30	8	
	U_1-L_2	-198.88	205.83	-132.17	151.87	46.7	46.71	46.71	71.43	10	
	U_2-L_3	-264.93	237.52	-174.16	164.75	42.7	42.74	42.74	65.30	8	
	U_3-L_4	-132.80	240.15	-90.49	174.37	42.7	42.74	42.74	65.30	8	
	U_4-L_5	-58.36	154.32	-7.50	96.61	35.1	35.09	35.09	53.51	4	
	L_1-U_1	-198.77	194.20	-131.96	97.78	35.1	35.09	35.09	53.51	4	
	L_2-U_2	-144.65	172.26	-81.66	111.74	38.8	38.83	38.83	59.23	4	
	L_3-U_3	-264.93	237.52	-174.16	164.75	42.7	42.74	42.74	65.30	8	
	L_4-U_4	-129.60	132.65	-86.99	87.76	35.1	35.09	35.09	53.51	4	
	L_5-U_5	-80.41	79.17	-40.69	38.40	20.5	20.51	20.40	33.89	8	
	U_1-U_2	-55.77	49.20	-33.41	16.62	15.4	15.42	15.42	23.71	2	
	U_2-U_3	-31.76	14.78	-9.33	-10.86	15.4	15.42	15.42	23.71	2	
	U_3-U_4	-30.68	7.74	-14.82	-24.44	15.4	15.42	15.42	23.71	2	
	U_4-U_5	-67.71	47.32	-24.68	15.45	15.4	15.42	15.42	23.71	2	
	L_1-L_2	-38.28	22.14	-18.92	9.63	20.5	20.51	20.40	33.89	8	
	L_2-L_3	-42.93	36.22	6.07	-6.77	0.00	0.00	0.00	0.00	0.00	
	L_3-L_4	-126.34	139.32	5.00	-6.16	0.00	0.00	0.00	0.00	0.00	
	L_4-L_5	-51.16	64.62	5.00	-6.85	0.00	0.00	0.00	0.00	0.00	
	U_1-L_1	-56.78	51.44	3.43	-4.13	0.00	0.00	0.00	0.00	0.00	
	U_2-L_2	-34.29	33.73	2.38	-2.68	0.00	0.00	0.00	0.00	0.00	
	U_3-L_3	-34.66	41.73	8.14	-6.67	0.00	0.00	0.00	0.00	0.00	
	U_4-L_4	-48.92	41.04	5.00	-6.51	0.00	0.00	0.00	0.00	0.00	
	U_5-L_5	-44.09	36.22	6.41	-6.07	0.00	0.00	0.00	0.00	0.00	
	L_1-L_2	-42.86	26.75	5.67	-0.49	0.00	0.00	0.00	0.00	0.00	
	L_2-L_3	-76.62	55.14	-3.47	2.34	-0.08	-0.67	15.42	15.42	23.71	2
	L_3-L_4	-44.33	29.90	-10.03	-6.56	0.00	0.00	0.00	0.00	0.00	
	L_4-L_5	-157.33	157.82	-81.87	107.26	46.7	46.71	46.71	71.43	10	
	L_1-U_1	-157.58	127.45	-94.48	92.03	46.7	46.71	46.71	71.43	10	
	L_2-U_2	-157.33	157.82	-81.87	107.26	46.7	46.71	46.71	71.43	10	
	L_3-U_3	-157.24	110.55	-100.96	60.56	38.8	38.83	38.83	59.23	4	
	L_4-U_4	-23.05	134.29	-2.63	84.47	20.5	20.51	20.40	33.89	8	
	L_5-U_5	-23.05	134.29	-2.63	84.47	20.5	20.51	20.40	33.89	8	
	U_1-L_1	-15.43	10.63	6.13	-10.91	0.00	0.00	0.00	0.00	0.00	
	U_2-L_2	-44.27	28.75	5.67	-0.49	0.00	0.00	0.00	0.00	0.00	
	U_3-L_3	-27.80	22.04	5.37	-4.75	0.00	0.00	0.00	0.00	0.00	
	U_4-L_4	-47.82	41.04	5.00	-6.94	0.00	0.00	0.00	0.00	0.00	
	U_5-L_5	-56.38	44.63	7.19	-6.45	0.00	0.00	0.00	0.00	0.00	
	L_1-L_2	-23.05	13.46	2.63	-0.84	0.00	0.00	0.00	0.00	0.00	
	L_2-L_3	-42.86	37.86	3.00	-2.89	0.00	0.00	0.00	0.00	0.00	
	L_3-L_4	-45.34	33.17	3.60	-3.30	0.00	0.00	0.00	0.00	0.00	
	L_4-L_5	-26.37	17.75	1.09	-4.50	0.00	0.00	0.00	0.00	0.00	
	U_1-L_2	-19.17	19.79	1.29	-8.71	0.00	0.00	0.00	0.00	0.00	
	U_2-L_3	-14.41	3.86	5.32	-13.03	0.00	0.00	0.00	0.00	0.00	
	U_3-L_4	-20.67	19.67	4.98	-10.42	15.4	15.42	15.42	23.71	2	
	U_4-L_5	-12.65	11.52	3.84	-8.64	0.00	0.00	0.00	0.00	0.00	
	L_1-U_2	-104.46	74.73	-79.00	37.07	20.8	20.80	20.67	34.66	7	
	L_2-U_3	-123.94	48.59	-94.35	19.29	42.7	42.74	42.74	65.30	8	
	L_3-U_4	-175.75	129.57	-132.18	74.63	35.1	35.09	35.09	53.51	4	
	L_4-U_5	-146.92	122.33	-92.36	86.27	40.7	40.70	40.44	67.92	25	
	U_1-U_2	-58.96	19.27	-40.75	4.45	15.4	15.42	15.42	23.71	2	
	U_2-U_3	-22.28	32.38	-11.22	81.62	35.1	35.09	35.09	53.13	4	
	U_3-U_4	-114.40	155.74	-68.44	94.55	63.01	35.1	35.09	53.13	4	
	U_4-U_5	-33.28	26.40	-13.38	19.09	19.4	19.37	19.37	29.87	2	
	L_1-L_2	-58.73	34.00	-29.31	1.27	15.4	15.42	15.42	23.71	2	
	L_2-L_3	-76.62	55.14	-3.47	2.34	-0.08	-0.67	15.42	15.42	23.71	2
	L_3-L_4	-78.84	77.38	-2.64	2.50	0.01	-0.43	15.42	15.42	23.71	2
	L_4-L_5	-115.65	79.79	-4.12	3.41	0.39	-0.35	15.42	15.42	23.71	2
	U_1-L_1	-7.35	5.13	-9.27	-1.34	15.63	15.58	25.96	5		
	U_2-L_2	-3.36	-1.91	-1.21	0.83	0.48	-1.09	15.42	15.42	23.71	2
	U_3-L_3	-7.82	-10.20	-2.14	-0.15	-0.13	-0.56	15.42	15.42	23.71	2
	U_4-L_4	-33.68	19.58	-2.18	1.73	0.42	-0.37	15.42	15.42	23.71	2
	U_5-L_5	-78.90	59.78	-4.41	3.49	0.56	-0.51	15.42	15.42	23.71	2
	L_1-U_1	-25.14	23.64	-1.07	1.68	0.45	-0.51	15.42	15.42	23.71	2
	L_2-U_2	-68.21	63.59	-3.28	2.93	0.23	-0.22	15.42	15.42	23.71	2
	L_3-U_3	-90.31	64.36	-2.56	0.28	-0.26	-0.26	15.42	15.42	23.71	2
	L_4-U_4	-38.86	63.71	-3.40	2.48	0.26	-0.26	15.42	15.42	23.71	2
	L_5-U_5	-33.50	18.26	-2.04	1.37	0.08	-0.35	15.42	15.42	23.71	2
	U_1-L_2	-19.42	19.56	-1.55	1.33	0.03	-0.61	15.42	15.42	23.71	2
	U_2-L_3	-1.49	-18.98	-1.11	0.30	0.41	-1.01	15.42	15.42	23.71	2
	U_3-L_4	-46.48	58.24	-3.40	2.87	0.48	-0.54	15.42	15.42	23.71	2
	U_4-L_5	-53.83	37.97	-2.05	1.61	0.00	-0.73	15.42	15.42	23.71	2
	L_1-U_2	-51.79	22.37	-2.59	1.16	-0.84	-0.82	15.42	15.42	23.71	2
	L_2-U_3	-69.31	71.94	-4.00	4.07	0.27	-0.33	15.42	15.42	23.71	2
	L_3-U_4	-73.25	65.79	-3.03	2.19	0.17	0.04	15.42	15.42	23.71	2
	L_4-U_5	-78.35	71.28	-3.36	2.09	0.44	-0.04	15.42	15.42	23.71	2
	U_1-U_2	-5.27	64.89	-1.68	2.77	0.25	-0.16	15.42	15.42	23.71	2
	U_2-U_3	-22.40	36.94	-3.37	2.11	0.00	-0.00	15.42	15.42	23.71	2
	U_3-U_4	-38.98	50.40	-2.57	2.50	0.23	-0.22	15.42	15.42	23.71	2
	U_4-U_5	-77.08	85.18	-3.45	2.84	0.50	-0.21	15.42	15.42	23.71	2

ZZ Axis Moments from STAAD

Location	Member	Shape Factor	M_p (k-in)	Formula f_b ≤ Term * F_y/S_xx	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor $C_{mx/a}$
Structure 1	U_1-L_1	1.69	855	1.5	773.7	-0.427	0.43	0.43
	U_1-L_2	1.69	855	1.5	773.7	0.316	0.73	0.73
	U_1-L_3	1.69	855	1.5	773.7	0.316	0.73	0.73
	U_1-L_4	1.69	855	1.5	773.7	0.316	0.73	0.73
	U_1-L_5	1.69	855	1.5	773.7	-0.380	0.45	0.45
	U_2-L_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_2-L_3	1.51	1753	1.5	1737.0	-0.221	0.51	0.51
	U_2-L_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_2-L_5	1.51	1753	1.5	1737.0	-0.221	0.51	0.51
	U_3-L_3	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_3-L_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_3-L_5	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_4-L_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_4-L_5	1.51	1753	1.5	1737.0	-0.221	0.51	0.51
	U_5-L_5	1.51	1753	1.5	1737.0	-0.221	0.51	0.51
	L_1-L_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_2-L_3	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_3-L_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_4-L_5	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_1-L_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_2-L_3	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_3-L_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_4-L_5	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_1-U_1	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_2-U_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_3-U_3	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_4-U_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_5-U_5	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_1-U_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_2-U_3	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_3-U_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_4-U_5	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_1-L_1	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_2-L_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_3-L_3	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_4-L_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_5-L_5	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_1-L_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_2-L_3	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_3-L_4	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	L_4-L_5	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_1-L_1	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_2-L_2	1.53	1755	1.5	1617.1	-0.221	0.51	0.51
	U_3-L_3	1.53	1755	1.5	1617.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

(Case I considered in Max, Tension/Compression Load)

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load (k-in)	Start (k-in)	End (k-in)	Live Load (Max) (k-in)	Start (k-in)	End (k-in)	Pedestrian Load (Max) (k-in)	Start (k-in)	End (k-in)	Pedestrian Load (Min) (k-in)	Start (k-in)	End (k-in)	Lane Reduction & Impact Live Load (k-in)	Start (k-in)	End (k-in)	Lane Reduction & Impact Live Load (k-in)	Start (k-in)	End (k-in)	Impact Pedestrian Load Max (k-in)	Start (k-in)	End (k-in)	Impact Pedestrian Load Min (k-in)	Start (k-in)	End (k-in)
Structure 1	U_0 - U_1	-75.17	-0.72	0.94	1.08	-1.39	-14.21	10.50	11.97	15.51	-158.23	0.00	0.00	0.00	-77.57	14.62	-111.38	-206.64	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_1 - U_{1a}	-65.82	-29.29	0.19	-2.21	-2.23	-18.54	2.51	24.59	24.83	-206.43	0.00	0.00	0.00	-58.06	6.39	-63.15	-264.19	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_{1a} - U_2	-112.29	-86.52	1.01	2.78	-3.35	-18.90	11.24	30.94	-37.42	-210.37	0.00	0.00	0.00	-131.36	152.69	-194.62	-161.01	90.2	90.24	76.71	127.46	2147	1328.6	1.41
	U_2 - U_3	-75.71	-66.12	1.74	2.65	-3.83	-17.33	10.64	30.05	-42.64	-192.98	0.00	0.00	0.00	4.81	-13.54	-53.92	-124.73	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_3 - U_4	-9.25	61.62	1.73	2.62	-18.29	-4.62	19.27	29.14	-203.57	61.42	0.00	0.00	0.00	13.03	117.38	-276.68	13.26	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_4 - U_5	42.76	120.21	1.98	2.61	-13.97	-0.20	22.05	29.07	-155.57	-2.18	0.00	0.00	0.00	84.26	194.06	-146.66	153.43	90.2	90.24	76.71	127.46	2147	1328.6	1.41
	U_5 - U_6	93.19	179.24	2.21	2.61	-14.34	4.93	21.25	17.76	-43.29	43.85	0.00	0.00	0.00	148.76	181.27	-45.21	222.32	90.2	90.24	78.18	142.56	2586	1645.1	1.42
	U_6 - U_7	-47.38	52.06	15.13	6.93	-20.82	16.54	-58.80	78.64	-231.72	394.11	0.00	0.00	0.00	-58.80	784.31	-362.85	923.34	138.2	138.17	111.77	199.97	3642	2197.7	1.45
	U_7 - U_8	475.02	-124.35	8.60	0.08	11.45	-183.42	71.16	0.85	-110.93	1.30	0.00	0.00	0.00	710.05	-160.56	788.46	-400.11	130.3	130.35	109.11	180.77	2950	1795.3	1.39
	U_8 - U_9	46.82	20.99	1.58	1.90	-1.68	-10.13	17.06	20.48	-18.12	-109.48	0.00	0.00	0.00	83.04	53.39	37.30	-115.59	96.6	96.61	79.12	139.29	2174	1387.9	1.40
	U_9 - U_{9a}	64.59	-138.78	1.47	1.93	-1.91	-15.79	25.87	11.57	18.09	-181.75	0.00	0.00	0.00	114.64	-137.56	226.14	-451.41	96.6	96.61	83.55	139.29	2174	1387.9	1.40
	U_{9a} - U_{10}	27.91	-140.51	2.68	1.23	-0.40	-17.56	28.91	13.22	-6.44	-189.33	0.00	0.00	0.00	73.86	-165.46	271.91	-428.79	128.7	128.69	105.26	182.66	3153	1864.4	1.42
	U_{10} - U_{11}	-106.12	-155.13	1.94	0.69	-3.35	-17.47	20.87	7.43	-36.13	-188.40	0.00	0.00	0.00	-110.82	-192.02	-184.93	-446.60	151.8	151.76	130.54	219.77	4535	2932.6	1.45
	U_{11} - U_{12}	-138.04	-302.39	1.47	0.69	-3.35	-26.23	20.87	7.43	-36.13	-188.40	0.00	0.00	0.00	-161.46	-353.13	-276.35	-446.60	151.8	151.76	130.54	219.77	4535	2932.6	1.45
	U_{12} - U_{13}	-245.82	-183.07	1.33	0.98	-26.12	-10.18	14.31	10.61	-281.57	-109.74	0.00	0.00	0.00	-300.94	-224.20	-689.58	-380.65	188.5	188.51	157.55	274.68	5476	3413.6	1.46
	U_{13} - U_{14}	-123.51	-327.11	1.62	0.24	-25.18	-9.29	14.31	10.61	-177.92	-109.19	0.00	0.00	0.00	-177.92	-427.79	-513.59	-555.38	188.5	188.51	164.41	274.68	5476	3413.6	1.46
	U_{14} - U_{15}	-269.97	-145.19	0.63	0.08	-27.25	-8.88	6.77	0.83	-293.81	-95.77	0.00	0.00	0.00	-342.16	-187.66	-732.92	-313.24	188.5	188.51	157.55	274.68	5476	3413.6	1.46
	U_{15} - U_{16}	-134.36	-67.49	0.66	0.08	-27.25	-9.22	7.66	1.15	-160.42	-81.83	0.00	0.00	0.00	-191.48	-81.83	-406.03	-97.00	127.3	127.33	110.40	199.23	3668	2529.5	1.46
	U_{16} - U_{17}	-170.82	-20.32	0.51	-0.06	-11.30	-0.38	5.49	-0.53	-121.82	-4.11	0.00	0.00	0.00	-214.93	-27.23	-382.42	-31.76	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	U_{17} - U_{18}	-186.23	-23.42	0.56	-0.45	-9.46	2.73	5.98	-4.84	-102.02	29.48	0.00	0.00	0.00	-234.31	24.16	-374.72	68.77	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	U_{18} - U_{19}	-114.82	-28.77	0.37	-0.37	-7.77	-15.72	2.16	11.52	-70.19	-162.98	0.00	0.00	0.00	-152.07	-253.27	-187.55	-164.05	90.2	90.24	76.71	127.46	2147	1328.6	1.41
	U_{19} - U_{20}	-71.24	-180.99	-0.21	1.59	-0.50	-18.51	-2.21	16.89	-5.32	-197.12	0.00	0.00	0.00	-95.48	-213.33	-99.63	-491.54	138.2	138.15	119.05	199.70	3434	1990.9	1.45
	U_{20} - U_{21}	-327.34	-325.40	1.05	2.25	-8.07	-33.16	17.22	23.96	-66.60	-353.03	0.00	0.00	0.00	-410.95	-391.88	-651.12	-881.67	232.7	232.70	186.86	340.10	6520	3217.6	1.46
	U_{21} - U_{22}	-338.58	-327.11	1.29	2.27	-8.07	-33.16	17.22	23.96	-66.60	-353.03	0.00	0.00	0.00	-410.95	-391.88	-651.12	-881.67	232.7	232.70	186.86	340.10	6520	3217.6	1.46
	U_{22} - U_{23}	-396.14	-197.74	2.20	4.27	-19.19	-21.94	23.39	45.42	-204.28	-233.61	0.00	0.00	0.00	-484.58	-198.02	-780.95	-560.75	251.7	251.73	219.41	365.62	7161	3870.6	1.45
	U_{23} - U_{24}	-344.18	-179.44	3.29	2.87	-7.57	-41.99	35.03	30.60	-80.56	-447.02	0.00	0.00	0.00	-401.89	-193.49	-652.15	-814.40	232.7	232.70	189.45	340.10	6520	3217.6	1.46
	U_{24} - U_{25}	-226.16	-295.72	2.41	3.25	-8.48	-34.63	24.82	34.60	-202.49	-381.87	0.00	0.00	0.00	-260.60	-339.46	-481.97	-652.87	191.2	191.24	160.43	277.13	5476	3413.6	1.46
	U_{25} - U_{26}	-350.21	-90.73	2.79	3.66	-22.50	-8.07	29.73	39.01	-250.18	-85.92	0.00	0.00	0.00	-416.63	-67.24	-780.51	-229.65	198.9	198.88	169.65	285.08	5137	2713.1	1.43
	U_{26} - U_{27}	-75.71	3.23	3.79	3.66	-22.50	-8.07	29.73	39.01	-250.18	-85.92	0.00	0.00	0.00	-260.60	-67.24	-780.51	-229.65	198.9	198.88	169.65	285.08	5137	2713.1	1.43
	U_{27} - U_{28}	-167.09	-39.84	3.52	3.97	-19.21	-6.11	37.90	38.03	-204.48	-65.01	0.00	0.00	0.00	-168.46	101.24	-483.03	-32.72	156.8	156.80	134.92	214.81	3285	1852.3	1.37
	U_{28} - U_{29}	-109.78	-170.74	3.16	2.87	-19.07	-2.52	33.62	30.54	-209.43	-26.83	0.00	0.00	0.00	-99.00	261.65	-414.97	-197.08	156.8	156.80	128.72	214.81	3285	1852.3	1.37
	U_{29} - U_{30}	-8.79	-79.50	2.42	2.56	-16.91	-8.47	27.90	12.24	-161.91	-87.44	0.00	0.00	0.00	-8.79	102.25	-347.21	1630.13	221.8	221.77	196.91	327.26	6244	3427.0	1.48
	U_{30} - U_{31}	-261.01	1266.00	0.20	11.80	-0.57	-1.13	2.12	125.60	-6.07	-12.00	0.00	0.00	0.00	-336.56	1809.08	-347.21	1630.13	221.8	221.77	196.91	327.26	6244	3427.0	1.48
	U_{31} - U_{32}	-1192.78	-1192.78	0.53	7.22	-1.77	-3.51	107.56	107.56	-18.64	-7.76	0.00	0.00	0.00	-1540.44	-1540.44	-153.72	-153.72	221.8	221.77	196.91	327.26	6244	3427.0	1.48
	U_{32} - U_{33}	-25.29	11.66	0.79	1.83	-4.51	-20.86	8.32	33.99	-47.44	-219.44	0.00	0.00	0.00	-22.05	118.24	-94.54	-152.11	185.7	185.70	154.12	266.55	4767	2721.4	1.44
	U_{33} - U_{34}	-343.12	-196.83	2.48	3.13	-7.96	-36.13	26.13	18.84	-204.22	-84.57	0.00	0.00	0.00	-352.63	-191.91	-661.72	-344.23	191.2	191.24	160.43	277.13	5476	3413.6	1.46
	U_{34} - U_{35}	-150.60	33.06	2.71	2.33	-3.60	-15.64	28.46	24.46	-37.87	-164.54	0.00	0.00	0.00	-232.77	74.78	-146.55	-170.92	127.4	127.33	105.84	178.51	2762	1538.8	1.40
	U_{35} - U_{36}	-147.31	4.37	3.13	2.24	0.32	-21.49	32.88	23.51	-3.41	-226.10	0.00	0.00	0.00	-234.25	36.25	-195.94	-268.24	127.8	127.83	111.16	178.51	2762	1538.8	1.40
	U_{36} - U_{37}	-75.76	-19.22	3.13	2.24	0.32	-21.49	32.88	23.51	-3.41	-226.10	0.00	0.00	0.00	-115.50	-20.01	-195.94	-268.24	127.8	127.83	111.16	178.51	2762	1538.8	1.40
	U_{37} - U_{38}	-31.69	-33.99	2.55	0.49	-6.85	-19.72	26.85	5.11	-72.09	-207.42	0.00	0.00	0.00	-6.29	-37.54	-134.92	-313.83	144.8	144.84	129.49	208.19	3613	2101.0	1.44
	U_{38} - U_{39}	-86.03	-71.70	1.57	0.74	-2.77	-19.53	16.53	7.76	-97.39	-209.86	0.00	0.00	0.00	-86.03	-71.70	-134.92	-313.83	144.8	144.84	129.49	208.19	3613	2101.0	1.44
	U_{39} - U_{40}	-60.96	-66.58	1.02	-1.40	-26.13	-10.36	10.74	14.70	-295.95	-108.94	0.00	0.00	0.00	-65.29	-93.96	-463.98	-254.15	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_{40} - U_{41}	-21.15	5.53	0.89	2.51	-18.29	-4.62	19.27	29.14	-203.57	-61.42	0.00	0.00	0.00	-13.03	117.38	-276.68	-13.26	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_{41} - U_{42}	-33.07	-28.69	2.32	3.01	-19.86	-6.96	24.45	31.71	-208.98	-73.26	0.00	0.00	0.00	-11.12	78.52	-314.58	-57.94	134.9	134.91	112.76	189.26	3012	1689.0	1.40
	U_{42} - U_{43}	-15.13	113.78	2.20	3.18	-22.00	-2.98	23.09	33.46	-231.47	-31.32	0.00	0.00	0.00	10.35	191.41	-320.98	107.20	127.8	127.83	111.16	178.51	2762	1538.8	1.40
	U_{43} - U_{44}	-24.72	209.64	1.77	2.38	-19.28	-0.96	24.72	33.46	-231.47	-31.32	0.00	0.00	0.00	21.36	304.31	-276.19	127.83	127.8	111.16	178.51	2762	1538.8	1.40	
	U_{44} - U_{45}	-2.74	209.64	1.77	2.38	-19.28	-0.96	18.62	25.01	-202.80	-10.28	0.00	0.00	0.00	20.65	305.30	-267.21	259.43	173.0	173.03	144.25	241.17	3969	2180.7	1.39
	U_{45} - U_{46}	-122.51	20.21	1.58	2.38	-19.28	-0.96	20.21	25.01	-202.80	-10.28	0.00	0.00	0.00	-122.51	157.54	-267.21	259.43	173.0	173.03	144.25	241.17	3969	2180.7	1.39
	U_{46} - U_{47}	-122.51	1157.56	0.18	11.96	0.11	-1.47	1.90	119.56	-5.41	-10.41	0.00	0.00	0.00	-156.79	1668.39	-157.78	1484.80	221.8	221.77	196.91	327.26	6244	3427.0	1.48
	U_{47} - U_{48}	-1154.91	-197.36	9.43	0.97	-0.91	-0.64	100.36	10.35	-9.70	-6.64	0.00	0.00	0.00	1631.85	-243.12	1488.78	-265.46	221.8	221.77	196.91	327.26	6244	3427.0	1.48
	U_{48} - U_{49}	-1154.91	-197.36	9.43	0.97	-0.91	-0.64	100.36	10.35	-9.70	-6.64	0.00	0.00	0.00	1631.85	-243.12	1488.78	-265.46	221.8	221.77	196.91	327.26	6244	3427.0	1.48
	U_{49} - U_{50}	-178.89	-59.81	2.85	3.10	-5.49	-22.43	40.51	32.96	-58.42	-238.81	0.00	0.00	0.00	142.44	-189.43	13.32	-542.74	181.9	181.87	147.20	249.02	3767	2047.9	1.37
	U_{50} - U_{51}	-236.51	-153.10	2.91	2.55	-4.59	-40.90	30.96	27.18	-48.88	-436.48	0.00	0.00	0.00	-267.21	-153.60	-371.01	-765.19	232.7	232.70	189.45	340.10	6520	3217.6	1.46
	U_{51} - U_{52}	-98.60	-313.27	3.08	2.89	-40.61	-12.02	32.81	30.74	-432.41	-127.98	0.00	0.00	0.00	-85.59	-387.22	-690.38	-573.54	232.7	232.70	189.45	340.10	6520	3217.6	1.46
	U_{52} - U_{53}	-159.54	-380.07	2.91	2.55	-4.59	-40.90	30.96	27.18	-48.88	-436.48	0.00	0.00	0.00	-267.21	-153.60	-371.01	-765.19	232.7	232.70	189.45	340.10	6520	3217.6	1.46
	U_{53} - U_{54}	-350.37	-386.86	2.29	0.63	-36.61	-12.79	24.33	6.67	-389.75	-136.14	0.00	0.00	0.00	-423.86	-494.25	-962.18	-679.90	251.7	251.73	219.41	365.62	7161	3870.6	1.45
	U_{54} - U_{55}	-279.98	-117.76	1.54	-0.41	-31.18	-5.79	16.42	-4.32	-332.02	-81.54	0.00	0.00	0.00	-341.33	-158.71	-794.29	-233.09	212.6	212.59	170.43	297.57	4967	2491.8	1.40
	U_{55} - U_{56}	-252.51	-37.61	1.56	-0.14	-31.18	-5.79	16.42	-4.32	-332.02	-81.54	0.00	0.00	0.00	-341.33	-158.71	-794.29	-233.09	212.6	212.59	170.43	297.57	4967	2491.8	1.40
	U_{56} - U_{57}	-12.12	-7.02	-1.20	-0.66	-12.11	7.92	-12.12	-7.02	-128.90	84.35	0.00	0.00	0.00	-226.46	-10.48	-469.78	13.29	127.8	127.83	111.16	178.51	2762	1538.8	1.40
	U_{57} - U_{58}	-139.08	-187.97	-0.11	0.70	3.76	-10.50	-1.13	7.54	-40.92	-113.24	0.00	0.00	0.00	179.34	-234.56	-233.45	-391.57	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	U_{58} - U_{59}	-47.38	-119.85	0.27	1.62	-6.61	-26.23	-1.13	7.54	-40.92	-113.24	0.00	0.00	0.00	-63.30	-143.13	-38.14	-391.57	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	U_{59} - U_{60}	-52.58	-125.17	-0.18	0.89	-5.11	-17.02	-1.94	6.61	-12.00	-183.50	0.00	0.00	0.00	-76.87	-135.43	-83.95	-606.46	127.3	127.33	110.40	199.23	3668	2529.5	1.46
	U_{60} - U_{61}	-277.84	-111.68	0.67	1.75	-5.19	-22.73	7.19	18.83	-56.09	-345.11	0.00	0.00	0.00	-351.85	-120.68	-434.00	-463.80	188.5	188.51	164.41	274.68	5476	3413.6	1.46
	U_{61} - U_{62}	-166.98	-243.52	1.17	1.63	-11.29	-25.91	12.86	17.54	-121.74	-279.40	0.00	0.00	0.00	-200.35	-293.77	-375.34	-479.80	188.5	188.51	157.55	274.68	5476	3413.6	1.46
	U_{62} - U_{63}	-287.74	-127.82	1.71	1.41	-26.25	-6.46	12.86	17.54	-121.74	-279.40	0.00	0.00	0.00	-297.62	-146.42	-741.27	-256.75	188.5	188.51	157.55	274.68	5476	3413.6	1.46
	U_{63} - U_{64}	-141.43	-113.94	0.99	1.86	-17.44	-2.85	15.71	20.08	-188.02	-30.76	0.00	0.00	0.00	-189.94	-122.02	-428.28	-188.11	151.8	151.76	130.54	219.77	4535	2932.6	1.45
	U_{64} - U_{65}	-140.52	-22.75	1.22	2.76	-17.10	-3.33	13.19	-29.80	-184.39	-39.85	0.00	0.00	0.00	-172.04	68.32	-428.89	-17.03	128.7	128.69	105.26	182.66	3153	1864.4	1.42
	U_{65} - U_{66}	-141.64	56.96	1.54	2.52	-15.40	-1.18	16.60	27.20	-166.69	-12.79	0.00	0.00	0.00	-162.93	109.41	-400.83	57.94	96.6	96.61	83.55	139.29	2174	1387.9	1.40
	U_{66} - U_{67}	2.97	40.71	1.58	1.61	-10.62	-1.24	21.38	17.37	-114.52	-13.34	0.00	0.00	0.00	31.65	75.51	-145.01	35.99	96.6	96.61	79.12	139.29	2174	1387.9	1.40
	U_{67} - U_{68}	-136.67	471.04	0.36	5.76	-16.13	16.99	3.92	62.09	-173.89	118.44	0.00	0.00	0.00	-172.57	693.07	-403.73	766.32	130.3	130.26	105.11	180.77	2960	1795.3	1.39
	U_{68} - U_{69}	497.26	-34.44	7.25	0.10	18.83	-20.46	80.67	1.11	209.67	227.80	0.00	0.00	0.00	751.31	-63.32	919.00	340.92	138.2	138.17	111.77	199.97	3642	2197.7	1.45
	U_{69} - U_{70}	41.03	109.94	1.46	1.87	-1.80	-12.28	16.20	20.76	-20.01	-136.74	0.00	0.00	0.00	74.39	164.71	27.33	-40.04	97.1	97.11	78.18	142.56	2586	1648.1	1.47
	U_{70} - U_{71}	113.94	44.48	2.76	1.86	-0.85	-12.94	30.68	20.75	-8.51	-144.05	0.00	0.00	0.00	188.84	84.80	134.59	-129.44	90.2	90.24	76.71	127.46	2147	1328.6	1.41
	U_{71} - U_{72}	59.35	15.11	2.65	1.65	-5.06	-15.03	29.45	18.36	-56.34	-167.36	0.00	0.00	0.00	115.44	43.01	3.91	-197.93	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_{72} - U_{73}	86.09	-19.75	2.65	1.40	-13.82	-6.13	29.54	16.18	-153.86	-68.41	0.00	0.00	0.00	150.31	-4.64	-88.10	-114.61	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_{73} - U_{74}	80.30	-119.58	2.63	0.54	-18.20	-6.91	29.30	5.99	-202.62	-76.88	0.00	0.00	0.00	142.48	-147.65	-159.02	-255.38	90.2	90.24	76.71	127.46	2147	1328.6	1.41
	U_{74} - U_{75}	-24.63	-27.07	1.63	0.14	-19.60	-5.64	18.09	1.50	-217.12	-62.81	0.00	0.00	0.00	-8.50	-33.24	-314.37	-118.95	90.2	90.24	72.24	127.46	2147	1328.6	1.41
	U_{75} - U_{76}	29.38	-160.68	1.72	-0.31	-15.39	-2.20	12.48	-3.47	-170.90	-22.24	0.00	0.00	0.00	53.12	-213.37	-180.28	-237.78	90.2	90.24	72.24	127.46	2147	1328.6	1.41

M_z Information

Location	Member	ZZ Axis Moment Properties: Max. Pos. Moment: Start (k-in)	End (k-in)	ZZ Axis Moment Properties: Max. Neg. Moment: Start (k-in)	End (k-in)	ZZ Axis Moment Properties: S_{top} (in^3)	S_b (in^3)	S_{bc} (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term = F/S_{bc}	M_z k-in	Equivalent Mem. Factor: a	C_{mx}	C_{b2G}	YY Axis Moments from STAAD: Dead Load (k-in)	Start (k-in)	End (k-in)	Live Load (Max) (k-in)	Start (k-in)	End (k-in)	Pedestrian Load (Max) (k-in)	Start (k-in)	End (k-in)
Structure 1	U_0 - U_1	3.82	7.53	-11.31	-22.21	0.00	0.00	0.00	33.22	17.37	-0.34	-0.68	-1.02	-2.00				-7.74	7.69	-11.75	-10.22	0.00	0.00	0.00	-74.13	-137.02
	U_1 - U_{1a}	-13.67	4.29	-22.42	-4.10	0.00	0.00	0.00	-6.39	2.51	-0.39	-2.20	-1.53					-6.32	3.32	7.47	-10.64	0.00	0.00	0.00	-177.67	-140.24
	U_{1a} - U_2	-12.74	0.17	25.18	-14.39	0.00	0.00	0.00	44.15	-90.10	93.44	-109.03	158.6	158.64	128.76	179.40	778.9	1.13	5920	—	0.9972453	5220.7	-0.857	0.26	0.26
	U_2 - U_3	-13.03	-4.24	-4.19	-33.90	0.00	0.00	0.00	41.52	-82.80	72.24	-97.08	158.6	158.64	128.68	179.40	778.9	1.13	5920	—	0.9972453	5220.7	-0.824	0.871	0.95
	U_3 - U_4	-18.80	4.91	-19.53	-15.03	0.00	0.00	0.00	-79.29	44.00	-80.23	-69.92	158.6	158.64	128.68	179.40	778.9	1.13	5920	—	0.9972464	5220.7	0.871	0.95	0.95
	U_4 - U_5	-19.32	8.08	17.19	-28.69	0.00	0.00	0.00	-207.70	-70.39	-160.24	-118.19	158.6	158.64	128.76	179.40	778.9	1.13	5920	—	0.9972471	5220.7	0.339	0.74	0.74
	U_5 - U_6	-10.19	13.87	-29.36	-15.48	0.00	0.00	0.00	-264.58	-89.00	-89.53	-48.74	158.6	158.64	136.91	184.47	778.9	1.13	5920	—	0.9973456	5479.5	0.108	0.87	0.87
	U_6 - U_7	-2.86	24.82	4.99	-3.33	0.00	0.00	0.00	-246.34	206.05	-236.14	169.47	260.46	259.97	298.48	1150.4	1.15	9850	—	0.9972513	8571.6	-0.336	0.27	0.27
	U_7 - U_8	-14.37	6.73	2.40	9.00	0.00	0.00	0.00	13.15	103.48	34.96	196.44	212.8	212.78	174.34	246.38	1116.1	1.16	8131	—	0.9972216	7002.2	0.178	0.67	0.67
	U_8 - U_9	-12.15	10.63	8.46	14.58	0.00	0.00	0.00	150.73	318.06	163.57	320.44	165.8	165.79	136.31	188.45	825.4	1.14	6219	—	0.9971772	5456.6	0.510	0.80	0.80
	U_9 - U_{9a}	-1.85	17.75	-5.61	-8.04	0.00	0.00	0.00	74.71	132.26	83.55	139.29	165.8	165.79	136.34	188.45	825.4	1.14	6219	—	0.9971756	5456.6	0.273	0.68	0.68
	U_{9a} - U_{10}	-8.12	7.59	6.17	3.08	0.00	0.00	0.00	238.83	64.54	246.41	89.63	212.8	212.78	174.34	246.38	1116.1	1.16	8131	—	0.9971760	5456.6

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Inspected

Vehicle Load Factors: DL Factor: 1.50, LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.50, LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

Maximum Axial with Moment Interaction Check

M_z Information | **M_y Information**

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | Max. Pos. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_z (in^3) | I_z (in^4) | $I_{z/c}$ (in^3) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F$_y$/S_{top} | M_z (k-in) | Equivalent Mom. Factor a | $C_{m(x)}$ | $C_{m(y)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | End (k-in) | Live Load (Max) Start (k-in) | End (k-in) | Live Load (Min) Start (k-in) | End (k-in) | Pedestrian Load (Max) Start (k-in) | End (k-in) | Pedestrian Load (Min) Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Max Start (k-in) | End (k-in) | Lane Reduction & Impact Live Load Min Start (k-in) | End (k-in) | Impact Pedestrian Load Max Start (k-in) | End (k-in) | Impact Pedestrian Load Min Start (k-in) | End (k-in) | Max. Neg. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_b (in^3) | Z_y (in^3) | $I_{y/c}$ (in^3) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F$_y$/S_{top} | M_y (k-in) | Equivalent Mom. Factor a | $C_{m(x)}$ | $C_{m(y)}$ | Tension: Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass | Compression: Yield: Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass | Buckle: Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass | Fracture: Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass |
|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HF1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information | M_y Information

ZZ Axis Moments from STAAD | Max. Neg. Mom. | YY Axis Moments from STAAD | Max. Neg. Mom. | Tension | Compression

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Start (k-in)	End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_z (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_z (k-in)	Equivalent Mom. Factor a	$C_{m(z)}$	$C_{m(z)}$	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Max	Lane Reduction & Impact Live Load Min	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Start (k-in)	End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	σ_{allt} (ksi)	Formula 1.8 Term * F_y/S_top	M_y (k-in)	Equivalent Mom. Factor a	$C_{m(y)}$	$C_{m(y)}$	Pass	Axial Factor	Moment Portion	Total	Pass	Axial Factor	Moment Portion	Total	Pass	Axial Factor	Moment Portion	Total	Pass
Structure 1	U_1–L_1	-29.87	-69.03	8.65	-5.71	-0.51	2.04					0.00	0.00	-29.47	53.54	-46.27	93.28	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.495	0.40	0.40	-105.35	-33.79	1.66	0.53	-8.46	-2.71					0.00	0.00	18.51	5.93	-84.17	-30.20	0.00	0.00	0.00	0.00	-112.68	36.21	-209.37	-83.19	94.0	93.99	93.97	104.66	65.3	1.11	3454	237	0.9832467	2993.9	0.321	0.73	0.73	----	----	----	----	----	----	----	----	0.614	0.128	0.75	Yes	0.582	0.119	0.71	Yes
	U_1–L_2	-9.08	15.18	0.55	-0.60	-3.31	3.42					0.00	0.00	-3.82	11.11	-59.66	69.22	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.862	0.26	0.26	-12.55	-8.49	1.06	0.53	-5.02	-2.75					0.00	0.00	11.79	5.95	-55.83	-8.29	0.00	0.00	0.00	0.00	-0.99	-3.31	-88.90	-21.82	94.0	93.99	93.99	104.66	65.3	1.11	3454	386	0.9182623	3035.4	0.245	0.70	0.70	----	----	----	----	----	----	----	----	0.249	0.045	0.3	Yes	0.242	0.088	0.33	Yes
	U_2–L_2	10.20	-9.70	0.66	-0.77	-4.77	4.92					0.00	0.00	23.03	-23.74	-12.33	23.89	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.324	0.39	0.39	-13.10	-7.04	0.64	0.31	-3.27	-2.01					0.00	0.00	-8.57	8.17	-54.76	9.08	94.0	93.99	93.99	104.66	65.3	1.11	3454	384	0.9185075	3035.6	-0.166	0.53	0.53	0.069	0.046	0.10	Yes	0.006	0.033	0.04	Yes	0.009	0.090	0.10	Yes
	U_3–L_3	33.45	-34.40	1.73	-1.80	-1.25	1.77					0.00	0.00	68.46	-70.76	25.39	-19.13	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.967	0.21	0.21	-64.34	-2.06	-0.93	-0.41	5.48	2.86					0.00	0.00	-123.12	-8.64	-30.30	38.69	94.0	93.99	93.99	104.66	65.3	1.11	3454	396	0.9185157	3029.8	0.070	0.63	0.63	0.139	0.126	0.27	Yes	0.077	0.069	0.15	Yes	0.006	0.045	0.06	Yes
	U_4–L_4	41.64	-42.40	1.40	-1.42	-3.70	4.30					0.00	0.00	83.52	-85.56	30.28	-23.10	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.970	0.21	0.21	-123.65	-27.39	-1.15	-0.48	6.77	3.33					0.00	0.00	-144.09	-29.37	-54.93	54.02	94.0	93.99	93.99	104.66	65.3	1.11	3454	396	0.9184878	3022.2	0.391	0.76	0.76	----	----	----	----	0.223	0.055	0.28	Yes	0.194	0.109	0.30	Yes
	U_5–L_5	45.56	-51.10	-0.74	0.52	3.23	-3.53					0.00	0.00	-8.28	5.77	36.00	-39.30	0.00	0.00	0.00	0.00	1	0.0	1.67	1016	1.5	913.3	-0.912	0.24	0.24	-115.93	-35.77	0.82	0.46	0.53	-0.83					0.00	0.00	-138.82	-39.98	-143.05	-13.92	94.0	93.99	93.97	104.66	65.3	1.11	3454	396	0.9184878	3030.7	0.419	0.77	0.77	----	----	----	----	0.372	0.064	0.44	Yes	0.354	0.119	0.48	Yes
	U_6–L_6	55.60	-55.58	-0.48	0.27	3.01	-4.04					0.00	0.00	69.31	-66.35	25.18	-12.68	15.4	15.42	15.42	23.71	1	1076.0	1.67	1144	1.5	1029.6	-0.958	0.22	0.22	-104.29	-32.53	0.74	0.41	-0.53	0.77					0.00	0.00	-121.53	8.77	-77.66	16.58	133.5	132.29	132.29	148.70	92.8	1.15	4295	274	0.9150418	4271.9	-0.072	0.57	0.57	----	----	----	----	0.377	0.064	0.44	Yes	0.357	0.091	0.45	Yes
	U_7–L_7	91.24	-101.87	-0.03	0.03	4.71	-4.99					0.00	0.00	-0.29	0.32	52.40	-55.55	0.00	0.00	0.00	0.00	1	0.0	1.67	1016	1.5	913.3	-0.912	0.24	0.24	-102.40	-33.61	0.05	-0.01	3.31	0.81					0.00	0.00	-129.83	49.21	-82.65	57.96	124.7	124.69	119.31	145.38	96.3	1.17	4798	196	0.9179186	3941.6	-0.356	0.46	0.46	----	----	----	----	0.464	0.078	0.55	Yes	0.428	0.201	0.63	Yes
	U_8–L_8	-20.57	21.23	0.32	-0.39	-2.21	2.72					0.00	0.00	-22.12	21.53	-58.65	66.96	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3	-0.973	0.25	0.25	-168.73	-52.55	0.30	0.60	2.87	0.00	0.00	0.00	-214.97	-68.52	-212.06	-64.58	234.5	274.51	274.48	318.87	83.7	1.16	10623	359	0.9170257	8850.7	0.319	0.73	0.73	----	----	----	----	0.466	0.022	0.49	Yes	0.448	0.016	0.46	Yes
	U_9–L_9	-38.47	39.71	0.01	-0.12	-2.51	3.70					0.00	0.00	-41.35	39.53	-72.53	82.65	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3	-0.973	0.25	0.25	-208.96	-65.10	0.01	0.00	3.56	0.00	0.00	0.00	-266.19	-84.85	-262.70	-80.00	234.5	274.51	274.48	318.87	83.7	1.16	10623	359	0.9170257	8850.7	-0.109	0.56	0.56	----	----	----	----	0.466	0.013	0.47	Yes	0.438	0.016	0.46	Yes
	U_{10}–L_{10}	-88.47	88.21	0.01	-0.12	-2.51	3.70					0.00	0.00	0.00	-2.35	-114.93	113.04	-155.86	166.46	39.5	39.52	39.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.936	0.23	0.23	-156.98	-112.09	-0.03	-0.01	-0.75	-0.46					0.00	0.00	-203.33	-148.49	-213.35	-152.74	163.7	163.71	163.68	198.75	204.3	1.21	6559	365	0.9173168	5280.3	0.712	0.89	0.89	----	----	----	----	0.364	0.061	0.45	Yes	0.366	0.086	0.45	Yes
	U_{11}–L_{11}	-91.10	90.85	0.54	-0.61	-2.22	3.59					0.00	0.00	1.84	-4.71	-118.40	116.53	-149.55	216.04	42.4	42.74	42.74	65.30	14	1309.7	1.53	2155	1.5	2115.6	-0.952	0.25	0.25	-180.44	-129.00	-0.20	-0.09	0.53	-0.31					0.00	0.00	-237.02	-24.24	-0.53	-2.11	-3.57	5.70	0.00	0.00	-147.41	24.26	-140.21	-21.57	173.7	173.70	173.70	202.71	247.5	1.17	6690	426	0.9180626	5623.6	0.232	0.69	0.69	----	----	----	----	0.396	0.054	0.45	Yes	0.378	0.100	0.48	Yes
	U_{12}–L_{12}	-79.57	78.39	1.02	-0.95	-2.15	2.63					0.00	0.00	11.04	-10.29	-23.15	28.40	0.00	0.00	0.00	0.00	1	0.0	1.67	1016	1.5	913.3	-0.912	0.24	0.24	-89.09	88.64	-132.54	138.82	21.1	21.09	21.09	36.40	10	1137.6	1.68	1170	1.5	1044.0	-0.962	0.22	0.22	-96.08	4.08	-0.79	-0.64	4.91	2.80					0.00	0.00	-135.91	4.82	-56.69	44.57	124.9	124.89	119.31	138.94	138.93	162.64	110.7	1.17	5367	295	0.9172033	4406.8	-0.039	0.59	0.59	----	----	----	----	0.368	0.050	0.42	Yes	0.350	0.119	0.47	Yes
	U_{13}–L_{13}	-49.26	60.16	1.26	-1.28	-2.77	3.02					0.00	0.00	-46.36	60.32	-152.67	120.48	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.954	0.26	0.26	-81.85	34.69	0.32	0.88	0.58	1.24					0.00	0.00	-101.90	57.49	-98.20	62.49	103.1	103.08	103.08	116.41	73.3	1.13	3841	240	0.9155715	3264.9	-0.364	0.37	0.37	----	----	----	----	0.416	0.052	0.47	Yes	0.394	0.138	0.54	Yes
	U_{14}–L_{14}	-29.77	34.65	1.47	-1.47	-2.66	4.45					0.00	0.00	-71.56	74.45	-68.81	63.07	17.2	17.24	17.24	26.54	2	791.9	1.54	782	1.5	763.3	-0.970	0.21	0.21	-53.63	-37.39	0.34	0.16	0.36	-0.43					0.00	0.00	-137.58	-34.46	-59.31	-34.10	94.0	93.99	93.97	104.66	65.3	1.11	3454	384	0.9162776	3030.4	0.186	0.94	0.94	----	----	----	----	0.186	0.094	0.25	Yes	0.186	0.158	0.29	Yes
	U_{15}–L_{15}	-1.50	-2.65	-2.30	2.32	3.25	-3.36					0.00	0.00	-24.74	29.05	35.05	-36.26	0.00	0.00	0.00	0.00	1	0.0	1.67	1016	1.5	913.3	-0.912	0.24	0.24	-34.12	29.12	0.83	0.46	0.53	-0.83					0.00	0.00	-41.24	29.12	-124.19	94.30	94.0	93.99	93.99	104.66	65.3	1.11	3454	224	0.9137181	2987.5	0.921	0.91	0.91	0.071	0.110	0.19	Yes	0.039	0.060	0.10	Yes	0.139	0.066	0.21	Yes
	U_{16}–L_{16}	-34.13	36.55	-1.53	1.50	-1.61	1.66					0.00	0.00	22.91	-28.46	83.24	-93.52	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.970	0.21	0.21	-52.13	28.30	-0.83	-0.41	5.48	2.86					0.00	0.00	16.28	8.50	12.21	-7.26	0.00	0.00	0.00	0.00	-149.36	-22.89	-154.66	-11.41	94.0	93.99	93.99	104.66	65.3	1.11	3454	207	0.9160017	2978.8	0.614	0.94	0.94	----	----	----	----	0.240	0.061	0.33	Yes	0.226	0.120	0.35	Yes
	U_{17}–L_{17}	-46.23	-55.85	-0.47	0.35	3.21	-3.33					0.00	0.00	-53.45	-67.74	105.13	-119.33	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.881	0.25	0.25	-139.67	-87.50	1.35	-1.24	1.12	-2.64					0.00	0.00	-162.67	-131.17	-165.81	-117.18	113.4	113.37	113.37	130.15	82.8	1.15	4295	174	0.9126020	3563.9	0.707	0.88	0.88	----	----	----	----	0.425	0.052	0.51	Yes	0.392	0.121	0.52	Yes
	U_{18}–L_{18}	-110.44	-114.63	-0.37	0.38	3.50	-3.66					0.00	0.00	-138.37	-143.78	221.46	-226.42	19.4	19.37	35.09	35.09	53.51	1157.0	-0.959	0.22	0.22	-166.71	-116.66	-0.29	-0.12	0.30	-0.20					0.00	0.00	-138.58	-44.74	0.32	-0.07	0.30	-0.20					0.00	0.00	3.46	-3.79	-175.65	-49.18	113.4	113.37	113.37	130.15	82.8	1.15	5019	248	0.9045762	4129.5	0.333	0.73	0.73	----	----	----	----	0.386	0.060	0.45	Yes	0.386	0.060	0.45	Yes
	U_{19}–L_{19}	-121.36	-131.26	-0.33	0.33	5.78	-5.79					0.00	0.00	-153.17	-166.01	238.75	-251.79	42.7	42.74	42.74	65.30	1	1389.6	1.53	2155	1.5	2115.6	-0.948	0.22	0.22	-42.91	25.16	-0.17	-0.37	4.95	-1.12					0.00	0.00	-178.49	4.03	12.59	-17.08	173.7	173.70	173.70	202.71	247.5	1.17	6690	207	0.9055002	5503.1	-0.473	0.43	0.43	----	----	----	----	0.400	0.034	0.44	Yes	0.373	0.147	0.49	Yes
	U_{20}–L_{20}	-134.59	-173.50	-0.20	0.28	5.71	-6.44					0.00	0.00	-172.13	-221.63	254.99	-315.80	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.807	0.28	0.28	-48.55	6.36	-0.80	-0.10	16.29	2.14					0.00	0.00	-51.96	6.80	-291.48	-38.20	173.7	173.70	173.70	202.71	247.5	1.17	6690	126	0.9355009	5362.4	0.131	0.63	0.63	----	----	----	----	0.479	0.096	0.58	Yes	0.421	0.147	0.57	Yes
	U_{21}–L_{21}	-114.23	-168.91	0.75	-0.86	-4.16	5.16					0.00	0.00	-138.11	-207.79	217.68	-309.14	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.753	0.30	0.30	-118.81	-54.22	0.77	0.73	-6.29	-0.68					0.00	0.00	-279.77	-60.75	-268.43	-61.23	173.7	173.70	173.70	202.71	247.5	1.17	6690	436	0.9910629	5623.6	0.505	0.80	0.80	----	----	----	----	0.360	0.057	0.42	Yes	0.349	0.107	0.46	Yes
	U_{22}–L_{22}	-123.79	-191.39	0.72	-0.76	-4.53	5.01					0.00	0.00	-160.96	-260.22	-223.56	240.10	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.931	0.23	0.23	-27.17	-60.93	1.08	0.19	-23.62	-2.95					0.00	0.00	-31.53	-2.00	201.30	-21.31	173.7	173.70	173.70	202.71	247.5	1.17	7303	210	0.9607792	6382.4	0.331	0.73	0.73	----	----	----	----	0.387	0.072	0.46	Yes	0.363	0.102	0.47	Yes
	U_{23}–L_{23}	-113.42	-182.62	0.84	-0.84	-4.46	4.97					0.00	0.00	-146.51	-251.39	-211.47	231.78	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.931	0.23	0.23	-24.42	4.39	1.39	0.24	-21.24	-3.81					0.00	0.00	-22.22	-2.16	-198.62	-20.98	173.7	173.70	173.70	202.71	247.5	1.17	7303	210	0.9598727	6382.4	0.331	0.73	0.73	----	----	----	----	0.387	0.072	0.46	Yes	0.363	0.102	0.47	Yes
	U_{24}–L_{24}	-56.01	62.13	0.48	-0.51	2.08	2.49					0.00	0.00	6.14	-5.43	-22.09	26.51	0.00	0.00	0.00	0.00	1	0.0	1.67	1016	1.5	913.3	-0.912	0.24	0.24	-66.12	73.71	-101.53	115.23	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	-0.881	0.25	0.25	-122.22	76.70	0.58	0.49	-1.33	-1.78					0.00	0.00	6.22	5.19	-14.18	-1.78	0.00	0.00	0.00	0.00	-7.80	106.45	-34.32	97.40	123.5	123.48	123.48	144.11	92.3	1.17	4795	183	0.9545372	3891.2	-0.073	0.57	0.57	----	----	----	----	0.422	0.048	0.47	Yes	0.388	0.105	0.50	Yes
	U_{25}–L_{25}	-0.29	0.29	-1.15	1.17	-1.00	1.00					0.00	0.00	-1.66	1.66	-19.79	22.02	0.00	0.00	0.00	0.00	1	0.0	1.67	1016	1.5	913.3	-0.912	0.24	0.24	-0.29	0.29	-38.61	38.61	19.63	19.63	19.63	30.29	5	987.9	1.54	1098	1.5	1066.2	-0.881	0.25	0.25	-0.29	0.29	-38.61	38.61	19.63	19.63	19.63	30.29	5	987.9	1.54	1098	1.5	1066.2	-0.881	0.25	0.25	-6.78	7.67	-36.61	36.61	19.63	19.63	19.63	30.29	5	987.9	1.54	1098	1.5	1066.2	-0.881	0.25	0.25	-0.20	0.20	-37.86	37.86

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-12.57	3.38	-0.40	0.45	0.01	-0.18				
	U_1-L_1	-1.68	-7.06	-1.36	0.13	0.22	-0.05				
	U_1-L_2	8.78	8.37	-0.07	0.02	-0.62	0.00				
	U_2-L_2	-9.78	-11.76	-0.71	-0.39	0.26	-0.79				
	U_2-L_3	-10.33	-17.60	-1.10	-1.43	0.41	-0.44				
	U_3-L_3	-26.83	58.49	-2.22	2.18	-0.95	-0.46				
	U_3-L_4	-74.80	111.69	-3.76	3.66	0.27	0.08				
	U_4-L_4	-6.35	88.66	-1.94	3.49	0.01	-0.01				
	U_4-L_5	-9.60	109.55	-1.54	2.86	0.22	-0.11				
	U_5-L_5	-74.80	111.69	-3.76	3.66	0.27	0.08				
	U_5-L_6	-58.84	54.78	-2.33	1.02	-0.05	-0.40				
	U_6-L_6	-26.83	58.49	-2.22	2.18	-0.95	-0.46				
	U_6-L_7	-55.25	39.07	2.10	1.53	0.28	-0.90				
	U_7-L_7	-20.99	7.38	-1.30	0.53	0.41	-0.76				
	U_7-L_8	-6.39	88.66	-1.94	3.49	0.01	-0.01				
	U_8-L_8	-19.09	4.09	-1.46	1.24	0.35	-0.90				
	U_8-L_9	-28.64	12.99	-1.55	0.70	0.24	-4.35				
	U_9-L_9	-89.35	58.15	-3.44	3.01	-0.29	-0.10				
	U_9-L_{10}	-89.27	61.38	-3.83	3.04	0.26	-0.26				
	U_{10}-L_{10}	-105.39	89.05	3.19	3.09	0.17	-0.17				
	U_{10}-L_{11}	-82.31	86.26	-3.62	3.56	0.61	-0.56				
	U_{11}-L_{11}	-89.27	61.38	-3.83	3.04	0.26	-0.26				
	U_{11}-L_{12}	-41.94	62.98	-3.79	2.92	0.64	-0.52				
	U_{12}-L_{12}	-89.35	58.15	-3.44	3.01	-0.29	-0.10				
	U_{12}-L_{13}	-17.36	7.00	-1.76	1.29	0.64	-0.92				
	U_{13}-L_{13}	-6.61	-11.46	-1.50	0.66	0.50	-13.65				
	U_{13}-L_{14}	7.43	-23.92	-1.04	0.48	1.92	-1.41				
	U_{14}-L_{14}	-44.32	35.88	-1.94	1.30	0.16	-1.00				
	U_{14}-L_{15}	-56.39	68.66	-3.29	3.19	0.71	-1.15				
	U_{15}-L_{15}	-88.55	73.83	-2.96	2.20	0.03	-0.82				
	U_{15}-L_{16}	-90.45	88.56	-3.28	2.61	-0.47	-0.28				
	U_{16}-L_{16}	-108.38	116.68	-3.58	3.08	0.23	-0.28				
	U_{16}-L_{17}	-154.28	139.71	-4.73	3.99	0.40	-0.16				
	U_{17}-L_{17}	-24.73	100.38	-3.28	3.94	0.49	-0.45				
	U_{17}-L_{18}	-88.28	73.83	-2.96	2.20	0.03	-0.82				
	U_{18}-L_{18}	-74.14	95.51	-4.13	3.65	0.20	-0.26				
	U_{18}-L_{19}	-43.13	74.87	-3.61	3.27	0.27	-0.27				
	U_{19}-L_{19}	-55.49	68.85	-3.52	2.37	0.30	-0.93				
	U_{19}-L_{20}	-32.97	39.97	-2.49	1.80	0.36	-0.90				
	U_{20}-L_{20}	-24.40	23.96	-1.56	1.32	0.29	-0.82				
	U_{20}-L_{21}	-10.32	4.39	-1.22	0.69	0.61	-1.06				
	U_{21}-L_{21}	-6.27	2.67	-0.74	0.42	0.37	-0.64				
	U_{21}-L_{22}	-17.08	16.16	-1.56	1.32	0.29	-0.82				
	U_{22}-L_{22}	-24.40	23.96	-1.56	1.32	0.29	-0.82				
	U_{22}-L_{23}	-55.69	65.14	-3.26	2.76	-0.27	-0.73				
	U_{23}-L_{23}	-49.22	80.41	-3.48	3.01	-0.67	-0.15				
	U_{23}-L_{24}	-41.16	74.87	-3.61	3.27	0.27	-0.27				
	U_{24}-L_{24}	-106.11	102.57	-4.54	4.12	0.26	-0.29				
	U_{24}-L_{25}	-20.11	100.38	-3.28	3.94	0.49	-0.45				
	U_{25}-L_{25}	-47.67	128.15	-3.23	4.20	0.56	-0.49				
	U_{25}-L_{26}	-73.70	139.71	-4.63	3.99	0.40	-0.16				
	U_{26}-L_{26}	-89.53	99.33	-3.89	2.95	0.18	-0.19				
	U_{26}-L_{27}	-86.54	82.57	-3.19	2.49	-0.11	-0.48				
	U_{27}-L_{27}	-60.17	67.66	-3.33	2.38	-0.39	-1.09				
	U_{28}-L_{28}	-12.59	26.40	-1.00	0.46	0.66	-1.21				
	U_{29}-L_{29}	6.51	-17.79	-1.38	0.99	0.68	-1.21				
	U_{30}-L_{30}	-17.68	87.11	-3.48	3.01	-0.67	-0.15				
	U_{31}-L_{31}	-38.92	20.55	-2.06	1.74	-0.01	-0.60				
	U_{32}-L_{32}	-88.53	71.18	-3.85	3.07	0.47	-0.40				
	U_{33}-L_{33}	-74.80	111.69	-3.76	3.66	0.27	0.08				
	U_{34}-L_{34}	-70.40	69.24	-3.88	3.26	0.36	-0.30				
	U_{35}-L_{35}	-86.92	56.40	-3.77	2.95	0.34	-0.25				
	U_{36}-L_{36}	-74.80	111.69	-3.76	3.66	0.27	0.08				
	U_{37}-L_{37}	-77.34	67.11	-2.89	2.20	-0.51	-0.03				
	U_{38}-L_{38}	-84.80	52.28	-3.45	2.76	0.49	-0.43				
	U_{39}-L_{39}	-2.84	82.10	-2.68	3.34	0.26	0.12				
	U_{40}-L_{40}	-54.59	58.66	-4.07	2.48	0.03	-0.04				
	U_{41}-L_{41}	-9.15	17.58	-1.26	0.13	-0.22	-0.64				
	U_{42}-L_{42}	-74.80	111.69	-3.76	3.66	0.27	0.08				
	U_{43}-L_{43}	-0.13	-8.77	-0.83	0.23	-0.73					
	U_{44}-L_{44}	-23.22	7.61	-0.63	0.71	0.13	-0.71				

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{req} (in^3)	S_x (in^3)	S_{net} (in^3)	Z_z (in^3)	I (in^4)	$I_{n/a}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	U_0-L_1	-22.18	10.86	-11.79	1.77	15.6	19.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.490	0.40	0.40
	U_1-L_1	-21.82	-7.24	9.94	-5.96	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.332	0.73	0.73
	U_1-L_2	-14.59	-11.91	-19.26	-19.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.375	0.40	0.40
	U_2-L_2	2.40	-20.90	16.42	-26.65	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.616	0.35	0.35
	U_2-L_3	-29.27	-28.77	-33.01	-33.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.983	0.27	0.27
	U_3-L_3	-24.66	24.28	-10.59	-5.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.522	0.35	0.35
	U_3-L_4	-129.49	126.01	-103.53	77.81	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.573	0.21	0.21
	U_4-L_4	-36.29	165.98	-8.10	115.37	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.219	0.51	0.51
	U_4-L_5	-34.01	182.54	-8.41	140.93	40.7	40.70	40.44	67.92	25	1961.0	1.67	2241	1.5	2014.7	-0.186	0.53	0.53
	U_5-L_5	-138.74	113.93	-83.48	85.90	40.7	40.70	40.44	67.92	25	1961.0	1.67	2241	1.5	2014.7	-0.607	0.29	0.29
	U_5-L_6	-109.33	85.44	-74.54	65.67	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.781	0.29	0.29
	U_6-L_6	-116.61	29.49	-52.25	16.27	42.7	42.74	42.74	65.30	8	1389.6	1.53	2133	1.5	2115.6	-0.339	0.46	0.46
	U_6-L_7	-101.30	72.21	-67.84	38.22	20.8	20.80	20.67	34.66	7	1076.0	1.67	1344	1.5	1029.6	-0.713	0.31	0.31
	U_7-L_7	-45.47	17.06	-21.53	-1.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.375	0.40	0.45
	U_7-L_8	-13.11	-20.12	1.99	-26.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.616	0.35	0.35
	U_8-L_8	-45.20	22.72	-19.82	-7.26	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.503	0.40	0.40
	U_8-L_9	-64.50	38.94	-36.51	8.64	19.4	19.37	19.37	29.87	2	907.0	1.54	986	1.5	958.8	-0.459	0.40	0.40
	U_9-L_9	-164.42	117.82	-120.27	73.12	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.717	0.31	0.31
	U_9-L_{10}	-114.53	122.33	-117.64	77.04	38.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.859	0.32	0.32
	U_{10}-L_{10}	-134.66	113.43	-108.83	-134.66	113.43	38.8	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.875	0.25	0.25
	U_{10}-L_{11}	-181.68	169.03	-134.66	113.42	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.875	0.25	0.25
	U_{11}-L_{11}	-159.87	161.40	-98.51	104.40	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.991	0.20	0.20
	U_{11}-L_{12}	-186.02	137.44	-119.00	86.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.759	0.30	0.30
	U_{12}-L_{12}	-158.08	122.33	-76.80	74.63	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.774	0.29	0.29
	U_{12}-L_{13}	-84.21	37.58	-35.29	13.54	21.54	21.54	21.54	33.27	5	967.7	1.54	1056	1.5	1036.2	-0.681	0.29	0.29
	U_{13}-L_{13}	-46.90	26.89	-13.68	-3.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.573	0.37	0.37
	U_{13}-L_{14}	-27.53	7.43	-13.68	-3.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.503	0.40	0.40
	U_{14}-L_{14}	-4.73	24.52	23.79	-50.61	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.470	0.41	0.41
	U_{14}-L_{15}	-53.08	64.66	-55.43	32.67	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.776	0.25	0.29
	U_{15}-L_{15}	-169.43	120.32	-127.84	73.23	38.5	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.740	0.30	0.30
	U_{15}-L_{16}	-156.05	126.37	-114.77	84.58	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.810	0.28	0.28
	U_{16}-L_{16}	-177.32	158.52	-134.57	104.39	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.991	0.20	0.20
	U_{16}-L_{17}	-190.48	193.06	-137.75	146.87	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.987	0.21	0.21
	U_{17}-L_{17}	-265.96	236.78	-199.69	179.41	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.890	0.24	0.24
	U_{17}-L_{18}	-132.17	130.67	-83.17	83.93	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.759	0.30	0.30
	U_{18}-L_{19}	-77.05	184.57	-25.42	124.57	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.417	0.43	0.43
	U_{19}-L_{19}	-190.60	174.73	-126.40	116.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.946	0.22	0.22
	U_{19}-L_{20}	-152.99	114.10	-80.69	120.62	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.819	0.25	0.25
	U_{20}-L_{20}	-131.17	102.57	-69.18	102.57	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.762	0.30	0.30
	U_{20}-L_{21}	-120.26	121.95	-67.55	76.82	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.986	0.21	0.21
	U_{21}-L_{21}	-76.90	76.64	-37.91	39.61	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.997	0.20	0.20
	U_{21}-L_{22}	-51.26	46.04	-16.35	16.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.503	0.40	0.40
	U_{22}-L_{22}	-30.05	19.13	-5.06	-8.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.503	0.40	0.40
	U_{23}-L_{23}	-24.44	39.01	-10.59	19.12	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.897	0.24	0.24
	U_{23}-L_{24}	-43.49	39.01	-18.19	9.77	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.897	0.24	0.24
	U_{24}-L_{24}	-144.42	97.89	-103.36	61.89	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.586	0.31	0.31
	U_{24}-L_{25}	-116.96	122.36	-76.02	74.72	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.996	0.22	0.22
	U_{25}-L_{25}	-157.60	145.72	-99.18	102.46	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.944	0.22	0.22
	U_{26}-L_{26}	-141.66	179.40	-103.35	138.74	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.976	0.20	0.20
	U_{26}-L_{27}	-47.78	43.35	-20.69	-3.01	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.503	0.40	0.40
	U_{27}-L_{27}	-31.19	14.63	-5.06	-8.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.503	0.40	0.40
	U_{28}-L_{28}	-13.93	5.15	-1.99	-5.23	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.503	0.40	0.40
	U_{29}-L_{29}	-14.72	10.55	-7.20	-12.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.447	0.42	0.42
	U_{30}-L_{30}	-17.68	87.11	-3.48	3.01	-0.67	-0.15											
	U_{31}-L_{31}	-21.95	18.55	-9.15	-6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{32}-L_{32}	-38.29	32.39	-20.74	-2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{33}-L_{33}	-41.12	34.76	-5.09	-4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{34}-L_{34}	-46.40	34.76	-5.09	-4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{35}-L_{35}	-40.36	31.12	6.86	-5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{36}-L_{36}	-22.03	8.41	-7.05	-2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{37}-L_{37}	-18.78	13.68	6.77	-8.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{38}-L_{38}	-13.65	11.46	-7.05	-13.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{39}-L_{39}	-11.06	5.06	10.87	-15.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{40}-L_{40}	-19.59	13.86	1.68	-10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{41}-L_{41}	-33.04	27.75	-1.95	-12.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{42}-L_{42}	-15.77	13.39	3.75	-8.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{43}-L_{43}	-20.98	16.96	0.24	-4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00
	U_{44}-L_{44}	-44.32	36.88	-1.94	1.30	0.16	-1.00											
	U_{45}-L_{45}	-56.39	68.66	-3.29	3.19	0.71	-1.15											
	U_{46}-L_{46}	-88.55	73.83	-2.96	2.20	0.03	-0.82											
	U_{47}-L_{47}	-90.45	88.56	-3.28	2.61	-0.47	-0.28											
	U_{48}-L_{48}	-108.38	116.68	-3.58	3.08	0.23	-0.28											
	U_{49}-L_{49}	-154.28	139.71	-4.73	3.99	0.40	-0.16											
	U_{50}-L_{50}	-24.73	100.38	-3.28	3.94	0.49	-0.45											
	U_{51}-L_{51}	-88.28	73.83	-2.96	2.20	0.03	-0.82											
	U_{52}-L_{52}	-74.14	95.51	-4.13	3.65	0.20	-0.26											
	U_{53}-L_{53}	-43.13	74.87	-3.61	3.27	0.27	-0.27											
	U_{54}-L_{54}	-55.49	68.85	-3.52	2.37	0.30	-0.93											
	U_{55}-L_{55}	-32.97	39.97	-2.49	1.80	0.36	-0.90											
	U_{56}-L_{56}	-24.40	23.96	-1.56	1.32	0.29	-0.82											
	U_{57}-L_{57}	-10.32	4.39	-1.22	0.69	0.61	-1.06											
	U_{58}-L_{58}	-6.27	2.67	-0.74	0.42	0.37	-0.64											
	U_{59}-L_{59}	-17.08	16.16	-1.56	1.32	0.29	-0.82											
	U_{60}-L_{60}	-24.40	23.96	-1.56	1.32	0.29	-0.82											
	U_{61}-L_{61}	-55.69	65.14	-3.26	2.76	-0.27	-0.73											
	U_{62}-L_{62}	-49.22	80.41	-3.48	3.01	-0.67	-0.15											
	U_{63}-L_{63}	-41.16	74.87	-3.61	3.27	0.27	-0.27											
	U_{64}-L_{64}	-106.11	102.57	-4.54	4.12	0.26	-0.29											
	U_{65}-L_{65}	-20.11	100.38	-3.28	3.94	0.49	-0.45											
	U_{66}-L_{66}	-47.67	128.15	-3.23	4.20	0.56	-0.49											
	U_{67}-L_{67}	-73.70	139.71	-4.63	3.99	0.40	-0.16											
	U_{68}-L_{68}	-89.53	99.33	-3.89	2.95	0.18	-0.19											
	U_{69}-L_{69}	-86.54	82.57	-3.19	2.49	-0.11	-0.48											
	U_{70}-L_{70}	-60.17	67.66	-3.33	2.38	-0.39	-1.09											
	U_{71}-L_{71}	-12.59	26.40	-1.00	0.46	0.66	-1.21											
	U_{72}-L_{72}	6.51	-17.79	-1.38	0.99	0.68	-1.21											
	U_{73}-L_{73}	-17.68	87.11	-3.48	3.01	-0.67	-0.15											
	U_{74}-L_{74}	-38.92	20.55	-2.06	1.74	-0.01	-0.60											
	U_{75}-L_{75}	-88.53	71.18	-3.85	3.07	0.47	-0.40											
	U_{76}-L_{76}	-74.80	111.69	-3.76	3.66	0.27	0.08											
	U_{77}-L_{77}	-70.40	69.24	-3.88	3.26	0.36	-0.30											
	U_{78}-L_{78}	-86.92	56.40	-3.77	2.95	0.34	-0.25											
	U_{79}-L_{79}	-74.80	111.69	-3.76	3.66	0.27	0.08											
	U_{80}-L_{80}	-77.34	67.11	-2.89	2.20	-0.51	-0.03											
	U_{81}-L_{81}	-84.80	52.28	-3.45	2.76	0.49	-0.43											
	U_{82}-L_{82}	-2.84	82.10	-2.68	3.34	0.26	0.12											
	U_{83}-L_{83}	-54.59	58.66	-4.07	2.48	0.03	-0.04											
	U_{84}-L_{84}	-9.15	17.58	-1.26	0.13	-0.22	-0.64											
	U_{85}-L_{85}	-74.80	111.69	-3.76	3.66	0.27	0.08											
	U_{86}-L_{86}	-0.13

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	U_1–U_2	88.99	-98.04	-1.82	1.62	2.01	-8.74	-0.65	0.45	2.38	-2.03
	U_2–U_3	104.53	-113.64	-1.49	2.15	-3.81	-11.27	0.13	0.51	-1.04	-4.99
	U_3–U_4	-130.85	58.79	0.97	2.85	-4.83	-7.46	2.20	0.80	-1.36	-12.99
	U_4–U_5	-80.24	76.71	1.80	2.71	-3.44	-5.53	0.72	-0.15	-1.06	-9.61
	U_5–U_6	-26.00	75.03	2.02	2.64	-7.33	-2.07	0.47	0.77	-1.36	-0.71
	U_6–U_7	19.49	179.90	2.26	2.33	-6.13	0.13	0.62	0.72	-1.37	0.17
	U_7–U_8	131.06	62.51	2.26	1.80	-6.13	0.41	-2.80	0.72	-1.37	0.17
	U_8–U_9	-71.27	857.90	3.97	4.08	-5.74	6.10	-1.34	3.99	0.00	0.00
	U_9–U_{10}	624.45	-765.15	2.22	1.09	1.48	-6.70	3.57	-1.52	0.00	0.00
	U_{10}–U_{11}	71.48	-13.72	1.06	1.92	0.57	-6.11	0.28	0.49	0.23	-0.97
	U_{11}–U_{12}	97.31	-222.34	1.11	1.92	-2.36	0.49	0.39	0.26	-1.81	-2.14
	U_{12}–U_{13}	35.40	-221.68	2.00	1.49	-1.82	-8.63	0.56	0.33	0.24	-1.72
	U_{13}–U_{14}	-120.52	-238.11	1.73	0.66	-2.25	-8.24	0.44	0.14	-0.62	-1.62
	U_{14}–U_{15}	-201.52	-242.36	1.36	0.41	-2.14	-14.72	0.29	0.09	-1.36	-2.14
	U_{15}–U_{16}	-380.34	-263.67	1.52	-0.48	-14.77	-6.00	0.32	0.20	2.38	-1.60
	U_{16}–U_{17}	-227.22	-366.78	1.46	-0.15	-9.09	-4.87	0.36	-0.03	-1.84	-2.30
	U_{17}–U_{18}	-263.00	-172.61	0.60	-0.01	-10.16	-2.93	0.05	-0.04	-1.64	-0.73
	U_{18}–U_{19}	-227.07	-24.53	0.55	-0.67	-5.82	-1.90	0.10	-0.08	-1.48	0.22
	U_{19}–U_{20}	-214.18	21.72	0.44	-0.18	4.78	0.84	0.09	-0.06	1.43	0.05
	U_{20}–U_{21}	-229.66	-4.97	0.41	-0.45	-3.89	1.78	0.06	-0.04	-1.34	-0.03
	U_{21}–U_{22}	419.98	-379.23	0.99	-0.29	4.33	-9.08	0.22	-0.23	1.23	-2.23
	U_{22}–U_{23}	-113.09	-299.12	-0.04	0.95	-0.82	-10.84	0.00	0.18	-0.50	-1.31
	U_{23}–U_{24}	-277.79	-627.77	-0.03	0.41	-1.31	-6.46	-0.02	0.08	-0.34	-1.23
	U_{24}–U_{25}	-433.77	-694.94	0.53	1.66	-8.02	-17.05	0.08	0.31	-1.29	-2.04
	U_{25}–U_{26}	-485.42	-542.93	0.76	2.36	-8.09	-17.45	0.11	0.44	-1.29	-1.85
	U_{26}–U_{27}	-543.33	-230.04	1.91	2.92	-5.60	-15.66	0.37	0.87	2.15	-1.73
	U_{27}–U_{28}	-414.64	-306.81	3.16	2.72	-10.71	-13.99	0.64	0.58	1.77	-2.26
	U_{28}–U_{29}	-384.32	-328.61	2.27	3.79	-7.45	-6.55	0.47	0.64	-1.44	-2.77
	U_{29}–U_{30}	-443.98	-59.22	2.80	3.62	-10.70	-2.55	0.49	0.82	-1.61	-0.82
	U_{30}–U_{31}	-219.08	228.23	3.27	3.76	-10.55	4.06	0.60	0.77	-1.61	0.54
	U_{31}–U_{32}	-166.00	321.73	3.80	3.31	-8.69	-2.08	0.77	0.79	1.44	-0.29
	U_{32}–U_{33}	-149.75	284.71	3.39	2.41	-7.47	0.72	0.73	0.60	-1.58	0.09
	U_{33}–U_{34}	-60.06	80.69	2.46	2.03	-6.13	-0.25	0.50	0.43	-1.25	0.29
	U_{34}–U_{35}	-290.99	1563.47	1.81	5.99	-0.56	-0.11	-1.34	5.47	0.00	0.00
	U_{35}–U_{36}	1538.20	1563.47	1.81	5.99	-0.56	-0.11	-1.34	5.47	0.00	0.00
	U_{36}–U_{37}	-27.64	20.42	1.22	2.39	-3.62	-9.45	-0.01	-0.26	0.00	0.00
	U_{37}–U_{38}	301.86	-322.34	1.14	1.92	-2.36	0.49	0.39	0.26	-1.81	-2.14
	U_{38}–U_{39}	186.19	-229.97	2.29	2.65	-6.09	-11.19	0.46	0.70	0.18	-1.19
	U_{39}–U_{40}	179.26	-73.23	2.96	2.13	-2.36	-9.56	0.59	0.66	0.03	-1.32
	U_{40}–U_{41}	29.27	-77.06	2.96	2.13	-2.36	-9.56	0.59	0.66	0.03	-1.32
	U_{41}–U_{42}	-76.59	-111.03	2.57	0.19	-3.93	-10.88	0.37	0.45	-49.62	-137.36
	U_{42}–U_{43}	-158.20	-180.94	2.57	0.19	-3.93	-10.88	0.37	0.45	-49.62	-137.36
	U_{43}–U_{44}	-164.13	-164.69	1.16	1.12	-14.11	-6.53	0.68	0.50	-1.67	-1.21
	U_{44}–U_{45}	-137.31	-80.66	0.46	0.46	-2.98	-2.82	0.13	0.13	-0.41	-0.41
	U_{45}–U_{46}	-44.00	54.78	0.42	2.57	-10.88	-3.56	0.49	0.43	0.96	-0.34
	U_{46}–U_{47}	-69.00	212.40	2.06	2.59	-8.43	-0.61	0.54	-1.17	0.41	-26.03
	U_{47}–U_{48}	-40.57	345.28	1.83	1.71	-8.24	0.04	-0.61	1.30	-0.96	0.63
	U_{48}–U_{49}	91.11	-25.60	1.83	1.71	-8.24	0.04	-0.61	1.30	-0.96	0.63
	U_{49}–U_{50}	-146.81	1530.30	1.01	6.04	-0.13	-0.92	-0.97	5.60	0.00	0.00
	U_{50}–U_{51}	1613.34	-340.01	3.03	2.05	-0.43	-0.60	1.66	-1.52	0.00	0.00
	U_{51}–U_{52}	-85.52	-172.42	2.43	0.63	-7.38	-3.74	0.76	0.23	-1.42	-1.15
	U_{52}–U_{53}	253.20	-149.43	2.26	2.94	0.00	-9.62	0.52	0.59	0.38	-1.49
	U_{53}–U_{54}	84.20	-327.18	3.39	2.85	-1.61	-12.67	0.74	0.68	-1.98	-3.26
	U_{54}–U_{55}	-85.52	-172.42	2.43	0.63	-7.38	-3.74	0.76	0.23	-1.42	-1.15
	U_{55}–U_{56}	-358.50	-362.03	2.71	2.43	-7.45	-16.17	0.54	0.55	-1.52	-2.40
	U_{56}–U_{57}	-300.96	-456.91	2.97	2.63	-16.04	-9.99	0.69	0.55	-1.72	-3.45
	U_{57}–U_{58}	-327.28	-297.63	2.97	2.63	-16.04	-9.99	0.69	0.55	-1.72	-3.45
	U_{58}–U_{59}	-569.38	-449.72	1.96	0.30	-17.29	-7.84	0.38	-0.04	-2.55	-1.21
	U_{59}–U_{60}	-407.37	-551.18	1.22	-0.63	-9.52	-9.49	0.21	-0.18	1.89	0.04
	U_{60}–U_{61}	-407.37	-551.18	1.22	-0.63	-9.52	-9.49	0.21	-0.18	1.89	0.04
	U_{61}–U_{62}	-290.40	-12.26	0.95	-0.97	4.00	2.07	0.20	-0.01	-1.64	0.67
	U_{62}–U_{63}	-431.42	-311.55	0.61	0.32	-0.01	-7.16	0.25	0.07	3.50	-2.01
	U_{63}–U_{64}	-344.67	-205.38	0.61	0.32	-0.01	-7.16	0.25	0.07	3.50	-2.01
	U_{64}–U_{65}	-21.98	-218.68	0.40	0.69	1.04	-8.89	-0.12	-0.10	0.40	-5.52
	U_{65}–U_{66}	-361.39	-187.99	0.43	1.70	-6.65	-8.47	-0.02	0.37	1.24	-1.70
	U_{66}–U_{67}	-252.02	-374.51	1.13	0.72	-6.47	-11.92	0.20	0.27	-1.63	-2.43
	U_{67}–U_{68}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{68}–U_{69}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{69}–U_{70}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{70}–U_{71}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{71}–U_{72}	-290.40	-12.26	0.95	-0.97	4.00	2.07	0.20	-0.01	-1.64	0.67
	U_{72}–U_{73}	-431.42	-311.55	0.61	0.32	-0.01	-7.16	0.25	0.07	3.50	-2.01
	U_{73}–U_{74}	-344.67	-205.38	0.61	0.32	-0.01	-7.16	0.25	0.07	3.50	-2.01
	U_{74}–U_{75}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{75}–U_{76}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{76}–U_{77}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{77}–U_{78}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{78}–U_{79}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{79}–U_{80}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{80}–U_{81}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{81}–U_{82}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{82}–U_{83}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{83}–U_{84}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{84}–U_{85}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{85}–U_{86}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{86}–U_{87}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{87}–U_{88}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{88}–U_{89}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{89}–U_{90}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{90}–U_{91}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{91}–U_{92}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{92}–U_{93}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{93}–U_{94}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{94}–U_{95}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{95}–U_{96}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{96}–U_{97}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{97}–U_{98}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{98}–U_{99}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{99}–U_{100}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{100}–U_{101}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{101}–U_{102}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{102}–U_{103}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{103}–U_{104}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{104}–U_{105}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{105}–U_{106}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{106}–U_{107}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{107}–U_{108}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{108}–U_{109}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{109}–U_{110}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{110}–U_{111}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{111}–U_{112}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{112}–U_{113}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{113}–U_{114}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{114}–U_{115}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{115}–U_{116}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{116}–U_{117}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{117}–U_{118}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{118}–U_{119}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{119}–U_{120}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{120}–U_{121}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{121}–U_{122}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{122}–U_{123}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{123}–U_{124}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{124}–U_{125}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{125}–U_{126}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{126}–U_{127}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{127}–U_{128}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{128}–U_{129}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{129}–U_{130}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{130}–U_{131}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{131}–U_{132}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{132}–U_{133}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{133}–U_{134}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{134}–U_{135}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{135}–U_{136}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{136}–U_{137}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{137}–U_{138}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{138}–U_{139}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{139}–U_{140}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{140}–U_{141}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{141}–U_{142}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{142}–U_{143}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{143}–U_{144}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{144}–U_{145}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{145}–U_{146}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{146}–U_{147}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{147}–U_{148}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{148}–U_{149}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{149}–U_{150}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{150}–U_{151}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{151}–U_{152}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{152}–U_{153}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{153}–U_{154}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{154}–U_{155}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{155}–U_{156}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{156}–U_{157}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{157}–U_{158}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{158}–U_{159}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{159}–U_{160}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{160}–U_{161}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{161}–U_{162}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{162}–U_{163}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{163}–U_{164}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{164}–U_{165}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{165}–U_{166}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{166}–U_{167}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{167}–U_{168}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{168}–U_{169}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{169}–U_{170}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{170}–U_{171}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{171}–U_{172}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{172}–U_{173}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{173}–U_{174}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{174}–U_{175}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{175}–U_{176}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{176}–U_{177}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{177}–U_{178}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{178}–U_{179}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{179}–U_{180}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{180}–U_{181}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{181}–U_{182}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{182}–U_{183}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{183}–U_{184}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{184}–U_{185}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{185}–U_{186}	-186.98	640.79	0.54	3.87	-5.18	3.90	-1.47	3.55	0.00	0.00
	U_{186}–U_{187}	-705.55	109.17	1.29	1.36	8.81	-8.83	3.95	-1.35	0.00	0.00
	U_{187}–U_{188}	-156.84	-12.62	2.05	1.95	-0.15	-6.84	0.70	0.62	0.15	-1.34
	U_{188}–U_{189}	-444.47	-187.92	1.34	0.66	-12.08	-3.75	0.12	0.29	-1.46	-0.76
	U_{189}–U_{190}	-235.18	-84.59	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{190}–U_{191}	-201.50	-70.43	1.95	0.95	-6.35	-2.16	0.14	0.46	-1.65	-0.50
	U_{191}–U_{192}	-214.86	128.23	1.80	1.83	-6.37	0.96	0.39	0.52	-1.79	0.34
	U_{192}–U_{193}

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 1.30
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	L_0-L_1	-19.48	-91.69	3.57	-9.31	1.61	-1.59	-0.11	0.13	0.00	-0.64
	L_1-L_2	30.30	-116.56	-2.44	-6.65	-0.50	1.76	-0.07	-1.33	-0.16	0.43
	L_2-L_3	39.07	-78.01	-8.30	-0.55	1.06	1.91	-1.04	-1.27	-0.21	-0.50
	L_3-L_4	-65.02	-14.74	-7.27	-5.15	0.98	3.22	-1.19	-1.34	0.23	0.85
	L_4-L_5	-50.69	-224.13	-7.70	-5.84	-1.39	0.09	0.63	-0.72	-0.32	-0.37
	L_5-L_6	-2.17	269.23	-3.14	-1.66	1.88	3.55	-0.84	0.05	0.53	1.12
	L_6-L_7	-5.23	54.73	-3.65	-0.61	2.27	3.14	0.02	0.00	-0.29	-0.14
	L_7-L_8	-38.81	57.46	0.26	-1.09	0.20	4.60	0.00	0.00	0.00	-0.35
	L_8-L_9	555.91	-39.94	-1.02	0.35	0.43	-0.27	-13.24	0.43	70.27	-0.62
	L_9-L_{10}	185.62	-153.59	0.91	-0.25	2.73	-1.56	0.00	0.00	0.00	0.53
	L_{10}-L_{11}	164.49	164.37	-2.09	-3.11	2.27	1.28	0.00	0.00	0.00	-1.00
	L_{11}-L_{12}	78.56	-261.15	0.63	-0.17	0.19	-1.26	0.42	0.00	-21.08	-61.62
	L_{12}-L_{13}	-57.21	-170.41	0.05	-4.91	1.66	0.83	-0.57	-0.97	0.43	0.20
	L_{13}-L_{14}	70.10	-469.56	-4.55	-8.82	1.28	1.15	-0.45	-2.28	0.35	0.23
	L_{14}-L_{15}	-489.53	-131.76	-8.67	-0.54	0.00	0.23	-1.09	-0.34	0.00	0.00
	L_{15}-L_{16}	-272.75	-394.04	-7.14	-7.08	0.44	0.78	-1.43	-1.04	0.13	-0.03
	L_{16}-L_{17}	-3.67	-37.75	-0.96	-1.26	-0.12	0.05	0.07	-0.07	-0.02	-0.22
	L_{17}-L_{18}	-202.30	-20.51	-0.75	-0.35	0.23	0.05	-0.91	0.20	0.00	0.00
	L_{18}-L_{19}	-240.68	180.28	-1.48	0.41	0.00	0.06	-0.06	-1.12	0.07	-0.19
	L_{19}-L_{20}	-192.40	90.95	-0.74	-0.11	2.77	1.77	0.06	-0.06	-1.23	0.86
	L_{20}-L_{21}	26.60	-260.09	0.27	-0.14	1.69	-2.39	-0.05	0.10	0.35	-1.08
	L_{21}-L_{22}	201.84	-347.07	1.51	0.35	0.45	-1.27	-0.12	0.17	0.00	0.00
	L_{22}-L_{23}	7.16	-277.32	-2.44	-6.42	-0.52	0.86	0.23	-1.18	-0.13	0.17
	L_{23}-L_{24}	-38.70	-479.24	0.83	-0.63	1.46	-1.64	-0.46	0.77	-0.83	0.53
	L_{24}-L_{25}	-367.51	-421.35	-11.49	-9.22	0.41	1.56	-1.24	-1.72	0.04	0.32
	L_{25}-L_{26}	-215.99	-584.61	-10.74	-9.37	0.42	1.42	-2.34	-1.92	0.00	0.00
	L_{26}-L_{27}	-619.43	-397.04	-16.29	-10.13	2.58	2.79	-2.41	-2.51	0.47	0.59
	L_{27}-L_{28}	-394.52	-7.37	-11.19	-6.07	2.27	4.21	-1.56	-0.96	0.46	0.80
	L_{28}-L_{29}	-324.29	260.70	-7.44	-4.00	0.23	3.49	-1.09	-0.34	0.00	0.00
	L_{29}-L_{30}	-295.59	262.58	-5.69	-3.12	2.03	3.96	-1.43	-0.05	0.41	0.92
	L_{30}-L_{31}	-139.88	344.51	-6.42	-3.13	0.40	1.30	-1.24	-0.42	0.00	0.00
	L_{31}-L_{32}	-188.97	686.21	-0.59	-0.99	2.08	4.09	0.00	-0.58	1.89	-7.58
	L_{32}-L_{33}	-139.46	-276.11	-1.00	0.07	2.88	-2.84	0.00	0.00	-0.23	-1.22
	L_{33}-L_{34}	-472.29	1361.46	0.10	-0.26	0.35	0.36	-0.34	0.00	0.00	0.00
	L_{34}-L_{35}	1356.12	-488.32	-0.59	-0.30	8.01	-0.77	0.00	0.00	-1.83	-7.40
	L_{35}-L_{36}	306.66	89.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	579.83	-109.25	-2.36	-5.22	3.31	1.56	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	1356.12	-488.32	-0.59	-0.30	8.01	-0.77	0.00	0.00	60.66	-21.96
	L_{38}-L_{39}	275.68	-101.76	-4.48	-5.78	3.40	1.60	-0.11	-0.89	1.05	-0.58
	L_{39}-L_{40}	209.89	-114.91	-3.47	-4.30	2.01	2.35	-0.29	-1.04	0.42	0.64
	L_{40}-L_{41}	-12.67	-87.44	-1.61	-2.07	1.24	1.61	-0.24	-0.83	0.26	0.39
	L_{41}-L_{42}	-33.73	-318.64	-8.33	-12.67	1.69	1.32	-0.99	-2.03	0.43	0.76
	L_{42}-L_{43}	326.90	-28.44	-13.41	-5.07	0.00	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	-183.23	53.46	-7.14	-7.36	1.39	3.00	-1.14	-0.36	0.42	0.44
	L_{44}-L_{45}	-472.29	1361.46	0.10	-0.26	0.35	0.36	-0.34	0.00	0.00	0.00
	L_{45}-L_{46}	-100.74	310.70	-1.33	-2.06	1.56	3.14	0.00	-0.60	0.00	0.00
	L_{46}-L_{47}	-69.72	308.77	2.55	0.29	2.66	0.92	0.00	0.00	-0.22	0.85
	L_{47}-L_{48}	-18.05	84.64	-1.16	-1.16	0.43	0.43	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	-18.47	-438.87	-2.27	0.33	0.78	2.35	0.00	0.00	-1.50	-28.71
	L_{49}-L_{50}	554.01	-196.75	-0.39	-0.39	0.00	0.00	0.00	0.00	0.00	0.00
	L_{50}-L_{51}	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{51}-L_{52}	-253.75	-181.16	1.86	-0.67	1.45	-0.82	0.00	0.00	-0.40	23.62
	L_{52}-L_{53}	554.01	-196.75	-0.39	-0.39	0.00	0.00	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	350.20	-203.85	0.09	-1.37	1.47	3.00	0.00	0.00	0.84	-0.46
	L_{54}-L_{55}	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{55}-L_{56}	243.13	341.77	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{56}-L_{57}	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{57}-L_{58}	467.50	30.67	0.51	-2.04	1.10	-0.06	-1.31	-0.26	0.11	-0.10
	L_{58}-L_{59}	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{59}-L_{60}	-332.43	186.70	-4.74	-1.70	0.85	-0.15	-1.04	0.21	0.00	0.00
	L_{60}-L_{61}	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{61}-L_{62}	53.61	-162.26	2.01	0.50	1.56	-2.19	-0.06	0.54	0.53	-0.09
	L_{62}-L_{63}	-192.76	-240.13	-0.26	-1.21	1.34	-1.31	0.10	0.04	0.65	-1.12
	L_{63}-L_{64}	24.74	-186.41	-0.26	-1.21	1.34	-1.31	0.10	0.04	0.65	-1.12
	L_{64}-L_{65}	40.28	-374.07	-2.08	-7.71	-0.05	0.56	-0.04	-1.42	0.00	0.00
	L_{65}-L_{66}	24.74	-186.41	-0.26	-1.21	1.34	-1.31	0.10	0.04	0.65	-1.12
	L_{66}-L_{67}	-121.39	-479.27	-6.79	-10.46	0.17	1.84	-1.04	-2.51	0.00	0.00
	L_{67}-L_{68}	-476.75	95.76	-8.87	-3.84	1.46	1.31	-2.32	-0.58	0.10	0.00
	L_{68}-L_{69}	-241.27	199.23	-4.75	-0.40	1.34	1.55	-1.20	0.19	0.23	0.47
	L_{69}-L_{70}	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{70}-L_{71}	-127.13	162.45	-0.92	0.68	1.80	-1.01	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{72}-L_{73}	606.98	-34.68	-1.23	0.38	6.19	-0.39	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	88.37	-176.94	-1.41	-4.27	-0.07	2.23	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{75}-L_{76}	217.20	-65.09	-7.12	-1.94	2.42	-0.04	-1.53	0.66	0.69	-0.56
	L_{76}-L_{77}	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{77}-L_{78}	-112.39	-133.89	-6.23	-1.62	0.54	-0.38	-1.22	-0.49	0.22	-0.22
	L_{78}-L_{79}	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{79}-L_{80}	-120.88	38.04	-0.73	0.52	0.52	-0.52	0.00	0.00	-0.69	0.44

ZZ Axis Moments from STAAD

Location	Member	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term * F/Sy	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor b	Equivalent Mom. Factor C_{mx}	C_{bmx}
Structure 2	L_0-L_1	0.00	0.00	0.00	0.00	0.00	0.00	-19.48	-91.69	3.57	-9.31	1.61	-1.59	-0.11	0.13	0.00	-0.64
	L_1-L_2	0.00	0.00	0.00	0.00	0.00	0.00	30.30	-116.56	-2.44	-6.65	-0.50	1.76	-0.07	-1.33	-0.16	0.43
	L_2-L_3	0.00	0.00	0.00	0.00	0.00	0.00	39.07	-78.01	-8.30	-0.55	1.06	1.91	-1.04	-1.27	-0.21	-0.50
	L_3-L_4	0.00	0.00	0.00	0.00	0.00	0.00	-65.02	-14.74	-7.27	-5.15	0.98	3.22	-1.19	-1.34	0.23	0.85
	L_4-L_5	0.00	0.00	0.00	0.00	0.00	0.00	-50.69	-224.13	-7.70	-5.84	-1.39	0.09	0.63	-0.72	-0.32	-0.37
	L_5-L_6	0.00	0.00	0.00	0.00	0.00	0.00	-2.17	269.23	-3.14	-1.66	1.88	3.55	-0.84	0.05	0.53	1.12
	L_6-L_7	0.00	0.00	0.00	0.00	0.00	0.00	-5.23	54.73	-3.65	-0.61	2.27	3.14	0.02	0.00	-0.29	-0.14
	L_7-L_8	0.00	0.00	0.00	0.00	0.00	0.00	-38.81	57.46	0.26	-1.09	0.20	4.60	0.00	0.00	0.00	-0.35
	L_8-L_9	0.00	0.00	0.00	0.00	0.00	0.00	555.91	-39.94	-1.02	0.35	0.43	-0.27	-13.24	0.43	70.27	-0.62
	L_9-L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	185.62	-153.59	0.91	-0.25	2.73	-1.56	0.00	0.00	0.00	0.53
	L_{10}-L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	164.49	164.37	-2.09	-3.11	2.27	1.28	0.00	0.00	0.00	-1.00
	L_{11}-L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	78.56	-261.15	0.63	-0.17	0.19	-1.26	0.42	0.00	-21.08	-61.62
	L_{12}-L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	-57.21	-170.41	0.05	-4.91	1.66	0.83	-0.57	-0.97	0.43	0.20
	L_{13}-L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	70.10	-469.56	-4.55	-8.82	1.28	1.15	-0.45	-2.28	0.35	0.23
	L_{14}-L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	-489.53	-131.76	-8.67	-0.54	0.00	0.23	-1.09	-0.34	0.00	0.00
	L_{15}-L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	-272.75	-394.04	-7.14	-7.08	0.44	0.78	-1.43	-1.04	0.13	-0.03
	L_{16}-L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	-3.67	-37.75	-0.96	-1.26	-0.12	0.05	0.07	-0.07	-0.02	-0.22
	L_{17}-L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	-202.30	-20.51	-0.75	-0.35	0.23	0.05	-0.91	0.20	0.00	0.00
	L_{18}-L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	-240.68	180.28	-1.48	0.41	0.00	0.06	-0.06	-1.12	0.07	-0.19
	L_{19}-L_{20}	0.00	0.00	0.00	0.00	0.00	0.00	-192.40	90.95	-0.74	-0.11	2.77	1.77	0.06	-0.06	-1.23	0.86
	L_{20}-L_{21}	0.00	0.00	0.00	0.00	0.00	0.00	26.60	-260.09	0.27	-0.14	1.69	-2.39	-0.05	0.10	0.35	-1.08
	L_{21}-L_{22}	0.00	0.00	0.00	0.00	0.00	0.00	201.84	-347.07	1.51	0.35	0.45	-1.27	-0.12	0.17	0.00	0.00
	L_{22}-L_{23}	0.00	0.00	0.00	0.00	0.00	0.00	7.16	-277.32	-2.44	-6.42	-0.52	0.86	0.23	-1.18	-0.13	0.17
	L_{23}-L_{24}	0.00	0.00	0.00	0.00	0.00	0.00	-38.70	-479.24	0.83	-0.63	1.46	-1.64	-0.46	0.77	-0.83	0.53
	L_{24}-L_{25}	0.00	0.00	0.00	0.00	0.00	0.00	-367.51	-421.35	-11.49	-9.22	0.41	1.56	-1.24	-1.72	0.04	0.32
	L_{25}-L_{26}	0.00	0.00	0.00	0.00	0.00	0.00	-215.99	-584.61	-10.74	-9.37	0.42	1.42	-2.34	-1.92	0.00	0.00
	L_{26}-L_{27}	0.00	0.00	0.00	0.00	0.00	0.00	-619.43	-397.04	-16.29	-10.13	2.58	2.79	-2.41	-2.51	0.47	0.59
	L_{27}-L_{28}	0.00	0.00	0.00	0.00	0.00	0.00	-394.52	-7.37	-11.19	-6.07	2.27	4.21	-1.56	-0.96	0.46	0.80
	L_{28}-L_{29}	0.00	0.00	0.00	0.00	0.00	0.00	-324.29	260.70	-7.44	-4.00	0.23	3.49	-1.09	-0.34	0.00	0.00
	L_{29}-L_{30}	0.00	0.00	0.00	0.00	0.00	0.00	-295.59	262.58	-5.69	-3.12	2.03	3.96	-1.43	-0.05	0.41	0.92
	L_{30}-L_{31}	0.00	0.00	0.00	0.00	0.00	0.00	-139.88	344.51	-6.42	-3.13	0.40	1.30	-1.24	-0.42	0.00	0.00
	L_{31}-L_{32}	0.00	0.00	0.00	0.00	0.00	0.00	-188.97	686.21	-0.59	-0.99	2.08	4.09	0.00	-0.58	1.89	-7.58
	L_{32}-L_{33}	0.00	0.00	0.00	0.00	0.00	0.00	-139.46	-276.11	-1.00	0.07	2.88	-2.84	0.00	0.00	-0.23	-1.22
	L_{33}-L_{34}	0.00	0.00	0.00	0.00	0.00	0.00	-472.29	1361.46	0.10	-0.26	0.35	0.36	-0.34	0.00	0.00	0.00
	L_{34}-L_{35}	0.00	0.00	0.00	0.00	0.00	0.00	1356.12	-488.32	-0.59	-0.30	8.01	-0.77	0.00	0.00	-1.83	-7.40
	L_{35}-L_{36}	0.00	0.00	0.00	0.00	0.00	0.00	306.66	89.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	0.00	0.00	0.00	0.00	0.00	0.00	579.83	-109.25	-2.36	-5.22	3.31	1.56	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	0.00	0.00	0.00	0.00	0.00	0.00	1356.12	-488.32	-0.59	-0.30	8.01	-0.77	0.00	0.00	60.66	-21.96
	L_{38}-L_{39}	0.00	0.00	0.00	0.00	0.00	0.00	275.68	-101.76	-4.48	-5.78	3.40	1.60	-0.11	-0.89	1.05	-0.58
	L_{39}-L_{40}	0.00	0.00	0.00	0.00	0.00	0.00	209.89	-114.91	-3.47	-4.30	2.01	2.35	-0.29	-1.04	0.42	0.64
	L_{40}-L_{41}	0.00	0.00	0.00	0.00	0.00	0.00	-12.67	-87.44	-1.61	-2.07	1.24	1.61	-0.24	-0.83	0.26	0.39
	L_{41}-L_{42}	0.00	0.00	0.00	0.00	0.00	0.00	-33.73	-318.64	-8.33	-12.67	1.69	1.32	-0.99	-2.03	0.43	0.76
	L_{42}-L_{43}	0.00	0.00	0.00	0.00	0.00	0.00	326.90	-28.44	-13.41	-5.07	0.00	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	0.00	0.00	0.00	0.00	0.00	0.00	-183.23	53.46	-7.14	-7.36	1.39	3.00	-1.14	-0.36	0.42	0.44
	L_{44}-L_{45}	0.00	0.00	0.00	0.00	0.00	0.00	-472.29	1361.46	0.10	-0.26	0.35	0.36	-0.34	0.00	0.00	0.00
	L_{45}-L_{46}	0.00	0.00	0.00	0.00	0.00	0.00	-100.74	310.70	-1.33	-2.06	1.56	3.14	0.00	-0.60	0.00	0.00
	L_{46}-L_{47}	0.00	0.00	0.00	0.00	0.00	0.00	-69.72	308.77	2.55	0.29	2.66	0.92	0.00	0.00	-0.22	0.85
	L_{47}-L_{48}	0.00	0.00	0.00	0.00	0.00	0.00	-18.05	84.64	-1.16	-1.16	0.43	0.43	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	0.00	0.00	0.00	0.00	0.00	0.00	-18.47	-438.87	-2.27	0.33	0.78	2.35	0.00	0.00	-1.50	-28.71
	L_{49}-L_{50}	0.00	0.00	0.00	0.00	0.00	0.00	554.01	-196.75	-0.39	-0.39	0.00	0.00	0.00	0.00	0.00	0.00
	L_{50}-L_{51}	0.00	0.00	0.00	0.00	0.00	0.00	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{51}-L_{52}	0.00	0.00	0.00	0.00	0.00	0.00	-253.75	-181.16	1.86	-0.67	1.45	-0.82	0.00	0.00	-0.40	23.62
	L_{52}-L_{53}	0.00	0.00	0.00	0.00	0.00	0.00	554.01	-196.75	-0.39	-0.39	0.00	0.00	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	0.00	0.00	0.00	0.00	0.00	0.00	350.20	-203.85	0.09	-1.37	1.47	3.00	0.00	0.00	0.84	-0.46
	L_{54}-L_{55}	0.00	0.00	0.00	0.00	0.00	0.00	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{55}-L_{56}	0.00	0.00	0.00	0.00	0.00	0.00	243.13	341.77	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{56}-L_{57}	0.00	0.00	0.00	0.00	0.00	0.00	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{57}-L_{58}	0.00	0.00	0.00	0.00	0.00	0.00	467.50	30.67	0.51	-2.04	1.10	-0.06	-1.31	-0.26	0.11	-0.10
	L_{58}-L_{59}	0.00	0.00	0.00	0.00	0.00	0.00	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{59}-L_{60}	0.00	0.00	0.00	0.00	0.00	0.00	-332.43	186.70	-4.74	-1.70	0.85	-0.15	-1.04	0.21	0.00	0.00
	L_{60}-L_{61}	0.00	0.00	0.00	0.00	0.00	0.00	1437.37	-471.51	-2.94	1.69	7.96	-1.11	0.00	0.00	0.29	1.88
	L_{61}-L_{62}	0.00	0.00	0.00	0.00	0.00	0.00	53.61	-162.26	2.01	0.50	1.56	-2.19	-0.06	0.54	0.53	-0.09
	L_{62}-L_{63}	0.00	0.00	0.00	0.00	0.00	0.00	-192.76	-240.13	-0.26	-1.21	1.34	-1.31	0.10	0.04	0.65	-1.12
	L_{63}-L_{64}	0.00	0.00	0.00	0.00	0.00	0.00	24.74	-186.41	-0.26	-1.21	1.34	-1.31	0.10	0.04	0.65	-1.12
	L_{64}-L_{65}	0.00	0.00	0.00	0.00	0.00	0.00	40.28	-374.07	-2.08	-7.71	-0.05	0.56	-0.04	-1.42	0.00	0.00
	L_{65}-L_{66}	0.00	0.00	0.00	0.00	0.00	0.00	24.74	-186.41	-0.26	-1.21	1.34	-1.31	0.10	0.04	0.65	-1.12
	L_{66}-L_{67}	0.00	0.00	0.00	0.00	0.00	0.00	-121.39	-479.27	-6.79	-10.46	0.17	1.84	-1.04	-2.51	0.00	0.00
	L_{67}-L_{68}	0.00	0.00	0.00	0.00	0.00	0.00	-476.75	95.76	-8.87	-3.84	1.46	1.31	-2.32	-0.58	0.10	0.00
	L_{68}-L_{69}	0.00	0.00	0.00	0.00	0.00	0.00	-241.27	199.23	-4.75	-0.40	1.34	1.55	-1.20	0.19	0.23	0.47
	L_{69}-L_{70}	0.00	0.00	0.00	0.00	0.00	0.00	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{70}-L_{71}	0.00	0.00	0.00	0.00	0.00	0.00	-127.13	162.45	-0.92	0.68	1.80	-1.01	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	0.00	0.00	0.00	0.00	0.00	0.00	-434.07	-326.96	-2.67	-7.80	2.17	2.38	-0.15	-1.37	0.50	0.46
	L_{72}-L_{73}	0.00	0.00	0.00	0.00	0.00	0.00	606.98	-34.68	-1.23	0.38	6.19	-0.39	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	0.00	0.00	0.00	0.00	0.00	0.00	88.37	-176.94	-1.41	-4.27

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Section
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 1.30
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Inforation

M_y Inforation

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | $I_{t/n}$ (in^4) | Shape Factor f | M_p (k-in) | Formula (.8 Form.* F_y/S_bot) | M_r (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(a)}$ | Equivalent Mom. Factor $C_{b(c)}$ | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_y (in^3) | $I_{y/n}$ (in^4) | Shape Factor f | M_p (k-in) | $F_{cr/n}$ (ksi) | Formula (.8 Form.* F_y/S_bot) | M_r (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{b(a)}$ | Equivalent Mom. Factor $C_{b(c)}$ | Yield Axial Axial/ϕ | Yield Moment Positive | Yield Total | Pass | Tension Axial Axial/ϕ | Fracture Moment Positive | Fracture Total | Pass | Buckle Axial Axial/ϕ | Buckle Moment Total | Buckle Total | Pass | Compression Axial Axial/ϕ | Yield Moment Total | Yield Total | Pass |
|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors: DL Factor= 1.30, LL Factor= 1.30
Pedestrian Load Factors: DL Factor= 1.30, LL Factor= 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

M_y Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	ZZ Section Properties S_{bb} (in^3)	S_{tt} (in^3)	Z_z (in^3)	I_z (in^4)	$I_{t/t}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term = F/ S_{bb}	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(pos)}$	Equivalent Mom. Factor $C_{b(neg)}$	YY Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	YY Section Properties S_{bb} (in^3)	S_{tt} (in^3)	Z_y (in^3)	$I_{y/t}$ (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kips)	Formula 1.8 Term = F/ S_{bb}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(pos)}$	Equivalent Mom. Factor $C_{b(neg)}$	Pass
Structure 1		U_0–L_1	3.62	-1.41	0.48	0.36	-0.04	-0.09	0.15	0.01	0.03	-0.02	-0.39	-0.16	-0.23	-3.60	6.35	4.07	-3.46	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.828	0.27	0.27	-84.71	-28.00	-2.72	-5.55	1.79	1.78	-1.09	-0.56	0.55	0.50	-36.34	-74.19	23.97	23.79	-16.17	-8.33	8.12	7.41	-157.37	-132.84	-78.97	-5.47	100.5	100.60	120.28	66.1	1.20	3970	144	0.94257	3126.1	0.844	0.94	0.94	0.274	0.045	0.32	Yes	0.165	0.525	0.20	Yes
		U_1–L_2	-11.46	-3.33	-0.87	0.02	0.30	-0.12	-0.25	0.07	0.08	-0.04	-11.65	0.20	0.38	-1.64	-7.26	-4.62	-3.94	13.7	13.74	13.69	22.82	5	706.7	1.66	757	1.5	763.3	0.136	0.65	0.65	-122.41	-23.66	-9.01	-7.05	2.33	1.85	1.18	-0.11	0.49	0.45	-120.36	-94.17	31.10	24.72	17.52	-1.60	7.33	6.62	2.67	-91.67	-199.56	72.83	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257	2947.3	0.315	0.73	0.73	0.176	0.096	0.28	Yes	0.097	0.353	0.15	Yes	—	—	—
		U_2–L_3	-20.11	-11.79	-0.95	-0.03	-0.09	-0.03	-0.09	-0.03	-0.09	-0.03	-21.98	-1.69	-1.26	-1.26	-1.26	-1.26	-1.52	-0.39	1.56	-0.37	-10.25	-15.39	5.8	-16.59	15.4	15.43	15.42	15.42	23.71	5	733.4	1.66	785	1.5	763.3	-0.415	0.43	0.43	-139.81	-60.83	-0.01	-6.06	15.24	19.27	2.19	5.17	3.44	136.63	-22.61	219.15	77.83	94.0	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257	2947.3	0.315	0.73	0.73	0.176	0.096	0.28	Yes	0.097	0.353	0.15	Yes	—	—	—
		U_3–L_4	9.82	-15.00	-0.39	-0.37	-0.02	-0.60	0.00	0.00	0.00	-0.11	-5.17	-4.88	-0.28	-7.98	0.00	0.00	-0.02	-1.27	6.04	-25.64	12.40	-29.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.415	0.43	0.43	206.42	91.50	-2.91	-3.84	-12.76	-4.02	0.00	0.00	34.29	11.46	217.75	52.27	46.79	49.13	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	160	0.95180	2952.4	0.240	0.70	0.70	0.420	0.077	0.5	Yes	0.388	0.038	0.43	Yes	—	—	—
		U_4–L_5	-16.21	-5.07	-0.71	-0.14	-0.07	-0.19	-0.14	-0.07	-0.19	-0.14	-8.47	-2.16	-1.66	-2.48	-1.69	-1.26	-2.00	-0.45	-0.36	-0.36	-33.39	-26.43	5.8	-26.43	15.4	15.43	15.42	15.42	23.71	5	733.4	1.66	785	1.5	763.3	-0.415	0.43	0.43	-154.18	5.21	0.02	-0.04	19.37	19.37	2.19	-0.87	-1.85	-0.09	0.00	2.96	-7.27	67.73	18.76	-27.01	-8.59	0.00	0.00	-112.38	-33.66	113.4	113.37	113.37	130.81	65.3	1.11	3454	160	0.95173	3126.1	0.696	0.92	0.92	0.261	0.062	0.48	Yes	0.273	0.045	0.28	Yes	—	—	—
		U_5–L_6	-34.06	79.11	-1.25	1.15	-0.12	-0.13	-0.28	0.44	0.00	0.00	-16.74	15.39	-1.76	-3.32	5.26	0.00	0.00	0.00	-66.04	122.85	-46.35	100.55	15.4	15.42	15.42	23.71	3	1153.7	1.51	1753	1.5	1737.0	-0.034	0.23	0.23	-152.50	23.39	-1.21	1.87	10.36	0.34	-1.31	-0.37	0.00	0.00	-21.26	62.84	-70.33	36.37	148.0	147.96	147.96	167.25	201.8	1.13	5519	262	0.99484	4728.8	-0.232	0.36	0.36	0.103	0.369	0.19	Yes	0.233	0.066	0.27	Yes	—	—	—
		U_6–L_7	-72.67	72.67	-1.73	1.73	-0.19	-0.19	-0.42	0.42	0.00	0.00	-23.00	17.96	-1.63	-2.55	-0.16	1.25	0.00	0.00	-132.42	131.03	-83.77	83.77	15.4	15.42	15.42	23.71	3	1153.7	1.51	1753	1.5	1737.0	-0.034	0.23	0.23	-153.31	-33.38	0.57	2.18	-2.93	-1.73	-1.81	-0.82	0.00	0.00	-189.68	-83.52	-250.55	-151.42	148.0	147.96	147.96	167.25	201.8	1.13	5519	325	0.99994	4689.9	0.604	0.84	0.84	0.329	0.136	0.48	Yes	0.184	0.075	0.26	Yes	—	—	—
		U_7–L_8	-12.32	139.19	-0.80	1.76	0.28	0.04	-0.19	0.58	0.21	0.13	-10.36	22.76	3.66	0.47	-2.33	6.96	2.47	1.56	-29.49	210.53	-11.26	181.55	40.7	40.70	40.44	67.92	25	1981.0	1.67	2241	1.5	2014.7	-0.140	0.54	0.54	251.85	97.14	-4.44	-29.60	14.62	-2.21	0.27	2.17	0.60	-57.41	-91.37	34.71	20.95	-3.06	0.95	31.14	8.64	252.77	7.50	372.63	153.51	202.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.96365	6452.3	0.412	0.76	0.76	0.413	0.141	0.56	Yes	0.256	0.096	0.35	Yes	—	—	—
		U_8–L_9	-100.86	90.26	-1.63	1.70	-0.27	-0.12	-0.50	0.51	0.00	0.00	-24.97	15.09	-2.51	-1.61	-0.62	0.17	0.00	0.00	-163.66	136.95	-127.72	119.20	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.007	0.47	0.47	225.31	59.57	-6.29	-40.93	14.62	-2.21	0.27	2.27	0.74	-69.04	-128.55	-115.15	-63.19	25.48	32.60	10.70	0.00	0.00	-230.76	-76.92	309.17	177.06	202.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.96365	6452.3	0.412	0.76	0.76	0.413	0.141	0.56	Yes	0.256	0.096	0.35	Yes	—	—	—
		U_9–L_{10}	-73.41	69.80	-1.49	0.84	0.14	0.05	-0.31	0.35	0.00	0.00	-19.28	10.82	1.82	0.63	-3.77	4.25	0.00	0.00	-120.49	104.60	-93.06	91.56	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.870	0.25	0.25	62.43	-78.54	-5.60	-6.54	1.04	0.94	1.09	0.30	0.00	0.00	-13.06	-212.16	98.57	-86.33	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.99831	6308.9	0.052	0.62	0.62	0.421	0.084	0.51	Yes	0.260	0.047	0.31	Yes	—	—	—
		U_{10}–L_{11}	-89.86	87.84	-1.85	1.79	-0.34	-0.07	-0.39	0.23	0.00	0.00	-32.05	23.97	1.89	0.82	-4.57	2.71	0.00	0.00	-135.87	132.40	-104.14	43.03	42.74	42.74	42.74	65.30	9	1389.8	1.53	2155	1.5	2115.6	-0.270	0.45	0.45	49.24	-37.24	-7.13	1.23	1.59	2.23	0.69	0.00	0.00	-63.79	-233.35	84.68	-56.15	197.4	197.41	184.99	230.30	248.6	1.17	6690	277	0.91252	5561.6	0.230	0.69	0.69	0.433	0.098	0.54	Yes	0.238	0.054	0.30	Yes	—	—	—
		U_{11}–L_{12}	-69.88	47.84	-1.31	0.71	-0.14	-0.25	-0.31	0.21	0.00	0.00	-17.00	9.15	-1.81	-3.18	3.70	2.56	0.00	0.00	-112.94	74.08	-93.25	58.06	20.8	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1329.6	-0.656	0.34	0.34	-53.60	-112.14	-9.91	0.00	0.00	0.00	0.00	0.00	0.00	-62.79	-258.08	-129.43	-151.39	133.5	133.45	123.27	155.40	168.8	1.16	5128	176	0.93018	4196.9	0.243	0.70	0.70	0.387	0.149	0.54	Yes	0.243	0.085	0.33	Yes	—	—	—
		U_{12}–L_{13}	-27.39	6.37	-0.62	0.20	0.02	-0.43	-0.15	0.03	0.00	0.00	-8.01	2.64	0.27	0.51	-1.75	0.34	0.00	0.00	-46.01	11.71	-35.25	1.11	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.255	0.50	0.50	59.28	-19.74	-2.98	-3.54	-10.14	-2.44	2.30	0.79	0.00	0.00	-38.61	-49.74	-131.13	-31.60	33.80	11.42	0.00	0.00	-163.12	-93.43	-144.74	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237	2925.7	-0.165	0.53	0.53	0.380	0.106	0.49	Yes	0.209	0.058	0.27	Yes	—	—	—
		U_{13}–L_{14}	-5.39	0.16	-0.09	-0.04	0.00	0.00	-0.04	-0.01	0.00	0.00	-1.74	0.43	0.04	0.08	-0.38	0.06	0.00	0.00	-7.13	0.73	-5.47	0.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.255	0.50	0.50	-20.50	-163.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.06	-0.84	-84.09	84.09	93.99	93.99	93.99	93.99	104.66	65.3	1.11	3454	123	0.93722	2894.2	0.373	0.75	0.75	0.227	0.147	0.38	Yes	0.125	0.081	0.21	Yes	—	—	—
		U_{14}–L_{15}	-31.63	31.63	-0.57	0.57	0.00	0.00	-0.14	0.14	0.00	0.00	-4.78	4.78	-0.57	0.57	0.00	0.00	0.00	0.00	-46.37	46.37	-36.38	36.38	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.255	0.50	0.50	-131.93	1.76	-1.59	-3.91	-11.00	-0.50	0.00	0.00	2.09	0.73	-25.38	25.38	93.99	93.99	93.99	93.99	104.66	65.3	1.11	3454	126	0.94345	3179.0	-0.345	0.46	0.46	0.485	0.063	0.55	Yes	—	—	—
		U_{15}–L_{16}	-13.33	-37.03	-0.40	0.12	0.41	-0.79	0.00	0.00	0.00	0.00	-5.06	1.52	-5.28	0.28	-10.12	0.00	0.00	0.00	-50.56	-1.54	-10.75	-46.16	24.18	-61.29	17.2	17.24	17.24	26.54	8	824.7	1.54	878	1.5	853.4	-0.395	0.44	0.44	-131.99	1.76	-1.99	-3.01	-11.00	-0.50	0.00	0.00	2.09	0.73	-25.38	25.38	93.99	93.99	93.99	93.99	104.66	65.3	1.11	3841	126	0.93458	3179.0	-0.345	0.46	0.46	0.485	0.063	0.55	Yes	—	—	—
		U_{16}–L_{17}	-66.01	54.01	-1.12	0.88	0.00	-0.39	-0.23	0.17	0.00	0.00	-14.36	11.23	-0.54	-4.92	-2.80	2.04	0.00	0.00	-104.49	84.82	-85.67	63.82	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.872	0.26	0.26	243.56	-138.11	0.01	1.90	7.16	0.35	-1.76	-0.67	0.00	0.00	-316.01	-147.96	-197.72	-173.72	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.94893	4015.5	0.467	0.79	0.79	0.423	0.158	0.59	Yes	0.266	0.090	0.36	Yes	—	—	—
		U_{17}–L_{18}	-133.77	124.46	-2.13	2.13	-0.16	-0.16	-0.42	0.42	0.00	0.00	-27.58	18.69	-4.43	-2.72	-2.72	-2.72	-3.41	-0.68	0.00	0.00	-209.23	192.00	-174.46	132.72	36.5	36.51	36.29	59.23	21	1751.5	1.54	1956	1.5	1763.3	-0.372	0.27	0.27	-260.50	-183.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.07	-0.84	-84.09	84.09	93.99	93.99	93.99	93.99	104.66	65.3	1.11	3454	160	0.94734	3126.1	0.844	0.94	0.94	0.274	0.045	0.32	Yes	0.165	0.525	0.20	Yes	—	—	—
		U_{18}–L_{19}	-116.17	105.67	-1.88	1.35	0.00	-0.13	-0.36	-0.36	0.00	0.00	-24.06	-17.30	-3.00	-0.13	-1.64	-4.27	-4.31	0.00	0.00	0.00	-182.50	159.86	-151.06	135.24	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.877	0.25	0.25	-153.55	-20.51	0.68	2.23	0.27	0.22	-1.64	-0.32	0.00	0.00	-188.33	10.69	-195.12	-22.96	173.7	173.70	173.70	202.71	247.3	1.17	6690	190	0.95774	5072.2	0.285	0.73	0.73	0.284	0.133	0.53	Yes	0.285	0.073	0.36	Yes	—	—	—
		U_{19}–L_{20}	-139.38	104.34	-2.13	1.51	-0.36	-0.45	-0.45	0.45	0.00	0.00	-27.18	13.63	-3.41	-0.80	-4.67	-1.40	-5.00	0.00	0.00	0.00	-201.26	194.43	-157.56	132.22	36.5	36.51	36.29	59.23	21	1751.5	1.53	2357	1.5	2312.1	-0.905	0.24	0.24	-325.20	1.03	-1.69	3.21	-1.48	0.63	-2.21	-0.57	0.00	0.00	-460.76	54.70	-447.39	11.84	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.91844	6223.0	-0.127	0.55	0.55	0.495	0.108	0.68	Yes	0.272	0.087	0.36	Yes	—	—	—
		U_{20}–L_{21}	-131.97	151.07	-2.00	1.80	0.48	-0.26	-0.42	0.51	0.00	0.00	-25.67	23.09	6.08	-0.36	-3.03	6.11	0.00	0.00	204.79	226.29	-163.65	182.02	46.7	46.71	46.71	74.10	17	1711.0	1.53	2357	1.5	2312.1	-0.905	0.24	0.24	-325.20	1.03	-1.69	3.21	-1.48	0.63	-2.21	-0.57	0.00	0.00	-460.76	54.70	-447.39	11.84	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.91844	6223.0	-0.127	0.55	0.55	0.495	0.108	0.68	Yes	0.272	0.087	0.36	Yes	—	—	—
		U_{21}–L_{22}	-175.19	162.79	-2.13	1.93	0.19	-0.56	-0.64	0.56	0.00	0.00	-27.25	24.66	9.99	-0.77	-1.78	-7.64	6.66	-0.42	-0.22	-263.18	243.68	-214.76	202.29	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5	2115.6	-0.526	0.23	0.23	-229.59	28.68	-3.25	-6.31	-2.14	0.89	-3.30	-0.85	0.00	0.00	-276.49	77.26	-269.14	-34.22	173.7	173.70	173.70	202.71	247.3	1.17	6690	190	0.95785	5072.2	0.285	0.73	0.73	0.284	0.133	0.53	Yes	0.285	0.073	0.36	Yes	—	—	—
		U_{22}–L_{23}	-45.28	135.71	-1.75	2.21	0.51	-0.14	-0.36	0.49	0.18	-0.02	-22.14	27.86	8.39	-1.79	-4.34	5.82	2.17	-0.28	-87.66	212.65	-67.74	61.56	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.472	0.44	0.44	254.55	118.13	-2.85	-5.28	2.57	1.16	-0.21	0.37	1.78	0.17	-35.94	-66.69	32.48	14.65	-2.93	5.25	25.03	2.33	284.19	64.28	405.68	352.98	148.0	147.96	147.96	167.25	201.8	1.13	5519	114	0.92749	4328.7	0.870	0.95	0.95	0.402	0.194	0.60	Yes	0.221	0.107	0.33	Yes	—	—	—
		U_{23}–L_{24}	-143.90	143.90	-2.24	2.24	0.25	-0.30	-0.48	0.55	0.00	0.00	-30.78	29.67	3.17	-3.81	-5.76	6.59	0.83	0.01	-186.21	215.14	-142.08	171.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.472	0.44	0.44	237.43	79.75	-4.15	-7.36	3.58	1.62	-0.29	0.52	2.48	0.24	-50.11	-92.99	45.28	20.43	7.65	5.25	284.86	13.52	368.81	99.90	160.6	160.57	160.57	184.25	223.9	1.15	6080	176	0.95317	5050.4	0.271	0.71	0.71	0.445	0.111	0.62	Yes	0.249	0.094	0.34	Yes	—	—	—
		U_{24}–L_{25}	-112.49	135.83	-2.44	2.35	0.25	-0.30	-0.48	0.55	0.00	0.00	-30.78	29.67	3.17	-3.81	-5.76	6.59	0.83	0.01	-186.21	215.14	-142.08	171.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.472	0.44	0.44	237.43	79.75	-4.15	-7.36	3.58	1.62	-0.29	0.52	2.48	0.24	-50.11	-92.99	45.28	20.43	7.65	5.25	284.86	13.52	368.81	99.90	160.6	160.57	160.57	184.25	223.9	1.15	6080	176	0.95317	5050.4	0.271	0.71	0.71	0.445	0.111	0.62	Yes	0.249	0.094	0.34	Yes	—	—	—
		U_{25}–L_{26}	-83.86	94.66	-2.01	2.24	1.56	-0.34	-0.37	0.40	0.00	0.00	-27.86	19.71	-4.24	-4.89	4.80	0.00	0.00	0.00	-144.97	148.68	-103.24	117.43	35.1	35.09	35.09	53.51	3	1183.7	1.53	1766	1.5	1737.0	-0.975	0.21	0.21	193.33	28.56	-4.42	-8.57	4.49	0.49	1.58	0.44	0.00	0.00	-59.83	-108.22	6.16	6.24	22.15	6.20	0.00	0.00	178.75	-103.05	259.34	45.75	148.0	147.96	147.96	167.25	201.8	1.13	5519	224	0.99324	4752.7	0.176	0.67	0.67	0.431	0.131	0.55	Yes	0.227	0.072	0.30	Yes	—	—	—
		U_{26}–L_{27}	-51.74	54.21	-1.49	0.83	0.30	-0.28	-0.27	0.25	0.00	0.00	-18.86	10.53	3.84	-3.57	-3.26	3.01	0.00	0.00	-91.19	84.16	-62.28	65.83	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.917	0.23	0.23	176.96	23.37	-7.22	-8.67	7.73	0.80	1.79	0.47	0.00	0.00	-111.52	-111.87	242.00	40.21	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.95179	4013.6	0.160	0.67	0.67	0.363	0.101	0.50	Yes	0.182	0.068	0.25	Yes	—	—	—
		U_{27}–L_{28}	-36.07	36.07	-0.74	0.74	0.00	-0.18	-0.18	0.18	0.00	0.00	-6.98	6.98	-0.74	0.74	0.00	0.00	0.00	0.00	-54.33	54.33	-46.57	46.57	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.255	0.50	0.50	-152.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.08	-0.84	-84.09	84.09	93.99	93.99	93.99	93.99	104.66	65.3	1.11	3454	160	0.95205	3126.1	0.844	0.94	0.94	0.274	0.045	0.32	Yes	0.165	0.525	0.20	Yes	—	—	—
		U_{28}–L_{29}	-14.00	1.02	-0.72	0.14	0.26	-0.63	-0.11	0.03	-0.01	-0.08	-9.08	1.82	3.44	-5.09	-1.36	0.41	-0.16	-0.98	-30.00	3.69	-13.98	-9.06	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.123	0.55	0.55	183.52	39.17	-3.29	-5.78	-8.03	-1.13	1.85	0.52	2.60	0.74	-41.49	-72.99	-101.38	-14.30	25.88	7.24	28.07	10.35	162.55	-43.96	84.69	32.33	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	127	0.93479	2899.4	-0.272	0.49	0.49	0.145	0.085	0.23	Yes	0.080	0.047	0.13	Yes	—	—	—
		U_{29}–L_{30}	18.17	5.24	-0.09	0.65	0.14	0.01	-0.03	0.03	-0.01	-0.08	-0.68	0.68	0.14	-0.19	-0.13	0.04	-0.01	-0.09	-2.84	0.35	-1.32	-0.86	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.123	0.55	0.55	17.39	3.71	-0.31	-0.55	-0.76	-0.11	0.18	0.05	0.25	0.07	-3.93	-6.91	-9.60	-1.35	2.45	0.69	2.66	0.98	15.39	-4.16	8.02	3.07	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	127	0.93479	2899.4	-0.272	0.49	0.49	0.145	0.085	0.23	Yes	0.080	0.047	0.13	Yes	—	—	—
		U_{30}–L_{31}	-32.82	30.91	-1.00	0.82	0.29	-0.27	-0.20	0.17	0.03	-0.04	-12.64	10.33	3.61	-3.05	-3.36	2.58	0.40	-0.04	-59.10	53.61	-37.98	35.63	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.307	0.24	0.24	-185.65	-44.79	0.12	0.58	-0.17	-0.06	-0.14	-0.29	0.15	0.04	-9.03	-26.24	-2.11	-0.74	-20.14	-4.12	2.12	0.51	-229.62	-24.12	-244.09	-69.20	94.0	93.99	93.99	93.99	104.66	65.3	1.11	3454	115	0.92855	2879.5	0.243	0.70	0.70	0.371	0.146	0.52	Yes	0.259	0.084	0.34	Yes	—	—	—
		U_{31}–L_{32}	-53.04	53.04	-1.42	1.42	0.15	-0.15	-0.42	0.42	0.00	0.00	-17.05	14.63	-3.56	-4.67	-4.67	-4.67	-5.60	-0.93	-84.83	84.83	-61.19	61.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.307	0.24	0.24	-222.11	-67.07	0.00	0.00

Axial AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.263	1.00	Yes	0.728	0.197	0.93	Yes	1.00	**3.81**
North Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-540.02	-184	60	-184	-828	9	-10	78	56																		
		U_1 - U_2			-----	-578.44	-62	32	-127	-766	-7	-39	-1	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.210	1.00	Yes	0.780	0.182	0.97	Yes	1.00	**2.44**
		U_2 - U_3			-----	-571.53	-143	194	-355	-586	4	28	63	188	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.218	1.00	Yes	0.771	0.139	0.92	Yes	1.00	**2.30**
		U_3 - U_4			251.59	-545.52	35	244	-350	-715	22	38	144	35	0.288	0.194	0.49	Yes	0.198	0.133	0.34	Yes	0.742	0.252	1.00	Yes	0.736	0.170	0.91	Yes	1.00	**2.82**
		U_4 - U_5			268.01	-569.61	84	234	-947	-193	25	-26	51	-50	0.307	0.234	0.55	Yes	0.211	0.161	0.38	Yes	0.775	0.209	0.99	Yes	0.768	0.225	1.00	Yes	1.00	**2.96**
		U_5 - U_6			605.50	-----	221	432	-1009	156	-128	-58	360	40	0.694	0.301	1.00	Yes	0.468	0.196	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		U_6 - U_7			816.80	-----	354	210	-724	-270	-278	-113	443	-140	0.781	0.215	1.00	Yes	0.546	0.148	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		U_7 - U_8			962.69	-----	34	1112	-1322	1850	-442	-21	229	-140	0.667	0.325	1.00	Yes	0.465	0.222	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		U_8 - U_9			877.24	-----	1143	-117	1350	-1019	-366	-206	-244	130	0.719	0.271	1.00	Yes	0.492	0.185	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		U_9 - U_{10}			678.73	-----	237	281	70	-704	-155	21	51	623	0.736	0.258	1.00	Yes	0.499	0.173	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		U_{10} - U_{11}			266.03	-606.92	318	-81	75	-976	27	93	264	232	0.289	0.261	0.55	Yes	0.192	0.167	0.36	Yes	0.781	0.201	0.99	Yes	0.774	0.219	1.00	Yes	1.00	**3.72**
		U_{11} - U_{12}			-----	-857.05	210	-121	57	-871	104	407	246	643	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.185	1.00	Yes	0.804	0.145	0.95	Yes	1.00	**2.62**
		U_{12} - U_{13}			-----	-1175.02	-7	-243	-203	-1031	346	215	577	425	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1.00	Yes	0.785	0.142	0.93	Yes	1.00	**2.65**
		U_{13} - U_{14}			-----	-1317.02	-154	-391	-541	-1503	224	180	369	540	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.233	1.00	Yes	0.755	0.166	0.93	Yes	1.00	**2.49**
		U_{14} - U_{15}			-----	-1315.98	-280	-254	-1429	-728	217	32	616	194	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.235	1.00	Yes	0.754	0.158	0.92	Yes	1.00	**2.48**
		U_{15} - U_{16}			-----	-1369.89	-157	-432	-1085	-953	86	37	451	203	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.201	1.00	Yes	0.785	0.120	0.91	Yes	1.00	**2.60**
		U_{16} - U_{17}			-----	-1325.64	-345	-209	-1553	-570	140	-52	630	91	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.228	1.00	Yes	0.760	0.171	0.94	Yes	1.00	**2.80**
		U_{17} - U_{18}			-----	-1035.22	-213	-71	-954	-32	-1	-61	420	15	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.173	1.00	Yes	0.810	0.155	0.97	Yes	1.00	**2.76**
		U_{18} - U_{19}			-----	-725.08	-200	-69	-775	-85	27	-120	387	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.169	1.00	Yes	0.816	0.156	0.98	Yes	1.00	**2.97**
		U_{19} - U_{20}			-----	-585.84	-265	300	-1658	1480	-67	-126	313	-601	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.170	0.84	Yes	0.659	0.334	1.00	Yes	1.00	**7.21**
	Structure 2	U_0 - U_1			-----	-607.49	-88	-103	417	-1633	3	-71	82	160	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.242	0.97	Yes	0.717	0.277	1.00	Yes	1.00	**6.67**
		U_1 - U_2			-----	-825.60	-46	-192	-72	-1090	-71	-222	-13	-411	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.193	1.00	Yes	0.797	0.165	0.97	Yes	1.00	**3.81**
		U_2 - U_3			-----	-1152.21	-98	-281	12	-1647	-29	367	39	425	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.177	1.00	Yes	0.818	0.168	0.99	Yes	1.00	**3.52**
		U_3 - U_4			-----	-1283.71	-427	-425	-755	-1767	522	889	415	560	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.258	1.00	Yes	0.731	0.157	0.89	Yes	1.00	**2.80**
		U_4 - U_5			-----	-1426.82	-462	-390	-907	-2123	763	302	441	324	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1.00	Yes	0.733	0.176	0.91	Yes	1.00	**2.84**
		U_5 - U_6			-----	-1548.23	-429	-12	-1521	-1414	187	-210	326	501	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1.00	Yes	0.795	0.126	0.93	Yes	1.00	**3.10**
		U_6 - U_7			-----	-1318.41	-297	-116	-863	-1856	-128	-181	321	120	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.240	1.00	Yes	0.751	0.165	0.92	Yes	1.00	**2.74**
		U_7 - U_8			-----	-1323.06	-207	-195	-1949	-934	-100	-179	177	44	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1.00	Yes	0.753	0.174	0.93	Yes	1.00	**2.76**
		U_8 - U_9			-----	-1168.07	-294	89	-1527	-495	-86	-194	385	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1.00	Yes	0.792	0.162	0.96	Yes	1.00	**2.84**
		U_9 - U_{10}			-----	-935.12	-105	308	-1438	-227	-128	-147	253	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1.00	Yes	0.807	0.175	0.99	Yes	1.00	**3.16**
		U_{10} - U_{11}			483.28	-792.30	165	364	-1304	-185	-174	-162	431	-24	0.408	0.237	0.65	Yes	0.278	0.154	0.44	Yes	0.792	0.203	1.00	Yes	0.787	0.184	0.98	Yes	1.00	**4.58**
		U_{11} - U_{12}			800.95	-----	225	526	-1727	20	-339	-124	583	83	0.677	0.315	1.00	Yes	0.454	0.210	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		U_{12} - U_{13}			1095.66	-----	443	137	-1510	-751	-411	-376	630	-200	0.740	0.250	1.00	Yes	0.527	0.170	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		U_{13} - U_{14}			1484.36	-----	155	2145	-339	1388	-945	-454	-414	-492	0.730	0.263	1.00	Yes	0.517	0.173	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.70**
		U_{14} - U_{15}			1371.28	-----	2682	124	1230	-27	-1017	-803	-554	-487	0.674	0.318	1.00	Yes	0.477	0.209	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.19**
		U_{15} - U_{16}			1227.24	-----	137	461	-139	-1626	-612	-387	-86	828	0.742	0.255	1.00	Yes	0.528	0.172	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		U_{16} - U_{17}			990.88	-----	633	296	488	-1672	-197	-22	512	443	0.730	0.264	1.00	Yes	0.486	0.174	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		U_{17} - U_{18}			694.41	-----	441	310	-55	-1048	6	252	179	841	0.697	0.301	1.00	Yes	0.464	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		U_{18} - U_{19}			529.72	-638.64	506	220	304	-1412	109	119	489	464	0.532	0.311	0.85	Yes	0.349	0.199	0.55	Yes	0.759	0.179	0.94	Yes	0.754	0.240	1.00	Yes	1.00	**4.75**
		U_{19} - U_{20}			275.43	-691.18	285	194	-208	-1126	31	23	215	519	0.258	0.250	0.51	Yes	0.171	0.164	0.34	Yes	0.767	0.228	1.00	Yes	0.763	0.180	0.95	Yes	1.00	**3.51**
	Structure 3	U_{20} - U_{21}			-----	-850.65	164	-27	-488	-1056	-13	-55	308	314	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1.00	Yes	0.776	0.153	0.93	Yes	1.00	**3.55**
		U_{21} - U_{22}			-----	-790.30	-44	-2	-431	-1380	0	66	209	378	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.267	1.00	Yes	0.721	0.200	0.93	Yes	1.00	**3.01**
		U_{22} - U_{23}			-----	-783.36	54	-47	-1345	-680	62	-3	409	106	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.279	1.00	Yes	0.715	0.195	0.91	Yes	1.00	**2.98**
		U_{23} - U_{24}			-----	-839.87	-57	131	-1182	-481	-23	-53	367	113	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.226	1.00	Yes	0.767	0.171	0.94	Yes	1.00	**3.33**
		U_{24} - U_{25}			253.88	-734.41	166	257	-1102	-261	-53	-86	426	-65	0.238	0.234	0.48	Yes	0.158	0.154	0.32	Yes	0.815	0.184	1.00	Yes	0.810	0.177	0.99	Yes	1.00	**3.44**
		U_{25} - U_{26}			468.14	-657.73	185	433	-1272	-118	-153	-76	337	-18	0.470	0.265	0.74	Yes	0.308	0.169	0.48	Yes	0.782	0.188	0.97	Yes	0.777	0.216	1.00	Yes	1.00	**4.33**
		U_{26} - U_{27}			680.29	-----	325	381	-1406	-2	-226	-71	484	-80	0.683	0.309	1.00	Yes	0.455	0.205	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		U_{27} - U_{28}			982.13	-----	300	540	-1745	223	-350	-14	488	71	0.724	0.270	1.00	Yes	0.482	0.178	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		U_{28} - U_{29}			1175.22	-----	463	155	-1998	-1005	-366	-261	648	-138	0.710	0.282	1.00	Yes	0.505	0.190	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		U_{29} - U_{30}			1495.82	-----	255	2128	-55	748	-859	-476	-269	-22	0.736	0.256	1.00	Yes	0.521	0.168	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		U_{30} - U_{31}			1477.25	-----	2405	44	900	-190	-704	-605	-201	-56	0.726	0.271	1.00	Yes	0.514	0.178	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.48**
		U_{31} - U_{32}			1100.36	-----	63	398	-432	-1297	-385	-202	63	910	0.743	0.250	1.00	Yes	0.530	0.171	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		U_{32} - U_{33}			861.61	-----	453	258	12	-1372	-82	8	535	575	0.728	0.264	1.00	Yes	0.489	0.176	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		U_{33} - U_{34}			640.11	-691.57	348	227	-117	-1552	38	274	544	1044	0.541	0.346	0.89	Yes	0.368	0.227	0.60	Yes	0.691	0.303	1.00	Yes	0.687	0.219	0.91	Yes	1.00	**5.30**
		U_{34} - U_{35}			-----	-875.26	321	44	-143	-1600	213	170	634	582	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.237	1.00	Yes	0.755	0.195	0.96	Yes	1.00	**4.00**
		U_{35} - U_{36}			-----	-1129.32	139	-154	-515	-1412	115	93	376	625	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.222	1.00	Yes	0.766	0.150	0.92	Yes	1.00	**3.67**
		U_{36} - U_{37}			-----	-1302.88	-81	15	-575	-2025	92	1	434	317	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.245	1.00	Yes	0.742	0.180	0.93	Yes	1.00	**3.47**
		U_{37} - U_{38}			-----	-1266.59	90	-178	-1865	-1201	50	17	348	302	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.268	1.00	Yes	0.721	0.166	0.89	Yes	1.00	**3.33**
		U_{38} - U_{39}			-----	-1466.09	79	-307	-1734	-1512	134	-36	747	253	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1.00	Yes	0.753	0.144	0.90	Yes	1.00	**3.50**
		U_{39} - U_{40}			-----	-1424.95	-220	-339	-2185	-1152	34	-32	484	194	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.254	1.00	Yes	0.732	0.181	0.92	Yes	1.00	**3.39**
		U_{40} - U_{41}			-----	-1363.66	-247	-337	-1629	-908	48	-115	583	49	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.213	1.00	Yes	0.776	0.145	0.93	Yes	1.00	**3.61**
		U_{41} - U_{42}			-----	-1178.77	-146	-133	-1257	-37	-68	-99	390	11	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.154	1.00	Yes	0.837	0.128	0.97	Yes	1.00	**4.11**
		U_{42} - U_{43}			-----	-847.06	-131	-62	-992	-82	-39	-93	348	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.169	1.00	Yes	0.818	0.150	0.97	Yes	1.00	**4.31**
		U_{43} - U_{44}			-----	-591.72	-14	-217	-1732	1523	-69	36	197	-470	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.220	0.93	Yes	0.699	0.294	1.00	Yes	1.00	**7.01**
	Structure 4	U_0 - U_1			-----	-624.13	0	-166	727	-1458	7	-78	-41	50	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.203	0.92	Yes	0.702	0.293	1.00	Yes	1.00	**7.28**
		U_1 - U_2			-----	-711.22	-32	-142	68	-869	-62	-232	-102	-311	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.800	0.175	0.98	Yes	1.00	**3.21**
		U_2 - U_3			-----	-1022.20	-71	-167	-18	-1012	-51	336	-69	494	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1.00	Yes	0.800	0.165	0.97	Yes	1.00	**3.07**
		U_3 - U_4			-----	-1330.33	-189	-312	-294	-1388	493	827	422	546	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.226	1.00	Yes	0.763	0.153	0.92	Yes	1.00	**3.20**
		U_4 - U_5			-----	-1342.45	-399	-72	-561	-1101	686	228	487	293	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.217	1.00	Yes	0.770	0.122	0.90	Yes	1.00	**2.75**
		U_5 - U_6			-----	-1318.17	-188	-281	-625	-1590	140	-148	285	329	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.228	1.00	Yes	0.756	0.175	0.94	Yes	1.00	**2.64**
		U_6 - U_7			-----	-1330.29	-380	-106	-1657	-525	-89	-187	404	67	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.229	1.00	Yes	0.763	0.183	0.95	Yes	1.00	**2.68**
		U_7 - U_8			-----	-1225.89	-167	-5	-923	-323	-59	-178	316	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.170	1.00	Yes	0.819	0.127	0.95	Yes	1.00	**2.83**
		U_8 - U_9			-----	-908.31	-100	181	-745	-10	-34	-157	296	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.130	1.00	Yes	0.852	0.124	0.98	Yes	1.00	**2.63**
		U_9 - U_{10}			-----	-618.01	-80	224	-917	28	-96	-107	249	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1.00	Yes	0.789	0.205	1.00	Yes	1.00	**2.99**
		U_{10} - U_{11}			653.05	-467.01	295	226	-922	1	-230	-137	510	-188	0.708	0.288	1.00	Yes	0.480	0.194	0.68	Yes	0.601	0.179	0.79	Yes	0.596	0.206	0.81	Yes	1.00	**5.62**
		U_{11} - U_{12}			873.79	-----	-28	987	-1308	1369	-424	-104	301	-247	0.716	0.282	1.00	Yes	0.490	0.192	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		U_{12} - U_{13}			1020.55	-----	1143	114	1542	-1147	-528	-491	-294	97	0.707	0.287	1.00	Yes	0.493	0.196	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		U_{13} - U_{14}			825.66	-----	218	418	55	-648	-325	-205	-8	520	0.790	0.209	1.00	Yes	0.552	0.144	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		U_{14} - U_{15}			642.07	-----	423	293	216	-903	-127	-40	289	140	0.736	0.263	1.00	Yes	0.496	0.172	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		U_{15} - U_{16}			394.90	-560.05	312	217	-251	-825	-60	136	66	457	0.453	0.273	0.73	Yes	0.311	0.187	0.50	Yes	0.762	0.231	1.00	Yes	0.755	0.196	0.96	Yes	1.00	**3.62**
		U_{16} - U_{17}			394.55	-570.32	382	121	-659	-442	80	74	439	216	0.452	0.231	0.69	Yes	0.310	0.158	0.47	Yes	0.776	0.216	1.00	Yes	0.769	0.157	0.93	Yes	1.00	**3.65**
		U_{17} - U_{18}			177.92	-553.79	286	-78	-646	-548	-38	71	292	222	0.204	0.203	0.41	Yes	0.138	0.133	0.28	Yes	0.754	0.244	1.00	Yes	0.747	0.154	0.91	Yes	1.00	**2.75**
		U_{18} - U_{19}			-----	-517.26	133	-45	-806	-373	-11	25	459	13	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.291	1.00	Yes	0.698	0.192	0.89	Yes	1.00	**2.57**
		U_{19} - U_{20}			-----	-560.18	167	-295	-1023	834	-112	105	336	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.146	0.91	Yes	0.755	0.243	1.00	Yes	1.00	**4.81**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	$L_0 - L_1$	200.87	-----	117	-438	1447	-2096	-78	-286	63	231	0.307	0.690	1.00	Yes	0.181	0.423	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.95**
		$L_1 - L_2$	452.90	-----	-35	-704	153	-44	-433	-156	-29	-30	0.693	0.304	1.00	Yes	0.423	0.201	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$L_2 - L_3$	691.42	-----	-646	-736	-23	15	-126	70	-32	21	0.795	0.198	1.00	Yes	0.460	0.119	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$L_3 - L_4$	698.25	-----	-652	-553	78	223	203	78	52	69	0.803	0.190	1.00	Yes	0.477	0.122	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.97**
		$L_4 - L_5$	391.86	-511.31	-824	91	104	598	-224	470	55	35	0.507	0.302	0.81	Yes	0.304	0.195	0.50	Yes	0.786	0.198	0.99	Yes	0.779	0.218	1.00	Yes	1.00	**3.66**
		$L_5 - L_6$	-----	-733.80	-311	-132	165	597	188	46	72	127	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.139	1.00	Yes	0.847	0.132	0.98	Yes	1.00	**3.81**
		$L_6 - L_7$	-----	-1086.76	-754	-285	211	178	99	702	120	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.106	1.00	Yes	0.875	0.118	1.00	Yes	1.00	**5.28**
		$L_7 - L_8$	-----	-1233.77	10	593	60	1439	-105	-115	-80	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1.00	Yes	0.781	0.191	0.98	Yes	1.00	**4.78**
		$L_8 - L_9$	-----	-1304.49	570	-31	1116	2	-137	-150	3	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.156	1.00	Yes	0.826	0.148	0.98	Yes	1.00	**5.49**
		$L_9 - L_{10}$	-----	-1063.83	113	-872	161	137	538	64	32	135	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.066	0.94	Yes	0.856	0.137	1.00	Yes	1.00	**6.30**
		$L_{10} - L_{11}$	-----	-559.33	-38	-555	529	-7	119	78	139	48	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.096	0.96	Yes	0.852	0.147	1.00	Yes	1.00	**4.49**
		$L_{11} - L_{12}$	595.19	-----	54	-688	481	-176	227	22	93	-33	0.771	0.222	1.00	Yes	0.462	0.145	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$L_{12} - L_{13}$	1047.16	-----	-462	-744	150	-81	231	332	31	33	0.826	0.171	1.00	Yes	0.529	0.103	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$L_{13} - L_{14}$	1292.63	-----	-223	-1486	346	-451	389	93	9	0	0.760	0.237	1.00	Yes	0.492	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$L_{14} - L_{15}$	1653.28	-----	-1348	-1199	-354	-27	-164	372	-116	-67	0.808	0.189	1.00	Yes	0.525	0.115	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$L_{15} - L_{16}$	1573.54	-----	-1053	-1648	-219	-369	8	-330	-120	-57	0.769	0.222	1.00	Yes	0.493	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$L_{16} - L_{17}$	1175.56	-----	-1480	-304	-433	97	-384	382	-105	-45	0.743	0.251	1.00	Yes	0.482	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$L_{17} - L_{18}$	877.57	-----	-1049	-103	-277	144	141	-220	-127	-62	0.764	0.230	1.00	Yes	0.489	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		$L_{18} - L_{19}$	486.24	-----	-510	339	-512	596	-74	307	-332	-29	0.744	0.248	1.00	Yes	0.503	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.01**
		$L_{19} - L_{20}$	199.10	-474.52	-250	50	-460	252	178	40	-71	-16	0.305	0.175	0.48	Yes	0.186	0.117	0.31	Yes	0.862	0.116	0.98	Yes	0.854	0.138	1.00	Yes	1.00	**5.70**
	Structure 2	$L_0 - L_1$	313.44	-----	185	-809	1089	-2649	27	92	-130	-450	0.381	0.613	1.00	Yes	0.226	0.394	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**24.23**
		$L_1 - L_2$	524.98	-----	285	-1264	180	-247	-604	-204	-42	22	0.638	0.357	1.00	Yes	0.379	0.226	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$L_2 - L_3$	1019.79	-----	-209	-1182	-39	-167	-73	17	70	73	0.814	0.182	1.00	Yes	0.535	0.104	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		$L_3 - L_4$	1292.51	-----	-275	-1703	34	-435	276	100	153	81	0.767	0.225	1.00	Yes	0.518	0.144	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		$L_4 - L_5$	1742.58	-----	-1565	-1760	-386	-258	95	267	93	198	0.812	0.184	1.00	Yes	0.538	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$L_5 - L_6$	1814.46	-----	-1594	-2229	-148	-398	306	38	110	-15	0.779	0.217	1.00	Yes	0.523	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$L_6 - L_7$	1783.72	-----	-2424	-1504	-447	-116	-34	465	-161	45	0.755	0.242	1.00	Yes	0.502	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$L_7 - L_8$	1420.20	-----	-1532	-1194	-211	296	84	-131	-131	8	0.814	0.180	1.00	Yes	0.535	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$L_8 - L_9$	1080.22	-----	-1342	-198	-112	516	-159	602	-29	15	0.756	0.238	1.00	Yes	0.509	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$L_9 - L_{10}$	891.38	-646.24	-1064	-679	-94	751	153	-218	20	97	0.796	0.196	1.00	Yes	0.463	0.122	0.59	Yes	0.683	0.127	0.82	Yes	0.679	0.170	0.85	Yes	1.00	**6.04**
		$L_{10} - L_{11}$	-----	-705.94	-938	37	105	537	-222	494	61	0	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.120	0.96	Yes	0.829	0.164	1.00	Yes	1.00	**4.63**
		$L_{11} - L_{12}$	-----	-1039.66	-1029	24	102	997	321	-85	83	239	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.124	0.99	Yes	0.853	0.140	1.00	Yes	1.00	**5.81**
		$L_{12} - L_{13}$	-----	-1546.58	-374	-184	435	-452	119	-163	200	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.061	1.00	Yes	0.925	0.045	0.98	Yes	1.00	**8.87**
		$L_{13} - L_{14}$	-----	-1523.94	-367	1230	-586	2567	-262	-454	-254	-552	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.190	0.97	Yes	0.767	0.224	1.00	Yes	1.00	**5.79**
		$L_{14} - L_{15}$	-----	-1624.55	1125	-471	2016	-376	-518	-320	-322	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.151	0.98	Yes	0.817	0.176	1.00	Yes	1.00	**7.55**
		$L_{15} - L_{16}$	-----	-1502.27	-470	-16	-985	354	-215	97	11	402	-----	-----	-----	-----	-----	-----	-----	-----	0.906	0.087	1.00	Yes	0.899	0.098	1.00	Yes	1.00	**7.36**
		$L_{16} - L_{17}$	-----	-1162.92	232	-598	1210	122	27	-5	406	193	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.146	1.00	Yes	0.847	0.149	1.00	Yes	1.00	**6.10**
		$L_{17} - L_{18}$	-----	-828.53	79	-746	474	234	212	59	103	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.118	1.00	Yes	0.870	0.119	0.99	Yes	1.00	**4.43**
		$L_{18} - L_{19}$	-----	-637.01	-172	-579	663	114	183	259	-3	34	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.139	1.00	Yes	0.849	0.128	0.98	Yes	1.00	**4.30**
		$L_{19} - L_{20}$	606.56	-568.99	-161	-1208	550	222	495	-33	58	-42	0.687	0.309	1.00	Yes	0.406	0.195	0.61	Yes	0.763	0.223	0.99	Yes	0.758	0.233	1.00	Yes	1.00	**5.45**
		$L_{20} - L_{21}$	932.37	-418.02	-1026	-1344	517	31	96	369	-90	-94	0.753	0.240	1.00	Yes	0.495	0.140	0.64	Yes	0.400	0.224	0.63	Yes	0.397	0.200	0.60	Yes	1.00	**5.78**
		$L_{21} - L_{22}$	891.77	-----	-1041	-1564	224	-89	387	85	-90	-28	0.721	0.275	1.00	Yes	0.483	0.168	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$L_{22} - L_{23}$	896.33	-----	-1438	-1311	-155	200	-72	512	-21	3	0.724	0.270	1.00	Yes	0.486	0.165	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		$L_{23} - L_{24}$	924.30	-281.74	-1465	-1272	-3	351	292	-98	9	75	0.747	0.250	1.00	Yes	0.491	0.144	0.64	Yes	0.270	0.267	0.54	Yes	0.268	0.218	0.49	Yes	1.00	**5.82**
		$L_{24} - L_{25}$	613.52	-431.49	-1030	-782	237	356	-257	684	61	0	0.695	0.303	1.00	Yes	0.411	0.190	0.61	Yes	0.579	0.217	0.80	Yes	0.575	0.199	0.78	Yes	1.00	**6.11**
		$L_{25} - L_{26}$	-----	-615.80	-927	-685	108	672	239	-225	39	124	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.142	0.97	Yes	0.821	0.179	1.00	Yes	1.00	**6.47**
		$L_{26} - L_{27}$	-----	-838.79	-645	-430	-193	639	-124	483	-206	15	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.108	1.00	Yes	0.881	0.103	0.99	Yes	1.00	**5.93**
		$L_{27} - L_{28}$	-----	-1168.76	-67	217	-225	1147	88	197	-41	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.119	0.98	Yes	0.851	0.141	1.00	Yes	1.00	**5.94**
		$L_{28} - L_{29}$	-----	-1590.90	-112	-334	18	-11	171	-20	-88	8	-----	-----	-----	-----	-----	-----	-----	-----	0.959	0.038	1.00	Yes	0.952	0.033	0.99	Yes	1.00	**6.39**
		$L_{29} - L_{30}$	-----	-1639.00	-378	808	-463	1982	-66	-129	-16	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.123	0.96	Yes	0.825	0.173	1.00	Yes	1.00	**5.42**
		$L_{30} - L_{31}$	-----	-1591.82	825	-331	2246	-419	-134	-117	-604	-479	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.172	0.98	Yes	0.801	0.196	1.00	Yes	1.00	**8.45**
		$L_{31} - L_{32}$	-----	-1544.71	-146	-256	325	-96	-60	74	-389	115	-----	-----	-----	-----	-----	-----	-----	-----	0.940	0.055	1.00	Yes	0.932	0.033	0.97	Yes	1.00	**10.88**
		$L_{32} - L_{33}$	-----	-1042.85	361	-369	1003	156	137	-3	-144	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.101	0.97	Yes	0.855	0.137	1.00	Yes	1.00	**8.48**
		$L_{33} - L_{34}$	-----	-691.06	-137	-1034	407	185	494	102	8	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.147	0.97	Yes	0.812	0.181	1.00	Yes	1.00	**6.54**
		$L_{34} - L_{35}$	794.26	-539.33	-362	-1297	582	12	408	662	-11	72	0.709	0.287	1.00	Yes	0.413	0.176	0.59	Yes	0.570	0.228	0.80	Yes	0.566	0.208	0.78	Yes	1.00	**6.59**
		$L_{35} - L_{36}$	1079.73	-----	-389	-1295	366	-29	742	135	101	-44	0.755	0.245	1.00	Yes	0.509	0.155	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		$L_{36} - L_{37}$	1363.29	-----	-1099	-1623	243	1	-18	379	-100	10	0.782	0.210	1.00	Yes	0.513	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$L_{37} - L_{38}$	1752.38	-----	-1173	-2732	-56	-367	216	-83	-43	-10	0.742	0.253	1.00	Yes	0.493	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$L_{38} - L_{39}$	1772.20	-----	-2305	-1800	-302	-176	-88	432	-25	-15	0.760	0.231	1.00	Yes	0.510	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$L_{39} - L_{40}$	1679.33	-----	-1961	-1534	-201	-308	134	-374	-51	-35	0.783	0.210	1.00	Yes	0.518	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		$L_{40} - L_{41}$	1279.13	-----	-1681	-828	-308	-49	-281	537	-59	-11	0.752	0.240	1.00	Yes	0.506	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		$L_{41} - L_{42}$	1014.77	-----	-1206	-561	-162	-61	220	-115	-28	11	0.800	0.198	1.00	Yes	0.524	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		$L_{42} - L_{43}$	480.59	-----	-1400	79	-223	47	-390	416	-5	-11	0.614	0.377	1.00	Yes	0.367	0.218	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$L_{43} - L_{44}$	414.59	-----	-782	324	-1758	765	796	232	293	86	0.504	0.488	1.00	Yes	0.300	0.310	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**21.12**
	Structure 3	$L_0 - L_1$	372.25	-390.35	99	-339	592	-892	-28	-127	-1	-3	0.592	0.297	0.89	Yes	0.363	0.199	0.57	Yes	0.737	0.158	0.90	Yes	0.731	0.269	1.00	Yes	1.00	**9.81**
		$L_1 - L_2$	539.44	-----	250	-487	348	-401	-67	34	43	116	0.826	0.170	1.00	Yes	0.558	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.86**
		$L_2 - L_3$	893.00	-----	-193	-922	6	-176	149	319	18	4	0.778	0.219	1.00	Yes	0.498	0.132	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$L_3 - L_4$	1193.28	-----	-344	-1333	62	-367	449	210	46	54	0.755	0.236	1.00	Yes	0.490	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$L_4 - L_5$	1648.24	-----	-1325	-1383	-329	-216	184	373	80	118	0.805	0.193	1.00	Yes	0.517	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		$L_5 - L_6$	1554.55	-----	-877	-1791	-83	-354	347	142	141	76	0.759	0.240	1.00	Yes	0.494	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$L_6 - L_7$	1281.76	-----	-1443	-370	-407	234	-91	466	-185	17	0.754	0.238	1.00	Yes	0.488	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$L_7 - L_8$	1084.52	-----	-629	-711	-84	117	109	-40	-29	39	0.856	0.139	1.00	Yes	0.547	0.083	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$L_8 - L_9$	573.40	-----	-631	-64	-175	333	-161	507	-17	46	0.743	0.256	1.00	Yes	0.446	0.164	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$L_9 - L_{10}$	327.26	-524.96	-741	-183	1	485	356	104	68	127	0.424	0.259	0.69	Yes	0.247	0.155	0.41	Yes	0.807	0.170	0.98	Yes	0.800	0.196	1.00	Yes	1.00	**5.27**
		$L_{10} - L_{11}$	-----	-1063.61	-877	-436	-408	740	107	1093	-57	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.123	0.99	Yes	0.856	0.138	1.00	Yes	1.00	**8.15**
		$L_{11} - L_{12}$	-----	-1250.51	-42	467	-68	1183	-158	-175	-349	-539	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1.00	Yes	0.792	0.157	0.95	Yes	1.00	**4.83**
		$L_{12} - L_{13}$	-----	-1249.95	467	-23	1152	-12	-243	-217	-567	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1.00	Yes	0.792	0.153	0.95	Yes	1.00	**5.20**
		$L_{13} - L_{14}$	-----	-1087.30	-278	-480	-38	275	305	127	-228	118	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.111	1.00	Yes	0.875	0.075	0.96	Yes	1.00	**4.82**
		$L_{14} - L_{15}$	-----	-746.63	29	-390	569	166	113	16	149	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.122	1.00	Yes	0.861	0.126	0.99	Yes	1.00	**3.60**
		$L_{15} - L_{16}$	-----	-543.65	5	-582	424	195	130	19	16	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.159	1.00	Yes	0.828	0.154	0.99	Yes	1.00	**3.24**
		$L_{16} - L_{17}$	621.36	-218.80	-149	-921	310	27	84	378	93	-29	0.715	0.283	1.00	Yes	0.425	0.181	0.61	Yes	0.299	0.229	0.53	Yes	0.296	0.222	0.52	Yes	1.00	**3.10**
		$L_{17} - L_{18}$	654.94	-----	-555	-900	87	-9	147	-54	3	12	0.753	0.241	1.00	Yes	0.436	0.145	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.31**
		$L_{18} - L_{19}$	426.68	-----	-903	51	47	1	-155	335	23	-105	0.653	0.343	1.00	Yes	0.398	0.229	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$L_{19} - L_{20}$	184.52	-309.04	-373	248	-1156	886	1151	313	210	58	0.282	0.594	0.88	Yes	0.166	0.357	0.53	Yes	0.561	0.433	1.00	Yes	0.556	0.347	0.91	Yes	1.00	**17.96**

Axial AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-288.06	-59	89	-159	218	-28	-9	-62	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.147	0.86	Yes	0.673	0.325	1.00	Yes	1.00	**1.51**
		$U_1 - L_1$			-----	-349.39	21	-10	-173	204	-3	-1	-448	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.204	0.97	Yes	0.739	0.260	1.00	Yes	1.00	**3.27**
		$U_2 - L_2$			90.86	-329.36	77	-85	-176	232	48	25	479	224	0.163	0.436	0.60	Yes	0.090	0.240	0.33	Yes	0.720	0.214	0.94	Yes	0.697	0.297	1.00	Yes	1.00	**4.74**
		$U_3 - L_3$			214.24	-----	210	-208	-64	124	-62	46	1162	325	0.385	0.605	1.00	Yes	0.212	0.333	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		$U_4 - L_4$			-----	-339.57	203	-201	113	-114	-432	-159	744	216	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.249	1.00	Yes	0.719	0.259	0.98	Yes	1.00	**3.80**
		$U_5 - L_5$			-----	-423.53	71	-89	228	-262	38	2	100	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.101	0.87	Yes	0.731	0.265	1.00	Yes	1.00	**2.78**
		$U_6 - L_6$			-----	-491.98	85	-82	243	-263	-187	-62	256	25	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.136	0.93	Yes	0.743	0.254	1.00	Yes	1.00	**2.48**
		$U_7 - L_7$			-----	-413.08	129	-143	273	-291	-163	14	178	23	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.144	0.88	Yes	0.674	0.322	1.00	Yes	1.00	**1.80**
		$U_8 - L_8$			-----	-1156.42	0	-7	61	-72	-181	-16	1590	388	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.156	1.00	Yes	0.802	0.013	0.82	Yes	1.00	**4.29**
		$U_9 - L_9$			-----	-647.77	-172	200	-354	414	-410	-170	242	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.156	0.95	Yes	0.749	0.241	1.00	Yes	1.00	**2.99**
		$U_{10} - L_{10}$			-----	-737.00	-122	105	-327	351	-721	-409	-559	-474	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.202	1.00	Yes	0.757	0.196	0.96	Yes	1.00	**3.97**
		$U_{11} - L_{11}$			-----	-671.83	-125	191	-312	455	-507	-300	-48	-265	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.164	0.97	Yes	0.782	0.211	1.00	Yes	1.00	**3.71**
		$U_{12} - L_{12}$			-----	-550.33	-97	96	-255	280	-378	-210	508	45	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.187	0.99	Yes	0.755	0.239	1.00	Yes	1.00	**3.66**
		$U_{13} - L_{13}$			-----	-372.61	-41	61	-219	248	-174	6	137	1	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.125	0.88	Yes	0.714	0.283	1.00	Yes	1.00	**2.74**
		$U_{14} - L_{14}$			-----	-320.25	-166	191	-62	72	-34	-47	825	120	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.278	1.00	Yes	0.678	0.244	0.93	Yes	1.00	**4.43**
		$U_{15} - L_{15}$			143.98	-309.49	-100	94	245	-266	80	52	343	-80	0.259	0.439	0.70	Yes	0.142	0.242	0.39	Yes	0.694	0.166	0.86	Yes	0.655	0.340	1.00	Yes	1.00	**4.45**
		$U_{16} - L_{16}$			-----	-322.51	14	-27	237	-245	47	-51	257	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.133	0.87	Yes	0.682	0.313	1.00	Yes	1.00	**3.20**
		$U_{17} - L_{17}$			-----	-437.48	60	-75	218	-240	-122	-113	214	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.122	0.95	Yes	0.755	0.244	1.00	Yes	1.00	**2.52**
		$U_{18} - L_{18}$			-----	-538.60	144	-150	424	-439	-134	-122	276	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.100	0.89	Yes	0.749	0.249	1.00	Yes	1.00	**2.68**
		$U_{19} - L_{19}$			-----	-645.21	171	-170	535	-524	-118	-46	213	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.105	0.92	Yes	0.751	0.248	1.00	Yes	1.00	**3.13**
		$U_{20} - L_{20}$			-----	-555.29	161	-261	324	-476	29	4	589	77	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.226	1.00	Yes	0.680	0.229	0.91	Yes	1.00	**2.05**
	Structure 2	$U_0 - L_0$			-----	-607.46	-167	216	-409	493	-37	-6	-853	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.236	1.00	Yes	0.681	0.222	0.91	Yes	1.00	**2.62**
		$U_1 - L_1$			-----	-722.78	-119	129	-457	491	-106	-6	-882	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.172	1.00	Yes	0.775	0.208	0.99	Yes	1.00	**4.06**
		$U_2 - L_2$			-----	-596.32	-108	119	-436	455	-109	-38	152	23	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.087	0.89	Yes	0.760	0.233	1.00	Yes	1.00	**3.61**
		$U_3 - L_3$			-----	-503.06	-57	65	-199	223	73	-46	397	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.135	1.00	Yes	0.789	0.203	1.00	Yes	1.00	**3.06**
		$U_4 - L_4$			-----	-347.29	-10	25	-148	166	-55	42	471	92	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1.00	Yes	0.735	0.213	0.95	Yes	1.00	**3.30**
		$U_5 - L_5$			115.80	-337.72	87	-75	-189	217	-110	96	310	7	0.208	0.367	0.58	Yes	0.115	0.202	0.32	Yes	0.763	0.197	0.96	Yes	0.715	0.277	1.00	Yes	1.00	**4.28**
		$U_6 - L_6$			290.26	-224.32	157	-165	-128	140	-31	106	901	136	0.522	0.472	1.00	Yes	0.287	0.260	0.55	Yes	0.505	0.320	0.83	Yes	0.475	0.211	0.69	Yes	1.00	**5.06**
		$U_7 - L_7$			-----	-321.57	136	-160	45	-52	-31	-25	816	30	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.270	1.00	Yes	0.680	0.204	0.89	Yes	1.00	**3.93**
		$U_8 - L_8$			-----	-469.76	55	-77	348	-370	-40	-41	153	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.107	0.79	Yes	0.677	0.323	1.00	Yes	1.00	**3.62**
		$U_9 - L_9$			-----	-694.57	159	-172	573	-592	21	-24	527	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.100	0.88	Yes	0.744	0.251	1.00	Yes	1.00	**4.41**
		$U_{10} - L_{10}$			-----	-794.79	169	-188	540	-570	-36	-184	477	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.151	0.94	Yes	0.743	0.251	1.00	Yes	1.00	**4.43**
		$U_{11} - L_{11}$			-----	-811.32	186	-186	510	-527	-187	-70	199	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.102	0.92	Yes	0.759	0.233	1.00	Yes	1.00	**3.99**
		$U_{12} - L_{12}$			-----	-880.53	162	-150	513	-531	-217	-31	467	12	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.147	1.00	Yes	0.763	0.228	1.00	Yes	1.00	**4.14**
		$U_{13} - L_{13}$			-----	-748.96	212	-210	576	-557	-168	22	419	46	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.162	1.00	Yes	0.722	0.275	1.00	Yes	1.00	**3.46**
		$U_{14} - L_{14}$			-----	-1077.89	102	-100	48	-53	-101	238	1402	298	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1.00	Yes	0.715	0.018	0.74	Yes	1.00	**4.75**
		$U_{15} - L_{15}$			-----	-734.02	-122	130	-555	551	-309	13	448	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1.00	Yes	0.708	0.266	0.98	Yes	1.00	**5.02**
		$U_{16} - L_{16}$			-----	-710.54	-90	64	-421	441	-801	-259	47	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.173	1.00	Yes	0.761	0.187	0.95	Yes	1.00	**4.54**
		$U_{17} - L_{17}$			-----	-647.62	-127	125	-510	518	-274	-185	-172	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.131	0.93	Yes	0.754	0.240	1.00	Yes	1.00	**4.03**
		$U_{18} - L_{18}$			-----	-598.07	-98	97	-415	458	-113	-128	373	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.106	0.91	Yes	0.762	0.234	1.00	Yes	1.00	**3.74**
		$U_{19} - L_{19}$			-----	-500.63	-55	59	-238	259	-66	-32	447	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.108	0.87	Yes	0.748	0.249	1.00	Yes	1.00	**3.54**
		$U_{20} - L_{20}$			-----	-388.48	-13	19	-205	217	-170	-29	210	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.124	0.93	Yes	0.744	0.247	1.00	Yes	1.00	**3.34**
		$U_{21} - L_{21}$			-----	-340.67	23	-18	-190	212	-87	45	470	28	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.206	0.98	Yes	0.721	0.271	1.00	Yes	1.00	**3.61**
		$U_{22} - L_{22}$			-----	-329.53	-82	97	-47	49	-45	-26	853	94	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1.00	Yes	0.697	0.124	0.83	Yes	1.00	**4.12**
		$U_{23} - L_{23}$			-----	-317.32	-61	51	237	-254	33	117	187	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.130	0.85	Yes	0.671	0.325	1.00	Yes	1.00	**4.01**
		$U_{24} - L_{24}$			-----	-375.99	15	-24	225	-240	77	-2	423	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.154	0.93	Yes	0.720	0.274	1.00	Yes	1.00	**3.42**
		$U_{25} - L_{25}$			-----	-472.84	42	-42	303	-299	-85	-30	368	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.107	0.82	Yes	0.706	0.292	1.00	Yes	1.00	**3.27**
		$U_{26} - L_{26}$			-----	-566.24	70	-74	499	-526	-120	-23	367	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.129	0.89	Yes	0.722	0.269	1.00	Yes	1.00	**3.73**
		$U_{27} - L_{27}$			-----	-633.55	87	-88	546	-557	-134	2	538	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.137	0.92	Yes	0.737	0.259	1.00	Yes	1.00	**3.96**
		$U_{28} - L_{28}$			-----	-713.01	77	-74	550	-550	-152	16	573	19	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.128	0.96	Yes	0.764	0.233	1.00	Yes	1.00	**4.16**
		$U_{29} - L_{29}$			-----	-717.44	120	-125	634	-609	-115	27	470	20	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.168	0.97	Yes	0.692	0.303	1.00	Yes	1.00	**4.70**
		$U_{30} - L_{30}$			-----	-1061.49	-55	44	93	-104	-166	72	1461	198	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.203	1.00	Yes	0.717	0.019	0.74	Yes	1.00	**5.44**
		$U_{31} - L_{31}$			-----	-720.90	-114	114	-452	454	-304	-34	566	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1.00	Yes	0.695	0.217	0.92	Yes	1.00	**4.54**
		$U_{32} - L_{32}$			-----	-845.08	-81	59	-453	459	-692	-277	-387	-343	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.189	1.00	Yes	0.732	0.197	0.93	Yes	1.00	**5.04**
		$U_{33} - L_{33}$			-----	-829.08	-118	108	-407	439	-443	-340	301	-310	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.151	1.00	Yes	0.782	0.197	0.98	Yes	1.00	**4.66**
		$U_{34} - L_{34}$			-----	-841.89	-105	121	-401	470	-286	-195	996	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.149	0.99	Yes	0.787	0.208	1.00	Yes	1.00	**5.51**
		$U_{35} - L_{35}$			-----	-712.38	-100	121	-508	539	-195	4	417	1	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.106	0.90	Yes	0.763	0.229	1.00	Yes	1.00	**4.68**
		$U_{36} - L_{36}$			-----	-501.71	-46	60	-285	310	-60	64	686	124	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.196	0.93	Yes	0.723	0.271	1.00	Yes	1.00	**3.71**
		$U_{37} - L_{37}$			-----	-328.59	-9	11	-119	135	-32	13	745	41	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.254	1.00	Yes	0.695	0.172	0.87	Yes	1.00	**4.00**
		$U_{38} - L_{38}$			344.85	-173.40	-231	238	153	-159	42	100	230	-73	0.620	0.370	1.00	Yes	0.341	0.204	0.55	Yes	0.390	0.108	0.50	Yes	0.367	0.304	0.68	Yes	1.00	**5.18**
		$U_{39} - L_{39}$			151.65	-332.99	-124	118	204	-229	77	23	458	-53	0.273	0.425	0.70	Yes	0.150	0.234	0.39	Yes	0.752	0.176	0.93	Yes	0.705	0.293	1.00	Yes	1.00	**4.99**
		$U_{40} - L_{40}$			-----	-341.97	-12	-1	208	-210	28	-30	295	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.106	0.89	Yes	0.724	0.268	1.00	Yes	1.00	**3.43**
		$U_{41} - L_{41}$			-----	-488.05	28	-32	241	-253	6	-32	183	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.094	0.93	Yes	0.765	0.230	1.00	Yes	1.00	**3.42**
		$U_{42} - L_{42}$			-----	-586.88	63	-71	463	-477	10	-36	468	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.103	0.89	Yes	0.748	0.244	1.00	Yes	1.00	**3.68**
		$U_{43} - L_{43}$			-----	-707.48	82	-94	549	-554	-49	-49	502	7	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.114	0.93	Yes	0.758	0.235	1.00	Yes	1.00	**3.91**
		$U_{44} - L_{44}$			-----	-675.35	117	-133	377	-522	-133	-23	595	101	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.187	1.00	Yes	0.724	0.221	0.95	Yes	1.00	**3.44**
	Structure 3	$U_0 - L_0$			-----	-578.70	-144	192	-412	484	-56	-7	-617	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.211	1.00	Yes	0.695	0.232	0.93	Yes	1.00	**2.77**
		$U_1 - L_1$			-----	-657.06	-115	127	-434	456	-123	-3	-806	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.173	1.00	Yes	0.765	0.212	0.98	Yes	1.00	**3.73**
		$U_2 - L_2$			-----	-562.44	-110	116	-333	371	-149	-46	466	95	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.143	0.97	Yes	0.782	0.210	1.00	Yes	1.00	**3.46**
		$U_3 - L_3$			-----	-451.63	-46	59	-188	211	43	-64	195	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.097	0.95	Yes	0.779	0.214	1.00	Yes	1.00	**2.78**
		$U_4 - L_4$			-----	-350.26	-17	26	-183	202	-40	33	458	49	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.200	0.99	Yes	0.741	0.258	1.00	Yes	1.00	**3.33**
		$U_5 - L_5$			104.16	-316.02	75	-68	-147	176	-88	111	683	92	0.187	0.423	0.62	Yes	0.103	0.233	0.34	Yes	0.708	0.286	1.00	Yes	0.669	0.225	0.90	Yes	1.00	**4.14**
		$U_6 - L_6$			-----	-318.28	132	-147	42	-43	-138	-29	853	104	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.280	1.00	Yes	0.673	0.188	0.87	Yes	1.00	**4.02**
		$U_7 - L_7$			-----	-366.30	19	-31	235	-255	21	-39	199	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.110	0.86	Yes	0.702	0.291	1.00	Yes	1.00	**3.16**
		$U_8 - L_8$			-----	-515.22	71	-74	330	-336	-8	-100	312	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.138	0.89	Yes	0.707	0.287	1.00	Yes	1.00	**3.65**
		$U_9 - L_9$			-----	-654.77	109	-165	393	-503	-25	-172	115	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.104	0.89	Yes	0.762	0.234	1.00	Yes	1.00	**3.99**
		$U_{10} - L_{10}$			-----	-784.17	119	-116	383	-430	-209	-98	543	97	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.169	0.99	Yes	0.774	0.223	1.00	Yes	1.00	**4.24**
		$U_{11} - L_{11}$			-----	-649.74	168	-193	426	-473	-160	-32	430	99	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.148	0.93	Yes	0.734	0.263	1.00	Yes	1.00	**2.91**
		$U_{12} - L_{12}$			-----	-1116.12	79	-109	28	-69	-173	20	1809	464	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.186	1.00	Yes	0.774	0.020	0.80	Yes	1.00	**4.80**
		$U_{13} - L_{13}$			-----	-467.39	-68	77	-255	276	-312	-54	177	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.159	0.94	Yes	0.721	0.272	1.00	Yes	1.00	**2.88**
		$U_{14} - L_{14}$			-----	-516.51	-46	32	-185	219	-727	-343	-80	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.216	1.00	Yes	0.741	0.192	0.94	Yes	1.00	**3.52**
		$U_{15} - L_{15}$			-----	-444.02	-36	43	-199	227	-448	-226	-233	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.189	1.00	Yes	0.766	0.230	1.00	Yes	1.00	**3.26**
		$U_{16} - L_{16}$			-----	-346.20	-7	11	-206	206	-526	-259	529	53	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1.00	Yes	0.733	0.264	1.00	Yes	1.00	**4.59**
		$U_{17} - L_{17}$			299.11	-----	-307	322	242	-272	10	132	-15	-147	0.538	0.454	1.00	Yes	0.296	0.250	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**
		$U_{18} - L_{18}$			112.91	-308.94	-105	118	219	-269	-106	13	499	48	0.203	0.489	0.70	Yes	0.112	0.269	0.39	Yes	0.675	0.246	0.93	Yes	0.654	0.344	1.00	Yes	1.00	**5.02**
		$U_{19} - L_{19}$			-----	-322.83	-49	38	247	-237	-83	-7	247	28	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.139	0.85	Yes	0.683	0.316	1.00	Yes	1.00	**3.09**
		$U_{20} - L_{20}$			-----	-372.80	19	-29	54	-119	-45	-14	297	95	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.164	1.00	Yes	0.789	0.152	0.95	Yes	1.00	**1.93**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
North Truss - Diagonals	Structure 1	$U_0 - L_1$	646.13	-----	-104	53	-18	-1	-105	-89	-19	-5	0.848	0.148	1.00	Yes	0.512	0.081	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_1 - L_2$	458.47	-----	-83	0	14	-18	-217	-142	-17	-24	0.825	0.169	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.72**
		$U_2 - L_3$	401.70	-261.17	-119	-27	-17	-69	-413	9	64	-77	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	0.601	0.277	0.88	Yes	0.553	0.152	0.71	Yes					1.00	**5.82**
		$U_3 - L_4$	-----	-373.91	-24	-42	16	-63	-187	-213	-48	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.138	1.00	Yes	0.791	0.080	0.88	Yes					1.00	**3.13**
		$U_4 - L_4$	536.47	-----	-90	32	-54	-4	-201	-225	-479	-219	0.794	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.09**
		$U_5 - L_5$	680.29	-----	-200	226	-51	79	-278	-303	-321	-130	0.804	0.187	1.00	Yes	0.442	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.30**
		$U_5 - L_6$	656.33	-----	-286	248	-86	104	-147	-183	284	118	0.776	0.215	1.00	Yes	0.427	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.74**
		$U_6 - L_7$	647.90	-----	-102	308	1	136	-107	-127	309	186	0.766	0.232	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.94**
		$U_8 - L_8$	988.92	-----	-107	343	20	139	345	438	280	103	0.791	0.209	1.00	Yes	0.490	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.92**
		$U_9 - L_{10}$	1014.95	-----	-305	248	-78	87	146	361	273	200	0.811	0.182	1.00	Yes	0.503	0.102	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.95**
		$U_{10} - L_{11}$	990.09	-----	-249	175	-90	76	-84	343	228	174	0.836	0.160	1.00	Yes	0.518	0.090	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.42**
		$U_{11} - L_{12}$	834.12	-----	-268	80	-105	3	-21	271	-6	58	0.825	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.95**
		$U_{12} - L_{13}$	654.55	-----	-203	158	-84	26	-39	85	48	-104	0.798	0.198	1.00	Yes	0.502	0.110	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.48**
		$U_{13} - L_{14}$	455.13	-----	-94	29	-21	-23	-82	-15	-52	-177	0.819	0.171	1.00	Yes	0.450	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.98**
		$U_{15} - L_{14}$	224.84	-281.83	-66	-15	-9	-83	-283	-262	-695	-128	0.404	0.308	0.72	Yes	0.222	0.169	0.40	Yes	0.660	0.335	1.00	Yes	0.596	0.106	0.71	Yes					1.00	**3.79**
		$U_{16} - L_{15}$	381.69	-----	-121	85	-21	-27	-330	-296	-523	-125	0.686	0.306	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.42**
		$U_{17} - L_{16}$	516.72	-----	-138	99	-34	13	-408	-353	-109	-129	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.76**
		$U_{18} - L_{17}$	611.32	-----	-313	253	-112	76	-522	-464	-113	-119	0.723	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.90**
		$U_{19} - L_{18}$	688.16	-----	-346	256	-132	87	-439	-445	-67	-107	0.745	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.82**
		$U_{20} - L_{19}$	723.34	-----	-229	256	-95	92	-491	-327	-99	-38	0.783	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.14**
	Structure 2	$U_0 - L_1$	801.55	-----	-371	358	-115	100	-106	-190	-61	-51	0.793	0.201	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.30**
		$U_1 - L_2$	791.27	-----	-389	314	-95	71	-222	-33	-100	-29	0.783	0.214	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.29**
		$U_2 - L_3$	646.97	-----	-334	256	-86	66	-209	146	-25	88	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.45**
		$U_3 - L_4$	600.61	-----	-181	139	-37	16	-148	-49	105	61	0.801	0.196	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.65**
		$U_4 - L_5$	425.76	-----	-134	98	-3	-31	-198	35	-14	-163	0.766	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.86**
		$U_5 - L_6$	430.50	-260.20	-124	54	57	-100	-209	114	-115	-190	0.774	0.219	1.00	Yes	0.426	0.121	0.55	Yes	0.614	0.173	0.79	Yes	0.551	0.159	0.71	Yes					1.00	**5.07**
		$U_6 - L_7$	-----	-385.08	-43	-10	45	-101	-155	-117	59	-300	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.173	1.00	Yes	0.738	0.115	0.86	Yes					1.00	**3.40**
		$U_8 - L_7$	570.93	-----	-176	122	-52	-13	-212	-446	-552	-187	0.728	0.270	1.00	Yes	0.458	0.154	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.83**
		$U_8 - L_8$	659.72	-----	-303	227	-167	50	-371	-356	-775	-275	0.715	0.282	1.00	Yes	0.393	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.25**
		$U_{10} - L_9$	790.49	-----	-311	222	-132	55	-442	-465	-474	-223	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{11} - L_{10}$	871.94	-----	-339	278	-109	130	-395	-446	127	-10	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.61**
		$U_{12} - L_{11}$	873.73	-----	-363	352	-118	154	-325	-363	224	77	0.796	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.68**
		$U_{13} - L_{12}$	752.23	-----	-429	376	-153	155	-176	-183	324	123	0.744	0.247	1.00	Yes	0.409	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.04**
		$U_{14} - L_{13}$	752.69	-----	-276	424	-23	156	-200	-160	380	187	0.745	0.253	1.00	Yes	0.410	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.75**
		$U_{14} - L_{15}$	640.24	-----	-221	350	23	73	100	207	211	-44	0.757	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.81**
		$U_{15} - L_{16}$	618.61	-----	-376	329	-64	70	-109	259	-17	21	0.731	0.260	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.16**
		$U_{16} - L_{17}$	717.08	-----	-327	344	-69	96	-268	269	-150	62	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.10**
		$U_{17} - L_{18}$	649.06	-----	-291	266	-68	81	-84	338	-22	105	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.55**
		$U_{18} - L_{19}$	653.98	-----	-294	243	-50	69	54	296	35	21	0.773	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.89**
		$U_{19} - L_{20}$	615.44	-----	-198	170	-39	7	38	177	122	-18	0.785	0.213	1.00	Yes	0.432	0.119	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.01**
		$U_{20} - L_{21}$	442.67	-----	-125	101	-9	-9	-43	134	21	-86	0.796	0.199	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.45**
		$U_{21} - L_{22}$	449.55	-220.55	-109	56	11	-76	-26	31	165	-154	0.809	0.188	1.00	Yes	0.445	0.103	0.55	Yes	0.521	0.125	0.65	Yes	0.467	0.140	0.61	Yes					1.00	**5.15**
		$U_{23} - L_{22}$	400.18	-267.86	-103	43	19	-76	-208	-266	-489	-40	0.720	0.274	1.00	Yes	0.396	0.151	0.55	Yes	0.638	0.254	0.90	Yes	0.567	0.132	0.70	Yes					1.00	**4.77**
		$U_{24} - L_{23}$	390.00	-----	-109	97	-23	-7	-237	-208	-533	-29	0.701	0.294	1.00	Yes	0.386	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.28**
		$U_{25} - L_{24}$	581.05	-----	-194	173	-32	9	-393	-336	-380	-133	0.741	0.254	1.00	Yes	0.407	0.144	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.87**
		$U_{26} - L_{25}$	656.41	-----	-277	259	-30	42	-308	-357	110	39	0.776	0.222	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.88**
		$U_{27} - L_{26}$	662.62	-----	-287	284	-45	58	-259	-283	177	69	0.783	0.214	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.87**
		$U_{28} - L_{27}$	707.67	-----	-342	353	-49	68	-241	-280	200	110	0.766	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.05**
		$U_{29} - L_{28}$	636.42	-----	-362	340	-74	74	-111	-164	207	100	0.752	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.69**
		$U_{30} - L_{29}$	625.67	-----	-218	348	36	107	-127	-131	335	129	0.740	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.36**
		$U_{30} - L_{31}$	756.02	-----	-299	426	12	74	219	328	291	0	0.748	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.59**
		$U_{31} - L_{32}$	736.26	-----	-414	371	-73	77	-170	167	-14	43	0.765	0.232	1.00	Yes	0.421	0.119	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.57**
		$U_{32} - L_{33}$	867.89	-----	-361	325	-62	95	-348	359	-139	137	0.791	0.202	1.00	Yes	0.435	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.56**
		$U_{33} - L_{34}$	860.69	-----	-358	253	-68	90	0	452	24	206	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		$U_{34} - L_{35}$	824.07	-----	-308	235	-105	41	45	224	234	-14	0.815	0.178	1.00	Yes	0.448	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.50**
		$U_{35} - L_{36}$	735.99	-----	-332	229	-105	27	-30	160	41	-105	0.797	0.196	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
		$U_{36} - L_{37}$	617.74	-----	-183	152	-33	-10	-108	41	-58	-228	0.788	0.210	1.00	Yes	0.496	0.118	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.39**
		$U_{38} - L_{37}$	-----	-368.43	-31	-12	45	-85	-152	-238	-372	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.195	1.00	Yes	0.706	0.097	0.81	Yes					1.00	**2.82**
		$U_{39} - L_{38}$	284.90	-281.42	-82	45	34	-88	-267	-238	-685	-86	0.512	0.311	0.83	Yes	0.282	0.171	0.46	Yes	0.670	0.321	1.00	Yes	0.595	0.112	0.71	Yes					1.00	**4.15**
		$U_{40} - L_{39}$	397.22	-140.64	-132	94	12	-45	-335	-316	-403	-117	0.714	0.285	1.00	Yes	0.393	0.157	0.55	Yes	0.337	0.204	0.55	Yes	0.298	0.169	0.47	Yes					1.00	**4.24**
		$U_{41} - L_{40}$	567.47	-----	-172	127	-19	4	-380	-362	-97	-82	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.54**
		$U_{42} - L_{41}$	626.05	-----	-318	265	-49	32	-422	-417	-67	-64	0.740	0.257	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{43} - L_{42}$	751.16	-----	-388	303	-66	45	-470	-451	-6	-47	0.743	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.89**
		$U_{44} - L_{43}$	783.26	-----	-274	323	-94	80	-472	-328	55	-22	0.775	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
	Structure 3	$U_0 - L_1$	719.19	-----	-344	302	-112	94	-16	-251	-63	-53	0.779	0.217	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.92**
		$U_1 - L_2$	701.81	-----	-346	251	-99	67	-350	-328	-126	-45	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.88**
		$U_2 - L_3$	649.80	-----	-328	255	-97	63	-231	78	-49	79	0.768	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.64**
		$U_3 - L_4$	550.09	-----	-152	97	-39	5	-143	51	78	-17	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.16**
		$U_4 - L_5$	428.98	-----	-131	100	-14	-33	-186	-20	-8	-183	0.772	0.221	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.08**
		$U_5 - L_6$	390.14	-331.29	-98	1	33	-111	-219	-87	-88	-313	0.702	0.233	0.94	Yes	0.386	0.128	0.52	Yes	0.776	0.217	1.00	Yes	0.701	0.142	0.85	Yes					1.00	**5.11**
		$U_7 - L_6$	405.73	-----	-79	32	-31	-30	-208	-284	-573	-193	0.730	0.267	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.23**
		$U_8 - L_7$	594.75	-----	-193	140	-70	6	-409	-410	-521	-228	0.725	0.270	1.00	Yes	0.456	0.154	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.57**
		$U_8 - L_8$	775.23	-----	-242	101	-132	-22	-494	-510	-769	-426	0.767	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.71**
		$U_{10} - L_9$	951.58	-----	-245	174	-112	48	-538	-592	122	-205	0.804	0.191	1.00	Yes	0.498	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.48**
		$U_{11} - L_{10}$	992.78	-----	-311	242	-83	89	-478	-428	220	83	0.794	0.200	1.00	Yes	0.492	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.25**
		$U_{12} - L_{11}$	993.91	-----	-113	358	3	133	-332	-301	318	180	0.795	0.202	1.00	Yes	0.492	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.48**
		$U_{12} - L_{13}$	670.97	-----	-113	282	25	73	127	219	129	-16	0.793	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.11**
		$U_{13} - L_{14}$	653.16	-----	-304	223	-28	58	-6	268	46	76	0.772	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.98**
		$U_{14} - L_{15}$	706.22	-----	-189	210	-23	43	-172	214	103	63	0.835	0.159	1.00	Yes	0.459	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.13**
		$U_{15} - L_{16}$	588.28	-----	-94	29	-22	2	-90	168	-43	40	0.863	0.134	1.00	Yes	0.474	0.074	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.62**
		$U_{17} - L_{16}$	-----	-382.46	-18	-30	-10	-52	2	1	-326	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.117	1.00	Yes	0.809	0.067	0.88	Yes					1.00	**2.98**
		$U_{18} - L_{17}$	322.86	-328.36	-84	9	-9	-73	-247	-240	-621	-45	0.581	0.287	0.87	Yes	0.319	0.158	0.48	Yes	0.756	0.239	1.00	Yes	0.695	0.107	0.81	Yes					1.00	**5.33**
		$U_{19} - L_{18}$	412.11	-120.68	-100	23	24	-19	-443	-328	148	113	0.741	0.256	1.00	Yes	0.408	0.141	0.55	Yes	0.277	0.233	0.52	Yes	0.255	0.128	0.39	Yes					1.00	**3.70**
		$U_{20} - L_{19}$	638.54	-----	-7	33	-14	-6	-465	-377	93	106	0.838	0.155	1.00	Yes	0.506	0.086	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.72**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-528.01	-30	69	-182	-927	21	-21	-23	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.276	1	Yes	0.712	0.220	0.94	Yes	1.00	**4.50**
		U_1 - U_2			-----	-563.42	-52	74	-162	-867	4	46	-32	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.226	1	Yes	0.760	0.206	0.97	Yes	1.00	**3.13**
		U_2 - U_3			108.44	-554.10	-101	236	-296	-730	10	-90	162	-148	0.124	0.201	0.33	Yes	0.084	0.131	0.22	Yes	0.754	0.243	1	Yes	0.747	0.174	0.93	Yes	1.00	**3.08**
		U_3 - U_4			277.26	-532.77	79	233	-238	-899	-74	-77	-18	-228	0.318	0.252	0.57	Yes	0.218	0.173	0.40	Yes	0.725	0.270	1	Yes	0.718	0.214	0.94	Yes	1.00	**3.92**
		U_4 - U_5			287.64	-545.54	89	233	-1081	-190	-154	-25	-157	-129	0.330	0.284	0.62	Yes	0.226	0.195	0.43	Yes	0.742	0.246	0.99	Yes	0.736	0.257	1.00	Yes	1.00	**4.04**
		U_5 - U_6			582.50	-----	225	379	-1139	140	-331	-19	-51	-301	0.668	0.327	1.00	Yes	0.450	0.213	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		U_6 - U_7			768.17	-----	278	189	-936	-267	-326	78	-468	-161	0.735	0.263	1.00	Yes	0.513	0.181	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		U_7 - U_8			950.87	-----	-46	1231	-1705	1990	-263	350	-207	150	0.659	0.337	1.00	Yes	0.460	0.230	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		U_8 - U_9			835.31	-----	1183	-155	1662	-1618	-82	238	51	256	0.684	0.310	1.00	Yes	0.468	0.211	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		U_9 - U_{10}			638.81	-----	227	226	-116	-1041	106	426	202	444	0.693	0.304	1.00	Yes	0.469	0.204	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.50**
		U_{10} - U_{11}			-----	-590.99	225	-88	170	-1079	225	94	297	73	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.211	0.98	Yes	0.754	0.242	1.00	Yes	1.00	**4.06**
		U_{11} - U_{12}			-----	-872.89	167	-123	7	-1036	169	98	233	80	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.819	0.172	1.00	Yes	1.00	**3.47**
		U_{12} - U_{13}			-----	-1183.61	-34	-165	-317	-1138	223	-37	282	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.791	0.157	0.95	Yes	1.00	**3.82**
		U_{13} - U_{14}			-----	-1324.75	-112	-353	-544	-1776	151	65	111	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.228	1	Yes	0.759	0.196	0.96	Yes	1.00	**3.76**
		U_{14} - U_{15}			-----	-1312.54	-251	-187	-1672	-765	184	-52	201	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.752	0.184	0.94	Yes	1.00	**3.69**
		U_{15} - U_{16}			-----	-1329.11	-81	-413	-1392	-879	24	-64	101	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.230	1	Yes	0.762	0.154	0.92	Yes	1.00	**3.49**
		U_{16} - U_{17}			-----	-1307.96	-318	-185	-1766	-650	54	-176	-108	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.750	0.195	0.95	Yes	1.00	**3.71**
		U_{17} - U_{18}			-----	-1006.48	-170	-101	-1046	-99	-158	-236	-61	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1	Yes	0.788	0.170	0.96	Yes	1.00	**3.31**
		U_{18} - U_{19}			-----	-720.65	-198	-29	-763	-45	-195	-173	-11	-171	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.175	1	Yes	0.811	0.153	0.97	Yes	1.00	**3.41**
		U_{19} - U_{20}			-----	-641.53	-176	-23	-1362	354	-122	5	280	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.243	0.98	Yes	0.722	0.274	1.00	Yes	1.00	**8.45**
	Structure 2	U_0 - U_1			-----	-604.43	168	-154	400	-1654	95	182	-28	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.203	0.93	Yes	0.714	0.281	1.00	Yes	1.00	**6.53**
		U_1 - U_2			-----	-767.74	-103	-155	-118	-1169	337	634	230	53	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.249	1	Yes	0.741	0.177	0.92	Yes	1.00	**3.64**
		U_2 - U_3			-----	-1102.84	-79	-233	-23	-1876	601	4	466	2	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.212	1	Yes	0.783	0.191	0.98	Yes	1.00	**3.89**
		U_3 - U_4			-----	-1304.78	-372	-310	-883	-2095	126	-286	220	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.245	1	Yes	0.743	0.187	0.93	Yes	1.00	**3.64**
		U_4 - U_5			-----	-1426.07	-371	-339	-1139	-2340	-54	-346	99	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.261	1	Yes	0.732	0.194	0.93	Yes	1.00	**3.75**
		U_5 - U_6			-----	-1540.32	-384	-3	-1658	-1564	-109	-295	-80	-378	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.791	0.137	0.93	Yes	1.00	**4.30**
		U_6 - U_7			-----	-1248.15	-289	-95	-811	-2250	-73	-256	-44	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.278	1	Yes	0.711	0.200	0.92	Yes	1.00	**3.47**
		U_7 - U_8			-----	-1250.98	-178	-227	-2350	-802	-168	-208	-170	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.274	1	Yes	0.712	0.209	0.93	Yes	1.00	**3.50**
		U_8 - U_9			-----	-1145.09	-305	79	-1717	-551	-206	-180	-93	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.208	1	Yes	0.777	0.183	0.96	Yes	1.00	**3.88**
		U_9 - U_{10}			-----	-910.98	-107	269	-1649	-250	-262	-128	-110	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.202	1	Yes	0.786	0.201	0.99	Yes	1.00	**4.22**
		U_{10} - U_{11}			444.26	-750.70	63	336	-1747	-435	-168	-87	-163	-191	0.375	0.270	0.65	Yes	0.255	0.174	0.43	Yes	0.751	0.239	0.99	Yes	0.746	0.247	1.00	Yes	1.00	**5.76**
		U_{11} - U_{12}			774.78	-----	158	495	-2016	-18	-378	-184	-148	-450	0.654	0.339	1.00	Yes	0.440	0.227	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		U_{12} - U_{13}			1069.93	-----	267	20	-1629	-977	-520	-125	-671	-491	0.722	0.269	1.00	Yes	0.515	0.183	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		U_{13} - U_{14}			1356.73	-----	-316	3052	-407	1511	-702	284	-536	-172	0.667	0.330	1.00	Yes	0.472	0.217	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.61**
		U_{14} - U_{15}			1388.65	-----	2948	-22	1308	-98	-543	277	-247	147	0.683	0.310	1.00	Yes	0.483	0.203	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		U_{15} - U_{16}			1106.73	-----	55	298	-536	-2234	72	709	440	844	0.669	0.325	1.00	Yes	0.476	0.219	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.16**
		U_{16} - U_{17}			928.44	-----	593	238	124	-2026	330	337	579	224	0.684	0.315	1.00	Yes	0.455	0.208	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.06**
		U_{17} - U_{18}			706.95	-----	471	279	-170	-1546	40	159	151	140	0.710	0.286	1.00	Yes	0.472	0.190	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		U_{18} - U_{19}			417.67	-608.94	428	175	216	-1621	19	38	115	-63	0.419	0.292	0.72	Yes	0.275	0.185	0.47	Yes	0.724	0.136	0.86	Yes	0.719	0.275	1.00	Yes	1.00	**5.53**
		U_{19} - U_{20}			228.73	-715.65	271	141	-418	-1254	16	141	105	51	0.215	0.220	0.44	Yes	0.142	0.145	0.29	Yes	0.795	0.205	1	Yes	0.790	0.201	1.00	Yes	1.00	**4.76**
		U_{20} - U_{21}			-----	-839.65	125	-13	-487	-1326	106	-13	115	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.224	1	Yes	0.766	0.192	0.96	Yes	1.00	**4.75**
		U_{21} - U_{22}			-----	-782.18	-24	4	-488	-1653	-8	-48	1	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.275	1	Yes	0.714	0.240	0.96	Yes	1.00	**4.09**
		U_{22} - U_{23}			-----	-767.39	-23	-37	-1617	-679	-57	-100	39	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.290	1	Yes	0.700	0.234	0.94	Yes	1.00	**4.00**
		U_{23} - U_{24}			-----	-789.57	12	66	-1438	-496	-196	-103	-36	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.268	1	Yes	0.721	0.208	0.93	Yes	1.00	**4.18**
		U_{24} - U_{25}			178.69	-701.00	94	215	-1215	-374	-220	-37	-137	-134	0.168	0.224	0.40	Yes	0.111	0.147	0.26	Yes	0.778	0.215	1	Yes	0.773	0.195	0.97	Yes	1.00	**4.31**
		U_{25} - U_{26}			352.11	-615.98	134	370	-1557	-60	-204	42	-158	-71	0.353	0.294	0.65	Yes	0.232	0.187	0.42	Yes	0.732	0.196	0.93	Yes	0.727	0.264	1.00	Yes	1.00	**5.11**
		U_{26} - U_{27}			639.34	-----	219	422	-1900	-135	-199	20	-172	-164	0.642	0.352	1.00	Yes	0.427	0.233	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		U_{27} - U_{28}			908.18	-----	203	551	-2257	159	-351	-60	-245	-444	0.669	0.330	1.00	Yes	0.445	0.218	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		U_{28} - U_{29}			1086.34	-----	241	51	-2422	-1109	-422	53	-730	-390	0.657	0.337	1.00	Yes	0.467	0.226	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.67**
		U_{29} - U_{30}			1342.35	-----	-134	3142	-144	1304	-612	565	-131	327	0.660	0.333	1.00	Yes	0.467	0.218	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.01**
		U_{30} - U_{31}			1438.22	-----	2748	-128	1381	-341	-219	419	281	401	0.707	0.283	1.00	Yes	0.501	0.185	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.55**
		U_{31} - U_{32}			1094.55	-----	13	335	-991	-1423	191	646	503	759	0.739	0.252	1.00	Yes	0.527	0.172	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		U_{32} - U_{33}			783.22	-----	488	194	407	-1857	333	274	567	96	0.662	0.331	1.00	Yes	0.444	0.221	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		U_{33} - U_{34}			536.98	-752.84	364	158	-225	-1737	137	170	227	60	0.454	0.273	0.73	Yes	0.309	0.176	0.49	Yes	0.753	0.221	0.98	Yes	0.748	0.245	1.00	Yes	1.00	**6.13**
		U_{34} - U_{35}			-----	-917.09	339	-31	-268	-1691	117	-10	191	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.179	0.98	Yes	0.791	0.206	1.00	Yes	1.00	**4.70**
		U_{35} - U_{36}			-----	-1198.48	148	-248	-161	-1696	100	87	125	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.181	1	Yes	0.813	0.180	1.00	Yes	1.00	**4.63**
		U_{36} - U_{37}			-----	-1283.58	-149	-60	-557	-2422	163	-54	186	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1	Yes	0.731	0.216	0.95	Yes	1.00	**3.93**
		U_{37} - U_{38}			-----	-1244.18	31	-258	-2223	-1027	19	3	156	6	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.279	1	Yes	0.708	0.198	0.91	Yes	1.00	**3.73**
		U_{38} - U_{39}			-----	-1550.46	34	-401	-1720	-1685	82	-109	249	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.193	1	Yes	0.796	0.143	0.94	Yes	1.00	**4.54**
		U_{39} - U_{40}			-----	-1390.90	-338	-471	-2343	-1162	-117	-144	-66	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.271	1	Yes	0.714	0.194	0.91	Yes	1.00	**3.73**
		U_{40} - U_{41}			-----	-1366.12	-397	-429	-1632	-968	-90	-131	-163	-278	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.216	1	Yes	0.778	0.145	0.93	Yes	1.00	**4.09**
		U_{41} - U_{42}			-----	-1087.02	-281	-175	-2009	-458	-99	26	-60	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.218	1	Yes	0.771	0.205	0.98	Yes	1.00	**3.81**
		U_{42} - U_{43}			-----	-808.95	-275	-55	-1324	-247	97	-66	239	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.781	0.201	0.99	Yes	1.00	**3.99**
		U_{43} - U_{44}			-----	-630.95	-125	-164	-1492	721	-63	3	151	11	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.228	0.98	Yes	0.745	0.253	1.00	Yes	1.00	**7.46**
	Structure 3	U_0 - U_1			-----	-634.37	169	-167	595	-1402	61	127	10	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.168	0.89	Yes	0.714	0.282	1.00	Yes	1.00	**7.86**
		U_1 - U_2			-----	-685.80	-67	-116	18	-773	250	504	200	86	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.218	1	Yes	0.772	0.156	0.93	Yes	1.00	**3.38**
		U_2 - U_3			-----	-998.26	-77	-123	-125	-1028	513	7	444	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.209	1	Yes	0.781	0.167	0.95	Yes	1.00	**3.60**
		U_3 - U_4			-----	-1347.41	-144	-207	-355	-1712	132	-233	208	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.215	1	Yes	0.772	0.189	0.97	Yes	1.00	**4.22**
		U_4 - U_5			-----	-1316.25	-327	-56	-627	-1309	-8	-307	79	-402	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1	Yes	0.755	0.144	0.90	Yes	1.00	**3.65**
		U_5 - U_6			-----	-1296.92	-154	-231	-812	-1681	-45	-203	-46	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1	Yes	0.743	0.185	0.93	Yes	1.00	**3.76**
		U_6 - U_7			-----	-1322.39	-310	-89	-1804	-519	-84	-229	30	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.233	1	Yes	0.758	0.199	0.96	Yes	1.00	**3.89**
		U_7 - U_8			-----	-1173.18	-130	-47	-1129	-303	-204	-202	-38	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.200	1	Yes	0.784	0.156	0.94	Yes	1.00	**3.87**
		U_8 - U_9			-----	-866.87	-128	167	-1038	-135	-100	-112	-118	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1	Yes	0.813	0.172	0.99	Yes	1.00	**3.54**
		U_9 - U_{10}			-----	-599.21	-99	213	-1034	9	-202	-128	-131	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.216	0.99	Yes	0.765	0.232	1.00	Yes	1.00	**3.92**
		U_{10} - U_{11}			636.18	-----	216	225	-1130	-79	-326	-60	-315	-185	0.690	0.306	1.00	Yes	0.467	0.205	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		U_{11} - U_{12}			832.52	-----	-146	1120	-1601	1582	-310	154	-341	8	0.682	0.310	1.00	Yes	0.467	0.211	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		U_{12} - U_{13}			924.48	-----	1211	-37	2113	-1638	-330	100	-112	217	0.641	0.354	1.00	Yes	0.447	0.241	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		U_{13} - U_{14}			772.23	-----	177	297	-100	-909	-80	381	136	470	0.738	0.258	1.00	Yes	0.516	0.177	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		U_{14} - U_{15}			587.30	-----	391	223	71	-1089	55	140	351	16	0.673	0.318	1.00	Yes	0.454	0.208	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		U_{15} - U_{16}			292.58	-574.85	244	124	-243	-931	-1	136	83	112	0.335	0.244	0.58	Yes	0.230	0.168	0.40	Yes	0.782	0.212	1	Yes	0.775	0.221	1.00	Yes	1.00	**4.37**
		U_{16} - U_{17}			296.05	-597.17	285	69	-788	-426	40	64	187	-5	0.339	0.219	0.56	Yes	0.233	0.150	0.39	Yes	0.813	0.182	1	Yes	0.805	0.187	1.00	Yes	1.00	**4.50**
		U_{17} - U_{18}			101.21	-562.82	227	-130	-741	-476	-67	135	-16	-50	0.116	0.199	0.32	Yes	0.078	0.129	0.21	Yes	0.766	0.224	1	Yes	0.759	0.176	0.94	Yes	1.00	**3.21**
		U_{18} - U_{19}			-----	-545.10	41	-29	-904	-288	139	15	182	10	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.252	1	Yes	0.735	0.215	0.96	Yes	1.00	**3.09**
		U_{19} - U_{20}			-----	-488.53	108	-229	-935	-335	-67	14	328	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.333	1	Yes	0.659	0.222	0.89	Yes	1.00	**4.37**

Axial AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Lower Chord	Structure 1	L_0 - L_1	210.36	-136.51	681	-1243	614	-958	-382	-1405	15	58	0.322	0.675	1.00	Yes	0.190	0.404	0.60	Yes	0.248	0.478	0.73	Yes	0.246	0.373	0.62	Yes	1.00	**13.36**
		L_1 - L_2	436.92	-----	-268	-621	46	-20	-663	151	18	21	0.669	0.329	1.00	Yes	0.408	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		L_2 - L_3	668.15	-----	-844	-719	-37	57	-134	-50	10	-8	0.769	0.226	1.00	Yes	0.445	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_3 - L_4	641.82	-149.24	-938	-455	40	189	-113	167	-34	39	0.738	0.253	1.00	Yes	0.439	0.164	0.61	Yes	0.204	0.229	0.44	Yes	0.202	0.227	0.43	Yes	1.00	**3.95**
		L_4 - L_5	-----	-510.87	-817	-246	89	485	-232	94	166	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.168	0.96	Yes	0.778	0.216	1.00	Yes	1.00	**5.27**
		L_5 - L_6	-----	-747.84	-470	-383	139	579	-92	36	20	87	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.118	1	Yes	0.863	0.128	1.00	Yes	1.00	**5.73**
		L_6 - L_7	-----	-1063.81	-864	-771	148	16	97	158	191	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.133	1	Yes	0.856	0.136	1.00	Yes	1.00	**6.94**
		L_7 - L_8	-----	-1256.24	-32	582	-38	1362	41	73	158	214	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.188	1	Yes	0.796	0.180	0.98	Yes	1.00	**7.09**
		L_8 - L_9	-----	-1269.10	554	-47	1383	-102	37	-14	127	22	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.176	1	Yes	0.804	0.183	0.99	Yes	1.00	**7.03**
		L_9 - L_{10}	-----	-1000.96	-295	-1193	14	55	37	14	34	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.108	0.93	Yes	0.806	0.188	1.00	Yes	1.00	**8.98**
		L_{10} - L_{11}	-----	-533.00	-263	-690	481	-20	-8	-3	73	10	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.112	0.94	Yes	0.812	0.183	1.00	Yes	1.00	**6.81**
		L_{11} - L_{12}	584.11	-----	-10	-632	330	-199	-425	150	-16	20	0.756	0.242	1.00	Yes	0.454	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		L_{12} - L_{13}	1080.26	-----	-613	-795	68	-98	-49	20	-20	-34	0.852	0.147	1.00	Yes	0.545	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		L_{13} - L_{14}	1330.57	-----	-562	-1378	223	-392	-159	214	-106	63	0.783	0.208	1.00	Yes	0.507	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		L_{14} - L_{15}	1627.69	-----	-1229	-1515	-351	-81	-284	-47	-66	-49	0.795	0.203	1.00	Yes	0.517	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		L_{15} - L_{16}	1583.35	-----	-1021	-1729	-198	-391	-160	-131	-75	16	0.774	0.220	1.00	Yes	0.497	0.128	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{16} - L_{17}	1231.95	-----	-1367	-483	-400	39	-164	100	-34	-65	0.779	0.215	1.00	Yes	0.505	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_{17} - L_{18}	919.05	-----	-934	-200	-187	-50	8	-100	-44	-1	0.800	0.193	1.00	Yes	0.512	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_{18} - L_{19}	437.58	-----	-927	321	-262	189	-207	186	4	-14	0.670	0.321	1.00	Yes	0.453	0.201	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_{19} - L_{20}	346.87	-----	-335	48	-1460	861	-4	-1	-112	-25	0.531	0.462	1.00	Yes	0.324	0.313	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.69**
	Structure 2	L_0 - L_1	169.34	-----	560	-1739	599	-1310	-437	-1519	28	99	0.256	0.742	1.00	Yes	0.155	0.363	0.52	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.50**
		L_1 - L_2	543.04	-----	253	-1195	168	-214	-542	285	75	103	0.660	0.332	1.00	Yes	0.392	0.211	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		L_2 - L_3	1025.99	-----	-419	-1039	-18	-148	-7	-327	125	162	0.809	0.185	1.00	Yes	0.530	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		L_3 - L_4	1311.29	-----	-496	-1588	58	-332	-506	182	43	124	0.770	0.226	1.00	Yes	0.519	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		L_4 - L_5	1726.28	-----	-1786	-1507	-241	-230	295	-100	17	-10	0.805	0.189	1.00	Yes	0.533	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		L_5 - L_6	1835.02	-----	-1976	-2266	-33	-343	-154	163	-93	58	0.787	0.211	1.00	Yes	0.528	0.128	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		L_6 - L_7	1785.98	-----	-2568	-1633	-392	-102	20	247	52	-12	0.756	0.241	1.00	Yes	0.502	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		L_7 - L_8	1402.87	-----	-1534	-1344	-187	229	-223	-43	-69	78	0.804	0.188	1.00	Yes	0.528	0.110	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		L_8 - L_9	1129.65	-----	-1421	-448	-138	482	-132	177	42	-120	0.790	0.208	1.00	Yes	0.532	0.130	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		L_9 - L_{10}	897.06	-587.52	-1118	-814	-85	605	-161	-78	-37	33	0.801	0.198	1.00	Yes	0.466	0.123	0.59	Yes	0.621	0.134	0.76	Yes	0.617	0.179	0.80	Yes	1.00	**7.66**
		L_{10} - L_{11}	-----	-701.69	-970	-190	11	567	-120	75	123	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.090	0.92	Yes	0.824	0.170	1.00	Yes	1.00	**6.21**
		L_{11} - L_{12}	-----	-1026.08	-1149	-107	-5	974	29	-55	30	89	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.107	0.96	Yes	0.841	0.156	1.00	Yes	1.00	**7.35**
		L_{12} - L_{13}	-----	-1437.73	-380	-240	-61	-910	-20	-178	422	201	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.126	1	Yes	0.860	0.090	0.96	Yes	1.00	**9.10**
		L_{13} - L_{14}	-----	-1502.45	-477	1324	-995	2706	-190	-257	211	218	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.172	0.94	Yes	0.756	0.236	1.00	Yes	1.00	**8.03**
		L_{14} - L_{15}	-----	-1492.41	1258	-546	2822	-842	-240	-166	13	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.176	0.94	Yes	0.751	0.246	1.00	Yes	1.00	**7.31**
		L_{15} - L_{16}	-----	-1474.40	-511	-92	-1064	205	-113	6	-196	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.889	0.105	1	Yes	0.882	0.106	0.99	Yes	1.00	**10.32**
		L_{16} - L_{17}	-----	-1173.77	7	-1055	1161	79	49	-384	9	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1	Yes	0.855	0.143	1.00	Yes	1.00	**8.74**
		L_{17} - L_{18}	-----	-813.78	-177	-890	492	176	-11	159	17	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.122	0.99	Yes	0.855	0.142	1.00	Yes	1.00	**6.20**
		L_{18} - L_{19}	-----	-634.51	-313	-754	616	78	128	-221	-10	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.114	0.97	Yes	0.846	0.145	1.00	Yes	1.00	**6.18**
		L_{19} - L_{20}	651.63	-481.05	-454	-1185	477	130	-124	163	-33	-22	0.738	0.254	1.00	Yes	0.437	0.162	0.60	Yes	0.645	0.164	0.81	Yes	0.641	0.229	0.87	Yes	1.00	**6.46**
		L_{20} - L_{21}	973.68	-348.72	-1201	-1429	365	1	32	69	0	-37	0.776	0.216	1.00	Yes	0.509	0.128	0.64	Yes	0.329	0.210	0.54	Yes	0.327	0.208	0.54	Yes	1.00	**6.95**
		L_{21} - L_{22}	939.44	-----	-1303	-1526	204	-153	38	233	-55	23	0.749	0.248	1.00	Yes	0.501	0.155	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		L_{22} - L_{23}	928.52	-----	-1173	-1597	-149	177	-185	107	21	-40	0.740	0.253	1.00	Yes	0.495	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		L_{23} - L_{24}	962.45	-311.52	-1504	-1233	-9	298	-36	9	-6	67	0.768	0.227	1.00	Yes	0.503	0.134	0.64	Yes	0.294	0.235	0.53	Yes	0.292	0.219	0.52	Yes	1.00	**6.61**
		L_{24} - L_{25}	683.61	-454.09	-1058	-763	104	452	-130	-25	96	-90	0.774	0.224	1.00	Yes	0.458	0.143	0.61	Yes	0.609	0.129	0.74	Yes	0.605	0.204	0.81	Yes	1.00	**6.63**
		L_{25} - L_{26}	-----	-625.81	-836	-709	72	586	-15	-59	12	80	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.113	0.96	Yes	0.834	0.161	1.00	Yes	1.00	**6.87**
		L_{26} - L_{27}	-----	-777.88	-1104	-211	133	483	-79	88	140	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.128	0.96	Yes	0.817	0.177	1.00	Yes	1.00	**6.64**
		L_{27} - L_{28}	-----	-1180.27	-1040	-568	61	1126	-69	-263	89	193	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.124	1	Yes	0.860	0.139	1.00	Yes	1.00	**9.93**
		L_{28} - L_{29}	-----	-1541.10	-176	-448	-172	-147	141	99	307	27	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.062	1	Yes	0.922	0.045	0.97	Yes	1.00	**11.14**
		L_{29} - L_{30}	-----	-1505.57	-499	1196	-737	2695	92	121	42	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.164	0.93	Yes	0.758	0.235	1.00	Yes	1.00	**7.37**
		L_{30} - L_{31}	-----	-1450.45	1245	-469	3020	-897	120	68	144	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.178	0.92	Yes	0.730	0.264	1.00	Yes	1.00	**8.18**
		L_{31} - L_{32}	-----	-1489.76	-277	-304	-770	210	86	57	-160	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.092	1	Yes	0.891	0.076	0.97	Yes	1.00	**10.70**
		L_{32} - L_{33}	-----	-1050.34	-27	-756	1011	53	355	-82	-25	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.123	1	Yes	0.861	0.138	1.00	Yes	1.00	**7.75**
		L_{33} - L_{34}	-----	-701.64	122	-977	533	89	-403	229	20	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.126	0.96	Yes	0.824	0.171	1.00	Yes	1.00	**6.10**
		L_{34} - L_{35}	871.60	-637.24	-517	-1112	668	-22	227	-287	-6	-61	0.778	0.212	1.00	Yes	0.453	0.132	0.59	Yes	0.674	0.116	0.79	Yes	0.669	0.178	0.85	Yes	1.00	**7.92**
		L_{35} - L_{36}	1127.19	-----	-509	-1354	509	-74	-153	220	-80	14	0.788	0.203	1.00	Yes	0.531	0.127	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_{36} - L_{37}	1330.01	-----	-768	-1964	303	-83	27	167	34	-5	0.763	0.231	1.00	Yes	0.501	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_{37} - L_{38}	1745.02	-----	-1081	-2803	-3	-450	-200	13	-72	53	0.739	0.259	1.00	Yes	0.491	0.151	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		L_{38} - L_{39}	1809.23	-----	-2337	-2015	-381	-81	-76	184	11	-59	0.776	0.219	1.00	Yes	0.521	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		L_{39} - L_{40}	1684.74	-----	-2154	-1470	-264	-389	-37	-72	-57	7	0.785	0.208	1.00	Yes	0.520	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		L_{40} - L_{41}	1334.39	-----	-1668	-956	-427	22	-153	169	0	-18	0.784	0.209	1.00	Yes	0.528	0.129	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		L_{41} - L_{42}	1026.64	-----	-1183	-612	-200	-96	46	-71	22	111	0.809	0.183	1.00	Yes	0.531	0.108	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_{42} - L_{43}	540.64	-----	-1448	416	-326	177	-82	250	141	60	0.657	0.336	1.00	Yes	0.391	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		L_{43} - L_{44}	243.33	-----	-740	104	-2938	1308	-624	-182	-97	-28	0.296	0.700	1.00	Yes	0.176	0.449	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**34.20**
	Structure 3	L_0 - L_1	281.29	-----	489	-1054	763	-1218	-212	-963	40	183	0.430	0.565	1.00	Yes	0.263	0.372	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.42**
		L_1 - L_2	454.98	-----	169	-675	157	-188	-442	266	37	61	0.696	0.294	1.00	Yes	0.471	0.187	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		L_2 - L_3	933.76	-----	-165	-766	-20	-146	6	-291	92	134	0.813	0.185	1.00	Yes	0.520	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_3 - L_4	1215.50	-----	-265	-1273	47	-311	-442	168	30	118	0.769	0.226	1.00	Yes	0.499	0.140	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		L_4 - L_5	1643.71	-----	-1491	-1091	-277	-139	112	-167	25	12	0.803	0.191	1.00	Yes	0.515	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		L_5 - L_6	1579.27	-----	-1185	-1662	-34	-316	-117	311	-64	133	0.772	0.222	1.00	Yes	0.501	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_6 - L_7	1329.87	-----	-1409	-593	-350	202	-121	183	1	-28	0.782	0.209	1.00	Yes	0.507	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		L_7 - L_8	1076.50	-----	-733	-744	-90	53	-98	66	-23	67	0.850	0.143	1.00	Yes	0.543	0.085	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_8 - L_9	629.76	-----	-603	-191	-203	333	-73	86	59	-90	0.816	0.175	1.00	Yes	0.489	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		L_9 - L_{10}	425.32	-517.06	-777	-296	-34	473	97	106	-19	29	0.551	0.224	0.78	Yes	0.321	0.136	0.46	Yes	0.795	0.139	0.94	Yes	0.788	0.206	1.00	Yes	1.00	**6.88**
		L_{10} - L_{11}	-----	-1010.66	-1086	-637	71	160	51	-132	108	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.114	0.95	Yes	0.818	0.172	1.00	Yes	1.00	**9.47**
		L_{11} - L_{12}	-----	-1256.82	-57	532	-114	1433	-90	-105	-136	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.796	0.190	0.99	Yes	1.00	**7.26**
		L_{12} - L_{13}	-----	-1246.29	555	-35	1366	-52	-137	-142	-289	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1	Yes	0.789	0.181	0.98	Yes	1.00	**6.98**
		L_{13} - L_{14}	-----	-1041.92	-261	-857	-34	140	-631	-191	-133	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.150	1	Yes	0.839	0.135	0.98	Yes	1.00	**6.70**
		L_{14} - L_{15}	-----	-744.10	-228	-470	572	138	35	-186	-11	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.124	1	Yes	0.859	0.127	0.99	Yes	1.00	**5.80**
		L_{15} - L_{16}	-----	-516.04	-244	-778	459	138	-56	299	7	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.185	0.98	Yes	0.786	0.206	1.00	Yes	1.00	**5.39**
		L_{16} - L_{17}	626.07	-120.60	-188	-1061	216	3	-127	-25	29	-71	0.720	0.277	1.00	Yes	0.428	0.180	0.61	Yes	0.165	0.214	0.38	Yes	0.163	0.256	0.42	Yes	1.00	**3.93**
		L_{17} - L_{18}	645.72	-----	-534	-977	31	-74	11	73	13	104	0.743	0.253	1.00	Yes	0.430	0.152	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		L_{18} - L_{19}	457.24	-----	-674	-443	-30	31	-16	418	50	-75	0.700	0.292	1.00	Yes	0.427	0.193	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_{19} - L_{20}	151.23	-----	-1886	1104	-1591	1205	901	245	76	21	0.231	0.759	1.00	Yes	0.136	0.461	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**22.31**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-372.51	-25	48	-50	109	-100	-32	-323	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.163	1	Yes	0.788	0.139	0.93	Yes	1.00	**1.52**
		$U_1 - L_1$			-----	-344.25	18	-13	-193	207	42	18	-291	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.150	0.91	Yes	0.728	0.264	1.00	Yes	1.00	**3.78**
		$U_2 - L_2$			77.15	-355.44	68	-75	-131	193	31	7	-229	9	0.139	0.313	0.46	Yes	0.076	0.172	0.25	Yes	0.777	0.154	0.94	Yes	0.752	0.246	1.00	Yes	1.00	**5.62**
		$U_3 - L_3$			259.55	-326.65	226	-235	-89	142	-208	-46	470	300	0.467	0.437	0.91	Yes	0.257	0.240	0.50	Yes	0.716	0.180	0.9	Yes	0.691	0.301	1.00	Yes	1.00	**7.31**
		$U_4 - L_4$			-----	-405.45	-42	31	77	-82	-81	12	264	93	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.102	1	Yes	0.858	0.104	0.97	Yes	1.00	**4.75**
		$U_5 - L_5$			-----	-428.72	20	-39	229	-252	-108	-23	-123	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.103	0.88	Yes	0.740	0.255	1.00	Yes	1.00	**3.63**
		$U_6 - L_6$			-----	-520.58	46	-58	268	-289	-84	33	78	67	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.086	0.88	Yes	0.747	0.253	1.00	Yes	1.00	**3.71**
		$U_7 - L_7$			-----	-445.57	118	-131	289	-313	-129	46	-11	76	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.121	0.87	Yes	0.687	0.309	1.00	Yes	1.00	**2.51**
		$U_8 - L_8$			-----	-1332.16	-3	-2	-191	230	-197	-69	-182	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.962	0.032	1	Yes	0.924	0.043	0.97	Yes	1.00	**5.15**
		$U_9 - L_9$			-----	-674.98	-166	189	-347	420	-224	-158	-251	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.128	0.94	Yes	0.762	0.234	1.00	Yes	1.00	**3.18**
		$U_{10} - L_{10}$			-----	-812.49	-115	107	-316	370	-205	-147	-254	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.106	0.95	Yes	0.802	0.192	1.00	Yes	1.00	**4.93**
		$U_{11} - L_{11}$			-----	-689.97	-84	133	-261	411	-174	-44	-144	2	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.093	0.93	Yes	0.803	0.191	1.00	Yes	1.00	**4.57**
		$U_{12} - L_{12}$			-----	-561.63	-39	43	-238	267	-174	3	183	181	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.094	0.91	Yes	0.771	0.228	1.00	Yes	1.00	**4.48**
		$U_{13} - L_{13}$			-----	-388.17	-6	20	-191	217	-92	86	-80	102	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.092	0.88	Yes	0.744	0.248	1.00	Yes	1.00	**3.28**
		$U_{14} - L_{14}$			-----	-340.16	-194	217	-134	143	-94	-20	-139	-26	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.122	0.89	Yes	0.720	0.278	1.00	Yes	1.00	**4.74**
		$U_{15} - L_{15}$			223.73	-316.09	-172	169	240	-253	-115	-131	45	-155	0.402	0.369	0.78	Yes	0.221	0.203	0.43	Yes	0.708	0.155	0.87	Yes	0.669	0.324	1.00	Yes	1.00	**5.30**
		$U_{16} - L_{16}$			-----	-322.64	-47	34	236	-244	-80	-85	-103	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.151	0.88	Yes	0.683	0.312	1.00	Yes	1.00	**4.27**
		$U_{17} - L_{17}$			-----	-439.96	38	-56	211	-229	-118	-172	-129	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.133	0.96	Yes	0.759	0.232	1.00	Yes	1.00	**3.35**
		$U_{18} - L_{18}$			-----	-534.32	124	-130	430	-441	-164	-62	145	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.093	0.88	Yes	0.743	0.250	1.00	Yes	1.00	**3.68**
		$U_{19} - L_{19}$			-----	-649.39	139	-151	496	-510	-65	11	234	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.089	0.9	Yes	0.756	0.237	1.00	Yes	1.00	**4.18**
		$U_{20} - L_{20}$			-----	-586.55	167	-214	402	-482	31	4	711	93	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.222	1	Yes	0.683	0.224	0.91	Yes	1.00	**2.84**
	Structure 2	$U_0 - L_0$			-----	-632.86	-120	187	-336	449	-265	-45	-1026	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.678	0.190	0.87	Yes	1.00	**2.71**
		$U_1 - L_1$			-----	-660.23	-122	129	-408	444	24	-69	-1324	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.238	1	Yes	0.708	0.188	0.90	Yes	1.00	**3.94**
		$U_2 - L_2$			-----	-612.22	-90	100	-391	426	86	40	-185	43	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.095	0.92	Yes	0.780	0.218	1.00	Yes	1.00	**4.11**
		$U_3 - L_3$			-----	-512.18	-47	54	-182	211	15	125	-86	91	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.090	0.97	Yes	0.803	0.192	1.00	Yes	1.00	**3.79**
		$U_4 - L_4$			-----	-368.26	20	-5	-148	168	-105	60	120	159	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.104	0.94	Yes	0.779	0.215	1.00	Yes	1.00	**4.06**
		$U_5 - L_5$			170.47	-356.53	117	-109	-158	188	-113	93	-129	108	0.307	0.278	0.59	Yes	0.169	0.153	0.33	Yes	0.805	0.106	0.92	Yes	0.754	0.240	1.00	Yes	1.00	**4.95**
		$U_6 - L_6$			363.59	-----	216	-226	-160	170	-135	83	198	154	0.654	0.346	1.00	Yes	0.360	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_7 - L_7$			-----	-415.69	-16	22	56	-64	-101	-22	-97	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.058	1	Yes	0.880	0.081	0.97	Yes	1.00	**4.95**
		$U_8 - L_8$			-----	-464.11	16	-35	366	-371	-134	-110	-177	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.121	0.8	Yes	0.669	0.325	1.00	Yes	1.00	**4.16**
		$U_9 - L_9$			-----	-697.20	103	-123	567	-587	-133	-102	-185	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.088	0.87	Yes	0.747	0.249	1.00	Yes	1.00	**5.10**
		$U_{10} - L_{10}$			-----	-797.36	105	-140	538	-562	-66	-42	41	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.080	0.87	Yes	0.746	0.248	1.00	Yes	1.00	**5.38**
		$U_{11} - L_{11}$			-----	-816.56	166	-171	500	-514	-67	-80	-103	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.078	0.9	Yes	0.763	0.227	1.00	Yes	1.00	**4.90**
		$U_{12} - L_{12}$			-----	-886.48	147	-160	520	-531	21	-65	28	67	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.076	0.93	Yes	0.768	0.228	1.00	Yes	1.00	**4.92**
		$U_{13} - L_{13}$			-----	-745.78	244	-243	573	-561	-83	44	70	78	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.110	0.95	Yes	0.719	0.274	1.00	Yes	1.00	**3.68**
		$U_{14} - L_{14}$			-----	-1341.51	150	-145	88	-92	-61	127	-103	55	-----	-----	-----	-----	-----	-----	-----	-----	0.981	0.016	1	Yes	0.890	0.026	0.92	Yes	1.00	**5.39**
		$U_{15} - L_{15}$			-----	-747.90	-168	170	-555	564	-82	-46	-154	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.138	0.98	Yes	0.721	0.270	1.00	Yes	1.00	**4.51**
		$U_{16} - L_{16}$			-----	-749.35	-115	104	-440	464	-156	-92	-5	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.083	0.95	Yes	0.803	0.197	1.00	Yes	1.00	**4.80**
		$U_{17} - L_{17}$			-----	-659.60	-138	142	-467	486	-173	-62	-159	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.085	0.9	Yes	0.768	0.226	1.00	Yes	1.00	**4.18**
		$U_{18} - L_{18}$			-----	-600.84	-94	101	-412	454	-158	-36	88	43	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.085	0.89	Yes	0.766	0.232	1.00	Yes	1.00	**4.23**
		$U_{19} - L_{19}$			-----	-509.22	-33	40	-226	245	-159	-11	78	63	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.085	0.86	Yes	0.760	0.236	1.00	Yes	1.00	**4.03**
		$U_{20} - L_{20}$			-----	-400.99	3	3	-178	195	-152	13	-151	22	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.101	0.93	Yes	0.768	0.222	1.00	Yes	1.00	**3.73**
	Structure 3	$U_{21} - L_{21}$			-----	-345.18	38	-35	-184	203	-137	33	51	71	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.111	0.9	Yes	0.730	0.260	1.00	Yes	1.00	**4.03**
		$U_{22} - L_{22}$			-----	-391.92	119	-130	-31	32	-162	-58	-129	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.099	0.99	Yes	0.829	0.166	1.00	Yes	1.00	**4.92**
		$U_{23} - L_{23}$			-----	-321.97	-103	96	238	-246	-96	-46	-108	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.124	0.86	Yes	0.681	0.315	1.00	Yes	1.00	**4.76**
		$U_{24} - L_{24}$			-----	-378.10	-21	16	225	-234	-78	-60	-103	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.105	0.89	Yes	0.724	0.268	1.00	Yes	1.00	**4.05**
		$U_{25} - L_{25}$			-----	-472.57	22	-35	297	-295	-82	-29	9	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.081	0.8	Yes	0.706	0.286	1.00	Yes	1.00	**3.91**
		$U_{26} - L_{26}$			-----	-570.14	76	-106	498	-528	-73	32	-116	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.087	0.85	Yes	0.727	0.270	1.00	Yes	1.00	**4.38**
		$U_{27} - L_{27}$			-----	-634.52	141	-157	543	-551	-64	-105	-106	4	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.077	0.87	Yes	0.739	0.256	1.00	Yes	1.00	**4.23**
		$U_{28} - L_{28}$			-----	-710.57	141	-138	551	-551	-116	25	128	88	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.075	0.9	Yes	0.762	0.234	1.00	Yes	1.00	**4.32**
		$U_{29} - L_{29}$			-----	-717.21	206	-212	639	-628	-114	26	-68	49	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.121	0.93	Yes	0.691	0.306	1.00	Yes	1.00	**4.56**
		$U_{30} - L_{30}$			-----	-1312.15	47	-59	-222	188	-94	107	-131	21	-----	-----	-----	-----	-----	-----	-----	-----	0.960	0.035	1	Yes	0.870	0.039	0.91	Yes	1.00	**5.52**
		$U_{31} - L_{31}$			-----	-776.89	-184	180	-503	509	-118	-60	65	-71	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.119	0.99	Yes	0.749	0.244	1.00	Yes	1.00	**4.32**
		$U_{32} - L_{32}$			-----	-914.65	-130	109	-446	468	-184	-96	-285	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.119	1	Yes	0.793	0.201	1.00	Yes	1.00	**5.17**
		$U_{33} - L_{33}$			-----	-855.32	-144	147	-396	441	-162	-41	-145	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.080	0.95	Yes	0.800	0.194	1.00	Yes	1.00	**5.09**
		$U_{34} - L_{34}$			-----	-845.72	-97	118	-399	464	-204	-22	245	166	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.088	0.93	Yes	0.791	0.205	1.00	Yes	1.00	**5.93**
		$U_{35} - L_{35}$			-----	-724.52	-94	117	-459	513	-178	55	-171	77	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.071	0.88	Yes	0.776	0.218	1.00	Yes	1.00	**5.07**
		$U_{36} - L_{36}$			-----	-497.16	-42	56	-293	314	-136	76	107	144	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.087	0.81	Yes	0.716	0.275	1.00	Yes	1.00	**4.01**
		$U_{37} - L_{37}$			-----	-355.86	-155	187	-96	110	-96	16	-150	3	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.119	0.93	Yes	0.753	0.240	1.00	Yes	1.00	**4.16**
		$U_{38} - L_{38}$			358.23	-----	-234	241	140	-135	-100	-104	-132	-157	0.644	0.354	1.00	Yes	0.354	0.195	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{39} - L_{39}$			220.59	-329.87	-163	158	209	-230	-111	-103	-106	-150	0.397	0.337	0.74	Yes	0.218	0.185	0.41	Yes	0.745	0.153	0.9	Yes	0.698	0.293	1.00	Yes	1.00	**5.42**
		$U_{40} - L_{40}$			-----	-340.27	-51	31	217	-218	-92	-74	-8	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.114	0.89	Yes	0.720	0.279	1.00	Yes	1.00	**4.19**
		$U_{41} - L_{41}$			-----	-487.10	35	-54	242	-256	-26	39	-78	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.094	0.93	Yes	0.764	0.233	1.00	Yes	1.00	**4.09**
		$U_{42} - L_{42}$			-----	-584.97	107	-117	481	-490	-86	-48	50	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.079	0.87	Yes	0.745	0.251	1.00	Yes	1.00	**4.24**
		$U_{43} - L_{43}$			-----	-705.70	142	-159	533	-553	-35	-13	506	44	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.135	0.95	Yes	0.756	0.235	1.00	Yes	1.00	**4.30**
		$U_{44} - L_{44}$			-----	-679.06	194	-240	467	-585	-29	-5	494	84	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.178	1	Yes	0.728	0.248	0.98	Yes	1.00	**3.43**
	Structure 4	$U_0 - L_0$			-----	-557.59	-107	171	-339	418	-250	-33	-970	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.258	1	Yes	0.649	0.194	0.85	Yes	1.00	**2.56**
		$U_1 - L_1$			-----	-624.56	-114	122	-411	437	-1	-78	-918	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.213	1	Yes	0.727	0.203	0.93	Yes	1.00	**4.12**
		$U_2 - L_2$			-----	-550.55	-94	100	-391	408	83	31	-139	49	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.086	0.9	Yes	0.766	0.231	1.00	Yes	1.00	**3.90**
		$U_3 - L_3$			-----	-460.78	-33	51	-162	192	-88	74	-81	117	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.093	0.96	Yes	0.795	0.195	1.00	Yes	1.00	**3.29**
		$U_4 - L_4$			-----	-355.18	26	-15	-175	192	-164	80	60	171	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.103	0.91	Yes	0.752	0.246	1.00	Yes	1.00	**3.98**
		$U_5 - L_5$			203.50	-361.42	134	-133	-149	181	-159	66	156	157	0.366	0.277	0.65	Yes	0.201	0.152	0.36	Yes	0.810	0.115	0.93	Yes	0.765	0.231	1.00	Yes	1.00	**5.36**
		$U_6 - L_6$			-----	-350.11	180	-198	38	-40	-193	-44	149	8	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.127	0.91	Yes	0.741	0.253	1.00	Yes	1.00	**4.68**
		$U_7 - L_7$			-----	-366.85	-14	4	236	-255	-164	-135	-197	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.149	0.9	Yes	0.703	0.291	1.00	Yes	1.00	**3.55**
		$U_8 - L_8$			-----	-515.07	16	-19	335	-337	-155	-132	-59	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.112	0.86	Yes	0.707	0.288	1.00	Yes	1.00	**4.47**
		$U_9 - L_9$			-----	-657.88	53	-113	380	-487	-102	-21	-174	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.102	0.9	Yes	0.766	0.226	1.00	Yes	1.00	**4.88**
		$U_{10} - L_{10}$			-----	-787.26	85	-99	387	-424	-20	4	-54	39	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.069	0.89	Yes	0.777	0.220	1.00	Yes	1.00	**5.16**
		$U_{11} - L_{11}$			-----	-645.36	182	-211	419	-474	-50	62	67	120	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.101	0.88	Yes	0.729	0.263	1.00	Yes	1.00	**3.13**
		$U_{12} - L_{12}$			-----	-1349.91	43	-69	61	-116	-110	9	-118	5	-----	-----	-----	-----	-----	-----	-----	-----	0.975	0.018	1	Yes	0.936	0.022	0.96	Yes	1.00	**5.30**
		$U_{13} - L_{13}$			-----	-467.00	-105	115	-251	277	-116	-93	-167	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.140	0.93	Yes	0.720	0.273	1.00	Yes	1.00	**2.50**
		$U_{14} - L_{14}$			-----	-550.71	-49	48	-193	233	-206	-171	-39	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.116	0.95	Yes	0.790	0.204	1.00	Yes	1.00	**3.86**
		$U_{15} - L_{15}$			-----	-454.17	-29	37	-175	210	-165	-60	-175	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.107	0.93	Yes	0.784	0.213	1.00	Yes	1.00	**3.47**
		$U_{16} - L_{16}$			-----	-346.21	-203	204	-151	153	-135	-38	-208	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.122	0.89	Yes	0.733	0.260	1.00	Yes	1.00	**4.24**
		$U_{17} - L_{17}$			303.50	-----	-298	311	199	-218	-135	-53	-83	-167	0.546	0.446	1.00	Yes	0.300	0.245	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		$U_{18} - L_{18}$			116.53	-294.38	-118	127	253	-293	-81	-34	-77	-117	0.210	0.408	0.62	Yes	0.115	0.225	0.34	Yes	0.643	0.142	0.79	Yes	0.623	0.374	1.00	Yes	1.00	**5.76**
		$U_{19} - L_{19}$			-----	-352.27	-30	18	143	-192	-166	-87	423	152	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.216	0.99	Yes	0.745	0.245	1.00	Yes	1.00	**4.14**
		$U_{20} - L_{20}$			-----	-390.81	49	-57	83	-129	-174	-56	138	44	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.117	1	Yes	0.827	0.165	1.00	Yes	1.00	**1.71**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	668.63	-----	-44	35	5	-8	-185	-253	-47	-20	0.877	0.115	1.00	Yes	0.530	0.063	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.71**
		$U_1 - L_2$	461.13	-70.69	-93	0	12	-13	-89	-172	9	5	0.829	0.169	1.00	Yes	0.456	0.093	0.55	Yes	0.162	0.149	0.32	Yes	0.150	0.119	0.27	Yes					1.00	**4.62**
		$U_2 - L_3$	419.93	-340.55	-91	-17	2	-67	-227	-265	-282	-147	0.755	0.198	0.96	Yes	0.415	0.109	0.53	Yes	0.784	0.206	1	Yes	0.721	0.117	0.84	Yes					1.00	**6.28**
		$U_3 - L_4$	-----	-380.49	-24	-35	26	-56	-237	-202	-138	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.123	1	Yes	0.805	0.071	0.88	Yes					1.00	**3.55**
		$U_4 - L_4$	594.38	-----	-86	50	-43	-13	-60	-173	-131	-114	0.872	0.128	1.00	Yes	0.479	0.070	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.61**
		$U_4 - L_5$	720.22	-----	-187	226	-100	45	56	-74	-69	17	0.851	0.142	1.00	Yes	0.468	0.078	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.76**
		$U_5 - L_6$	652.48	-----	-275	241	-168	111	349	152	298	190	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.81**
		$U_6 - L_7$	651.53	-----	-113	303	-8	115	291	174	241	173	0.770	0.226	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.72**
		$U_8 - L_9$	1011.47	-----	-123	348	3	135	237	186	80	103	0.809	0.185	1.00	Yes	0.501	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.13**
		$U_9 - L_{10}$	1030.35	-----	-316	228	-77	91	204	156	84	103	0.824	0.167	1.00	Yes	0.510	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.27**
		$U_{10} - L_{11}$	1012.47	-----	-270	150	-77	41	-82	-141	24	-42	0.855	0.143	1.00	Yes	0.529	0.080	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.52**
		$U_{11} - L_{12}$	837.81	-----	-268	81	-101	-35	-300	-270	-293	-230	0.829	0.169	1.00	Yes	0.456	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.99**
		$U_{12} - L_{13}$	626.15	-----	-188	135	-56	1	-343	-314	-264	-268	0.763	0.231	1.00	Yes	0.480	0.131	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.95**
		$U_{13} - L_{14}$	445.12	-----	-88	34	-8	-26	-293	-292	-233	-288	0.801	0.197	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.33**
		$U_{15} - L_{14}$	241.11	-336.09	-57	-1	3	-77	-210	-310	-318	-280	0.434	0.191	0.63	Yes	0.239	0.105	0.35	Yes	0.787	0.203	1	Yes	0.711	0.099	0.82	Yes					1.00	**3.99**
		$U_{16} - L_{15}$	419.00	-246.03	-123	89	-1	-55	-202	-274	-200	-187	0.754	0.237	1.00	Yes	0.414	0.131	0.55	Yes	0.583	0.189	0.78	Yes	0.521	0.158	0.68	Yes					1.00	**4.82**
		$U_{17} - L_{16}$	534.97	-----	-147	105	-36	-16	-144	-219	-263	-142	0.785	0.210	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.01**
		$U_{18} - L_{17}$	635.30	-----	-316	251	-133	65	-121	-146	355	-72	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.14**
		$U_{19} - L_{18}$	725.82	-----	-353	263	-106	68	-50	-150	46	6	0.786	0.205	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.31**
		$U_{20} - L_{19}$	737.32	-----	-336	308	-127	105	-61	-141	1	33	0.799	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.45**
	Structure 2	$U_0 - L_1$	790.88	-----	-353	341	-68	76	-169	-327	-122	49	0.782	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.65**
		$U_1 - L_2$	791.67	-----	-406	305	-89	60	-61	-158	40	10	0.783	0.212	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.76**
		$U_2 - L_3$	653.76	-----	-325	251	-68	52	-209	-192	-78	-177	0.773	0.222	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.18**
		$U_3 - L_4$	576.35	-----	-173	132	-42	-4	-311	-280	-318	-216	0.768	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.11**
		$U_4 - L_5$	415.09	-----	-125	83	14	-44	-300	-259	-220	-215	0.747	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.18**
		$U_5 - L_6$	395.63	-309.94	-110	55	65	-107	-428	-245	-369	-245	0.712	0.265	0.98	Yes	0.391	0.146	0.54	Yes	0.732	0.264	1	Yes	0.656	0.141	0.80	Yes					1.00	**5.29**
		$U_6 - L_7$	-----	-373.33	-37	-10	55	-94	-307	-265	-287	-252	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1	Yes	0.715	0.107	0.83	Yes					1.00	**3.22**
		$U_8 - L_7$	612.52	-----	-176	131	-47	-18	-95	-283	-142	-224	0.781	0.215	1.00	Yes	0.492	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.66**
		$U_8 - L_9$	723.00	-----	-325	252	-137	17	-121	-189	-282	-166	0.783	0.213	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.52**
		$U_{10} - L_9$	834.94	-----	-309	240	-113	42	-59	-147	-37	-74	0.826	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.73**
		$U_{11} - L_{10}$	913.01	-----	-353	298	-173	98	114	-34	61	9	0.832	0.165	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.86**
		$U_{12} - L_{11}$	838.16	-----	-349	329	-128	134	164	70	596	153	0.764	0.230	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.19**
		$U_{13} - L_{12}$	757.65	-----	-433	378	-181	174	281	130	265	149	0.750	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.56**
		$U_{14} - L_{13}$	736.03	-----	-265	422	-27	214	286	136	486	149	0.728	0.268	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.93**
		$U_{14} - L_{15}$	648.01	-----	-226	364	-3	104	152	81	53	38	0.766	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.33**
		$U_{15} - L_{16}$	628.63	-----	-367	323	-100	105	237	30	51	68	0.743	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.80**
		$U_{16} - L_{17}$	741.29	-----	-346	345	-84	109	13	-5	95	33	0.803	0.193	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.42**
		$U_{17} - L_{18}$	681.68	-----	-301	278	-79	77	-111	-51	-21	-22	0.806	0.191	1.00	Yes	0.443	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.35**
		$U_{18} - L_{19}$	675.76	-----	-295	239	-53	31	-177	-102	-162	-110	0.799	0.199	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.62**
		$U_{19} - L_{20}$	606.79	-----	-196	163	-21	-3	-211	-179	-141	-137	0.774	0.218	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.49**
		$U_{20} - L_{21}$	433.25	-----	-116	96	1	-15	-224	-135	-158	-141	0.779	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.76**
		$U_{21} - L_{22}$	439.68	-286.41	-103	57	32	-73	-263	-249	-265	-238	0.791	0.209	1.00	Yes	0.435	0.115	0.55	Yes	0.677	0.182	0.86	Yes	0.606	0.132	0.74	Yes					1.00	**5.41**
		$U_{23} - L_{22}$	403.64	-354.43	-97	49	13	-68	-65	-218	-91	-186	0.726	0.187	0.92	Yes	0.399	0.103	0.51	Yes	0.844	0.149	1	Yes	0.750	0.124	0.88	Yes					1.00	**5.44**
		$U_{24} - L_{23}$	439.94	-----	-119	103	-4	-30	-59	-117	-178	-71	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.57**
		$U_{25} - L_{24}$	624.50	-----	-198	180	-16	-19	10	-96	-15	-55	0.796	0.196	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.02**
		$U_{26} - L_{25}$	690.23	-----	-286	265	-90	37	110	-26	32	5	0.816	0.182	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.79**
		$U_{27} - L_{26}$	672.75	-----	-301	287	-131	95	146	33	-33	67	0.795	0.197	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.43**
		$U_{28} - L_{27}$	670.68	-----	-309	325	-116	128	185	99	629	95	0.726	0.270	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.84**
		$U_{29} - L_{28}$	628.89	-----	-355	330	-126	120	269	116	217	111	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.49**
		$U_{30} - L_{29}$	596.31	-----	-201	342	-12	165	222	123	515	133	0.705	0.287	1.00	Yes	0.388	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.83**
		$U_{30} - L_{31}$	773.85	-----	-283	452	-24	133	125	69	62	38	0.766	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.92**
		$U_{31} - L_{32}$	782.64	-----	-449	382	-132	131	55	39	36	47	0.774	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.21**
		$U_{32} - L_{33}$	894.05	-----	-377	327	-104	116	-133	-106	10	-24	0.814	0.178	1.00	Yes	0.448	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.85**
		$U_{33} - L_{34}$	894.53	-----	-342	286	-120	73	-245	-216	-255	-159	0.815	0.180	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.20**
		$U_{34} - L_{35}$	822.13	-----	-301	218	-96	41	-283	-285	-201	-232	0.813	0.182	1.00	Yes	0.447	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.63**
		$U_{35} - L_{36}$	710.86	-----	-313	228	-95	24	-389	-266	-308	-257	0.770	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.25**
		$U_{36} - L_{37}$	605.01	-----	-174	138	-28	-16	-308	-337	-326	-314	0.771	0.224	1.00	Yes	0.486	0.127	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.38**
		$U_{38} - L_{37}$	-----	-391.50	-25	-16	43	-84	-119	-239	-116	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.148	1	Yes	0.750	0.096	0.85	Yes					1.00	**2.95**
		$U_{39} - L_{38}$	259.73	-340.47	-75	37	49	-96	-163	-209	-261	-166	0.467	0.199	0.67	Yes	0.257	0.109	0.37	Yes	0.811	0.181	1	Yes	0.720	0.123	0.85	Yes					1.00	**4.38**
		$U_{40} - L_{39}$	434.86	-215.17	-128	94	28	-64	-124	-185	-99	-118	0.782	0.217	1.00	Yes	0.430	0.119	0.55	Yes	0.515	0.145	0.67	Yes	0.455	0.163	0.62	Yes					1.00	**4.93**
		$U_{41} - L_{40}$	599.11	-----	-179	136	-51	-11	-60	-140	-106	-76	0.799	0.193	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.51**
		$U_{42} - L_{41}$	638.13	-----	-327	263	-136	65	-88	-83	-332	-32	0.754	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.37**
		$U_{43} - L_{42}$	807.19	-----	-394	317	-95	65	-4	-119	-5	-29	0.799	0.200	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.97**
		$U_{44} - L_{43}$	814.00	-----	-357	364	-139	122	-27	-162	34	6	0.805	0.193	1.00	Yes	0.443	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.59**
	Structure 3	$U_0 - L_1$	715.63	-----	-342	301	-68	71	-184	-261	-131	45	0.775	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.61**
		$U_1 - L_2$	724.75	-----	-360	267	-91	57	-67	-149	38	13	0.785	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.68**
		$U_2 - L_3$	643.80	-----	-324	234	-110	53	-232	-259	-192	-187	0.761	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.10**
		$U_3 - L_4$	529.77	-----	-144	92	-25	-16	-331	-278	-323	-231	0.777	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_4 - L_5$	408.31	-188.15	-118	88	13	-53	-378	-305	-343	-236	0.734	0.260	1.00	Yes	0.404	0.143	0.55	Yes	0.446	0.212	0.66	Yes	0.398	0.151	0.55	Yes					1.00	**4.41**
		$U_5 - L_6$	294.95	-314.11	-75	-7	41	-93	-402	-340	-295	-310	0.530	0.235	0.77	Yes	0.292	0.129	0.43	Yes	0.736	0.256	1	Yes	0.665	0.119	0.79	Yes					1.00	**4.27**
		$U_7 - L_6$	451.96	-----	-85	36	-20	-32	-109	-268	-224	-248	0.813	0.187	1.00	Yes	0.447	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.96**
		$U_8 - L_7$	642.15	-----	-189	155	-50	-14	-156	-223	-148	-168	0.783	0.209	1.00	Yes	0.493	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.42**
		$U_8 - L_9$	860.37	-----	-261	136	-140	-45	-12	-177	-66	-125	0.851	0.147	1.00	Yes	0.468	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.38**
		$U_{10} - L_9$	1017.63	-----	-261	180	-138	26	100	-26	-125	-2	0.860	0.137	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.97**
		$U_{11} - L_{10}$	906.47	-----	-287	224	-157	92	403	243	1116	475	0.725	0.270	1.00	Yes	0.449	0.154	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.44**
		$U_{12} - L_{11}$	975.94	-----	-104	359	-10	142	419	274	272	206	0.780	0.214	1.00	Yes	0.483	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.84**
		$U_{12} - L_{13}$	671.52	-----	-116	287	10	113	186	113	95	94	0.794	0.197	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
		$U_{13} - L_{14}$	668.18	-----	-309	222	-70	76	165	135	91	114	0.790	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.04**
		$U_{14} - L_{15}$	726.52	-----	-197	190	-19	31	-85	-133	58	-5	0.859	0.137	1.00	Yes	0.472	0.075	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.50**
		$U_{15} - L_{16}$	586.63	-----	-86	31	-24	-15	-218	-177	-159	-124	0.860	0.137	1.00	Yes	0.473	0.076	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.05**
		$U_{17} - L_{16}$	-----	-402.22	-13	-22	-5	-47	-45	-151	-137	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.920	0.073	1	Yes	0.851	0.060	0.92	Yes					1.00	**3.15**
		$U_{18} - L_{17}$	285.39	-377.85	-61	13	-17	-65	-66	-213	-189	-70	0.513	0.145	0.66	Yes	0.282	0.080	0.37	Yes	0.870	0.127	1	Yes	0.800	0.083	0.89	Yes					1.00	**5.05**
		$U_{19} - L_{18}$	419.27	-104.11	-83	25	-23	-33	1	-142	-453	-149	0.754	0.238	1.00	Yes	0.415	0.131	0.55	Yes	0.239	0.233	0.48	Yes	0.220	0.106	0.33	Yes					1.00	**4.75**
		$U_{20} - L_{19}$	654.54	-----	-74	59	-21	2	-146	-197	30	-7	0.859	0.136	1.00	Yes	0.519	0.075	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.79**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-547.72	-87	52	339	-1099	-42	112	-92	-822	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.211	0.96	Yes	0.739	0.261	1.00	Yes	1.00	**6.40**
		$U_1 - U_2$	-----	-532.05	-105	78	-300	-767	-152	115	-134	-463	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.275	1	Yes	0.717	0.182	0.90	Yes	1.00	**3.63**
		$U_2 - U_3$	-----	-563.80	-99	286	-525	-472	-115	111	-161	-562	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.228	1	Yes	0.760	0.125	0.89	Yes	1.00	**4.23**
		$U_3 - U_4$	473.00	-594.69	139	399	-660	-510	-221	-11	260	-349	0.542	0.216	0.76	Yes	0.372	0.148	0.52	Yes	0.809	0.187	1	Yes	0.802	0.157	0.96	Yes	1.00	**6.35**
		$U_4 - U_5$	477.36	-585.97	189	388	-842	-131	-90	-19	-393	-162	0.547	0.267	0.82	Yes	0.376	0.183	0.56	Yes	0.797	0.200	1	Yes	0.790	0.200	1.00	Yes	1.00	**6.35**
		$U_5 - U_6$	687.13	-----	278	495	-660	249	98	135	-325	-299	0.788	0.212	1.00	Yes	0.531	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		$U_6 - U_7$	902.79	-----	420	225	-282	-10	322	288	-342	96	0.863	0.136	1.00	Yes	0.603	0.094	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.43**
		$U_7 - U_8$	1015.58	-----	-109	1420	-516	1305	543	732	-15	324	0.704	0.289	1.00	Yes	0.491	0.198	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_8 - U_9$	861.34	-----	1306	-282	1296	-846	371	544	226	-497	0.706	0.286	1.00	Yes	0.483	0.194	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		$U_9 - U_{10}$	631.63	-----	244	255	174	-895	-6	305	-117	-708	0.685	0.314	1.00	Yes	0.464	0.211	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.46**
		$U_{10} - U_{11}$	-----	-617.63	249	-173	132	-918	47	107	-73	-541	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.188	0.99	Yes	0.788	0.206	1.00	Yes	1.00	**4.26**
		$U_{11} - U_{12}$	-----	-901.58	154	-208	-52	-810	12	102	162	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.140	1	Yes	0.846	0.134	0.99	Yes	1.00	**3.21**
		$U_{12} - U_{13}$	-----	-1248.82	-49	-268	-297	-824	81	7	108	-473	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.149	1	Yes	0.834	0.114	0.95	Yes	1.00	**3.71**
		$U_{13} - U_{14}$	-----	-1386.39	-194	-504	-524	-1437	-43	-8	11	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.195	1	Yes	0.795	0.159	0.96	Yes	1.00	**3.53**
		$U_{14} - U_{15}$	-----	-1369.68	-407	-292	-1349	-690	41	-277	-105	-257	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.201	1	Yes	0.785	0.149	0.94	Yes	1.00	**3.44**
		$U_{15} - U_{16}$	-----	-1437.89	-199	-467	-894	-797	-113	-428	-306	-291	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.162	1	Yes	0.824	0.099	0.93	Yes	1.00	**3.91**
		$U_{16} - U_{17}$	-----	-1393.41	-414	-225	-1230	-447	-287	-374	-144	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.799	0.136	0.94	Yes	1.00	**4.51**
		$U_{17} - U_{18}$	-----	-1101.72	-251	-62	-755	41	-114	70	-114	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.123	1	Yes	0.862	0.123	0.99	Yes	1.00	**4.86**
		$U_{18} - U_{19}$	-----	-750.45	-240	13	-699	102	362	-143	83	-233	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.143	1	Yes	0.844	0.141	0.99	Yes	1.00	**5.23**
		$U_{19} - U_{20}$	-----	-594.52	-233	-77	-1117	275	-31	-123	-133	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.317	1	Yes	0.669	0.225	0.90	Yes	1.00	**9.49**
	Structure 2	$U_0 - U_1$	-----	-588.30	685	-453	1156	-1773	336	-65	175	-706	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.169	0.87	Yes	0.695	0.301	1.00	Yes	1.00	**8.49**
		$U_1 - U_2$	-----	-804.91	-149	-324	-203	-1130	-17	18	-46	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.777	0.171	0.95	Yes	1.00	**4.12**
		$U_2 - U_3$	-----	-1126.94	-130	-435	-205	-1457	-34	-63	-97	-661	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.800	0.148	0.95	Yes	1.00	**3.89**
		$U_3 - U_4$	-----	-1347.38	-534	-548	-1025	-1623	-115	-40	-61	-478	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.225	1	Yes	0.767	0.145	0.92	Yes	1.00	**3.46**
		$U_4 - U_5$	-----	-1469.42	-586	-564	-995	-1810	-120	-89	-312	-688	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.238	1	Yes	0.754	0.150	0.91	Yes	1.00	**3.60**
		$U_5 - U_6$	-----	-1550.94	-579	-18	-1307	-1344	-195	-51	-493	-696	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1	Yes	0.796	0.111	0.91	Yes	1.00	**4.02**
		$U_6 - U_7$	-----	-1395.70	-318	-207	-1289	-1377	-169	-95	42	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.195	1	Yes	0.795	0.123	0.92	Yes	1.00	**4.22**
		$U_7 - U_8$	-----	-1386.54	-347	-203	-1517	-880	-82	-180	-274	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.201	1	Yes	0.790	0.135	0.93	Yes	1.00	**4.19**
		$U_8 - U_9$	-----	-1201.52	-354	212	-1432	-281	-17	-194	-371	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.176	1	Yes	0.815	0.152	0.97	Yes	1.00	**4.81**
		$U_9 - U_{10}$	-----	-911.77	-90	533	-1559	-121	-121	-227	-603	-514	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.205	1	Yes	0.787	0.190	0.98	Yes	1.00	**5.98**
		$U_{10} - U_{11}$	801.77	-629.19	316	596	-1433	-159	-174	-98	-975	-370	0.677	0.321	1.00	Yes	0.461	0.211	0.68	Yes	0.629	0.263	0.9	Yes	0.625	0.202	0.83	Yes	1.00	**8.43**
		$U_{11} - U_{12}$	924.89	-----	190	647	-1052	452	31	32	-475	-526	0.781	0.213	1.00	Yes	0.525	0.142	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		$U_{12} - U_{13}$	1323.82	-----	478	83	-24	-125	347	443	-91	20	0.894	0.102	1.00	Yes	0.637	0.070	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.65**
		$U_{13} - U_{14}$	1327.40	-----	-334	2920	-423	2024	659	1010	303	587	0.653	0.339	1.00	Yes	0.462	0.223	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{14} - U_{15}$	1388.02	-----	2831	-176	1953	-241	693	770	513	417	0.683	0.315	1.00	Yes	0.483	0.207	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{15} - U_{16}$	1310.57	-----	140	399	-557	-1332	173	413	252	-554	0.792	0.198	1.00	Yes	0.564	0.134	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.76**
		$U_{16} - U_{17}$	1053.18	-----	667	214	46	-1005	-32	317	494	-835	0.776	0.214	1.00	Yes	0.516	0.141	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		$U_{17} - U_{18}$	719.34	-----	472	241	233	-1174	-58	278	-124	-531	0.722	0.277	1.00	Yes	0.481	0.183	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		$U_{18} - U_{19}$	531.52	-667.00	558	138	-26	-1143	4	149	148	-800	0.534	0.311	0.85	Yes	0.350	0.200	0.55	Yes	0.793	0.200	1	Yes	0.788	0.194	0.99	Yes	1.00	**6.68**
		$U_{19} - U_{20}$	-----	-724.65	259	95	-150	-1063	-55	129	-192	-396	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.194	1	Yes	0.800	0.170	0.97	Yes	1.00	**4.88**
		$U_{20} - U_{21}$	-----	-835.50	140	-97	-401	-980	0	20	-175	-655	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.231	1	Yes	0.763	0.142	0.91	Yes	1.00	**4.68**
		$U_{21} - U_{22}$	-----	-814.06	-80	-35	-665	-1184	-183	-98	-107	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.743	0.172	0.92	Yes	1.00	**4.31**
		$U_{22} - U_{23}$	-----	-808.16	-87	-102	-1202	-672	-106	-159	-184	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.247	1	Yes	0.738	0.174	0.92	Yes	1.00	**4.27**
		$U_{23} - U_{24}$	-----	-866.04	-91	206	-934	-369	6	-61	-491	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.203	1	Yes	0.790	0.135	0.93	Yes	1.00	**5.47**
		$U_{24} - U_{25}$	302.38	-718.11	176	319	-1105	-271	-9	-80	-429	-130	0.284	0.235	0.52	Yes	0.188	0.154	0.35	Yes	0.797	0.201	1	Yes	0.792	0.177	0.97	Yes	1.00	**5.87**
		$U_{25} - U_{26}$	676.03	-----	209	650	-1308	188	20	-39	-665	-354	0.679	0.320	1.00	Yes	0.445	0.204	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		$U_{26} - U_{27}$	731.04	-----	266	458	-878	110	-42	7	-774	-71	0.734	0.262	1.00	Yes	0.489	0.173	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		$U_{27} - U_{28}$	1053.12	-----	197	683	-1181	455	236	251	-660	-387	0.776	0.218	1.00	Yes	0.516	0.143	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.34**
		$U_{28} - U_{29}$	1431.29	-----	352	56	-693	-385	566	589	-602	260	0.865	0.130	1.00	Yes	0.616	0.088	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		$U_{29} - U_{30}$	1319.80	-----	-184	2918	-201	1914	802	1068	501	703	0.649	0.343	1.00	Yes	0.459	0.226	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{30} - U_{31}$	1373.69	-----	2862	-385	2060	-497	773	729	654	381	0.675	0.318	1.00	Yes	0.478	0.209	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		$U_{31} - U_{32}$	1219.58	-----	97	366	-787	-856	201	390	596	-628	0.824	0.168	1.00	Yes	0.587	0.115	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		$U_{32} - U_{33}$	819.65	-----	579	130	329	-1256	9	216	-94	-1002	0.692	0.299	1.00	Yes	0.465	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		$U_{33} - U_{34}$	573.95	-794.84	458	137	-190	-1403	-25	207	212	-611	0.485	0.272	0.76	Yes	0.330	0.178	0.51	Yes	0.795	0.200	1	Yes	0.790	0.198	0.99	Yes	1.00	**7.02**
		$U_{34} - U_{35}$	-----	-953.71	365	-210	-12	-1382	43	36	-107	-522	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.166	1	Yes	0.823	0.168	1.00	Yes	1.00	**4.55**
		$U_{35} - U_{36}$	-----	-1194.24	77	-477	-296	-1428	-19	81	-86	-359	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1	Yes	0.810	0.152	0.97	Yes	1.00	**3.67**
		$U_{36} - U_{37}$	-----	-1395.96	-304	-326	-910	-1436	-23	-123	98	-284	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.190	1	Yes	0.795	0.128	0.93	Yes	1.00	**3.59**
		$U_{37} - U_{38}$	-----	-1410.20	-211	-434	-1367	-1202	-95	-200	-219	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.189	1	Yes	0.803	0.122	0.93	Yes	1.00	**3.66**
		$U_{38} - U_{39}$	-----	-1599.37	-163	-632	-1210	-1337	8	-210	-428	-331	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.168	1	Yes	0.821	0.111	0.94	Yes	1.00	**4.02**
		$U_{39} - U_{40}$	-----	-1512.37	-615	-566	-1844	-1085	11	-90	-292	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.214	1	Yes	0.776	0.153	0.93	Yes	1.00	**3.84**
		$U_{40} - U_{41}$	-----	-1390.19	-537	-521	-1547	-946	157	-159	74	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1	Yes	0.792	0.138	0.93	Yes	1.00	**4.04**
		$U_{41} - U_{42}$	-----	-1189.14	-427	-125	-1364	-113	55	-28	-89	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.149	1	Yes	0.844	0.139	0.99	Yes	1.00	**5.07**
		$U_{42} - U_{43}$	-----	-880.65	-314	-43	-895	41	167	-214	-68	-418	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.139	1	Yes	0.850	0.136	0.99	Yes	1.00	**6.17**
		$U_{43} - U_{44}$	-----	-643.55	-172	-225	-1391	431	-124	-129	-97	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.217	0.99	Yes	0.760	0.236	1.00	Yes	1.00	**13.00**
	Structure 3	$U_0 - U_1$	-----	-594.27	630	-350	560	-1618	275	-45	324	-1238	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.248	0.93	Yes	0.669	0.325	1.00	Yes	1.00	**10.07**
		$U_1 - U_2$	-----	-706.98	-81	-228	-24	-770	-21	5	-68	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.190	1	Yes	0.795	0.155	0.96	Yes	1.00	**3.82**
		$U_2 - U_3$	-----	-1024.49	-54	-241	37	-843	-33	-60	-146	-684	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.180	1	Yes	0.802	0.137	0.94	Yes	1.00	**3.73**
		$U_3 - U_4$	-----	-1347.47	-221	-372	-472	-1355	-108	-36	-223	-560	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1	Yes	0.772	0.149	0.93	Yes	1.00	**3.99**
		$U_4 - U_5$	-----	-1421.98	-441	-132	-909	-804	-93	-56	-37	-731	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.173	1	Yes	0.815	0.100	0.92	Yes	1.00	**3.93**
		$U_5 - U_6$	-----	-1369.04	-253	-374	-866	-1273	-186	-148	116	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.206	1	Yes	0.785	0.140	0.93	Yes	1.00	**3.92**
		$U_6 - U_7$	-----	-1369.06	-496	-152	-1413	-494	-119	-298	-276	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.202	1	Yes	0.785	0.156	0.95	Yes	1.00	**3.95**
		$U_7 - U_8$	-----	-1210.87	-236	32	-915	-268	-108	-317	-498	-477	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.180	1	Yes	0.809	0.126	0.94	Yes	1.00	**4.34**
		$U_8 - U_9$	-----	-876.70	-132	254	-829	27	-214	-188	-456	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.166	1	Yes	0.823	0.137	0.96	Yes	1.00	**4.38**
		$U_9 - U_{10}$	-----	-602.38	-77	373	-998	230	3	0	-245	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.188	0.97	Yes	0.769	0.224	1.00	Yes	1.00	**6.71**
		$U_{10} - U_{11}$	704.18	-----	307	252	-550	60	132	149	-681	-10	0.764	0.233	1.00	Yes	0.517	0.156	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.55**
		$U_{11} - U_{12}$	860.32	-----	-305	1374	-634	1127	230	509	-249	229	0.705	0.293	1.00	Yes	0.482	0.199	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{12} - U_{13}$	1002.91	-----	1382	-130	1617	-843	166	533	1	-522	0.695	0.299	1.00	Yes	0.485	0.204	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_{13} - U_{14}$	825.35	-----	218	356	-135	-580	-100	374	280	-601	0.789	0.206	1.00	Yes	0.552	0.142	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		$U_{14} - U_{15}$	588.37	-----	433	203	187	-783	-56	241	153	-799	0.674	0.321	1.00	Yes	0.455	0.212	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		$U_{15} - U_{16}$	282.78	-595.06	256	109	-203	-808	-77	185	268	108	0.324	0.237	0.57	Yes	0.222	0.163	0.39	Yes	0.810	0.178	0.99	Yes	0.802	0.192	1.00	Yes	1.00	**4.97**
		$U_{16} - U_{17}$	281.85	-607.39	307	27	-612	-478	165	-76	142	-14	0.323	0.174	0.50	Yes	0.222	0.119	0.35	Yes	0.826	0.167	1	Yes	0.819	0.146	0.97	Yes	1.00	**5.04**
		$U_{17} - U_{18}$	-----	-609.50	201	-179	-501	-492	65	36	-35	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.165	1	Yes	0.822	0.119	0.95	Yes	1.00	**4.12**
		$U_{18} - U_{19}$	-----	-587.17	0	-72	-721	-174	214	-197	-5	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.200	1	Yes	0.792	0.172	0.97	Yes	1.00	**4.44**
		$U_{19} - U_{20}$	-----	-602.62	93	-295	-617	-113	-147	-110	77	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.813	0.147	0.96	Yes	1.00	**9.24**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	346.37	-265.25	235	-259	709	-845	263	969	-268	-984	0.530	0.465	1.00	Yes	0.312	0.279	0.60	Yes	0.482	0.353	0.84	Yes	0.478	0.254	0.74	Yes	1.00	**26.28**
		L_1 - L_2	366.11	-----	-127	-606	5	-31	-1191	262	312	-140	0.560	0.438	1.00	Yes	0.342	0.281	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_2 - L_3	627.15	-----	-749	-545	-53	42	41	-577	-181	119	0.722	0.274	1.00	Yes	0.417	0.162	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_3 - L_4	578.96	-199.06	-624	-363	-12	258	-1103	-66	265	-221	0.666	0.328	1.00	Yes	0.396	0.204	0.60	Yes	0.272	0.180	0.46	Yes	0.269	0.151	0.43	Yes	1.00	**4.27**
		L_4 - L_5	-----	-550.24	-607	324	98	462	124	-149	-72	200	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.133	0.98	Yes	0.838	0.161	1.00	Yes	1.00	**3.94**
		L_5 - L_6	-----	-747.66	-215	238	124	590	-187	-84	161	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.121	1	Yes	0.863	0.130	1.00	Yes	1.00	**3.89**
		L_6 - L_7	-----	-1175.11	-291	7	157	-29	-54	-214	-254	458	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.038	1	Yes	0.946	0.046	1.00	Yes	1.00	**4.55**
		L_7 - L_8	-----	-1249.50	-34	673	-58	1246	358	208	451	491	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.197	1	Yes	0.791	0.165	0.96	Yes	1.00	**3.67**
		L_8 - L_9	-----	-1151.88	677	-36	1107	-65	215	378	416	414	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.255	1	Yes	0.730	0.147	0.88	Yes	1.00	**2.66**
		L_9 - L_{10}	-----	-1057.58	338	-226	565	-414	527	-30	363	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.135	1	Yes	0.851	0.089	0.95	Yes	1.00	**6.33**
		L_{10} - L_{11}	-----	-546.83	-49	-605	499	-52	74	-696	-285	44	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.127	0.97	Yes	0.833	0.160	1.00	Yes	1.00	**7.48**
		L_{11} - L_{12}	486.59	-----	126	-668	332	-252	-1098	193	125	-81	0.630	0.369	1.00	Yes	0.378	0.233	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		L_{12} - L_{13}	1040.24	-----	-478	-614	59	-155	-11	-534	-160	120	0.821	0.171	1.00	Yes	0.525	0.104	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_{13} - L_{14}	1246.72	-----	-235	-1243	183	-528	-1059	109	146	22	0.733	0.260	1.00	Yes	0.475	0.161	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		L_{14} - L_{15}	1534.06	-----	-1553	-677	-569	-153	-221	-782	-153	159	0.749	0.242	1.00	Yes	0.487	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_{15} - L_{16}	1612.36	-----	-1148	-1247	-306	-374	-881	-13	102	-141	0.788	0.212	1.00	Yes	0.506	0.127	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		L_{16} - L_{17}	1215.66	-----	-1361	21	-421	55	210	-299	-127	169	0.769	0.226	1.00	Yes	0.499	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		L_{17} - L_{18}	1017.23	-----	-394	-34	-223	35	-93	-297	115	-90	0.886	0.114	1.00	Yes	0.567	0.069	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.37**
		L_{18} - L_{19}	514.51	-----	-485	238	-265	230	-138	303	-164	123	0.787	0.208	1.00	Yes	0.533	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		L_{19} - L_{20}	377.32	-292.09	-365	102	-852	513	349	78	140	31	0.638	0.359	1.00	Yes	0.394	0.212	0.61	Yes	0.586	0.369	0.96	Yes	0.581	0.278	0.86	Yes	1.00	**9.14**
	Structure 2	L_0 - L_1	-----	-501.93	116	-380	462	-1363	158	547	24	83	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.263	0.99	Yes	0.717	0.277	1.00	Yes	1.00	**18.16**
		L_1 - L_2	465.46	-----	345	-1251	243	-397	-1047	554	117	41	0.565	0.427	1.00	Yes	0.336	0.268	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_2 - L_3	965.13	-----	-229	-988	-42	-277	-212	-845	-74	156	0.761	0.233	1.00	Yes	0.499	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		L_3 - L_4	1239.31	-----	-290	-1489	-9	-517	-1143	235	179	2	0.728	0.265	1.00	Yes	0.490	0.168	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_4 - L_5	1742.38	-----	-1581	-1434	-438	-398	422	-513	-81	163	0.812	0.184	1.00	Yes	0.538	0.110	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		L_5 - L_6	1789.89	-----	-1204	-1841	-221	-501	-1044	54	190	-90	0.768	0.228	1.00	Yes	0.515	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		L_6 - L_7	1786.41	-----	-2196	-1329	-585	-226	-45	-801	-160	218	0.756	0.242	1.00	Yes	0.503	0.144	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_7 - L_8	1324.40	-----	-1518	-555	-309	369	-851	149	214	-143	0.759	0.237	1.00	Yes	0.499	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		L_8 - L_9	1009.69	-----	-1180	24	-124	576	-103	-1351	-86	174	0.706	0.286	1.00	Yes	0.476	0.184	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		L_9 - L_{10}	651.37	-780.28	-1113	-59	-124	849	-1171	-113	145	-131	0.581	0.319	0.91	Yes	0.339	0.193	0.54	Yes	0.825	0.155	0.99	Yes	0.819	0.178	1.00	Yes	1.00	**7.72**
		L_{10} - L_{11}	-----	-735.85	-733	458	7	567	116	-254	-76	75	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.081	0.96	Yes	0.864	0.128	1.00	Yes	1.00	**4.51**
		L_{11} - L_{12}	-----	-1030.91	-294	682	-77	1095	158	-218	49	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.120	0.98	Yes	0.845	0.149	1.00	Yes	1.00	**4.90**
		L_{12} - L_{13}	-----	-1473.62	-250	-354	56	-692	-124	131	-331	229	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.103	1	Yes	0.889	0.070	0.96	Yes	1.00	**5.03**
		L_{13} - L_{14}	-----	-1543.05	-621	1739	-878	2482	179	137	344	472	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.174	0.96	Yes	0.776	0.217	1.00	Yes	1.00	**4.22**
		L_{14} - L_{15}	-----	-1369.51	1739	-647	2295	-739	167	179	381	298	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.297	1	Yes	0.689	0.200	0.89	Yes	1.00	**2.53**
		L_{15} - L_{16}	-----	-1534.70	-523	-126	-414	-130	111	-139	281	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.926	0.071	1	Yes	0.918	0.052	0.98	Yes	1.00	**5.42**
		L_{16} - L_{17}	-----	-1044.72	592	-500	1113	-70	-87	-509	-383	81	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.232	1	Yes	0.761	0.137	0.90	Yes	1.00	**4.18**
		L_{17} - L_{18}	-----	-769.82	292	-471	525	58	-628	90	187	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1	Yes	0.808	0.084	0.90	Yes	1.00	**3.77**
		L_{18} - L_{19}	-----	-639.75	-106	-732	717	34	86	-754	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.132	1	Yes	0.853	0.141	1.00	Yes	1.00	**6.32**
		L_{19} - L_{20}	532.22	-406.95	-74	-979	474	86	-1315	350	148	-165	0.603	0.390	1.00	Yes	0.357	0.240	0.60	Yes	0.546	0.168	0.72	Yes	0.542	0.189	0.74	Yes	1.00	**6.09**
		L_{20} - L_{21}	988.70	-----	-1018	-1059	400	-80	450	-466	-185	70	0.788	0.205	1.00	Yes	0.517	0.124	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.32**
		L_{21} - L_{22}	829.49	-----	-722	-1445	94	-303	-1150	4	135	-102	0.661	0.335	1.00	Yes	0.442	0.214	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_{22} - L_{23}	838.33	-----	-1615	-617	-357	70	-202	-848	-59	206	0.669	0.327	1.00	Yes	0.447	0.207	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		L_{23} - L_{24}	915.78	-----	-1175	-897	-56	464	-876	108	164	-139	0.730	0.266	1.00	Yes	0.479	0.163	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.00**
		L_{24} - L_{25}	-----	-566.17	-1226	-42	210	533	337	-1172	-105	151	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.202	0.97	Yes	0.755	0.237	1.00	Yes	1.00	**8.62**
		L_{25} - L_{26}	-----	-641.67	-268	191	29	728	-9	-77	102	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.102	0.97	Yes	0.855	0.141	1.00	Yes	1.00	**6.29**
		L_{26} - L_{27}	-----	-861.39	-279	424	113	537	-58	67	-107	289	-----	-----	-----	-----	-----	-----	-----	-----	0.911	0.070	0.99	Yes	0.905	0.086	1.00	Yes	1.00	**4.76**
		L_{27} - L_{28}	-----	-1141.76	-230	745	-53	1312	51	-192	289	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.146	0.99	Yes	0.832	0.162	1.00	Yes	1.00	**5.30**
		L_{28} - L_{29}	-----	-1551.86	-279	-534	67	-467	-164	-25	-100	397	-----	-----	-----	-----	-----	-----	-----	-----	0.936	0.061	1	Yes	0.928	0.053	0.99	Yes	1.00	**6.83**
		L_{29} - L_{30}	-----	-1534.59	-742	1931	-843	2514	77	60	425	382	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.167	0.95	Yes	0.772	0.220	1.00	Yes	1.00	**4.70**
		L_{30} - L_{31}	-----	-1387.49	1786	-568	2232	-694	385	317	274	262	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.290	1	Yes	0.698	0.195	0.90	Yes	1.00	**1.69**
		L_{31} - L_{32}	-----	-1566.47	-179	-290	-304	-333	307	-376	247	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.945	0.054	1	Yes	0.937	0.033	0.98	Yes	1.00	**4.87**
		L_{32} - L_{33}	-----	-964.24	642	-289	973	-180	-408	112	-297	111	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.196	1	Yes	0.791	0.133	0.93	Yes	1.00	**3.26**
		L_{33} - L_{34}	-----	-759.31	447	-408	590	9	204	12	101	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.898	0.072	0.98	Yes	0.892	0.103	1.00	Yes	1.00	**5.49**
		L_{34} - L_{35}	721.09	-749.57	-256	-1278	834	-101	383	-1258	-217	96	0.644	0.356	1.00	Yes	0.375	0.216	0.60	Yes	0.792	0.158	0.96	Yes	0.787	0.204	1.00	Yes	1.00	**9.22**
		L_{35} - L_{36}	938.86	-----	30	-1282	549	-189	-1757	245	162	-116	0.657	0.338	1.00	Yes	0.442	0.218	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		L_{36} - L_{37}	1328.52	-----	-807	-1543	273	-278	75	-793	-200	155	0.762	0.235	1.00	Yes	0.500	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_{37} - L_{38}	1704.83	-----	-1535	-2218	-340	-664	-1270	121	105	-170	0.722	0.273	1.00	Yes	0.480	0.165	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{38} - L_{39}	1754.22	-----	-2092	-1271	-623	-226	-62	-905	-100	171	0.753	0.242	1.00	Yes	0.505	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_{39} - L_{40}	1704.23	-----	-1629	-1481	-448	-327	-720	306	122	-130	0.795	0.202	1.00	Yes	0.526	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		L_{40} - L_{41}	1274.46	-----	-1655	-188	-472	33	183	-507	-51	265	0.756	0.238	1.00	Yes	0.510	0.153	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		L_{41} - L_{42}	996.30	-----	-1114	159	-263	52	-332	59	264	81	0.796	0.200	1.00	Yes	0.523	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.25**
		L_{42} - L_{43}	513.88	-----	-1247	534	-285	216	694	388	113	337	0.624	0.368	1.00	Yes	0.371	0.233	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.36**
		L_{43} - L_{44}	-----	-462.04	-796	200	-633	212	-193	-56	1289	376	-----	-----	-----	-----	-----	-----	-----	-----	0.664	0.329	1	Yes	0.660	0.162	0.83	Yes	1.00	**27.89**
	Structure 3	L_0 - L_1	-----	-467.67	71	-260	271	-515	38	172	39	179	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.120	0.97	Yes	0.842	0.155	1.00	Yes	1.00	**5.83**
		L_1 - L_2	517.93	-----	222	-450	402	-461	286	-189	106	184	0.793	0.198	1.00	Yes	0.536	0.126	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		L_2 - L_3	888.18	-----	-195	-750	47	-230	234	-637	-22	164	0.773	0.226	1.00	Yes	0.495	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.32**
		L_3 - L_4	1134.32	-----	-153	-1248	48	-431	-1071	397	144	59	0.717	0.279	1.00	Yes	0.465	0.173	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_4 - L_5	1586.42	-----	-1357	-1041	-378	-257	90	-797	-33	222	0.775	0.219	1.00	Yes	0.498	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		L_5 - L_6	1495.86	-----	-741	-1522	-143	-465	-1175	86	241	-35	0.731	0.266	1.00	Yes	0.475	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_6 - L_7	1239.28	-----	-1361	-197	-500	239	-164	-982	-54	253	0.729	0.269	1.00	Yes	0.472	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		L_7 - L_8	995.48	-----	-677	-384	-107	154	-785	-116	137	-170	0.786	0.212	1.00	Yes	0.502	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		L_8 - L_9	545.11	-----	-798	218	-176	422	233	-441	-108	168	0.706	0.288	1.00	Yes	0.424	0.187	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_9 - L_{10}	-----	-564.91	-444	106	-64	519	-329	-65	145	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.078	0.95	Yes	0.861	0.137	1.00	Yes	1.00	**5.96**
		L_{10} - L_{11}	-----	-1175.54	-277	293	8	124	-262	88	-307	185	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.028	0.99	Yes	0.946	0.046	1.00	Yes	1.00	**7.23**
		L_{11} - L_{12}	-----	-1271.46	-24	634	-70	1284	395	65	297	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1	Yes	0.805	0.170	0.98	Yes	1.00	**4.77**
		L_{12} - L_{13}	-----	-1125.48	719	-23	1323	-63	-46	218	27	157	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.273	1	Yes	0.713	0.175	0.89	Yes	1.00	**3.26**
		L_{13} - L_{14}	-----	-1021.74	5	-395	84	89	-899	-135	321	-278	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.162	1	Yes	0.822	0.062	0.89	Yes	1.00	**4.48**
		L_{14} - L_{15}	-----	-712.67	46	-374	559	103	-26	-690	-259	86	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.146	1	Yes	0.836	0.126	0.97	Yes	1.00	**4.96**
		L_{15} - L_{16}	-----	-506.51	104	-749	456	108	-1355	366	253	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.211	1	Yes	0.772	0.198	0.97	Yes	1.00	**5.16**
		L_{16} - L_{17}	658.42	-----	-489	-651	230	-74	13	-530	-171	193	0.757	0.242	1.00	Yes	0.450	0.153	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		L_{17} - L_{18}	644.61	-----	-703	-622	-6	-116	-517	193	114	-114	0.742	0.253	1.00	Yes	0.429	0.150	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_{18} - L_{19}	443.11	-----	-756	76	-57	-12	411	328	-103	216	0.678	0.315	1.00	Yes	0.414	0.209	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{19} - L_{20}	310.48	-162.35	-656	402	-223	21	595	161	1496	406	0.475	0.518	1.00	Yes	0.280	0.307	0.59	Yes	0.295	0.455	0.76	Yes	0.292	0.197	0.49	Yes	1.00	**39.36**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-281.66	-13	53	-98	147	195	62	-1017	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.367	1	Yes	0.596	0.189	0.79	Yes	1.00	**1.88**
		$U_1 - L_1$			-----	-262.72	7	-1	-142	153	551	215	-1357	-489	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.421	1	Yes	0.556	0.196	0.76	Yes	1.00	**3.26**
		$U_2 - L_2$			59.83	-160.06	60	-63	-42	78	710	236	-2379	-724	0.108	0.789	0.90	Yes	0.059	0.434	0.50	Yes	0.350	0.642	1	Yes	0.339	0.100	0.44	Yes	1.00	**4.02**
		$U_3 - L_3$			136.81	-----	115	-131	-24	45	636	192	-2004	-499	0.246	0.748	1.00	Yes	0.135	0.412	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.49**
		$U_4 - L_4$			-----	-205.71	78	-79	89	-94	1024	511	-1836	-511	-----	-----	-----	-----	-----	-----	-----	-----	0.452	0.545	1	Yes	0.435	0.120	0.56	Yes	1.00	**4.69**
		$U_5 - L_5$			-----	-383.39	72	-85	196	-220	936	344	222	277	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.298	1	Yes	0.661	0.223	0.89	Yes	1.00	**4.10**
		$U_6 - L_6$			-----	-400.19	81	-70	197	-206	1629	739	455	287	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.386	1	Yes	0.574	0.180	0.76	Yes	1.00	**3.67**
		$U_7 - L_7$			-----	-381.21	105	-118	257	-277	1273	307	270	137	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.362	1	Yes	0.588	0.272	0.87	Yes	1.00	**3.50**
		$U_8 - L_8$			-----	-1168.72	-111	127	-248	293	1267	264	-1133	-413	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.147	1	Yes	0.813	0.055	0.87	Yes	1.00	**4.60**
		$U_9 - L_9$			-----	-625.19	-229	260	-374	421	603	233	-1106	-252	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.255	1	Yes	0.706	0.234	0.95	Yes	1.00	**3.04**
		$U_{10} - L_{10}$			-----	-634.48	-159	158	-256	293	618	299	-1727	-568	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.342	1	Yes	0.626	0.152	0.78	Yes	1.00	**3.47**
		$U_{11} - L_{11}$			-----	-629.63	-167	218	-335	447	628	363	-1013	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.236	1	Yes	0.733	0.208	0.95	Yes	1.00	**4.57**
		$U_{12} - L_{12}$			-----	-444.32	-129	135	-235	251	435	309	-1365	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.354	1	Yes	0.610	0.214	0.83	Yes	1.00	**3.52**
		$U_{13} - L_{13}$			-----	-310.49	-73	91	-149	176	322	186	-1087	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.370	1	Yes	0.595	0.201	0.80	Yes	1.00	**3.01**
		$U_{14} - L_{14}$			-----	-197.32	-51	59	-66	74	496	75	-2064	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.440	0.557	1	Yes	0.418	0.095	0.52	Yes	1.00	**3.96**
		$U_{15} - L_{15}$			-----	-280.90	-55	42	207	-226	158	-400	-1174	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.366	1	Yes	0.594	0.289	0.89	Yes	1.00	**6.79**
		$U_{16} - L_{16}$			-----	-320.15	49	-57	235	-245	621	25	-475	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.254	0.98	Yes	0.677	0.313	1.00	Yes	1.00	**5.20**
		$U_{17} - L_{17}$			-----	-418.37	80	-93	203	-222	505	200	38	82	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1	Yes	0.722	0.225	0.95	Yes	1.00	**3.61**
		$U_{18} - L_{18}$			-----	-533.30	173	-179	435	-447	679	172	205	46	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.183	0.97	Yes	0.742	0.253	1.00	Yes	1.00	**5.04**
		$U_{19} - L_{19}$			-----	-526.07	196	-209	389	-406	603	122	679	136	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.336	1	Yes	0.612	0.189	0.81	Yes	1.00	**3.02**
		$U_{20} - L_{20}$			-----	-426.15	239	-287	320	-381	440	58	428	56	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.376	1	Yes	0.545	0.202	0.75	Yes	1.00	**1.42**
	Structure 2	$U_0 - L_0$			-----	-622.28	-161	267	-323	468	40	7	-1033	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.250	1	Yes	0.667	0.198	0.87	Yes	1.00	**2.69**
		$U_1 - L_1$			-----	-650.36	-219	226	-456	473	628	166	-1448	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.248	1	Yes	0.697	0.201	0.90	Yes	1.00	**3.67**
		$U_2 - L_2$			-----	-519.00	-168	184	-337	371	621	296	-1401	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.303	1	Yes	0.661	0.190	0.86	Yes	1.00	**3.14**
		$U_3 - L_3$			-----	-458.07	-77	88	-205	225	545	267	-556	117	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1	Yes	0.718	0.205	0.93	Yes	1.00	**3.42**
		$U_4 - L_4$			-----	-274.56	-31	42	-140	155	548	241	-986	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.371	1	Yes	0.581	0.198	0.78	Yes	1.00	**3.37**
		$U_5 - L_5$			-----	-190.55	42	-29	-70	97	281	101	-1808	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.430	0.566	1	Yes	0.403	0.124	0.53	Yes	1.00	**4.42**
		$U_6 - L_6$			252.54	-----	140	-144	-53	58	-65	-122	-1238	-128	0.454	0.542	1.00	Yes	0.250	0.298	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		$U_7 - L_7$			-----	-212.06	77	-89	115	-130	636	78	-1799	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.479	0.513	1	Yes	0.449	0.166	0.62	Yes	1.00	**4.80**
		$U_8 - L_8$			-----	-472.62	151	-170	335	-358	421	45	-429	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.156	0.85	Yes	0.681	0.313	1.00	Yes	1.00	**4.38**
		$U_9 - L_9$			-----	-693.32	269	-277	578	-593	759	358	-412	5	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.164	0.94	Yes	0.743	0.251	1.00	Yes	1.00	**5.65**
		$U_{10} - L_{10}$			-----	-752.08	233	-233	511	-533	1177	691	74	261	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.256	1	Yes	0.703	0.235	0.94	Yes	1.00	**5.75**
		$U_{11} - L_{11}$			-----	-735.31	226	-220	452	-459	1174	660	95	404	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.257	1	Yes	0.687	0.203	0.90	Yes	1.00	**4.66**
		$U_{12} - L_{12}$			-----	-724.03	187	-170	417	-412	1467	638	773	451	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.301	1	Yes	0.628	0.179	0.81	Yes	1.00	**4.64**
		$U_{13} - L_{13}$			-----	-600.22	236	-234	478	-466	1373	308	594	201	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.328	1	Yes	0.579	0.229	0.81	Yes	1.00	**4.41**
		$U_{14} - L_{14}$			-----	-1108.83	-20	14	-129	113	1117	-86	-1863	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.179	1	Yes	0.735	0.023	0.76	Yes	1.00	**4.58**
		$U_{15} - L_{15}$			-----	-645.60	-273	275	-555	541	648	67	-1014	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.272	1	Yes	0.622	0.266	0.89	Yes	1.00	**4.59**
		$U_{16} - L_{16}$			-----	-637.69	-195	182	-422	421	673	191	-1476	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.255	1	Yes	0.683	0.179	0.87	Yes	1.00	**3.80**
		$U_{17} - L_{17}$			-----	-564.79	-207	207	-416	433	596	197	-1599	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.299	1	Yes	0.657	0.201	0.86	Yes	1.00	**3.63**
		$U_{18} - L_{18}$			-----	-564.43	-163	169	-436	468	621	216	-1080	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.240	1	Yes	0.719	0.240	0.96	Yes	1.00	**4.33**
		$U_{19} - L_{19}$			-----	-450.20	-94	95	-241	249	517	198	-1284	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.314	1	Yes	0.672	0.240	0.92	Yes	1.00	**3.75**
		$U_{20} - L_{20}$			-----	-295.80	-53	58	-131	147	519	190	-1250	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.606	0.387	1	Yes	0.567	0.168	0.74	Yes	1.00	**3.13**
		$U_{21} - L_{21}$			-----	-276.32	9	0	-178	196	132	-34	-1028	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.624	0.370	1	Yes	0.585	0.250	0.84	Yes	1.00	**5.17**
		$U_{22} - L_{22}$			-----	-213.55	-3	4	16	-17	694	153	-1884	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.481	0.514	1	Yes	0.452	0.021	0.48	Yes	1.00	**4.57**
		$U_{23} - L_{23}$			-----	-320.88	17	-25	226	-244	211	-115	-502	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.234	0.96	Yes	0.679	0.312	1.00	Yes	1.00	**5.37**
		$U_{24} - L_{24}$			-----	-369.44	54	-59	223	-232	585	205	-75	43	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.236	1	Yes	0.708	0.265	0.98	Yes	1.00	**4.32**
		$U_{25} - L_{25}$			-----	-475.95	100	-101	296	-296	589	224	-369	57	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.183	0.9	Yes	0.711	0.285	1.00	Yes	1.00	**4.44**
		$U_{26} - L_{26}$			-----	-573.20	170	-178	489	-517	709	302	-265	160	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.189	0.96	Yes	0.730	0.264	1.00	Yes	1.00	**4.94**
		$U_{27} - L_{27}$			-----	-596.32	222	-217	519	-525	1175	546	277	384	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.256	1	Yes	0.694	0.244	0.94	Yes	1.00	**4.86**
		$U_{28} - L_{28}$			-----	-616.30	157	-131	467	-450	1627	544	969	425	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.287	1	Yes	0.660	0.198	0.86	Yes	1.00	**5.17**
		$U_{29} - L_{29}$			-----	-591.66	169	-173	546	-538	1427	238	-87	109	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.336	1	Yes	0.570	0.261	0.84	Yes	1.00	**6.32**
		$U_{30} - L_{30}$			-----	-1076.33	-143	118	-170	135	921	-223	-1707	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.182	1	Yes	0.741	0.032	0.78	Yes	1.00	**4.04**
		$U_{31} - L_{31}$			-----	-654.83	-311	306	-481	471	499	98	-962	10	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.265	1	Yes	0.631	0.230	0.87	Yes	1.00	**3.10**
		$U_{32} - L_{32}$			-----	-849.90	-223	203	-465	463	464	165	-657	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1	Yes	0.737	0.199	0.94	Yes	1.00	**4.77**
		$U_{33} - L_{33}$			-----	-763.55	-248	237	-445	451	454	216	-1020	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1	Yes	0.714	0.199	0.92	Yes	1.00	**4.28**
		$U_{34} - L_{34}$			-----	-676.71	-238	250	-398	429	552	329	-1715	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.328	1	Yes	0.633	0.189	0.83	Yes	1.00	**3.91**
		$U_{35} - L_{35}$			-----	-577.72	-257	271	-406	447	631	372	-2130	-426	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.348	1	Yes	0.619	0.189	0.81	Yes	1.00	**3.75**
		$U_{36} - L_{36}$			-----	-476.56	-133	157	-312	338	189	136	-1153	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.304	1	Yes	0.686	0.295	0.99	Yes	1.00	**4.55**
		$U_{37} - L_{37}$			-----	-204.30	-79	94	-92	108	558	112	-1850	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.462	0.534	1	Yes	0.432	0.138	0.58	Yes	1.00	**4.29**
		$U_{38} - L_{38}$			245.92	-----	-146	153	122	-129	-59	-252	-1243	-306	0.442	0.556	1.00	Yes	0.243	0.306	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.43**
		$U_{39} - L_{39}$			-----	-316.22	-62	46	212	-235	318	-290	-663	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.278	1	Yes	0.669	0.300	0.97	Yes	1.00	**7.08**
		$U_{40} - L_{40}$			-----	-324.06	37	-45	215	-218	595	172	75	45	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.255	1	Yes	0.686	0.279	0.97	Yes	1.00	**4.65**
		$U_{41} - L_{41}$			-----	-460.25	88	-97	230	-244	578	193	-81	55	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.722	0.222	0.95	Yes	1.00	**3.90**
		$U_{42} - L_{42}$			-----	-582.23	170	-180	494	-502	669	172	61	61	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.173	0.96	Yes	0.742	0.257	1.00	Yes	1.00	**5.25**
		$U_{43} - L_{43}$			-----	-709.31	188	-206	534	-556	622	187	240	154	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.154	0.97	Yes	0.760	0.236	1.00	Yes	1.00	**6.42**
		$U_{44} - L_{44}$			-----	-670.15	250	-308	476	-604	542	92	494	84	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1	Yes	0.718	0.256	0.98	Yes	1.00	**5.36**
	Structure 3	$U_0 - L_0$			-----	-508.87	-152	244	-263	361	286	38	-858	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.268	1	Yes	0.637	0.185	0.83	Yes	1.00	**1.97**
		$U_1 - L_1$			-----	-625.72	-211	210	-464	468	620	146	-965	16	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.209	1	Yes	0.728	0.217	0.95	Yes	1.00	**3.97**
		$U_2 - L_2$			-----	-489.58	-165	176	-323	349	653	311	-1130	20	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.275	1	Yes	0.681	0.198	0.88	Yes	1.00	**3.01**
		$U_3 - L_3$			-----	-372.46	-73	88	-144	170	556	273	-848	83	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.298	1	Yes	0.643	0.173	0.82	Yes	1.00	**2.46**
		$U_4 - L_4$			-----	-278.16	-40	46	-173	187	590	226	-1000	32	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.369	1	Yes	0.589	0.239	0.83	Yes	1.00	**3.90**
		$U_5 - L_5$			-----	-202.62	33	-25	-112	134	191	61	-1729	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.454	0.545	1	Yes	0.429	0.171	0.60	Yes	1.00	**4.56**
		$U_6 - L_6$			-----	-196.43	60	-67	46	-51	807	245	-2027	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.438	0.557	1	Yes	0.416	0.086	0.51	Yes	1.00	**4.28**
		$U_7 - L_7$			-----	-364.43	74	-92	231	-256	437	-36	-146	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.196	0.94	Yes	0.698	0.292	1.00	Yes	1.00	**4.07**
		$U_8 - L_8$			-----	-507.47	135	-134	322	-327	918	447	-652	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.265	1	Yes	0.696	0.279	0.98	Yes	1.00	**5.12**
		$U_9 - L_9$			-----	-624.69	164	-219	370	-471	1092	469	9	255	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.244	1	Yes	0.727	0.218	0.95	Yes	1.00	**5.28**
		$U_{10} - L_{10}$			-----	-553.95	161	-154	274	-283	1570	816	1184	696	-----	-----	-----	-----	-----	-----	-----	-----	0.574	0.420	1	Yes	0.547	0.147	0.70	Yes	1.00	**2.57**
		$U_{11} - L_{11}$			-----	-487.96	214	-249	323	-370	1195	538	988	505	-----	-----	-----	-----	-----	-----	-----	-----	0.582	0.411	1	Yes	0.551	0.205	0.76	Yes	1.00	**1.81**
		$U_{12} - L_{12}$			-----	-1102.13	-13	-7	-85	58	1358	329	-2110	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.203	1	Yes	0.764	0.016	0.79	Yes	1.00	**4.03**
		$U_{13} - L_{13}$			-----	-449.51	-154	168	-279	297	658	119	-692	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.247	1	Yes	0.693	0.293	0.99	Yes	1.00	**2.68**
		$U_{14} - L_{14}$			-----	-447.89	-98	96	-185	204	606	247	-1295	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.318	1	Yes	0.642	0.178	0.83	Yes	1.00	**2.86**
		$U_{15} - L_{15}$			-----	-357.66	-80	89	-141	171	521	247	-1198	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.348	1	Yes	0.617	0.173	0.80	Yes	1.00	**2.91**
		$U_{16} - L_{16}$			-----	-203.47	-84	85	-114	118	891	342	-1886	-611	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.548	1	Yes	0.431	0.151	0.59	Yes	1.00	**3.73**
		$U_{17} - L_{17}$			163.78	-----	-202	201	130	-152	428	-212	-1522	-558	0.295	0.699	1.00	Yes	0.162	0.384	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.39**
		$U_{18} - L_{18}$			93.71	-297.59	-100	107	243	-286	480	153	-835	-447	0.169	0.608	0.78	Yes	0.093	0.334	0.43	Yes	0.650	0.335	0.99	Yes	0.630	0.366	1.00	Yes	1.00	**8.62**
		$U_{19} - L_{19}$			-----	-328.43	-24	8	227	-236	431	221	76	52	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.213	0.94	Yes	0.695	0.302	1.00	Yes	1.00	**6.01**
		$U_{20} - L_{20}$			-----	-323.17	80	-92	193	-241	605	194	301	96	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.273	1	Yes	0.684	0.308	1.00	Yes	1.00	**3.53**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$			619.32	-----	-40	31	1	-11	-362	-550	56	128	0.812	0.185	1.00	Yes	0.491	0.102	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		$U_1 - L_2$			380.86	-----	-94	-3	12	-16	-661	-611	371	199	0.685	0.312	1.00	Yes	0.377	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_2 - L_3$			-----	-291.23	-108	-16	60	-33	-302	-759	583	319	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.323	1	Yes	0.616	0.139	0.76	Yes	1.00	**10.73**
		$U_3 - L_4$			-----	-324.79	-17	-47	11	-65	48	-172	-698	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.253	1	Yes	0.687	0.083	0.77	Yes	1.00	**4.36**
		$U_4 - L_4$			571.01	-----	-89	48	-33	15	-179	-42	286	146	0.837	0.157	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		$U_5 - L_5$			626.98	-----	-164	213	-56	90	-366	209	738	63	0.741	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		$U_7 - L_6$			618.40	-----	-272	248	-41	88	-326	54	-573	32	0.731	0.259	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_8 - L_7$			616.82	-----	-88	295	29	83	-133	133	-541	-323	0.729	0.266	1.00	Yes	0.401	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.71**
		$U_9 - L_9$			956.82	-----	-95	354	12	184	-109	-569	592	286	0.765	0.233	1.00	Yes	0.474	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_9 - L_{10}$			961.91	-----	-305	223	-113	128	-464	-726	594	255	0.769	0.228	1.00	Yes	0.476	0.129	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{10} - L_{11}$			929.47	-----	-239	171	-82	95	-459	-733	181	-12	0.785	0.207	1.00	Yes	0.486	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		$U_{11} - L_{12}$			778.13	-----	-253	81	-95	48	-522	-711	167	-23	0.770	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{12} - L_{13}$			552.69	-----	-193	117	-102	43	-316	-788	-624	-294	0.674	0.323	1.00	Yes	0.424	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		$U_{13} - L_{14}$			385.96	-----	-82	23	-34	-23	-145	-367	-677	-285	0.694	0.300	1.00	Yes	0.382	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{15} - L_{14}$			253.91	-220.84	-75	-13	-3	-84	-275	-198	1037	-250	0.457	0.408	0.87	Yes	0.251	0.224	0.48	Yes	0.517	0.476	1	Yes	0.467	0.108	0.58	Yes	1.00	**6.66**
		$U_{16} - L_{15}$			327.06	-----	-118	73	-53	-1	-280	33	866	-258	0.588	0.402	1.00	Yes	0.324	0.221	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		$U_{17} - L_{16}$			520.64	-----	-143	97	-47	23	-357	-87	-304	-104	0.763	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{18} - L_{17}$			612.66	-----	-318	250	-132	90	-487	-53	-401	-111	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{19} - L_{18}$			692.88	-----	-333	253	-131	95	-455	-158	-458	-204	0.750	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{20} - L_{19}$			685.31	-----	-378	317	-181	145	-350	-174	-273	-139	0.742	0.251	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
	Structure 2	$U_0 - L_1$			764.48	-----	-261	311	-101	128	-569	-621	-156	5	0.756	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_1 - L_2$			714.47	-----	-384	278	-165	118	-457	-766	140	-34	0.707	0.293	1.00	Yes	0.389	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_2 - L_3$			601.23	-----	-316	253	-117	87	-335	-576	128	-25	0.711	0.283	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_3 - L_4$			540.60	-----	-172	111	-53	26	-315	-576	167	7	0.721	0.278	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_4 - L_5$			382.57	-----	-134	90	4	-18	-378	-464	243	40	0.688	0.306	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		$U_5 - L_6$			293.64	-243.17	-89	25	50	-108	-398	-498	-1125	-178	0.528	0.463	1.00	Yes	0.290	0.255	0.55	Yes	0.574	0.190	0.77	Yes	0.515	0.137	0.66	Yes	1.00	**7.78**
		$U_6 - L_7$			-----	-376.94	-9	-40	44	-100	41	-195	-550	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.189	1	Yes	0.722	0.114	0.84	Yes	1.00	**3.95**
		$U_8 - L_7$			597.40	-----	-186	149	-86	36	-316	-9	324	-148	0.762	0.233	1.00	Yes	0.479	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_9 - L_8$			721.04	-----	-331	244	-176	120	-150	93	-249	-128	0.781	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{10} - L_9$			831.68	-----	-312	253	-151	126	-141	166	-176	-8	0.823	0.171	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{11} - L_{10}$			876.98	-----	-343	298	-137	164	-206	241	-401	126	0.799	0.200	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{12} - L_{11}$			849.54	-----	-336	344	-132	175	-561	266	-545	53	0.774	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{13} - L_{12}$			729.26	-----	-410	376	-161	164	-497	71	-533	0	0.721	0.270	1.00	Yes	0.397	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_{14} - L_{13}$			728.31	-----	-247	422	-20	131	-140	27	-499	-329	0.721	0.270	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.51**
		$U_{14} - L_{15}$			577.60	-----	-187	337	-9	164	123	-234	663	249	0.683	0.311	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{15} - L_{16}$			588.35	-----	-347	315	-171	168	200	-276	586	177	0.696	0.303	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.38**
		$U_{16} - L_{17}$			693.78	-----	-331	355	-127	154	-15	-290	373	110	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_{17} - L_{18}$			645.65	-----	-286	278	-111	127	-62	-310	358	88	0.763	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{18} - L_{19}$			616.91	-----	-277	242	-83	97	-85	-615	288	75	0.729	0.268	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_{19} - L_{20}$			542.32	-----	-187	137	-43	48	-350	-666	289	79	0.692	0.304	1.00	Yes	0.380	0.174	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{20} - L_{21}$			374.24	-----	-115	93	-30	2	-114	-384	-604	-76	0.673	0.322	1.00	Yes	0.370	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{21} - L_{22}$			348.14	-----	-108	19	14	-77	-193	-669	-783	-90	0.626	0.365	1.00	Yes	0.344	0.200	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_{23} - L_{22}$			397.29	-----	-110	51	-1	-52	-161	-47	478	-107	0.715	0.279	1.00	Yes	0.393	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.09**
		$U_{24} - L_{23}$			426.35	-----	-123	106	-20	19	-184	109	-255	-63	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{25} - L_{24}$			598.04	-----	-191	176	-42	50	-186	54	-299	-81	0.763	0.232	1.00	Yes	0.419	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{26} - L_{25}$			662.04	-----	-286	271	-80	98	-59	270	-252	-56	0.783	0.211	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{27} - L_{26}$			653.68	-----	-286	291	-106	126	-293	208	-341	-7	0.773	0.226	1.00	Yes	0.425	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_{28} - L_{27}$			676.50	-----	-302	342	-96	149	-515	200	-537	38	0.733	0.263	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{29} - L_{28}$			594.96	-----	-347	329	-93	106	-338	119	-543	-42	0.703	0.295	1.00	Yes	0.387	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{30} - L_{29}$			630.48	-----	-198	366	31	73	-133	167	-228	-189	0.745	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		$U_{30} - L_{31}$			728.34	-----	-261	432	-60	226	53	-523	497	215	0.721	0.278	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{31} - L_{32}$			734.14	-----	-427	368	-232	216	-62	-465	451	118	0.726	0.268	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{32} - L_{33}$			846.60	-----	-345	339	-160	192	-233	-553	282	59	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{33} - L_{34}$			837.78	-----	-324	264	-147	163	-376	-671	236	35	0.763	0.229	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{34} - L_{35}$			783.99	-----	-296	236	-154	122	-455	-548	7	-138	0.776	0.219	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		$U_{35} - L_{36}$			694.46	-----	-317	228	-179	98	-390	-501	-453	-257	0.752	0.245	1.00	Yes	0.414	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{36} - L_{37}$			522.91	-----	-180	116	-81	26	-120	-812	-705	-247	0.667	0.327	1.00	Yes	0.420	0.188	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_{38} - L_{37}$			-----	-310.77	-15	-33	16	-74	-327	-160	740	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.325	1	Yes	0.595	0.085	0.69	Yes	1.00	**3.33**
		$U_{39} - L_{38}$			345.06	-191.72	-105	40	31	-87	-141	134	839	-128	0.621	0.377	1.00	Yes	0.341	0.207	0.55	Yes	0.457	0.356	0.82	Yes	0.406	0.134	0.54	Yes	1.00	**7.62**
		$U_{40} - L_{39}$			359.84	-----	-119	82	-38	-3	-318	37	672	-201	0.647	0.346	1.00	Yes	0.356	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_{41} - L_{40}$			559.73	-----	-177	124	-57	31	-321	-42	-411	-178	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{42} - L_{41}$			621.95	-----	-322	261	-122	92	-433	1	-402	-168	0.735	0.261	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_{43} - L_{42}$			768.66	-----	-377	307	-136	103	-391	-72	-375	-193	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{44} - L_{43}$			794.42	-----	-379	373	-176	156	-94	59	-211	-87	0.786	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
	Structure 3	$U_0 - L_1$			709.21	-----	-246	268	-78	102	-564	-530	-140	8	0.768	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_1 - L_2$			656.14	-----	-342	239	-159	108	-327	-642	162	-42	0.711	0.280	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_2 - L_3$			568.17	-----	-311	227	-125	86	-427	-823	129	-29	0.672	0.325	1.00	Yes	0.369	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_3 - L_4$			507.27	-----	-141	92	-41	19	-383	-469	160	-21	0.744	0.252	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_4 - L_5$			348.37	-----	-126	74	-29	-19	-265	-714	-701	-181	0.627	0.368	1.00	Yes	0.345	0.202	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		$U_5 - L_6$			-----	-301.84	-72	-15	21	-123	-355	-340	-1427	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.288	1	Yes	0.639	0.157	0.80	Yes	1.00	**8.27**
		$U_7 - L_6$			423.58	-----	-88	30	-38	-12	-196	-54	408	-124	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_8 - L_7$			564.06	-----	-183	143	-111	53	-200	12	776	-72	0.688	0.311	1.00	Yes	0.433	0.179	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_9 - L_8$			847.03	-----	-268	120	-116	23	-164	86	218	135	0.838	0.157	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		$U_{10} - L_9$			930.18	-----	-225	183	-94	82	-338	287	804	221	0.786	0.210	1.00	Yes	0.486	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		$U_{11} - L_{10}$			989.65	-----	-293	281	-81	107	-540	35	-575	-47	0.791	0.204	1.00	Yes	0.490	0.115	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{12} - L_{11}$			942.86	-----	-58	374	19	129	-287	121	-612	-246	0.754	0.245	1.00	Yes	0.467	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.22**
		$U_{13} - L_{12}$			611.55	-----	-90	292	6	156	55	-292	587	304	0.723	0.273	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_{13} - L_{14}$			607.77	-----	-272	221	-101	124	-56	-282	662	263	0.719	0.275	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		$U_{14} - L_{15}$			645.51	-----	-203	183	-52	97	-241	-669	306	97	0.763	0.237	1.00	Yes	0.420	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{15} - L_{16}$			503.05	-----	-83	30	-46	2	-373	-397	-743	-386	0.738	0.257	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_{17} - L_{16}$			-----	-333.17	-19	-40	0	-52	-375	-359	550	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.237	1	Yes	0.705	0.067	0.78	Yes	1.00	**4.55**
		$U_{18} - L_{17}$			-----	-220.11	-92	-3	-44	-49	-504	-156	1296	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.507	0.489	1	Yes	0.466	0.118	0.59	Yes	1.00	**8.11**
		$U_{19} - L_{18}$			438.35	-----	-86	15	16	-20	-337	-317	-210	-120	0.788	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		$U_{20} - L_{19}$			648.00	-----	-107	72	-30	4	-65	3	-61	11	0.850	0.142	1.00	Yes	0.513	0.078	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.51**

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors DL Factor: 1.30 Pedestrian Load Factors DL Factor: 1.30

Condition: As-Inspected Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Upper Chord	Structure 1	U$_1$ - U$_1$	-71.60	-73.91	-36.24			0.90	1.24	-40.34	-82.28	0.00	0.00	Vehicle	Vehicle	-----	-200.05	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.00	6.00
		U$_1$ - U$_2$	-90.76	-2.54	-81.27			0.90	1.24	-2.83	-90.47	0.00	0.00	Vehicle	Vehicle	-----	-235.60	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.25	5.25
		U$_1$ - U$_3$	-61.05	44.37	-107.83			0.90	1.24	49.39	-120.05	0.00	0.00	Vehicle	Vehicle	-----	-235.43	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.20	4.20
		U$_1$ - U$_4$	10.82	58.10	-124.38			0.90	1.24	64.68	-138.47	0.00	0.00	Vehicle	Vehicle	98.15	-165.95	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.21	10.21	4.16	4.16
		U$_1$ - U$_5$	12.98	58.41	-136.79			0.90	1.24	65.03	-152.29	0.00	0.00	Vehicle	Vehicle	101.41	-181.10	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.12	10.12	3.80	3.80
		U$_1$ - U$_6$	121.44	67.51	-104.14			0.90	1.24	75.16	-115.94	0.00	0.00	Vehicle	Vehicle	255.58	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	7.31	7.31	-----	-----
		U$_1$ - U$_7$	249.52	74.60	-62.11			0.90	1.24	83.05	-69.15	0.00	0.00	Vehicle	Vehicle	432.35	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	6.68	6.68	-----	-----
		U$_1$ - U$_8$	376.85	70.34	-20.91			0.90	1.24	78.31	-23.28	0.00	0.00	Vehicle	Vehicle	591.70	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	9.36	9.36	-----	-----
		U$_1$ - U$_9$	319.70	-19.70	1.17			0.90	1.20	1.26	-21.24	0.00	0.00	Vehicle	Vehicle	417.25	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	490.80	490.80	-----	-----
		U$_{10}$ - U$_{11}$	128.80	-6.83	-47.31			0.90	1.20	-7.37	-51.01	0.00	0.00	Vehicle	Vehicle	157.86	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{11}$ - U$_{12}$	-70.81	68.73	-76.99			0.90	1.20	74.10	-83.01	0.00	0.00	Vehicle	Vehicle	4.27	-199.97	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	10.53	10.53	6.34	6.34
		U$_{12}$ - U$_{13}$	-252.85	60.82	-106.66			0.90	1.20	65.58	-115.00	0.00	0.00	Vehicle	Vehicle	-----	-478.20	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.87	4.87
		U$_{13}$ - U$_{14}$	-391.81	52.12	-158.95			0.90	1.20	56.19	-171.38	0.00	0.00	Vehicle	Vehicle	-----	-732.14	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.35	4.35
		U$_{14}$ - U$_{15}$	-482.83	43.38	-175.54			0.90	1.20	46.77	-189.26	0.00	0.00	Vehicle	Vehicle	-----	-873.73	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.46	4.46
		U$_{15}$ - U$_{16}$	-484.28	43.22	-197.46			0.90	1.20	46.60	-212.90	0.00	0.00	Vehicle	Vehicle	-----	-906.34	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.96	3.96
		U$_{16}$ - U$_{17}$	-501.86	33.04	-196.85			0.90	1.20	35.62	-212.24	0.00	0.00	Vehicle	Vehicle	-----	-928.32	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.89	3.89
		U$_{17}$ - U$_{18}$	-467.82	15.75	-182.97			0.90	1.20	16.98	-197.28	0.00	0.00	Vehicle	Vehicle	-----	-864.62	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.36	4.36
		U$_{18}$ - U$_{19}$	-368.70	14.98	-143.89			0.90	1.20	16.15	-155.14	0.00	0.00	Vehicle	Vehicle	-----	-681.00	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	3.88	3.88
		U$_{19}$ - U$_{20}$	-251.42	7.48	-84.31			0.90	1.20	8.07	-90.90	0.00	0.00	Vehicle	Vehicle	-----	-445.01	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.69	4.69
		U$_{13}$ - U$_{20}$	-117.77	-3.43	-39.18			0.90	1.20	-3.70	-42.24	0.00	0.00	Vehicle	Vehicle	-----	-208.01	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	13.25	13.25
	Structure 2	U$_1$ - U$_1$	-118.16	-45.51	-37.68			0.90	1.18	-40.12	-48.45	0.00	0.00	Vehicle	Vehicle	-----	-216.59	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	10.92	10.92
		U$_1$ - U$_2$	-239.45	-86.16	-63.45			0.90	1.18	-67.56	-91.73	0.00	0.00	Vehicle	Vehicle	-----	-430.53	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.02	6.02
		U$_1$ - U$_3$	-350.29	-127.06	-106.26			0.90	1.18	-113.14	-135.28	0.00	0.00	Vehicle	Vehicle	-----	-631.24	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	99.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.38	5.38
		U$_1$ - U$_4$	-448.96	19.76	-141.02			0.90	1.18	21.04	-150.14	0.00	0.00	Vehicle	Vehicle	-----	-778.83	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.94	5.94
		U$_1$ - U$_5$	-483.05	28.67	-186.18			0.90	1.18	26.09	-198.23	0.00	0.00	Vehicle	Vehicle	-----	-885.66	15.10	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.07	5.07
		U$_1$ - U$_6$	-485.65	55.52	-194.47			0.90	1.18	59.11	-207.05	0.00	0.00	Vehicle	Vehicle	-----	-900.51	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.84	4.84
		U$_1$ - U$_7$	-428.66	65.79	-199.74			0.90	1.18	70.05	-212.67	0.00	0.00	Vehicle	Vehicle	-----	-833.73	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.29	4.29
		U$_1$ - U$_8$	-428.18	65.95	-200.46			0.90	1.18	70.22	-213.43	0.00	0.00	Vehicle	Vehicle	-----	-834.09	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.28	4.28
		U$_1$ - U$_9$	-335.25	74.69	-186.45			0.90	1.18	79.52	-198.51	0.00	0.00	Vehicle	Vehicle	-----	-693.89	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	3.98	3.98
		U$_9$ - U$_{10}$	-200.15	81.85	-154.12			0.90	1.18	87.15	-164.09	0.00	0.00	Vehicle	Vehicle	-----	-473.52	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.18	4.18
		U$_{10}$ - U$_{11}$	-52.03	86.90	-113.84			0.90	1.18	92.52	-121.21	0.00	0.00	Vehicle	Vehicle	52.63	-225.21	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	10.41	10.41	5.92	5.92
		U$_{11}$ - U$_{12}$	107.09	86.74	-77.49			0.90	1.18	92.36	-82.50	0.00	0.00	Vehicle	Vehicle	259.27	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	8.70	8.70	-----	-----
		U$_{12}$ - U$_{13}$	259.37	85.94	-43.00			0.90	1.18	91.50	-45.78	0.00	0.00	Vehicle	Vehicle	456.14	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.61	9.61	-----	-----
		U$_{13}$ - U$_{14}$	391.99	77.87	-10.83			0.90	1.18	82.90	-11.53	0.00	0.00	Vehicle	Vehicle	617.36	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	14.14	14.14	-----	-----
		U$_{14}$ - U$_{15}$	439.60	5.82	-0.09			0.90	1.17	-0.09	-6.13	0.00	0.00	Vehicle	Vehicle	571.11	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{15}$ - U$_{16}$	369.68	43.94	-20.12			0.90	1.17	46.23	-21.17	0.00	0.00	Vehicle	Vehicle	540.68	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	19.53	19.53	-----	-----
		U$_{16}$ - U$_{17}$	271.42	-22.31	-49.78			0.90	1.17	-23.47	-52.37	0.00	0.00	Vehicle	Vehicle	322.34	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{17}$ - U$_{18}$	171.80	-28.15	-71.35			0.90	1.17	-29.62	-75.07	0.00	0.00	Vehicle	Vehicle	184.83	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	5.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{18}$ - U$_{19}$	72.84	-60.42	-91.62			0.90	1.17	-63.56	-96.39	0.00	0.00	Vehicle	Vehicle	12.05	-30.62	4.88	30.19	25.3075	996.19	131.71	10.6302	5.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.47	7.47
		U$_{19}$ - U$_{20}$	-8.04	59.60	-128.26			0.90	1.17	62.70	-134.94	0.00	0.00	Vehicle	Vehicle	71.06	-185.88	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.21	13.21	5.07	5.07
		U$_{20}$ - U$_{21}$	-60.07	50.36	-141.46			0.90	1.17	52.98	-148.83	0.00	0.00	Vehicle	Vehicle	-----	-271.58	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.22	5.22
		U$_{21}$ - U$_{22}$	-82.15	39.91	-162.18			0.90	1.17	41.99	-170.63	0.00	0.00	Vehicle	Vehicle	-----	-328.62	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.42	4.42
		U$_{22}$ - U$_{23}$	-82.37	39.76	-166.14			0.90	1.17	41.83	-174.79	0.00	0.00	Vehicle	Vehicle	-----	-334.32	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.32	4.32
		U$_{23}$ - U$_{24}$	-65.94	28.34	-165.59			0.90	1.17	29.82	-174.22	0.00	0.00	Vehicle	Vehicle	-----	-312.20	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.42	4.42
		U$_{24}$ - U$_{25}$	-11.98	58.90	-143.25			0.90	1.17	61.97	-150.71	0.00	0.00	Vehicle	Vehicle	167.09	-66.10	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	141.71	272.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.53	13.53	4.48	4.48
		U$_{25}$ - U$_{26}$	54.95	66.89	-123.21			0.90	1.17	70.38	-129.63	0.00	0.00	Vehicle	Vehicle	162.92	-97.08	4.88	30.19	25.3075	996.19	131.71	10.6302	5.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	10.11	10.11	5.42	5.42
		U$_{26}$ - U$_{27}$	135.89	73.52	-97.03			0.90	1.17	77.35	-102.06	0.00	0.00	Vehicle	Vehicle	277.21	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	5.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	8.15	8.15	-----	-----
		U$_{27}$ - U$_{28}$	216.69	76.61	-65.45			0.90	1.17	80.60	-68.86	0.00	0.00	Vehicle	Vehicle	386.48	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	10.26	10.26	-----	-----
		U$_{28}$ - U$_{29}$	293.53	78.36	-37.33			0.90	1.17	82.44	-39.28	0.00	0.00	Vehicle	Vehicle	488.76	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	11.87	11.87	-----	-----
		U$_{29}$ - U$_{30}$	357.86	73.63	-10.37			0.90	1.17	77.47	-10.91	0.00	0.00	Vehicle	Vehicle	565.93	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	15.57	15.57	-----	-----
		U$_{30}$ - U$_{31}$	339.12	-8.95	-22.15			0.90	1.18	-9.53	-23.59	0.00	0.00	Vehicle	Vehicle	428.47	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{31}$ - U$_{32}$	251.34	39.08	-27.04			0.90	1.18	41.61	-28.79	0.00	0.00	Vehicle	Vehicle	380.83	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

North Truss - Lower Chord

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	L_0- L_1	4.73	-1.76	-1.91			0.90	1.24	-1.96	-2.13	0.00	0.00	Vehicle	Vehicle	3.60	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----
	L_1 - L_2	74.19	63.49	66.35			0.90	1.24	73.86	70.68	0.00	0.00	Vehicle	Vehicle	192.47	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.80**	**5.80**
	L_2 - L_3	97.64	-32.15	115.35			0.90	1.24	128.42	-35.79	0.00	0.00	Vehicle	Vehicle	293.87	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.45**	**4.45**
	L_3 - L_4	66.79	-46.56	142.12			0.90	1.24	158.22	-51.83	0.00	0.00	Vehicle	Vehicle	292.51	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**3.80**	**3.80**
	L_4 - L_5	-108.59	-69.91	84.67			0.90	1.24	94.27	-77.84	0.00	0.00	Vehicle	Vehicle	-----	-242.35	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.03**	**5.03**
	L_5 - L_6	-237.42	-77.15	41.23			0.90	1.24	45.90	-85.89	0.00	0.00	Vehicle	Vehicle	-----	-420.31	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.91**	**4.91**
	L_6 - L_7	-362.38	-80.61	6.52			0.90	1.24	7.26	-89.75	0.00	0.00	Vehicle	Vehicle	-----	-587.77	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.49**	**6.49**
	L_7 - L_8	-478.62	-70.14	-32.99			0.90	1.24	-36.73	-78.09	0.00	0.00	Vehicle	Vehicle	-----	-723.73	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**9.23**	**9.23**
	L_8 - L_9	-476.97	-66.66	-1.08			0.90	1.20	-1.17	-71.88	0.00	0.00	Vehicle	Vehicle	-----	-713.50	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**10.05**	**10.05**
	L_9 - L_{10}	-301.47	-36.76	-3.67			0.90	1.20	-3.96	-39.63	0.00	0.00	Vehicle	Vehicle	-----	-443.43	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**16.25**	**16.25**
	L_{10} - L_{11}	-104.56	-67.23	48.22			0.90	1.20	51.99	-72.48	0.00	0.00	Vehicle	Vehicle	-----	-230.15	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.46**	**5.46**
	L_{11} - L_{12}	96.98	60.28	63.85			0.90	1.20	68.85	64.99	0.00	0.00	Vehicle	Vehicle	215.57	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.22**	**7.22**
	L_{12} - L_{13}	268.60	-50.90	112.34			0.90	1.20	121.12	-54.88	0.00	0.00	Vehicle	Vehicle	506.65	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.83**	**5.83**
	L_{13} - L_{14}	405.49	114.03	136.08			0.90	1.20	146.72	122.95	0.00	0.00	Vehicle	Vehicle	717.87	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.15**	**6.15**
	L_{14} - L_{15}	502.59	-24.32	144.17			0.90	1.20	155.45	-26.22	0.00	0.00	Vehicle	Vehicle	855.45	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.90**	**6.90**
	L_{15} - L_{16}	469.06	-15.21	143.61			0.90	1.20	154.83	-16.40	0.00	0.00	Vehicle	Vehicle	811.07	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.14**	**7.14**
	L_{16} - L_{17}	365.26	-12.40	99.59			0.90	1.20	107.38	-13.37	0.00	0.00	Vehicle	Vehicle	614.43	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**7.93**	**7.93**
	L_{17} - L_{18}	248.52	2.72	67.77			0.90	1.20	73.07	2.93	0.00	0.00	Vehicle	Vehicle	418.07	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.69**	**8.69**
	L_{18} - L_{19}	112.87	-2.27	20.29			0.90	1.20	21.87	-2.45	0.00	0.00	Vehicle	Vehicle	175.16	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**17.82**	**17.82**
	L_{19} - L_{20}	-14.36	13.82	-17.05			0.90	1.20	14.90	-18.38	0.00	0.00	Vehicle	Vehicle	0.70	-42.56	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**34.71**	**34.71**	**22.26**	**22.26**
Structure 2	L_0- L_1	15.25	-3.73	0.71			0.90	1.18	0.75	-3.97	0.00	0.00	Vehicle	Vehicle	20.80	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**821.13**	**821.13**	-----	-----
	L_1 - L_2	136.09	34.68	21.62			0.90	1.18	36.92	23.02	0.00	0.00	Vehicle	Vehicle	224.91	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**13.47**	**13.47**	-----	-----
	L_2 - L_3	262.77	71.93	82.20			0.90	1.18	87.52	76.59	0.00	0.00	Vehicle	Vehicle	455.37	-----	6.20	37.95	31.7500	1252.35	131.71	10.7370	6.1375	15.74	32.76	-1056.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.01**	**8.01**	-----	-----
	L_3 - L_4	373.14	112.68	123.50			0.90	1.18	131.49	119.97	0.00	0.00	Vehicle	Vehicle	656.02	-----	9.45	51.08	41.6250	1685.48	131.71	10.7370	5.7282	16.87	32.73	-1420.90	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.02**	**7.02**	-----	-----
	L_4 - L_5	456.17	77.48	152.51			0.90	1.18	162.38	82.49	0.00	0.00	Vehicle	Vehicle	804.63	-----	11.08	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.35**	**7.35**	-----	-----
	L_5 - L_6	489.37	-41.68	186.77			0.90	1.18	198.86	-44.37	0.00	0.00	Vehicle	Vehicle	894.70	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5772	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.55**	**6.55**	-----	-----
	L_6 - L_7	479.01	-52.82	196.18			0.90	1.18	208.87	-56.24	0.00	0.00	Vehicle	Vehicle	894.24	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**6.41**	**6.41**	-----	-----
	L_7 - L_8	330.07	-72.49	163.97			0.90	1.18	174.58	-77.18	0.00	0.00	Vehicle	Vehicle	656.04	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**5.79**	**5.79**	-----	-----
	L_8 - L_9	188.98	-78.40	126.44			0.90	1.18	134.62	-83.47	0.00	0.00	Vehicle	Vehicle	420.67	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**6.77**	**6.77**	-----	-----
	L_9 - L_{10}	39.77	-83.55	87.25			0.90	1.18	92.89	-88.95	0.00	0.00	Vehicle	Vehicle	172.46	-63.93	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**8.85**	**8.85**	**8.63**	**8.63**
	L_{10} - L_{11}	-127.39	-84.24	55.13			0.90	1.18	58.69	-89.69	0.00	0.00	Vehicle	Vehicle	-----	-282.20	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.83**	**5.83**
	L_{11} - L_{12}	-282.64	-83.54	18.78			0.90	1.18	20.00	-88.95	0.00	0.00	Vehicle	Vehicle	-----	-483.06	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.29**	**7.29**
	L_{12} - L_{13}	-426.73	-78.79	-14.89			0.90	1.18	-15.85	-83.89	0.00	0.00	Vehicle	Vehicle	-----	-663.80	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.12**	**10.12**
	L_{13} - L_{14}	-536.42	-54.26	-22.86			0.90	1.18	-24.34	-57.77	0.00	0.00	Vehicle	Vehicle	-----	-772.46	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.94**	**16.94**
	L_{14} - L_{15}	-537.75	-38.90	-0.59			0.90	1.17	-0.62	-40.93	0.00	0.00	Vehicle	Vehicle	-----	-752.29	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**23.88**	**23.88**
	L_{15} - L_{16}	-475.65	-75.03	-18.76			0.90	1.17	-19.74	-78.94	0.00	0.00	Vehicle	Vehicle	-----	-720.96	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.13**	**10.13**
	L_{16} - L_{17}	-384.35	-31.41	22.28			0.90	1.17	23.44	-33.04	0.00	0.00	Vehicle	Vehicle	-----	-542.61	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**20.07**	**20.07**
	L_{17} - L_{18}	-281.86	8.94	40.62			0.90	1.17	42.74	9.41	0.00	0.00	Vehicle	Vehicle	-----	-354.18	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
	L_{18} - L_{19}	-175.17	-69.57	69.22			0.90	1.17	72.83	-73.20	0.00	0.00	Vehicle	Vehicle	-----	-322.87	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**5.44**	**5.44**
	L_{19} - L_{20}	-76.53	52.75	90.47			0.90	1.17	95.19	55.50	0.00	0.00	Vehicle	Vehicle	24.25	-27.34	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.94**	**7.94**	-----	-----
	L_{20} - L_{21}	4.38	-53.60	117.23			0.90	1.17	123.34	-56.40	0.00	0.00	Vehicle	Vehicle	166.03	-67.62	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.68**	**7.68**	**14.33**	**14.33**
	L_{21} - L_{22}	55.94	-44.30	133.20			0.90	1.17	140.14	-46.61	0.00	0.00	Vehicle	Vehicle	254.90	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.39**	**6.39**	-----	-----
	L_{22} - L_{23}	62.99	-20.69	119.59			0.90	1.17	125.82	-21.77	0.00	0.00	Vehicle	Vehicle	245.45	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.07**	**7.07**	-----	-----
	L_{23} - L_{24}	15.54	-37.93	100.61			0.90	1.17	105.85	-39.91	0.00	0.00	Vehicle	Vehicle	157.81	-31.68	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.85**	**8.85**	**20.52**	**20.52**
	L_{24} - L_{25}	-56.00	-42.95	77.48			0.90	1.17	81.51	-45.19	0.00	0.00	Vehicle	Vehicle	33.16	-131.55	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.02**	**9.02**	**11.46**	**11.46**
	L_{25} - L_{26}	-136.37	-49.57	46.54			0.90	1.17	48.97	-52.15	0.00	0.00	Vehicle	Vehicle	-----	-245.08	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.38**	**8.38**
	L_{26} - L_{27}	-217.73	-50.38	9.47			0.90	1.17	9.97	-53.00	0.00	0.00	Vehicle	Vehicle	-----	-351.95	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.62**	**9.62**
	L_{27} - L_{28}	-296.25	-52.20	-17.14			0.90	1.17	-18.03	-54.92	0.00	0.00	Vehicle	Vehicle	-----	-456.53	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**13.68**	**13.68**
	L_{28} - L_{29}	-364.18	-48.60	-20.80			0.90	1.17	-21.88	-51.13	0.00	0.00	Vehicle	Vehicle	-----	-539.91	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**17.82**	**17.82**
	L_{29} - L_{30}	-418.23	-20.00	-34.08			0.90	1.17	-21.05	-35.86	0.00	0.00	Vehicle	Vehicle	-----	-590.31	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**30.59**	**30.59**
	L_{30} - L_{31}	-350.38	-20.75	18.30			0.90	1.18	19.49	-22.09	0.00	0.00	Vehicle	Vehicle	-----	-484.20	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**52.71**	**52.71**
	L_{31} - L_{32}	-275.46	-77.29	-7.53			0.90	1.18	-8.02	-82.29	0.00	0.00	Vehicle	Vehicle	-----	-465.07	9.73	59.10	49.3700	1950.30	131.71	11.1432	5.8186	17.24	32.72	-1643.56	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.02**	**12.02**
	L_{32} - L_{33}	-179.08	-47.07	14.58			0.90	1.18	15.52	-50.11	0.00	0.00	Vehicle	Vehicle	-----	-297.95	7.48	43.48

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Inspected Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals																																														
Structure 1	U_1 - L_0	-77.19	13.30	-76.18			0.90	1.24	14.81	-84.82	0.00	0.00	Vehicle	Vehicle	------	-210.61	1.63	15.26	13.6300	503.58	131.71	9.3438	1.9120	43.98	31.16	-404.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.76	2.76
	U_1 - L_1	-33.88	11.96	-51.92			0.90	1.24	13.31	-57.80	0.00	0.00	Vehicle	Vehicle	------	-119.18	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.50	5.50
	U_2 - L_2	10.43	11.27	-38.83			0.90	1.24	12.55	-43.23	0.00	0.00	Vehicle	Vehicle	29.87	-42.64	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	33.26	33.26	8.38	8.38
	U_3 - L_3	44.39	11.85	-29.67			0.90	1.24	13.20	-33.03	0.00	0.00	Vehicle	Vehicle	74.86	------	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	------	------	------	------	------	29.04	29.04	------	------
	U_4 - L_4	-16.67	-16.11	0.03			0.90	1.24	0.03	-17.93	0.00	0.00	Vehicle	Vehicle	------	-44.97	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	18.58	18.58
	U_5 - L_5	-109.51	-69.81	0.71			0.90	1.24	0.79	-77.72	0.00	0.00	Vehicle	Vehicle	------	-243.39	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	4.06	4.06
	U_6 - L_6	-143.60	-85.10	-2.68			0.90	1.24	-2.99	-94.74	0.00	0.00	Vehicle	Vehicle	------	-309.85	3.13	23.61	20.4794	779.11	131.71	9.9479	2.0237	44.24	31.14	-624.88	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	3.56	3.56
	U_7 - L_7	-142.61	-87.27	2.38			0.90	1.24	2.64	-97.15	0.00	0.00	Vehicle	Vehicle	------	-311.70	2.88	21.86	18.9794	721.36	131.71	11.7292	1.9657	53.70	30.26	-562.19	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	2.98	2.98
	U_8 - L_8	-391.97	-93.49	-84.12			0.90	1.24	-93.65	-104.09	0.00	0.00	Vehicle	Vehicle	------	-644.87	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	6.47	6.47
	U_9 - L_9	-223.13	8.43	-79.03			0.90	1.20	9.09	-85.21	0.00	0.00	Vehicle	Vehicle	------	-400.85	3.50	30.81	27.3125	1016.81	131.71	12.1563	2.5246	43.34	31.21	-817.50	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	45.00	Pass	9.60	12.00	Pass	------	------	------	------	------	4.76	4.76
	U_{10} - L_{10}	-225.77	1.92	-71.60			0.90	1.20	2.07	-77.20	0.00	0.00	Vehicle	Vehicle	------	-393.87	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	6.29	6.29
	U_{11} - L_{11}	-198.79	-1.93	-71.11			0.90	1.20	-2.08	-76.67	0.00	0.00	Vehicle	Vehicle	------	-358.09	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.77	5.77
	U_{12} - L_{12}	-154.77	8.48	-65.30			0.90	1.20	9.15	-70.41	0.00	0.00	Vehicle	Vehicle	------	-292.73	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	5.36	5.36
	U_{13} - L_{13}	-109.04	16.68	-52.17			0.90	1.20	17.98	-56.25	0.00	0.00	Vehicle	Vehicle	------	-214.87	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.83	4.83
	U_{14} - L_{14}	-12.30	-10.17	-4.93			0.90	1.20	-5.32	-10.96	0.00	0.00	Vehicle	Vehicle	------	-30.24	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	30.33	30.33
	U_{15} - L_{15}	-5.62	-48.46	24.26			0.90	1.20	26.16	-52.25	0.00	0.00	Vehicle	Vehicle	26.70	-75.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	16.56	16.56	6.46	6.46
	U_{16} - L_{16}	-51.74	-56.85	16.79			0.90	1.20	18.10	-61.30	0.00	0.00	Vehicle	Vehicle	------	-146.94	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.72	4.72
	U_{17} - L_{17}	-127.31	-77.12	9.95			0.90	1.20	10.73	-83.15	0.00	0.00	Vehicle	Vehicle	------	-273.59	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	3.42	3.42
	U_{18} - L_{18}	-159.89	-88.06	9.18			0.90	1.20	9.90	-94.94	0.00	0.00	Vehicle	Vehicle	------	-331.28	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	3.85	3.85
	U_{19} - L_{19}	-191.17	-90.52	7.78			0.90	1.20	8.39	-97.60	0.00	0.00	Vehicle	Vehicle	------	-375.39	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	4.36	4.36
	U_{20} - L_{20}	-211.94	-97.32	7.62			0.90	1.20	8.21	-104.93	0.00	0.00	Vehicle	Vehicle	------	-411.93	0.00	29.13	29.1305	961.31	131.71	20.3229	2.8884	63.32	29.19	-722.67	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.28	3.28
Structure 2	U_1 - L_0	-206.53	9.82	-93.62			0.90	1.18	10.45	-99.68	0.00	0.00	Vehicle	Vehicle	------	-398.07	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	4.08	4.08
	U_1 - L_1	-188.72	10.08	-78.95			0.90	1.18	10.74	-84.05	0.00	0.00	Vehicle	Vehicle	------	-354.61	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.75	5.75
	U_2 - L_2	-155.84	10.64	-70.09			0.90	1.18	11.33	-74.62	0.00	0.00	Vehicle	Vehicle	------	-299.61	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.61	5.61
	U_3 - L_3	-134.53	12.06	-68.78			0.90	1.18	12.84	-73.23	0.00	0.00	Vehicle	Vehicle	------	-270.08	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	4.33	4.33
	U_4 - L_4	-64.47	14.10	-57.02			0.90	1.18	15.01	-60.77	0.00	0.00	Vehicle	Vehicle	------	-162.73	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.52	4.52
	U_5 - L_5	-19.94	23.90	-46.24			0.90	1.18	25.45	-49.23	0.00	0.00	Vehicle	Vehicle	7.16	-89.92	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	17.59	17.59	6.51	6.51
	U_6 - L_6	40.07	30.38	-33.54			0.90	1.18	32.34	-35.71	0.00	0.00	Vehicle	Vehicle	94.14	------	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	11.98	11.98	------	------
	U_7 - L_7	-26.03	-23.17	-0.95			0.90	1.18	-1.02	-24.66	0.00	0.00	Vehicle	Vehicle	------	-65.91	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	12.75	12.75
	U_8 - L_8	-125.22	-61.25	18.13			0.90	1.18	19.31	-65.22	0.00	0.00	Vehicle	Vehicle	------	-247.57	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	6.22	6.22
	U_9 - L_9	-174.50	-76.67	5.19			0.90	1.18	5.52	-81.63	0.00	0.00	Vehicle	Vehicle	------	-332.96	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.33	6.33
	U_{10} - L_{10}	-202.62	-86.67	3.08			0.90	1.18	3.28	-92.28	0.00	0.00	Vehicle	Vehicle	------	-383.37	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.24	6.24
	U_{11} - L_{11}	-229.48	-92.90	2.14			0.90	1.18	2.28	-98.91	0.00	0.00	Vehicle	Vehicle	------	-426.91	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.41	5.41
	U_{12} - L_{12}	-250.80	-94.24	2.02			0.90	1.18	2.15	-100.34	0.00	0.00	Vehicle	Vehicle	------	-456.48	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.49	5.49
	U_{13} - L_{13}	-223.27	-95.69	9.58			0.90	1.18	10.19	-101.88	0.00	0.00	Vehicle	Vehicle	------	-422.70	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	4.58	4.58
	U_{14} - L_{14}	-343.24	-83.71	-68.94			0.90	1.18	-73.40	-89.13	0.00	0.00	Vehicle	Vehicle	------	-562.08	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0516	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	7.95	7.95
	U_{15} - L_{15}	-123.12	9.76	-72.24			0.90	1.17	10.27	-76.00	0.00	0.00	Vehicle	Vehicle	------	-258.85	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	7.46	7.46
	U_{16} - L_{16}	-156.68	7.59	-79.03			0.90	1.17	7.99	-83.15	0.00	0.00	Vehicle	Vehicle	------	-311.77	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.13	6.13
	U_{17} - L_{17}	-147.89	7.31	-73.35			0.90	1.17	7.69	-77.17	0.00	0.00	Vehicle	Vehicle	------	-292.58	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.16	6.16
	U_{18} - L_{18}	-142.21	9.19	-72.53			0.90	1.17	9.67	-76.31	0.00	0.00	Vehicle	Vehicle	------	-284.08	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.70	5.70
	U_{19} - L_{19}	-111.47	10.27	-71.73			0.90	1.17	10.81	-75.46	0.00	0.00	Vehicle	Vehicle	------	-243.02	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.30	5.30
	U_{20} - L_{20}	-76.56	17.33	-56.04			0.90	1.17	18.23	-58.96	0.00	0.00	Vehicle	Vehicle	------	-176.18	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	5.06	5.06
	U_{21} - L_{21}	-44.33	21.25	-49.40			0.90	1.17	22.36	-51.97	0.00	0.00	Vehicle	Vehicle	------	-125.19	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.70	5.70
	U_{22} - L_{22}	-21.25	-22.08	-15.98			0.90	1.17	-16.82	-23.23	0.00	0.00	Vehicle	Vehicle	------	-57.82	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	13.80	13.80
	U_{23} - L_{23}	-39.04	-48.66	26.35			0.90	1.17	27.72	-51.19	0.00	0.00	Vehicle	Vehicle	------	-117.30	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.89	5.89
	U_{24} - L_{24}	-74.80	-47.98	14.13			0.90	1.17	14.86	-60.37	0.00	0.00	Vehicle	Vehicle	------	-175.72	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.98	4.98
	U_{25} - L_{25}	-103.21	-75.63	12.59			0.90	1.17	13.24	-79.57	0.00	0.00	Vehicle	Vehicle	------	-237.62	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.13	5.13
	U_{26} - L_{26}	-120.15	-80.33	11.87			0.90	1.17	12.49	-84.52	0.00	0.00	Vehicle	Vehicle	------	-266.06	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.41	5.41
	U_{27} - L_{27}	-123.87	-87.21	9.81			0.90	1.17	10.32	-91.75	0.00	0.00	Vehicle	Vehicle	------	-280.30	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.44	5.44
	U_{28} - L_{28}	-135.49	-94.35	8.92			0.90	1.17	9.38	-99.27	0.00	0.00	Vehicle	Vehicle	------	-305.18	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.34	5.34
	U_{29} - L_{29}	-116.90	-87.99	5.21			0.90	1.17	5.48	-92.58	0.00	0.00	Vehicle	Vehicle	------	-272.31	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.19	6.19
	U_{30} - L_{30}	-261.40	-74.57	-76.99			0.90	1.18	-79.39	-81.97	0.00	0.00	Vehicle	Vehicle	------	-446.38	11.02	52.76	41.7400	1741.08	131.71	25.6094	4.0676	56.66	29.95	-1342.96	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	9.41	9.41
	U_{31} - L_{31}	-156.06	12.29	-77.92			0.90	1.18	13.09	-82.96	0.00	0.00	Vehicle	Vehicle	------	-310.72	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.44	6.44
	U_{32} - L_{32}	-185.16	8.75	-78.60			0.90	1.18	9.32	-83.68	0.00	0.00	Vehicle	Vehicle	------	-349.50	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Inspected

Fy = 33.0 ksi Fu = 60.0 ksi E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals Structure 1	U_1 - L_1	87.39	-17.61	64.61			0.90	1.24	71.93	-19.61	0.00	0.00	Vehicle	Vehicle	207.11	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
	U_1 - L_2	23.29	-18.65	67.10			0.90	1.24	74.70	-20.76	0.00	0.00	Vehicle	127.39	-----	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.41**	**5.41**	-----	-----
	U_2 - L_3	-37.87	-18.09	10.24			0.90	1.24	11.40	-20.14	0.00	0.00	Vehicle	-----	-----	-75.41	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	**14.72**	**14.72**
	U_3 - L_4	-92.23	-17.50	22.64			0.90	1.24	25.20	-19.48	0.00	0.00	Vehicle	-----	-----	-145.23	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	**12.53**	**12.53**
	U_3 - L_4	143.29	11.69	64.52			0.90	1.24	71.83	13.02	0.00	0.00	Vehicle	Vehicle	279.65	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.24**	**5.24**	-----	-----
	U_4 - L_5	177.89	9.93	82.30			0.90	1.24	91.62	11.06	0.00	0.00	Vehicle	Vehicle	350.36	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.16**	**5.16**	-----	-----
	U_4 - L_6	184.40	0.90	97.58			0.90	1.24	108.64	1.00	0.00	0.00	Vehicle	Vehicle	380.96	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.29**	**4.29**	-----	-----
	U_5 - L_7	179.98	-2.42	95.04			0.90	1.24	105.81	-2.69	0.00	0.00	Vehicle	Vehicle	371.53	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.45**	**4.45**	-----	-----
	U_6 - L_8	268.90	0.80	92.63			0.90	1.20	99.88	0.86	0.00	0.00	Vehicle	Vehicle	479.41	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
	U_8 - L_{10}	278.76	-9.38	87.91			0.90	1.20	94.79	-10.11	0.00	0.00	Vehicle	Vehicle	485.61	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.21**	**7.21**	-----	-----
	U_{10} - L_{11}	284.98	9.62	73.89			0.90	1.20	79.67	10.37	0.00	0.00	Vehicle	Vehicle	474.05	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**7.85**	**7.85**	-----	-----
	U_{11} - L_{12}	250.55	-2.68	91.88			0.90	1.20	99.07	-2.89	0.00	0.00	Vehicle	Vehicle	454.50	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
	U_{12} - L_{13}	189.62	-10.79	73.45			0.90	1.20	79.20	-11.63	0.00	0.00	Vehicle	Vehicle	349.46	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**5.57**	**5.57**	-----	-----
	U_{13} - L_{14}	123.30	-23.10	70.55			0.90	1.20	76.06	-24.91	0.00	0.00	Vehicle	Vehicle	259.17	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.00**	**4.00**	-----	-----
	U_{14} - L_{14}	-24.40	-46.63	30.88			0.90	1.20	33.29	-50.28	0.00	0.00	Vehicle	11.56	-97.08	-----	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	**13.58**	**13.58**	**6.05**	**6.05**
	U_{15} - L_{15}	48.54	-25.09	54.09			0.90	1.20	58.32	-27.06	0.00	0.00	Vehicle	138.92	-----	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.50**	**6.50**	-----	-----
	U_{16} - L_{16}	146.57	-13.60	82.47			0.90	1.20	88.92	-14.66	0.00	0.00	Vehicle	306.14	-----	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.25**	**4.25**	-----	-----
	U_{18} - L_{17}	182.43	-11.72	78.78			0.90	1.20	84.94	-12.64	0.00	0.00	Vehicle	347.58	-----	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.51**	**5.51**	-----	-----
	U_{19} - L_{18}	223.79	-9.82	91.30			0.90	1.20	98.44	-10.59	0.00	0.00	Vehicle	418.90	-----	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.94**	**4.94**	-----	-----
	U_{20} - L_{19}	232.63	-4.41	77.10			0.90	1.20	83.13	-4.75	0.00	0.00	Vehicle	410.49	-----	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.75**	**5.75**	-----	-----
Structure 2	U_1 - L_1	213.47	-10.33	64.76			0.90	1.18	68.94	-10.99	0.00	0.00	Vehicle	367.13	-----	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
	U_1 - L_2	200.39	-12.31	85.39			0.90	1.18	90.92	-13.10	0.00	0.00	Vehicle	378.70	-----	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
	U_3 - L_3	172.76	-13.78	88.42			0.90	1.18	94.14	-14.67	0.00	0.00	Vehicle	346.96	-----	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.08**	**5.08**	-----	-----
	U_3 - L_4	147.11	-16.20	79.75			0.90	1.18	84.91	-17.25	0.00	0.00	Vehicle	301.63	-----	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**5.06**	**5.06**	-----	-----
	U_5 - L_5	49.07	-21.99	67.75			0.90	1.18	72.13	-22.98	0.00	0.00	Vehicle	157.57	-----	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	67.84	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.25**	**5.25**	-----	-----
	U_6 - L_6	2.97	-30.77	60.80			0.90	1.18	64.73	-32.76	0.00	0.00	Vehicle	88.00	-38.74	-----	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	**6.56**	**6.56**	**10.03**	**10.03**
	U_6 - L_7	-85.72	-54.64	32.12			0.90	1.18	34.20	-58.18	0.00	0.00	Vehicle	-----	-187.06	-----	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	-----	**4.70**	**4.70**
	U_7 - L_7	140.27	-26.76	58.69			0.90	1.18	62.48	-28.49	0.00	0.00	Vehicle	263.57	-----	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.41**	**7.41**	-----	-----
	U_8 - L_8	204.17	-12.10	84.14			0.90	1.18	89.58	-12.88	0.00	0.00	Vehicle	381.88	-----	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.65**	**5.65**	-----	-----
	U_{10} - L_9	234.82	7.56	79.37			0.90	1.18	84.50	8.05	0.00	0.00	Vehicle	415.12	-----	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.42**	**6.42**	-----	-----
	U_{11} - L_{10}	263.04	-0.81	94.99			0.90	1.18	101.14	-0.86	0.00	0.00	Vehicle	473.43	-----	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.75**	**5.75**	-----	-----
	U_{12} - L_{11}	273.97	-1.77	97.98			0.90	1.18	104.32	-1.88	0.00	0.00	Vehicle	491.78	-----	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
	U_{13} - L_{12}	254.88	-10.53	88.42			0.90	1.18	94.14	-11.21	0.00	0.00	Vehicle	453.72	-----	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.55**	**5.55**	-----	-----
	U_{14} - L_{13}	217.66	-9.42	90.53			0.90	1.18	96.39	-10.03	0.00	0.00	Vehicle	408.26	-----	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.81**	**5.81**	-----	-----
	U_{15} - L_{15}	110.03	-8.05	75.65			0.90	1.17	79.59	-8.47	0.00	0.00	Vehicle	246.50	-----	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
	U_{16} - L_{16}	132.26	-10.94	78.50			0.90	1.17	82.59	-11.51	0.00	0.00	Vehicle	279.30	-----	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
	U_{17} - L_{17}	172.87	-6.42	78.30			0.90	1.17	82.38	-6.76	0.00	0.00	Vehicle	331.82	-----	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
	U_{17} - L_{18}	160.16	-9.17	90.84			0.90	1.17	95.57	-9.64	0.00	0.00	Vehicle	332.46	-----	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.13**	**5.13**	-----	-----
	U_{18} - L_{19}	152.33	-11.99	85.70			0.90	1.17	90.16	-12.61	0.00	0.00	Vehicle	315.24	-----	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.53**	**5.53**	-----	-----
	U_{19} - L_{20}	120.67	-13.69	71.76			0.90	1.17	75.50	-14.41	0.00	0.00	Vehicle	255.02	-----	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.39**	**6.39**	-----	-----
	U_{20} - L_{21}	76.10	-20.75	72.75			0.90	1.17	76.54	-21.83	0.00	0.00	Vehicle	198.43	-----	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.59**	**4.59**	-----	-----
	U_{21} - L_{22}	31.50	-29.11	54.49			0.90	1.17	57.33	-30.63	0.00	0.00	Vehicle	115.47	-----	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
	U_{22} - L_{23}	24.27	-39.62	42.71			0.90	1.17	44.94	-41.68	0.00	0.00	Vehicle	89.96	-22.64	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	**8.98**	**8.98**	**8.33**	**8.33**
	U_{23} - L_{23}	72.21	-28.83	61.54			0.90	1.17	64.75	-30.33	0.00	0.00	Vehicle	178.05	-----	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.49**	**5.49**	-----	-----
	U_{24} - L_{24}	112.05	-16.77	82.35			0.90	1.17	86.64	-17.64	0.00	0.00	Vehicle	258.30	-----	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U_{25} - L_{25}	112.05	-16.77	82.35			0.90	1.17	86.64	-17.64	0.00	0.00	Vehicle	276.89	-----	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U_{26} - L_{26}	132.58	-12.27	90.20			0.90	1.17	94.90	-12.91	0.00	0.00	Vehicle	295.72	-----	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.46**	**5.46**	-----	-----
	U_{26} - L_{27}	137.86	-10.57	82.99			0.90	1.17	87.31	-11.12	0.00	0.00	Vehicle	292.72	-----	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
	U_{27} - L_{28}	144.93	-4.88	86.94			0.90	1.17	91.47	-5.14	0.00	0.00	Vehicle	278.47	-----	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.77**	**5.77**	-----	-----
	U_{28} - L_{29}	102.60	-7.78	80.06			0.90	1.17	84.23	-8.19	0.00	0.00	Vehicle	242.87	-----	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.51**	**6.51**	-----	-----
	U_{30} - L_{31}	139.84	-9.52	74.21			0.90	1.18	79.01	-10.13	0.00	0.00	Vehicle	284.50	-----	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.07**	**8.07**	-----	-----
	U_{31} - L_{32}	166.63	-13.97	74.32			0.90	1.18	79.12	-14.87	0.00	0.00	Vehicle	319.48	-----	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.26**	**7.26**	-----	-----
	U_{32} - L_{33}	202.12	-8.18	95.91			0.90	1.18	102.12	-8.71	0.00	0.00	Vehicle	395.51	-----	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
	U_{33} - L_{34}	201.72	-8.26	93.99			0.90	1.18	100.07	-8.80	0.00	0.00	Vehicle	392.32	-----	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.42**	**6.42**	-----	-----
	U_{35} - L_{35}	180.72	-2.08	82.64			0.90	1.18	87.99	-2.21	0.00	0.00	Vehicle	349.32	-----	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.78**	**6.78**	-----	-----
	U_{36} - L_{36}	162.90	-1.14

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Inspected

Fy = 33.0 ksi Fu = 60.0 ksi E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U$_0$ - U$_1$	-52.70	-50.53	-65.41			0.75	1.24	-46.88	-60.68	0.00	0.00	Vehicle	Vehicle	-----	-147.40	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	8.45	8.45
		U$_1$ - U$_2$	-61.66	-4.32	-81.54			0.75	1.24	-4.00	-75.64	0.00	0.00	Vehicle	Vehicle	-----	-178.49	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.66	6.66
		U$_2$ - U$_3$	-27.05	37.90	-121.56			0.75	1.24	35.16	-112.78	0.00	0.00	Vehicle	Vehicle	10.54	-181.78	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	19.86	19.86	4.77	4.77
		U$_3$ - U$_4$	32.90	48.94	-100.47			0.75	1.24	45.41	-93.21	0.00	0.00	Vehicle	Vehicle	101.80	-78.40	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.06	14.06	6.42	6.42
		U$_4$ - U$_5$	34.76	49.16	-121.29			0.75	1.24	45.61	-112.52	0.00	0.00	Vehicle	Vehicle	104.47	-101.10	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.95	13.95	5.33	5.33
		U$_5$ - U$_6$	124.19	57.54	-96.37			0.75	1.24	53.38	-89.41	0.00	0.00	Vehicle	Vehicle	230.84	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	10.25	10.25	-----	-----
		U$_6$ - U$_7$	223.31	68.11	-69.37			0.75	1.24	63.19	-64.36	0.00	0.00	Vehicle	Vehicle	372.45	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	9.20	9.20	-----	-----
		U$_7$ - U$_8$	331.92	58.34	-28.61			0.75	1.24	54.12	-26.54	0.00	0.00	Vehicle	Vehicle	501.85	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	14.38	14.38	-----	-----
		U$_8$ - U$_9$	267.71	-3.72	5.36			0.75	1.20	4.81	-3.35	0.00	0.00	Vehicle	Vehicle	354.28	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	139.46	139.46	-----	-----
		U$_9$ - U$_{10}$	89.12	-17.43	-50.29			0.75	1.20	-15.66	-45.18	0.00	0.00	Vehicle	Vehicle	95.50	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{10}$ - U$_{11}$	-76.89	-63.41	-79.73			0.75	1.20	-56.98	-71.63	0.00	0.00	Vehicle	Vehicle	-----	-193.08	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.27	7.27
		U$_{11}$ - U$_{12}$	-230.86	-86.63	-100.93			0.75	1.20	-77.83	-90.69	0.00	0.00	Vehicle	Vehicle	-----	-418.01	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.41	6.41
		U$_{12}$ - U$_{13}$	-342.15	-120.01	-140.74			0.75	1.20	-107.83	-126.45	0.00	0.00	Vehicle	Vehicle	-----	-609.18	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	6.29	6.29
		U$_{13}$ - U$_{14}$	-421.98	30.64	-154.11			0.75	1.20	27.53	-138.47	0.00	0.00	Vehicle	Vehicle	-----	-728.58	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.54	6.54
		U$_{14}$ - U$_{15}$	-422.87	-113.31	-175.38			0.75	1.20	-101.81	-157.58	0.00	0.00	Vehicle	Vehicle	-----	-754.58	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.74	5.74
		U$_{15}$ - U$_{16}$	-440.39	-120.76	-185.70			0.75	1.20	-108.50	-166.86	0.00	0.00	Vehicle	Vehicle	-----	-789.42	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.32	5.32
		U$_{16}$ - U$_{17}$	-422.93	18.10	-175.18			0.75	1.20	16.26	-157.40	0.00	0.00	Vehicle	Vehicle	-----	-754.43	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.75	5.75
		U$_{17}$ - U$_{18}$	-341.45	12.14	-130.85			0.75	1.20	10.91	-117.56	0.00	0.00	Vehicle	Vehicle	-----	-596.71	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.35	5.35
		U$_{18}$ - U$_{19}$	-247.63	7.38	-91.62			0.75	1.20	6.63	-82.32	0.00	0.00	Vehicle	Vehicle	-----	-428.93	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.22	5.22
		U$_{19}$ - U$_{20}$	-132.06	-3.87	-40.43			0.75	1.20	-3.47	-36.32	0.00	0.00	Vehicle	Vehicle	-----	-218.89	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	15.02	15.02
	Structure 2	U$_0$ - U$_1$	-131.63	-37.37	-29.38			0.75	1.18	-26.07	-33.16	0.00	0.00	Vehicle	Vehicle	-----	-214.22	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	15.56	15.56
		U$_1$ - U$_2$	-247.12	-85.35	-64.33			0.75	1.18	-57.07	-75.73	0.00	0.00	Vehicle	Vehicle	-----	-419.70	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.19	7.19
		U$_2$ - U$_3$	-347.28	-111.83	-106.83			0.75	1.18	-94.78	-99.22	0.00	0.00	Vehicle	Vehicle	-----	-580.45	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.36	7.36
		U$_3$ - U$_4$	-437.20	37.14	-157.05			0.75	1.18	32.95	-139.34	0.00	0.00	Vehicle	Vehicle	-----	-749.50	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.49	6.49
		U$_4$ - U$_5$	-468.83	-132.12	-167.77			0.75	1.18	-117.22	-148.85	0.00	0.00	Vehicle	Vehicle	-----	-802.98	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.84	6.84
		U$_5$ - U$_6$	-471.14	53.69	-168.33			0.75	1.18	47.64	-149.35	0.00	0.00	Vehicle	Vehicle	-----	-806.64	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.80	6.80
		U$_6$ - U$_7$	-414.50	59.75	-167.87			0.75	1.18	53.01	-148.94	0.00	0.00	Vehicle	Vehicle	-----	-732.47	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.22	6.22
		U$_7$ - U$_8$	-413.54	60.07	-176.91			0.75	1.18	53.30	-156.96	0.00	0.00	Vehicle	Vehicle	-----	-741.65	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
		U$_8$ - U$_9$	-322.06	65.30	-162.29			0.75	1.18	57.94	-143.99	0.00	0.00	Vehicle	Vehicle	-----	-605.86	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.58	5.58
		U$_9$ - U$_{10}$	-182.16	68.94	-132.31			0.75	1.18	61.16	-117.39	0.00	0.00	Vehicle	Vehicle	-----	-389.42	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.00	6.00
		U$_{10}$ - U$_{11}$	-32.61	71.97	-106.67			0.75	1.18	63.86	-94.64	0.00	0.00	Vehicle	Vehicle	40.62	-165.43	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.77	14.77	7.78	7.78
		U$_{11}$ - U$_{12}$	133.57	73.84	-78.54			0.75	1.18	65.51	-69.68	0.00	0.00	Vehicle	Vehicle	258.81	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	11.86	11.86	-----	-----
		U$_{12}$ - U$_{13}$	289.98	1.19	-44.85			0.75	1.18	1.05	-39.79	0.00	0.00	Vehicle	Vehicle	378.35	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	805.61	805.61	-----	-----
		U$_{13}$ - U$_{14}$	434.77	59.91	-17.08			0.75	1.18	53.15	-15.15	0.00	0.00	Vehicle	Vehicle	634.30	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	21.25	21.25	-----	-----
		U$_{14}$ - U$_{15}$	474.48	-12.35	-17.18			0.75	1.17	-10.83	-15.06	0.00	0.00	Vehicle	Vehicle	602.74	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{15}$ - U$_{16}$	383.31	45.08	-34.80			0.75	1.17	39.52	-30.51	0.00	0.00	Vehicle	Vehicle	549.68	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	22.50	22.50	-----	-----
		U$_{16}$ - U$_{17}$	279.61	-25.57	-54.88			0.75	1.17	-22.42	-48.12	0.00	0.00	Vehicle	Vehicle	334.34	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{17}$ - U$_{18}$	172.67	-45.81	-71.76			0.75	1.17	-40.16	-62.92	0.00	0.00	Vehicle	Vehicle	172.25	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{18}$ - U$_{19}$	74.40	-78.52	-100.52			0.75	1.17	-68.85	-88.13	0.00	0.00	Vehicle	Vehicle	7.22	-17.86	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	8.19	8.19	8.19	8.19
		U$_{19}$ - U$_{20}$	-9.98	44.13	-111.10			0.75	1.17	38.69	-97.41	0.00	0.00	Vehicle	Vehicle	37.33	-139.60	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.46	21.46	7.01	7.01
		U$_{20}$ - U$_{21}$	-62.02	-97.82	-121.94			0.75	1.17	-85.77	-106.91	0.00	0.00	Vehicle	Vehicle	-----	-219.61	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.25	7.25
		U$_{21}$ - U$_{22}$	-88.69	32.14	-131.52			0.75	1.17	28.18	-115.31	0.00	0.00	Vehicle	Vehicle	-----	-265.19	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.49	6.49
		U$_{22}$ - U$_{23}$	-88.87	-93.69	-143.12			0.75	1.17	-82.14	-125.48	0.00	0.00	Vehicle	Vehicle	-----	-278.65	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U$_{23}$ - U$_{24}$	-76.60	-94.01	-144.89			0.75	1.17	-82.42	-127.03	0.00	0.00	Vehicle	Vehicle	-----	-264.72	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.98	5.98
		U$_{24}$ - U$_{25}$	-37.55	46.01	-127.87			0.75	1.17	40.34	-112.11	0.00	0.00	Vehicle	Vehicle	3.63	-194.56	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.26	21.26	5.85	5.85
		U$_{25}$ - U$_{26}$	37.36	51.41	-114.10			0.75	1.17	45.07	-100.04	0.00	0.00	Vehicle	Vehicle	107.16	-81.49	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	16.17	16.17	6.84	6.84
		U$_{26}$ - U$_{27}$	128.18	56.66	-91.62			0.75	1.17	49.68	-80.33	0.00	0.00	Vehicle	Vehicle	231.21	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.85	12.85	-----	-----
		U$_{27}$ - U$_{28}$	233.91	59.96	-65.64			0.75	1.17	52.57	-57.55	0.00	0.00	Vehicle	Vehicle	372.43	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	15.41	15.41	-----	-----
		U$_{28}$ - U$_{29}$	337.95	-8.14	-41.70			0.75	1.17	-7.14	-36.56	0.00	0.00	Vehicle	Vehicle	430.05	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U$_{29}$ - U$_{30}$	437.48	49.80	-13.95			0.75	1.17	43.67	-12.23	0.00	0.00	Vehicle	Vehicle	625.49	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	25.81	25.81	-----	-----
		U$_{30}$ - U$_{31}$	420.86	-4.22	33.47			0.75	1.18	29.70	-3.75	0.00	0.00	Vehicle	Vehicle	585.73	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	38.50	38.50	-----	-----
		U$_{31}$ - U$_{32}$	300.88	57.83	-34.35			0.75	1.18	51.31	-30.48	0.00	0.00	Vehicle	Vehicle	457.84	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	6.81	-2.57			0.75	1.24	6.32	-2.38	0.00	0.00	Vehicle	Vehicle	19.24	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**78.22**	**78.22**	-----	-----
		L$_1$ - L$_2$	50.83	50.40	71.52			0.75	1.24	66.35	46.76	0.00	0.00	Vehicle	Vehicle	152.34	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**6.81**	**6.81**	-----	-----
		L$_2$ - L$_3$	61.27	-27.47	115.91			0.75	1.24	107.54	-25.48	0.00	0.00	Vehicle	Vehicle	219.45	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.65**	**5.65**	-----	-----
		L$_3$ - L$_4$	25.72	61.40	127.68			0.75	1.24	118.46	56.97	0.00	0.00	Vehicle	Vehicle	187.43	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.43**	**5.43**	-----	-----
		L$_4$ - L$_5$	-118.55	-55.37	69.18			0.75	1.24	64.18	-51.37	0.00	0.00	Vehicle	Vehicle	-----	-220.90	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**7.43**	**7.43**
		L$_5$ - L$_6$	-217.97	-66.23	44.86			0.75	1.24	41.61	-61.44	0.00	0.00	Vehicle	Vehicle	-----	-363.23	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**7.19**	**7.19**
		L$_6$ - L$_7$	-320.57	-74.47	7.92			0.75	1.24	7.35	-69.09	0.00	0.00	Vehicle	Vehicle	-----	-506.56	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**9.04**	**9.04**
		L$_7$ - L$_8$	-417.42	-42.12	-32.46			0.75	1.24	-30.11	-39.08	0.00	0.00	Vehicle	Vehicle	-----	-593.44	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**20.01**	**20.01**
		L$_8$ - L$_9$	-411.08	-72.89	-5.05			0.75	1.20	-4.54	-65.49	0.00	0.00	Vehicle	Vehicle	-----	-619.54	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.04**	**12.04**
		L$_9$ - L$_{10}$	-247.97	-25.37	1.40			0.75	1.20	1.26	-22.80	0.00	0.00	Vehicle	Vehicle	-----	-351.99	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**30.59**	**30.59**
		L$_{10}$ - L$_{11}$	-65.37	-56.30	59.00			0.75	1.20	53.01	-50.58	0.00	0.00	Vehicle	Vehicle	-----	-150.74	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**8.60**	**8.60**
		L$_{11}$ - L$_{12}$	101.81	56.57	89.36			0.75	1.20	80.29	50.83	0.00	0.00	Vehicle	Vehicle	236.74	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.13**	**6.13**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	52.44	130.12			0.75	1.20	116.91	47.12	0.00	0.00	Vehicle	Vehicle	495.27	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.08**	**6.08**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	100.25	128.36			0.75	1.20	115.33	90.07	0.00	0.00	Vehicle	Vehicle	635.87	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.10**	**8.10**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	-22.57	142.13			0.75	1.20	127.70	-20.28	0.00	0.00	Vehicle	Vehicle	785.52	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.60**	**8.60**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	-16.85	140.30			0.75	1.20	126.06	-15.14	0.00	0.00	Vehicle	Vehicle	762.18	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.84**	**8.84**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	-11.20	115.40			0.75	1.20	103.69	-10.06	0.00	0.00	Vehicle	Vehicle	630.89	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.05**	**8.05**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	-6.44	76.54			0.75	1.20	68.77	-5.79	0.00	0.00	Vehicle	Vehicle	465.34	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.64**	**8.64**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	-3.42	31.37			0.75	1.20	28.19	-3.07	0.00	0.00	Vehicle	Vehicle	265.85	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.58**	**11.58**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-0.62	-5.78			0.75	1.20	-0.56	-5.19	0.00	0.00	Vehicle	Vehicle	89.91	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_0$' - L$_1$	24.42	-5.64	-1.08			0.75	1.18	-0.96	-5.00	0.00	0.00	Vehicle	Vehicle	30.49	-----	1.88	20.08	18.2000	662.64	131.71	10.8828	6.9064	14.18	32.81	-559.98	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	138.42	37.98	31.79			0.75	1.18	33.69	28.20	0.00	0.00	Vehicle	Vehicle	223.75	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**14.69**	**14.69**	-----	-----
		L$_2$ - L$_3$	252.76	64.04	97.91			0.75	1.18	86.87	56.82	0.00	0.00	Vehicle	Vehicle	441.52	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.33**	**8.33**	-----	-----
		L$_3$ - L$_4$	352.26	100.87	124.35			0.75	1.18	110.33	89.49	0.00	0.00	Vehicle	Vehicle	601.37	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**8.67**	**8.67**	-----	-----
		L$_4$ - L$_5$	447.15	117.29	144.67			0.75	1.18	128.36	104.06	0.00	0.00	Vehicle	Vehicle	748.17	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.37**	**9.37**	-----	-----
		L$_5$ - L$_6$	477.91	123.63	175.21			0.75	1.18	155.45	109.69	0.00	0.00	Vehicle	Vehicle	823.37	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.46**	**8.46**	-----	-----
		L$_6$ - L$_7$	482.67	-55.27	176.09			0.75	1.18	156.23	-49.04	0.00	0.00	Vehicle	Vehicle	830.57	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.54**	**8.54**	-----	-----
		L$_7$ - L$_8$	336.57	-66.73	137.03			0.75	1.18	121.58	-59.21	0.00	0.00	Vehicle	Vehicle	595.59	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.27**	**8.27**	-----	-----
		L$_8$ - L$_9$	196.00	-69.56	113.88			0.75	1.18	101.04	-61.72	0.00	0.00	Vehicle	Vehicle	386.15	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**8.94**	**8.94**	-----	-----
		L$_9$ - L$_{10}$	45.53	-72.80	85.96			0.75	1.18	76.27	-64.59	0.00	0.00	Vehicle	Vehicle	158.34	-24.77	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**10.70**	**10.70**	**11.97**	**11.97**
		L$_{10}$ - L$_{11}$	-126.32	-73.38	51.47			0.75	1.18	45.67	-65.11	0.00	0.00	Vehicle	Vehicle	-----	-248.86	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.05**	**8.05**
		L$_{11}$ - L$_{12}$	-284.95	-75.02	23.45			0.75	1.18	20.81	-66.56	0.00	0.00	Vehicle	Vehicle	-----	-456.96	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.70**	**9.70**
		L$_{12}$ - L$_{13}$	-433.89	-65.12	3.91			0.75	1.18	3.47	-57.78	0.00	0.00	Vehicle	Vehicle	-----	-639.17	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**14.57**	**14.57**
		L$_{13}$ - L$_{14}$	-552.76	-29.02	-21.81			0.75	1.18	-19.35	-25.75	0.00	0.00	Vehicle	Vehicle	-----	-752.06	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**37.38**	**37.38**
		L$_{14}$ - L$_{15}$	-573.53	-42.51	21.25			0.75	1.17	18.63	-37.27	0.00	0.00	Vehicle	Vehicle	-----	-794.04	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**25.26**	**25.26**
		L$_{15}$ - L$_{16}$	-493.00	-54.43	-1.87			0.75	1.17	-1.64	-47.72	0.00	0.00	Vehicle	Vehicle	-----	-702.94	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.40**	**16.40**
		L$_{16}$ - L$_{17}$	-395.34	-14.64	28.71			0.75	1.17	25.17	-12.84	0.00	0.00	Vehicle	Vehicle	-----	-530.63	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**50.80**	**50.80**
		L$_{17}$ - L$_{18}$	-288.08	8.87	46.39			0.75	1.17	40.68	7.78	0.00	0.00	Vehicle	Vehicle	-----	-364.39	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-175.85	23.82	74.17			0.75	1.17	65.03	20.88	0.00	0.00	Vehicle	Vehicle	-----	-201.45	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{19}$ - L$_{20}$	-78.08	57.39	89.60			0.75	1.17	78.56	50.31	0.00	0.00	Vehicle	Vehicle	0.63	-36.09	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.64**	**9.64**	-----	-----
	Structure 2	L$_{20}$ - L$_{21}$	7.59	73.58	121.72			0.75	1.17	106.71	64.51	0.00	0.00	Vehicle	Vehicle	148.60	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.97**	**8.97**	-----	-----
		L$_{21}$ - L$_{22}$	59.10	74.79	134.39			0.75	1.17	117.83	65.57	0.00	0.00	Vehicle	Vehicle	230.01	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.69**	**7.69**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	-21.97	120.08			0.75	1.17	105.28	-19.26	0.00	0.00	Vehicle	Vehicle	230.50	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.48**	**8.48**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	-47.13	107.37			0.75	1.17	94.13	-41.32	0.00	0.00	Vehicle	Vehicle	166.01	-10.08	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.89**	**9.89**	**20.52**	**20.52**
		L$_{24}$ - L$_{25}$	-45.06	-52.37	89.02			0.75	1.17	78.05	-45.92	0.00	0.00	Vehicle	Vehicle	42.89	-118.27	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.28**	**9.28**	**11.51**	**11.51**
		L$_{25}$ - L$_{26}$	-134.95	-57.49	56.37			0.75	1.17	49.42	-50.40	0.00	0.00	Vehicle	Vehicle	-----	-240.96	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.70**	**8.70**
		L$_{26}$ - L$_{27}$	-245.92	-58.95	31.22			0.75	1.17	27.37	-51.68	0.00	0.00	Vehicle	Vehicle	-----	-386.89	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**9.32**	**9.32**
		L$_{27}$ - L$_{28}$	-351.86	-61.61	13.20			0.75	1.17	11.57	-54.02	0.00	0.00	Vehicle	Vehicle	-----	-527.64	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**12.88**	**12.88**
		L$_{28}$ - L$_{29}$	-458.41	-57.76	-6.81			0.75	1.17	-5.97	-50.64	0.00	0.00	Vehicle	Vehicle	-----	-661.77	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.13**	**16.13**
		L$_{29}$ - L$_{26}$	-542.36	-24.30	-30.33			0.75	1.17	-21.31	-26.59	0.00	0.00	Vehicle	Vehicle	-----	-739.64	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**36.59**	**36.59**
		L$_{30}$ - L$_{31}$	-514.21	-23.60	-46.89			0.75	1.18	-20.93	-41.60	0.00	0.00	Vehicle	Vehicle	-----	-722.56	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**24.05**	**24.05**
		L$_{31}$ - L$_{32}$	-411.27	-51.44	-5.03			0.75	1.18	-4.46	-45.64	0.00	0.00	Vehicle	Vehicle	-----	-593.98	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Inspected Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_0 - L_0	-67.68	10.89	-91.15			0.75	1.24	10.10	-84.57	0.00	0.00	Vehicle	Vehicle	-----	-197.92	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.27	3.27
	U_1 - L_1	-24.09	10.51	-52.71			0.75	1.24	9.75	-48.90	0.00	0.00	Vehicle	Vehicle	-----	-94.88	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.71	6.71
	U_2 - L_2	12.87	-3.76	-41.51			0.75	1.24	-3.49	-38.51	0.00	0.00	Vehicle	Vehicle	12.20	-33.33	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.47	9.47
	U_3 - L_3	37.37	16.64	-32.39			0.75	1.24	15.44	-30.05	0.00	0.00	Vehicle	Vehicle	68.65	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	25.28	25.28	-----	-----
	U_4 - L_4	-15.55	-23.85	3.57			0.75	1.24	3.31	-22.13	0.00	0.00	Vehicle	Vehicle	-----	-48.98	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.11	15.11
	U_5 - L_5	-92.59	-70.50	13.06			0.75	1.24	12.11	-65.41	0.00	0.00	Vehicle	Vehicle	-----	-205.40	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.08	5.08
	U_6 - L_6	-117.07	-82.38	2.22			0.75	1.24	2.06	-76.43	0.00	0.00	Vehicle	Vehicle	-----	-251.55	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	5.11	5.11
	U_7 - L_7	-127.52	-91.84	0.32			0.75	1.24	0.29	-85.20	0.00	0.00	Vehicle	Vehicle	-----	-276.53	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.90	3.90
	U_8 - L_8	-368.71	-121.96	-119.98			0.75	1.24	-111.31	-113.14	0.00	0.00	Vehicle	Vehicle	-----	-626.41	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.16	6.16
	U_9 - L_9	-214.56	5.21	-101.25			0.75	1.20	4.68	-90.97	0.00	0.00	Vehicle	Vehicle	-----	-397.19	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	4.73	4.73
	U_{10} - L_{10}	-198.68	-12.77	-80.54			0.75	1.20	-11.48	-72.37	0.00	0.00	Vehicle	Vehicle	-----	-352.36	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.52	7.52
	U_{11} - L_{11}	-171.40	-11.13	-77.00			0.75	1.20	-10.00	-69.18	0.00	0.00	Vehicle	Vehicle	-----	-312.76	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.79	6.79
	U_{12} - L_{12}	-128.37	5.99	-67.59			0.75	1.20	5.38	-60.73	0.00	0.00	Vehicle	Vehicle	-----	-245.83	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	6.65	6.65
	U_{13} - L_{13}	-96.65	16.29	-55.08			0.75	1.20	14.63	-49.49	0.00	0.00	Vehicle	Vehicle	-----	-189.97	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.74	5.74
	U_{14} - L_{14}	-11.04	-23.04	1.70			0.75	1.20	1.52	-20.70	0.00	0.00	Vehicle	Vehicle	-----	-41.27	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	16.12	16.12
	U_{15} - L_{15}	-2.47	-50.53	36.65			0.75	1.20	32.93	-45.40	0.00	0.00	Vehicle	Vehicle	39.60	-62.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.06	13.06	7.51	7.51
	U_{16} - L_{16}	-31.27	-55.68	27.34			0.75	1.20	24.56	-50.02	0.00	0.00	Vehicle	Vehicle	-----	-105.69	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.20	6.20
	U_{17} - L_{17}	-105.05	-77.58	9.38			0.75	1.20	8.43	-69.70	0.00	0.00	Vehicle	Vehicle	-----	-227.18	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	4.39	4.39
	U_{18} - L_{18}	-126.74	-85.91	5.13			0.75	1.20	4.61	-77.19	0.00	0.00	Vehicle	Vehicle	-----	-265.12	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.16	5.16
	U_{19} - L_{19}	-166.77	-88.57	-5.50			0.75	1.20	-4.94	-79.58	0.00	0.00	Vehicle	Vehicle	-----	-320.25	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.65	5.65
	U_{20} - L_{20}	-184.59	-104.57	-5.61			0.75	1.20	-5.04	-93.96	0.00	0.00	Vehicle	Vehicle	-----	-362.11	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.23	4.23
	U_0 - L_0	-203.59	11.81	-85.16			0.75	1.18	10.47	-75.55	0.00	0.00	Vehicle	Vehicle	-----	-362.89	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.81	5.81
	U_1 - L_1	-176.11	12.91	-80.08			0.75	1.18	11.46	-71.05	0.00	0.00	Vehicle	Vehicle	-----	-321.31	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.99	6.99
	U_2 - L_2	-137.55	12.22	-75.48			0.75	1.18	10.84	-66.97	0.00	0.00	Vehicle	Vehicle	-----	-265.88	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.52	6.52
	U_3 - L_3	-117.62	12.68	-73.97			0.75	1.18	11.25	-65.63	0.00	0.00	Vehicle	Vehicle	-----	-238.22	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.09	5.09
	U_4 - L_4	-50.97	25.45	-59.32			0.75	1.18	22.58	-52.63	0.00	0.00	Vehicle	Vehicle	-----	-134.69	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.48	5.48
	U_5 - L_5	-13.78	33.01	-47.59			0.75	1.18	29.29	-42.22	0.00	0.00	Vehicle	Vehicle	20.16	-72.80	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.07	15.07	7.74	7.74
	U_6 - L_6	45.47	41.70	-37.31			0.75	1.18	36.99	-33.10	0.00	0.00	Vehicle	Vehicle	107.21	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.33	10.33	-----	-----
	U_7 - L_7	-22.33	-17.57	3.23			0.75	1.18	2.86	-15.59	0.00	0.00	Vehicle	Vehicle	-----	-49.30	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	20.41	20.41
	U_8 - L_8	-120.08	-64.13	29.85			0.75	1.18	26.48	-56.90	0.00	0.00	Vehicle	Vehicle	-----	-230.07	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.21	7.21
	U_9 - L_9	-177.03	-79.43	15.84			0.75	1.18	14.05	-70.48	0.00	0.00	Vehicle	Vehicle	-----	-321.75	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
	U_{10} - L_{10}	-205.88	-85.36	17.73			0.75	1.18	15.73	-75.74	0.00	0.00	Vehicle	Vehicle	-----	-366.10	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.56	7.56
	U_{11} - L_{11}	-239.23	-88.61	5.25			0.75	1.18	4.66	-78.62	0.00	0.00	Vehicle	Vehicle	-----	-413.21	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.68	6.68
	U_{12} - L_{12}	-257.95	-97.20	5.60			0.75	1.18	4.97	-86.24	0.00	0.00	Vehicle	Vehicle	-----	-447.45	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.31	6.31
	U_{13} - L_{13}	-243.82	-100.98	6.14			0.75	1.18	5.44	-89.60	0.00	0.00	Vehicle	Vehicle	-----	-433.45	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	4.98	4.98
	U_{14} - L_{14}	-420.85	-91.85	-99.57			0.75	1.18	-81.50	-88.34	0.00	0.00	Vehicle	Vehicle	-----	-661.95	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	7.14	7.14
	U_{15} - L_{15}	-158.83	9.99	-92.57			0.75	1.17	8.76	-81.16	0.00	0.00	Vehicle	Vehicle	-----	-311.99	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.55	6.55
	U_{16} - L_{16}	-174.02	7.85	-86.93			0.75	1.17	6.89	-76.21	0.00	0.00	Vehicle	Vehicle	-----	-325.30	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.46	6.46
	U_{17} - L_{17}	-156.46	9.02	-79.04			0.75	1.17	7.91	-69.30	0.00	0.00	Vehicle	Vehicle	-----	-293.49	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
	U_{18} - L_{18}	-142.21	10.89	-77.85			0.75	1.17	9.55	-68.26	0.00	0.00	Vehicle	Vehicle	-----	-273.60	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
	U_{19} - L_{19}	-113.66	20.78	-71.35			0.75	1.17	18.22	-62.55	0.00	0.00	Vehicle	Vehicle	-----	-229.08	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.36	6.36
Structure 2	U_{20} - L_{20}	-76.51	26.70	-57.51			0.75	1.17	23.41	-50.42	0.00	0.00	Vehicle	Vehicle	-----	-165.01	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.92	5.92
	U_{21} - L_{21}	-45.77	27.45	-52.78			0.75	1.17	24.06	-46.28	0.00	0.00	Vehicle	Vehicle	-----	-119.67	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
	U_{22} - L_{22}	-17.72	-13.80	6.41			0.75	1.17	5.62	-12.10	0.00	0.00	Vehicle	Vehicle	-----	-38.76	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	26.79	26.79
	U_{23} - L_{23}	-30.69	-51.98	34.73			0.75	1.17	30.45	-45.58	0.00	0.00	Vehicle	Vehicle	-----	-99.14	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.80	6.80
	U_{24} - L_{24}	-62.06	-64.48	25.01			0.75	1.17	21.93	-56.53	0.00	0.00	Vehicle	Vehicle	-----	-154.18	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.54	5.54
	U_{25} - L_{25}	-103.15	-75.86	22.25			0.75	1.17	19.50	-66.51	0.00	0.00	Vehicle	Vehicle	-----	-220.56	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.14	6.14
	U_{26} - L_{26}	-134.38	-78.08	12.71			0.75	1.17	11.14	-68.45	0.00	0.00	Vehicle	Vehicle	-----	-263.68	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.47	6.47
	U_{27} - L_{27}	-156.03	-89.59	9.16			0.75	1.17	8.03	-78.55	0.00	0.00	Vehicle	Vehicle	-----	-304.95	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.95	5.95
	U_{28} - L_{28}	-179.40	-96.97	1.87			0.75	1.17	1.64	-85.02	0.00	0.00	Vehicle	Vehicle	-----	-343.75	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.72	5.72
	U_{29} - L_{29}	-171.60	-95.14	4.76			0.75	1.17	4.18	-83.41	0.00	0.00	Vehicle	Vehicle	-----	-331.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.22	6.22
	U_{30} - L_{30}	-393.29	-111.18	-107.54			0.75	1.18	-95.41	-98.64	0.00	0.00	Vehicle	Vehicle	-----	-639.51	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.68	6.68
	U_{31} - L_{31}	-203.49	10.15	-100.71			0.75	1.18	9.01	-89.35	0.00	0.00	Vehicle	Vehicle	-----	-380.69	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.45	5.45
	U_{32} - L_{32}	-222.61	1.94	-89.47			0.75	1.18	1.72	-79.38	0.00	0.00	Vehicle	Vehicle	-----	-392.59	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.29	-15.76	67.05			0.75	1.24	62.21	-14.62	0.00	0.00	Vehicle	Vehicle	150.15	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	7.23	-----	-----	-----	-----	-----	**8.57**	**8.57**	-----	-----
		U_1 - L_2	10.80	-15.18	39.82			0.75	1.24	36.94	-14.08	0.00	0.00	Vehicle	Vehicle	62.06	-4.26	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**11.29**	**11.29**	**24.58**	**24.58**
		U_2 - L_3	-44.05	-13.75	56.85			0.75	1.24	52.74	-12.76	0.00	0.00	Vehicle	Vehicle	11.29	-73.85	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.95**	**8.95**	**22.74**	**22.74**
		U_3 - L_4	-76.77	-33.89	16.19			0.75	1.24	15.02	-31.44	0.00	0.00	Vehicle	Vehicle	-----	-140.68	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.26**	**8.26**
		U_4 - L_4	118.48	-14.52	64.88			0.75	1.24	60.19	-13.47	0.00	0.00	Vehicle	Vehicle	232.28	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
		U_5 - L_5	137.62	-8.38	80.14			0.75	1.24	74.35	-7.78	0.00	0.00	Vehicle	Vehicle	275.56	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
		U_6 - L_6	157.39	1.81	82.74			0.75	1.24	76.76	1.67	0.00	0.00	Vehicle	Vehicle	304.39	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.43**	**6.43**	-----	-----
		U_7 - L_7	149.33	4.96	101.97			0.75	1.24	94.60	4.60	0.00	0.00	Vehicle	Vehicle	317.11	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
		U_8 - L_8	249.21	3.18	114.84			0.75	1.20	103.19	2.85	0.00	0.00	Vehicle	Vehicle	458.12	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**6.91**	**6.91**	-----	-----
		U_9 - L_{10}	260.39	-2.56	91.93			0.75	1.20	82.59	-2.30	0.00	0.00	Vehicle	Vehicle	445.88	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.50**	**8.50**	-----	-----
		U_{10} - L_{11}	236.43	6.72	109.33			0.75	1.20	98.23	6.03	0.00	0.00	Vehicle	Vehicle	435.06	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**6.86**	**6.86**	-----	-----
		U_{11} - L_{12}	212.05	4.85	91.74			0.75	1.20	82.42	4.36	0.00	0.00	Vehicle	Vehicle	382.82	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.86**	**6.86**	-----	-----
		U_{12} - L_{13}	151.78	-22.15	81.81			0.75	1.20	73.51	-19.90	0.00	0.00	Vehicle	Vehicle	292.88	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**6.52**	**6.52**	-----	-----
		U_{13} - L_{14}	108.73	-30.47	74.36			0.75	1.20	66.81	-27.38	0.00	0.00	Vehicle	Vehicle	228.20	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.77**	**4.77**	-----	-----
		U_{15} - L_{14}	-24.56	-59.47	30.63			0.75	1.20	27.52	-53.43	0.00	0.00	Vehicle	Vehicle	3.84	-101.39	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**16.44**	**16.44**	**5.68**	**5.68**
		U_{16} - L_{15}	23.90	-36.95	55.27			0.75	1.20	49.66	-33.20	0.00	0.00	Vehicle	Vehicle	95.63	-12.09	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**8.13**	**8.13**	**10.49**	**10.49**
		U_{17} - L_{16}	120.04	-23.20	65.03			0.75	1.20	58.43	-20.84	0.00	0.00	Vehicle	Vehicle	232.01	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**6.92**	**6.92**	-----	-----
		U_{18} - L_{17}	144.84	-7.39	77.34			0.75	1.20	69.49	-6.64	0.00	0.00	Vehicle	Vehicle	278.64	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.28**	**7.28**	-----	-----
		U_{19} - L_{18}	193.27	0.91	87.14			0.75	1.20	78.29	0.81	0.00	0.00	Vehicle	Vehicle	353.04	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.60**	**6.60**	-----	-----
		U_{20} - L_{19}	193.75	6.79	76.26			0.75	1.20	68.52	6.10	0.00	0.00	Vehicle	Vehicle	340.95	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.54**	**7.54**	-----	-----
		U_0 - L_1	202.60	-13.28	77.18			0.75	1.18	68.48	-11.78	0.00	0.00	Vehicle	Vehicle	352.40	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.40**	**8.40**	-----	-----
		U_1 - L_2	190.84	-15.07	98.94			0.75	1.18	87.78	-13.37	0.00	0.00	Vehicle	Vehicle	362.21	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_2 - L_3	155.90	-14.64	92.82			0.75	1.18	82.35	-12.99	0.00	0.00	Vehicle	Vehicle	309.72	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_3 - L_4	134.06	-15.87	76.24			0.75	1.18	67.64	-14.08	0.00	0.00	Vehicle	Vehicle	262.22	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.55**	**6.55**	-----	-----
		U_4 - L_5	46.01	-38.37	73.70			0.75	1.18	65.39	-34.04	0.00	0.00	Vehicle	Vehicle	144.82	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_5 - L_6	3.43	-48.54	64.15			0.75	1.18	56.92	-43.07	0.00	0.00	Vehicle	Vehicle	78.45	-51.54	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.45**	**7.45**	**7.64**	**7.64**
		U_6 - L_7	-84.31	-71.06	34.41			0.75	1.18	30.53	-63.05	0.00	0.00	Vehicle	Vehicle	-----	-191.57	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.36**	**4.36**
		U_7 - L_7	137.33	-36.28	45.83			0.75	1.18	40.66	-32.19	0.00	0.00	Vehicle	Vehicle	231.38	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**11.46**	**11.46**	-----	-----
		U_8 - L_8	210.92	-27.41	66.23			0.75	1.18	58.76	-24.32	0.00	0.00	Vehicle	Vehicle	350.59	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.50**	**8.50**	-----	-----
		U_{10} - L_9	236.39	-16.80	76.28			0.75	1.18	67.68	-14.90	0.00	0.00	Vehicle	Vehicle	395.29	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.00**	**8.00**	-----	-----
		U_{11} - L_{10}	274.65	-13.50	87.45			0.75	1.18	77.59	-11.97	0.00	0.00	Vehicle	Vehicle	457.91	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.34**	**7.34**	-----	-----
		U_{12} - L_{11}	281.09	-6.87	84.06			0.75	1.18	74.58	-6.10	0.00	0.00	Vehicle	Vehicle	462.38	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.55**	**7.55**	-----	-----
		U_{13} - L_{12}	278.14	-6.70	85.52			0.75	1.18	75.87	-5.94	0.00	0.00	Vehicle	Vehicle	460.22	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.58**	**6.58**	-----	-----
		U_{14} - L_{13}	235.47	-7.91	94.92			0.75	1.18	84.22	-7.02	0.00	0.00	Vehicle	Vehicle	415.60	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{14} - L_{15}	143.01	-5.05	93.71			0.75	1.17	82.16	-4.42	0.00	0.00	Vehicle	Vehicle	292.73	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{15} - L_{16}	171.90	-9.94	89.68			0.75	1.17	78.63	-8.72	0.00	0.00	Vehicle	Vehicle	325.68	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_{16} - L_{17}	181.04	-9.55	100.44			0.75	1.17	88.06	-8.37	0.00	0.00	Vehicle	Vehicle	349.83	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{17} - L_{18}	171.16	-10.78	92.20			0.75	1.17	80.84	-9.45	0.00	0.00	Vehicle	Vehicle	327.60	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.93**	**5.93**	-----	-----
		U_{18} - L_{19}	150.64	-12.39	85.12			0.75	1.17	74.63	-10.86	0.00	0.00	Vehicle	Vehicle	292.85	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.70**	**6.70**	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	-22.77	86.62			0.75	1.17	75.94	-19.97	0.00	0.00	Vehicle	Vehicle	262.34	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.29**	**6.29**	-----	-----
		U_{20} - L_{21}	76.04	-25.93	74.44			0.75	1.17	65.26	-22.74	0.00	0.00	Vehicle	Vehicle	183.69	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.39**	**5.39**	-----	-----
		U_{21} - L_{22}	38.33	-42.22	50.74			0.75	1.17	44.48	-37.02	0.00	0.00	Vehicle	Vehicle	107.66	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.75**	**8.75**	-----	-----
		U_{23} - L_{22}	18.05	-48.29	27.98			0.75	1.17	24.53	-42.34	0.00	0.00	Vehicle	Vehicle	55.36	-31.57	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**16.70**	**16.70**	**8.06**	**8.06**
		U_{24} - L_{23}	58.57	-35.13	69.83			0.75	1.17	61.22	-30.80	0.00	0.00	Vehicle	Vehicle	155.74	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.03**	**6.03**	-----	-----
		U_{25} - L_{24}	114.98	-25.76	69.65			0.75	1.17	61.07	-22.58	0.00	0.00	Vehicle	Vehicle	228.86	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.00**	**8.00**	-----	-----
		U_{26} - L_{25}	143.00	-19.21	81.02			0.75	1.17	71.03	-16.84	0.00	0.00	Vehicle	Vehicle	278.24	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.15**	**7.15**	-----	-----
		U_{27} - L_{26}	173.82	-10.12	74.41			0.75	1.17	65.24	-8.87	0.00	0.00	Vehicle	Vehicle	310.77	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.31**	**7.31**	-----	-----
		U_{28} - L_{27}	186.60	-6.43	83.63			0.75	1.17	73.32	-5.64	0.00	0.00	Vehicle	Vehicle	337.89	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_{29} - L_{28}	190.75	-5.77	88.38			0.75	1.17	77.48	-5.06	0.00	0.00	Vehicle	Vehicle	348.70	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{30} - L_{29}	161.86	-6.41	87.66			0.75	1.17	76.86	-5.62	0.00	0.00	Vehicle	Vehicle	310.34	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.36**	**6.36**	-----	-----
		U_{30} - L_{31}	191.72	-6.42	90.04			0.75	1.18	79.89	-5.70	0.00	0.00	Vehicle	Vehicle	353.10	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.33**	**7.33**	-----	-----
		U_{31} - L_{32}	226.45	-10.88	79.28			0.75	1.18	70.34	-9.65	0.00	0.00	Vehicle	Vehicle	385.82	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.83**	**7.83**	-----	-----
		U_{32} - L_{33}	243.42	-2.59	103.31			0.75	1.18	91.66	-2.30	0.00	0.00	Vehicle	Vehicle	435.61	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U_{33} - L_{34}	239.13	-2.27	91.76			0.75	1.18	81.42	-2.01	0.00	0.00	Vehicle	Vehicle	416.71	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.43**	**7.43**	-----	-----
		U_{34} - L_{35}	222.16	-13.04	85.96			0.75	1.18	76.27	-11.57	0.00	0.00	Vehicle	Vehicle	387.95	-----	0.00	30.63	30.6305	1010.81	131.

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans

Loading: 4F1
Condition: As-Inspected

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	-32.43	-24.71	-8.83	2.21	0.90	1.24	-27.51	-36.10	2.21	-8.83	Vehicle	Vehicle	-----	-133.65	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	13.81	13.81
		U_1 - U_2	-86.55	-4.35	-69.20	6.01	-16.34	0.90	1.24	-4.84	-77.03	6.01	-16.34	Vehicle	Vehicle	-----	-212.66	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.22	6.22
		U_2 - U_3	-48.14	35.40	-74.72	9.46	-19.05	0.90	1.24	39.41	-83.18	9.46	-19.05	Vehicle	Vehicle	-----	-170.72	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.22	6.22
		U_3 - U_4	36.58	46.30	-63.83	12.74	-17.47	0.90	1.24	51.55	-71.06	12.74	-17.47	Vehicle	Vehicle	114.57	-44.83	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.31	12.31	8.47	8.47
		U_4 - U_5	38.93	45.41	-67.51	12.80	-17.38	0.90	1.24	50.56	-75.15	12.80	-17.38	Vehicle	Vehicle	116.34	-47.09	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.50	12.50	8.04	8.04
		U_5 - U_6	154.60	52.18	-42.72	15.16	-12.03	0.90	1.24	58.10	-47.56	15.16	-12.03	Vehicle	Vehicle	276.50	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.89	8.89	-----	-----
		U_6 - U_7	288.38	56.74	-22.63	17.14	-4.31	0.90	1.24	63.16	-25.20	17.14	-4.31	Vehicle	Vehicle	457.00	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.17	8.17	-----	-----
		U_7 - U_8	410.94	6.94	-0.59	18.28	4.35	0.90	1.24	7.72	-0.65	18.28	4.35	Pedestrian	Pedestrian	568.02	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	26.89	26.89	-----	-----
		U_8 - U_9	311.57	8.61	-2.02	19.08	0.00	0.90	1.20	9.28	-2.18	19.08	0.00	Pedestrian	Vehicle	441.92	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	22.12	22.12	-----	-----
		U_9 - U_{10}	78.52	-7.18	-28.27	5.48	0.00	0.90	1.20	-7.74	-30.48	5.48	0.00	Vehicle	Vehicle	92.01	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{10} - U_{11}	-141.43	42.12	-58.45	-7.31	0.00	0.90	1.20	45.42	-63.02	0.00	-7.31	Vehicle	Vehicle	-----	-265.78	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.24	7.24
		U_{11} - U_{12}	-338.03	38.82	-90.40	9.77	-27.93	0.90	1.20	41.85	-97.46	9.77	-27.93	Vehicle	Vehicle	-----	-566.15	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.87	4.87
		U_{12} - U_{13}	-480.08	33.99	-108.11	8.23	-34.32	0.90	1.20	36.65	-116.56	8.23	-34.32	Vehicle	Vehicle	-----	-775.64	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.64	5.64
		U_{13} - U_{14}	-570.65	28.87	-127.11	6.68	-37.21	0.90	1.20	31.13	-137.05	6.68	-37.21	Vehicle	Vehicle	-----	-920.00	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.52	5.52
		U_{14} - U_{15}	-571.07	28.73	-129.94	6.65	-37.22	0.90	1.20	30.98	-140.10	6.65	-37.22	Vehicle	Vehicle	-----	-924.52	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.40	5.40
		U_{15} - U_{16}	-581.88	22.43	-121.90	4.98	-36.12	0.90	1.20	24.19	-131.44	4.98	-36.12	Vehicle	Vehicle	-----	-927.31	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.67	5.67
		U_{16} - U_{17}	-539.46	9.79	-103.46	3.52	-31.85	0.90	1.20	10.56	-111.55	3.52	-31.85	Pedestrian	Vehicle	-----	-846.32	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.06	7.06
		U_{17} - U_{18}	-422.33	10.84	-68.25	2.26	-25.05	0.90	1.20	11.69	-73.58	2.26	-25.05	Vehicle	Vehicle	Pedestrian	-677.25	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.56	5.56
		U_{18} - U_{19}	-286.19	6.12	-45.96	1.28	-16.96	0.90	1.20	6.59	-49.54	1.28	-16.96	Vehicle	Vehicle	Pedestrian	-458.49	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.89	5.89
		U_{19} - U_{20}	-140.84	1.64	-22.88	0.55	-8.68	0.90	1.20	1.77	-24.67	0.55	-8.68	Vehicle	Vehicle	Pedestrian	-226.44	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	16.09	16.09
	Structure 2	U_0 - U_1	-147.44	-19.93	-18.69	-4.88	0.36	0.90	1.18	-19.90	-21.22	0.36	-4.88	Vehicle	Vehicle	-----	-219.27	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	23.56	23.56
		U_1 - U_2	-319.06	-4.12	-60.72	1.96	-13.36	0.90	1.18	-4.38	-64.65	1.96	-13.36	Vehicle	Vehicle	-----	-498.82	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.31	7.31
		U_2 - U_3	-460.91	-85.75	-87.11	-20.95	3.77	0.90	1.18	-91.30	-92.74	3.77	-20.95	Vehicle	Vehicle	-----	-719.75	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.65	6.65
		U_3 - U_4	-580.03	29.45	-111.85	5.92	-27.68	0.90	1.18	31.36	-119.08	5.92	-27.68	Vehicle	Vehicle	-----	-908.85	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.39	6.39
		U_4 - U_5	-616.49	38.14	-123.35	7.86	-31.35	0.90	1.18	40.61	-131.33	7.86	-31.35	Vehicle	Vehicle	-----	-972.17	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.63	6.63
		U_5 - U_6	-604.71	47.61	-134.97	9.87	-32.88	0.90	1.18	50.69	-143.70	9.87	-32.88	Vehicle	Vehicle	-----	-972.94	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.14	6.14
		U_6 - U_7	-514.78	54.39	-121.35	11.56	-31.23	0.90	1.18	57.91	-129.20	11.56	-31.23	Vehicle	Vehicle	-----	-837.17	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.40	6.40
		U_7 - U_8	-512.83	54.44	-123.95	11.57	-31.18	0.90	1.18	57.97	-131.97	11.57	-31.18	Vehicle	Vehicle	-----	-838.23	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.28	6.28
		U_8 - U_9	-373.51	60.43	-101.83	13.16	-27.41	0.90	1.18	64.34	-108.42	13.16	-27.41	Vehicle	Vehicle	-----	-626.50	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	6.94	6.94
		U_9 - U_{10}	-181.05	63.06	-78.93	14.25	-21.42	0.90	1.18	67.14	-84.03	14.25	-21.42	Vehicle	Vehicle	-----	-344.61	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.39	8.39
		U_{10} - U_{11}	26.18	65.00	-55.14	15.21	-14.40	0.90	1.18	69.20	-58.70	15.21	-14.40	Vehicle	Vehicle	124.00	-42.28	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.78	12.78	13.55	13.55
		U_{11} - U_{12}	237.39	63.19	-30.29	15.56	-6.85	0.90	1.18	67.28	-32.25	15.56	-6.85	Vehicle	Vehicle	396.07	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	10.01	10.01	-----	-----
		U_{12} - U_{13}	435.89	61.56	-13.88	15.82	0.56	0.90	1.18	65.55	-14.77	15.82	0.56	Vehicle	Vehicle	651.87	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	10.73	10.73	-----	-----
		U_{13} - U_{14}	595.84	3.79	-2.04	15.74	6.91	0.90	1.18	4.04	-2.17	15.74	6.91	Pedestrian	Pedestrian	800.30	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	48.97	48.97	-----	-----
		U_{14} - U_{15}	615.53	4.50	0.38	24.37	0.00	0.90	1.17	4.74	0.39	24.37	0.00	Pedestrian	Vehicle	838.03	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	32.60	32.60	-----	-----
		U_{15} - U_{16}	486.15	28.56	-17.95	14.17	3.08	0.90	1.17	30.05	-18.89	14.17	3.08	Pedestrian	Vehicle	689.47	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	17.78	17.78	-----	-----
		U_{16} - U_{17}	339.27	-0.53	-33.86	11.57	0.00	0.90	1.17	-0.56	-35.62	11.57	0.00	Pedestrian	Vehicle	455.37	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{17} - U_{18}	192.13	55.12	-58.26	4.46	0.00	0.90	1.17	57.99	-61.30	4.46	0.00	Vehicle	Vehicle	325.16	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	9.90	9.90	-----	-----
		U_{18} - U_{19}	53.83	50.51	-73.57	-2.79	-12.78	0.90	1.17	53.14	-77.40	-2.79	-12.78	Vehicle	Vehicle	139.06	-30.64	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	13.41	13.41	9.06	9.06
		U_{19} - U_{20}	-58.94	44.80	-87.90	15.07	-15.67	0.90	1.17	47.13	-92.48	15.07	-15.67	Vehicle	Vehicle	-----	-196.85	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.85	6.85
		U_{20} - U_{21}	-125.32	37.36	-101.72	14.77	-16.52	0.90	1.17	39.31	-107.02	14.77	-16.52	Pedestrian	Vehicle	-----	-302.04	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.65	6.65
		U_{21} - U_{22}	-146.72	30.82	-100.51	14.37	-22.74	0.90	1.17	32.43	-105.74	14.37	-22.74	Pedestrian	Vehicle	-----	-328.20	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.53	6.53
		U_{22} - U_{23}	-146.49	28.83	-105.71	14.36	-22.72	0.90	1.17	30.34	-111.21	14.36	-22.72	Pedestrian	Vehicle	-----	-335.01	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.21	6.21
		U_{23} - U_{24}	-112.53	19.95	-93.82	13.88	-21.04	0.90	1.17	20.99	-98.70	13.88	-21.04	Pedestrian	Vehicle	-----	-274.60	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.34	7.34
		U_{24} - U_{25}	-36.03	43.18	-82.76	13.40	-15.01	0.90	1.17	45.43	-87.07	13.40	-15.01	Vehicle	Vehicle	12.22	-160.02	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	18.85	18.85	7.54	7.54
		U_{25} - U_{26}	80.94	46.75	-62.92	12.93	-12.15	0.90	1.17	49.18	-66.19	12.93	-12.15	Vehicle	Vehicle	169.16	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.93	13.93	-----	-----
		U_{26} - U_{27}	220.82	49.48	-43.09	12.57	-5.86	0.90	1.17	52.06	-45.34	12.57	-5.86	Vehicle	Vehicle	354.74	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	10.48	10.48	-----	-----
		U_{27} - U_{28}	363.48	49.60	-25.18	12.37	0.18	0.90	1.17	52.19	-26.49	12.37	0.18	Vehicle	Vehicle	540.37	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	13.04	13.04	-----	-----
		U_{28} - U_{29}	503.92	6.49	-11.99	12.24	3.11	0.90	1.17	6.83	-12.62	12.24	3.11	Pedestrian	Vehicle	679.87	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	40.31	40.31	-----	-----
		U_{29} - U_{30}	616.62	-1.82	-1.39	0.00	7.42	0.90	1.17	-1.46	-1.91	7.42	0.00	Pedestrian	Vehicle	809.35	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{30} - U_{31}	559.73	-3.70	-10.21	25.79	0.00	0.90	1.18	-3.94	-10.87	25.79	0.00	Pedestrian	V

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L$_0$- L$_1$	-1.94	0.17	1.10	-2.06	0.37	0.90	1.24	1.22	0.19	0.37	-2.06	Vehicle	Pedestrian	-----	-4.96	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	-----	-----
		L$_1$ - L$_2$	67.93	32.09	34.61	0.00	5.88	0.90	1.24	38.53	35.73	5.88	0.00	Vehicle	Vehicle	138.39	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**11.28**	**11.28**	-----	-----
		L$_2$ - L$_3$	78.83	-28.80	84.17	-7.39	15.48	0.90	1.24	93.70	-32.06	15.48	-7.39	Vehicle	Vehicle	224.29	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**6.29**	**6.29**	-----	-----
		L$_3$ - L$_4$	39.11	-40.04	85.44	-10.83	18.09	0.90	1.24	95.12	-44.57	18.09	-10.83	Vehicle	Vehicle	174.50	-7.11	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	**6.62**	**6.62**	**13.51**	**13.51**
		L$_4$ - L$_5$	-166.44	-58.48	51.98	-16.91	10.96	0.90	1.24	57.87	-65.10	10.96	-16.91	Vehicle	Vehicle	-----	-301.00	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.13**	**5.13**
		L$_5$ - L$_6$	-301.30	-63.20	21.01	-18.94	3.24	0.90	1.24	23.39	-70.36	3.24	-18.94	Vehicle	Vehicle	-----	-483.15	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.09**	**5.09**
		L$_6$ - L$_7$	-439.01	-67.89	1.32	-21.52	-4.99	0.90	1.24	1.47	-75.58	-4.99	-21.52	Pedestrian	Vehicle	-----	-668.96	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.69**	**6.69**
		L$_7$ - L$_8$	-551.71	0.32	-16.31	0.00	-35.56	0.90	1.24	0.36	-18.15	0.00	-35.56	Vehicle	Pedestrian	-----	-787.05	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.06**	**12.06**
		L$_8$ - L$_9$	-570.55	-60.67	8.28	-37.48	0.00	0.90	1.20	8.93	-65.41	0.00	-37.48	Vehicle	Pedestrian	-----	-875.47	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**6.11**	**6.11**
		L$_9$ - L$_{10}$	-355.55	-31.35	-6.52	-13.03	-11.67	0.90	1.20	-7.03	-33.80	-11.67	-13.03	Pedestrian	Pedestrian	-----	-523.09	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**12.59**	**12.59**
		L$_{10}$ - L$_{11}$	-118.56	-37.46	34.91	-12.42	0.00	0.90	1.20	37.64	-40.39	0.00	-12.42	Vehicle	Vehicle	-----	-206.63	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**9.45**	**9.45**
		L$_{11}$ - L$_{12}$	103.33	43.30	53.78	0.50	0.00	0.90	1.20	57.99	46.68	0.50	0.00	Vehicle	Vehicle	209.71	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.46**	**8.46**	-----	-----
		L$_{12}$ - L$_{13}$	300.47	-32.31	97.48	-8.15	17.86	0.90	1.20	105.10	-34.83	17.86	-8.15	Vehicle	Vehicle	527.24	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.42**	**6.42**	-----	-----
		L$_{13}$ - L$_{14}$	441.01	77.72	108.72	-6.62	24.18	0.90	1.20	117.23	83.80	24.18	-6.62	Vehicle	Vehicle	725.71	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.40**	**7.40**	-----	-----
		L$_{14}$ - L$_{15}$	546.80	-17.38	114.98	-3.50	24.61	0.90	1.20	123.97	-18.73	24.61	-3.50	Vehicle	Vehicle	872.00	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**8.29**	**8.29**	-----	-----
		L$_{15}$ - L$_{16}$	505.90	-11.70	97.92	-2.04	20.37	0.90	1.20	105.57	-12.61	20.37	-2.04	Vehicle	Vehicle	794.91	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**10.12**	**10.12**	-----	-----
		L$_{16}$ - L$_{17}$	398.64	-14.85	75.94	-0.84	12.78	0.90	1.20	81.88	-16.01	12.78	-0.84	Vehicle	Vehicle	624.68	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.99**	**9.99**	-----	-----
		L$_{17}$ - L$_{18}$	263.76	-2.31	36.59	0.15	4.73	0.90	1.20	39.45	-2.49	4.73	0.15	Vehicle	Vehicle	394.17	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**15.71**	**15.71**	-----	-----
		L$_{18}$ - L$_{19}$	118.86	-9.50	16.88	0.70	-3.28	0.90	1.20	18.20	-10.25	0.70	-3.28	Vehicle	Vehicle	178.17	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**21.09**	**21.09**	-----	-----
		L$_{19}$ - L$_{20}$	-23.25	3.16	-5.52	1.27	-12.00	0.90	1.20	3.40	-5.95	1.27	-12.00	Pedestrian	Pedestrian	-----	-53.56	1.95	17.93	15.9750	591.53	131.71	10.8073	5.7170	17.13	32.72	-498.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	**20.07**	**20.07**
		L$_0$'- L$_1$'	-35.95	0.48	3.82	-5.13	1.19	0.90	1.18	4.07	0.51	1.19	-5.13	Vehicle	Pedestrian	-----	-52.74	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L$_1$' - L$_2$'	132.83	27.20	13.14	2.94	-0.07	0.90	1.18	28.96	13.99	2.94	-0.07	Vehicle	Vehicle	210.32	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**17.28**	**17.28**	-----	-----
		L$_2$' - L$_3$'	304.11	47.94	63.59	10.53	-1.80	0.90	1.18	67.71	51.04	10.53	-1.80	Vehicle	Vehicle	483.36	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.92**	**9.92**	-----	-----
		L$_3$' - L$_4$'	445.92	81.96	88.33	0.00	13.17	0.90	1.18	94.05	87.27	13.17	0.00	Vehicle	Vehicle	701.95	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**9.18**	**9.18**	-----	-----
		L$_4$' - L$_5$'	567.84	-25.33	125.43	-6.10	24.82	0.90	1.18	133.55	-26.97	24.82	-6.10	Vehicle	Vehicle	911.80	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.10**	**8.10**	-----	-----
		L$_5$' - L$_6$'	603.64	-39.99	133.84	-8.06	28.47	0.90	1.18	142.50	-42.58	28.47	-8.06	Vehicle	Vehicle	969.98	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.34**	**8.34**	-----	-----
		L$_6$' - L$_7$'	599.48	-51.41	141.57	-10.41	30.26	0.90	1.18	150.73	-54.74	30.26	-10.41	Vehicle	Vehicle	975.28	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.08**	**8.08**	-----	-----
		L$_7$' - L$_8$'	373.94	-64.12	108.09	-13.66	24.93	0.90	1.18	115.08	-68.27	24.93	-13.66	Vehicle	Vehicle	635.72	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**8.41**	**8.41**	-----	-----
		L$_8$' - L$_9$'	195.71	-68.82	87.34	-15.12	19.52	0.90	1.18	92.99	-73.27	19.52	-15.12	Vehicle	Vehicle	375.31	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**9.72**	**9.72**	-----	-----
		L$_9$' - L$_{10}$'	-13.21	-70.89	59.02	-16.11	12.45	0.90	1.18	62.83	-75.47	12.45	-16.11	Vehicle	Vehicle	64.51	-115.29	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**13.93**	**13.93**	**9.47**	**9.47**
		L$_{10}$ - L$_{11}$	-217.32	-71.49	32.99	-17.02	5.50	0.90	1.18	35.12	-76.12	5.50	-17.02	Vehicle	Vehicle	-----	-381.46	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.69**	**5.69**
		L$_{11}$ - L$_{12}$	-419.93	-70.00	13.62	-17.31	-2.04	0.90	1.18	14.50	-74.53	-2.04	-17.31	Vehicle	Vehicle	-----	-642.79	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.85**	**6.85**
		L$_{12}$ - L$_{13}$	-591.41	-71.77	-0.86	-18.75	-7.09	0.90	1.18	-0.92	-76.41	-7.09	-18.75	Pedestrian	Vehicle	-----	-868.17	9.73	59.10	49.3700	1950.30	131.71	10.9531	5.8186	16.94	32.73	-1644.04	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.81**	**8.81**
		L$_{13}$ - L$_{14}$	-724.23	1.08	-10.96	0.00	-35.12	0.90	1.18	1.15	-11.66	0.00	-35.12	Vehicle	Pedestrian	-----	-1002.31	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.91**	**16.91**
		L$_{14}$ - L$_{15}$	-747.05	-38.64	13.47	-36.29	0.00	0.90	1.17	14.17	-40.66	0.00	-36.29	Vehicle	Pedestrian	-----	-1071.19	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**9.98**	**9.98**
		L$_{15}$ - L$_{16}$	-632.15	10.25	-1.20	0.00	-31.21	0.90	1.17	10.78	-1.26	0.00	-31.21	Vehicle	Pedestrian	-----	-864.01	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**19.81**	**19.81**
		L$_{16}$ - L$_{17}$	-488.62	-43.37	17.85	-25.39	0.00	0.90	1.17	18.78	-45.63	0.00	-25.39	Vehicle	Pedestrian	-----	-727.54	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.87**	**7.87**
		L$_{17}$ - L$_{18}$	-336.98	1.84	31.50	-18.12	0.00	0.90	1.17	33.14	1.93	0.00	-18.12	Vehicle	Pedestrian	-----	-459.12	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L$_{18}$ - L$_{19}$	-183.61	-46.38	54.14	-11.34	4.48	0.90	1.17	56.96	-48.80	4.48	-11.34	Vehicle	Vehicle	-----	-302.13	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**7.99**	**7.99**
		L$_{19}$ - L$_{20}$	-45.77	-41.72	66.63	-9.58	8.92	0.90	1.17	70.10	-43.90	8.92	-9.58	Vehicle	Vehicle	31.64	-116.56	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**10.34**	**10.34**	**12.03**	**12.03**
	Structure 2	L$_{20}$ - L$_{21}$	68.00	-37.08	89.92	-9.12	11.57	0.90	1.17	94.61	-39.02	11.57	-9.12	Vehicle	Vehicle	211.38	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.48**	**9.48**	-----	-----
		L$_{21}$ - L$_{22}$	133.90	-29.66	96.23	-8.82	13.61	0.90	1.17	101.24	-31.20	13.61	-8.82	Vehicle	Vehicle	305.69	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.21**	**8.21**	-----	-----
		L$_{22}$ - L$_{23}$	122.50	-14.02	87.07	-7.58	11.79	0.90	1.17	91.61	-14.75	11.79	-7.58	Vehicle	Pedestrian	278.34	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**9.19**	**9.19**	-----	-----
		L$_{23}$ - L$_{24}$	46.70	-36.53	76.01	-7.09	8.09	0.90	1.17	79.97	-38.44	8.09	-7.09	Vehicle	Vehicle	164.66	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**11.48**	**11.48**	-----	-----
		L$_{24}$ - L$_{25}$	-66.76	-40.67	56.65	-6.24	2.64	0.90	1.17	59.60	-42.79	2.64	-6.24	Vehicle	Vehicle	-----	-142.41	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**11.85**	**11.85**
		L$_{25}$ - L$_{26}$	-205.83	-43.50	33.34	-5.88	-3.61	0.90	1.17	35.08	-45.76	-3.61	-5.88	Vehicle	Vehicle	-----	-327.07	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**8.04**	**8.04**
		L$_{26}$ - L$_{27}$	-350.61	-44.31	18.02	-5.26	-6.72	0.90	1.17	18.96	-46.62	-5.26	-6.72	Vehicle	Vehicle	-----	-516.39	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**8.09**	**8.09**
		L$_{27}$ - L$_{28}$	-494.76	-44.13	-0.52	-5.10	-12.12	0.90	1.17	-0.55	-46.43	-5.10	-12.12	Pedestrian	Vehicle	-----	-703.55	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**11.91**	**11.91**
		L$_{28}$ - L$_{29}$	-620.88	-27.68	-4.97	-31.79	-17.19	0.90	1.17	-5.22	-29.12	-17.19	-31.79	Pedestrian	Pedestrian	-----	-886.32	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.75**	**10.75**
		L$_{29}$ - L$_{26}$	-716.82	-14.26	-15.77	0.00	-36.30	0.90	1.17	-15.00	-16.59	0.00	-36.30	Vehicle	Pedestrian	-----	-1000.61	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.10**	**15.10**
		L$_{26}$ - L$_{31}$	-

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Inspected Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian LL MAX	Pedestrian LL MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian LL MAX	Impact & Pedestrian LL MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.63	3.86	-58.69	3.44	-12.32	0.90	1.24	4.29	-65.34	3.44	-12.32	Pedestrian	Vehicle	-----	-206.66	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.84	3.84
		U_1 - L_1	-46.50	11.37	-37.57	2.93	-9.05	0.90	1.24	12.66	-41.82	2.93	-9.05	Vehicle	Vehicle	-----	-114.82	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.31	7.31
		U_2 - L_2	-0.07	10.30	-25.68	2.84	-5.68	0.90	1.24	11.46	-28.59	2.84	-5.68	Vehicle	Vehicle	14.81	-37.26	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	37.32	37.32	12.31	12.31
		U_3 - L_3	39.61	8.12	-11.97	2.70	-2.12	0.90	1.24	9.04	-13.33	2.70	-2.12	Vehicle	Vehicle	63.25	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	42.91	42.91	-----	-----
		U_4 - L_4	-30.21	-13.32	-4.87	-3.47	0.00	0.90	1.24	-5.43	-14.83	0.00	-3.47	Vehicle	Vehicle	-----	-58.55	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	21.55	21.55
		U_5 - L_5	-130.50	-36.02	3.73	-10.24	0.00	0.90	1.24	4.15	-40.10	0.00	-10.24	Vehicle	Vehicle	-----	-221.79	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	7.35	7.35
		U_6 - L_6	-158.19	-36.01	5.90	-13.06	0.00	0.90	1.24	6.57	-40.09	0.00	-13.06	Vehicle	Vehicle	-----	-257.76	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	8.73	8.73
		U_7 - L_7	-152.33	-36.15	11.52	-13.25	0.00	0.90	1.24	12.82	-40.25	0.00	-13.25	Vehicle	Vehicle	-----	-250.35	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	7.65	7.65
		U_8 - L_8	-455.44	-32.92	-56.59	-12.74	-18.98	0.90	1.24	-36.65	-63.00	-12.74	-18.98	Pedestrian	Vehicle	-----	-673.97	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	9.62	9.62
		U_9 - L_9	-287.50	3.10	-56.32	0.00	-18.21	0.90	1.20	3.34	-60.73	0.00	-18.21	Vehicle	Vehicle	-----	-452.70	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	5.89	5.89
		U_{10} - L_{10}	-276.27	1.50	-55.74	0.00	-17.55	0.90	1.20	1.61	-60.09	0.00	-17.55	Vehicle	Vehicle	-----	-437.27	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	7.76	7.76
		U_{11} - L_{11}	-232.54	-3.48	-47.40	0.00	-14.42	0.90	1.20	-3.76	-51.11	0.00	-14.42	Vehicle	Vehicle	-----	-368.74	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.00	8.00
		U_{12} - L_{12}	-178.38	1.04	-39.24	0.00	-11.20	0.90	1.20	1.13	-42.30	0.00	-11.20	Vehicle	Vehicle	-----	-286.89	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	8.37	8.37
		U_{13} - L_{13}	-127.70	3.14	-32.14	0.00	-7.88	0.90	1.20	3.38	-34.66	0.00	-7.88	Vehicle	Vehicle	-----	-211.06	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.29	7.29
		U_{14} - L_{14}	-30.38	-8.72	-2.00	0.00	-3.03	0.90	1.20	-2.16	-9.40	0.00	-3.03	Vehicle	Vehicle	-----	-51.71	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	33.45	33.45
		U_{15} - L_{15}	-28.93	-24.90	9.50	-4.53	1.55	0.90	1.20	10.25	-26.84	1.55	-4.53	Vehicle	Vehicle	-----	-72.50	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	11.71	11.71
		U_{16} - L_{16}	-75.99	-30.36	5.79	-7.07	1.39	0.90	1.20	6.24	-32.73	1.39	-7.07	Vehicle	Vehicle	-----	-141.34	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	8.11	8.11
		U_{17} - L_{17}	-161.81	-41.15	6.22	-10.66	1.30	0.90	1.20	6.71	-44.36	1.30	-10.66	Vehicle	Vehicle	-----	-268.02	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	5.62	5.62
		U_{18} - L_{18}	-190.09	-40.55	5.33	-12.69	1.12	0.90	1.20	5.75	-43.72	1.12	-12.69	Vehicle	Vehicle	-----	-303.96	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	7.67	7.67
		U_{19} - L_{19}	-228.09	-40.34	4.57	-14.99	0.97	0.90	1.20	4.93	-43.49	0.97	-14.99	Vehicle	Pedestrian	-----	-372.54	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	6.64	6.64
		U_{20} - L_{20}	-242.54	-41.31	4.14	-15.62	0.95	0.90	1.20	4.46	-44.54	0.95	-15.62	Vehicle	Pedestrian	-----	-393.50	0.00	27.86	27.8600	919.38	131.71	20.3229	2.7881	65.60	28.91	-684.53	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	4.72	4.72
	Structure 2	U_0 - L_0	-302.99	2.33	-61.26	2.22	-15.08	0.90	1.18	2.48	-65.23	2.22	-15.08	Pedestrian	Vehicle	-----	-478.69	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	5.20	5.20
		U_1 - L_1	-268.80	10.24	-56.26	2.12	-13.67	0.90	1.18	10.90	-59.90	2.12	-13.67	Vehicle	Vehicle	-----	-427.31	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	6.74	6.74
		U_2 - L_2	-220.88	11.04	-52.59	2.34	-12.32	0.90	1.18	11.75	-55.99	2.34	-12.32	Vehicle	Vehicle	-----	-359.93	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	6.31	6.31
		U_3 - L_3	-175.24	11.83	-45.44	2.49	-10.35	0.90	1.18	12.59	-48.38	2.49	-10.35	Vehicle	Vehicle	-----	-290.71	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	5.72	5.72
		U_4 - L_4	-82.09	10.26	-33.34	2.21	-6.62	0.90	1.18	10.92	-35.49	2.21	-6.62	Vehicle	Vehicle	-----	-152.85	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	7.24	7.24
		U_5 - L_5	-19.91	9.96	-26.36	2.23	-4.16	0.90	1.18	10.60	-28.06	2.23	-4.16	Vehicle	Vehicle	-----	-62.36	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	11.42	11.42
		U_6 - L_6	60.32	21.63	-13.56	1.75	-0.47	0.90	1.18	23.03	-14.43	1.75	-0.47	Vehicle	Vehicle	108.35	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	15.96	15.96	-----	-----
		U_7 - L_7	-41.78	-5.90	-4.14	-2.49	0.00	0.90	1.18	-4.41	-6.28	0.00	-2.49	Vehicle	Pedestrian	-----	-65.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	34.06	34.06
		U_8 - L_8	-189.01	-37.43	4.82	-8.38	0.00	0.90	1.18	5.14	-39.85	0.00	-8.38	Vehicle	Vehicle	-----	-297.51	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	8.57	8.57
		U_9 - L_9	-254.00	-46.43	0.77	-10.55	0.00	0.90	1.18	0.82	-49.44	0.00	-10.55	Vehicle	Vehicle	-----	-394.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	8.84	8.84
		U_{10} - L_{10}	-290.02	-47.12	3.54	-12.18	0.00	0.90	1.18	3.77	-50.17	0.00	-12.18	Vehicle	Vehicle	-----	-442.24	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	9.74	9.74
		U_{11} - L_{11}	-312.19	-49.31	7.62	-12.59	0.00	0.90	1.18	8.11	-52.50	0.00	-12.59	Vehicle	Vehicle	-----	-474.09	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	8.62	8.62
		U_{12} - L_{12}	-327.27	-46.54	10.97	-13.01	-0.93	0.90	1.18	11.68	-49.55	-0.93	-13.01	Vehicle	Vehicle	-----	-489.86	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	9.58	9.58
		U_{13} - L_{13}	-277.23	-39.30	14.62	-11.39	0.00	0.90	1.18	15.57	-41.84	0.00	-11.39	Vehicle	Vehicle	-----	-414.80	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	9.87	9.87
		U_{14} - L_{14}	-505.47	-30.72	-44.60	-9.95	-11.35	0.90	1.18	-32.71	-47.49	-9.95	-11.35	Vehicle	Vehicle	-----	-718.85	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	11.51	11.51
		U_{15} - L_{15}	-232.92	2.50	-51.71	1.67	-11.17	0.90	1.17	2.62	-54.40	1.67	-11.17	Pedestrian	Vehicle	-----	-373.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	8.40	8.40
		U_{16} - L_{16}	-260.09	6.04	-54.95	0.83	-12.63	0.90	1.17	6.35	-57.81	0.83	-12.63	Vehicle	Vehicle	-----	-413.27	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	7.02	7.02
		U_{17} - L_{17}	-228.20	6.81	-53.32	0.66	-11.76	0.90	1.17	7.16	-56.10	0.66	-11.76	Vehicle	Vehicle	-----	-369.59	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	7.04	7.04
		U_{18} - L_{18}	-209.23	8.18	-46.46	-0.02	-11.28	0.90	1.17	8.61	-48.88	-0.02	-11.28	Vehicle	Vehicle	-----	-335.55	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	7.53	7.53
		U_{19} - L_{19}	-166.51	8.66	-42.64	-0.07	-9.53	0.90	1.17	9.11	-44.86	-0.07	-9.53	Vehicle	Vehicle	-----	-274.78	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	7.69	7.69
		U_{20} - L_{20}	-113.91	8.75	-33.90	-0.43	-7.50	0.90	1.17	9.21	-35.67	-0.43	-7.50	Vehicle	Vehicle	-----	-194.44	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	7.33	7.33
		U_{21} - L_{21}	-62.73	12.73	-25.01	0.00	-5.22	0.90	1.17	13.39	-26.32	0.00	-5.22	Vehicle	Vehicle	-----	-115.76	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	10.56	10.56
		U_{22} - L_{22}	-38.93	-5.96	-5.39	-2.04	-2.15	0.90	1.17	-5.67	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	35.98	35.98
		U_{23} - L_{23}	-74.45	-30.54	9.31	-6.10	0.48	0.90	1.17	9.79	-32.13	0.48	-6.10	Vehicle	Vehicle	-----	-138.55	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	8.28	8.28
		U_{24} - L_{24}	-121.37	-35.78	9.12	-8.17	0.37	0.90	1.17	9.60	-37.65	0.37	-8.17	Vehicle	Vehicle	-----	-206.72	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	6.74	6.74
		U_{25} - L_{25}	-169.10	-41.94	8.78	-9.94	0.43	0.90	1.17	9.23	-44.13	0.43	-9.94	Vehicle	Vehicle	-----	-277.20	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	7.75	7.75
		U_{26} - L_{26}	-207.93	-44.81	7.94	-11.42	0.14	0.90	1.17	8.35	-47.14	0.14	-11.42	Vehicle	Vehicle	-----	-331.59	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	7.83	7.83
		U_{27} - L_{27}	-219.90	-46.73	6.53	-11.49	0.16	0.90	1.17	6.87	-49.16	0.16	-11.49	Vehicle	Vehicle	-----	-349.77	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	8.21	8.21
		U_{28} - L_{28}	-240.66	-42.88	9.41	-12.59	-0.25	0.90	1.17	9.90	-45.11	-0.25	-12.59	Vehicle	Vehicle	-----	-371.50	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	9.43	9.43
		U_{29} - L_{29}	-202.76	-37.94	14.24	-10.35	0.00	0.90	1.17	14.98	-39.92	0.00	-10.35	Vehicle	Vehicle	-----	-315.47	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	12.21	12.21
		U_{30} - L_{30}	-516.45	-31.08	-47.57	-8.21	-13.75	0.90	1.18	-33.10	-50.65	-8.21	-13.75	Vehicle	Vehicle	-----	-737.23	11.02	51.81	40.7900	1709.73	131.71	25.6094	4.0330	57.15	29.89	-1316.46	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	9.80	9.80
		U_{31} - L_{31}	-318.62	6.93	-53.56	0.00	-12.96	0.90	1.18	7.38	-57.03	0.00	-12.96	Vehicle	Vehicle	-----	-488.33	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	6.51	6.51
		U_{32} - L_{32}	-358.52	2.17	-58.19	-0.25	-14.65	0.90	1.18	2.31	-61.95	-0.25	-14.65	Vehicle	Vehicle	-----	-546.61	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	7.15	7.15
		U_{33} - L_{33}	-325.85	3.27	-54.69	0.00	-13.51	0.90	1.18	3.48	-58.23	0.00	-13.51	Vehicle	Vehicle	-----	-499.30	2.42	38.13	35.7105	1258.31	131.71	14.0365

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U$_0$ - L$_1$	87.61	-7.91	27.10	14.00	-4.60	0.90	1.24	30.17	-8.81	14.00	-4.60	Pedestrian	Pedestrian	171.31	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**11.29**	**11.29**	-----	-----
		U$_1$ - L$_2$	23.84	-17.48	46.12	-4.72	9.20	0.90	1.24	51.34	-19.46	9.20	-4.72	Vehicle	Vehicle	97.74	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.87**	**7.87**	-----	-----
		U$_2$ - L$_3$	-49.05	-14.65	16.41	-4.33	3.33	0.90	1.24	18.27	-16.31	3.33	-4.33	Vehicle	Vehicle	-----	-84.96	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**17.49**	**17.49**
		U$_3$ - L$_4$	-108.90	-13.36	-5.46	-4.21	-2.10	0.90	1.24	-6.08	-14.87	-2.10	-4.21	Pedestrian	Vehicle	-----	-160.90	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**15.30**	**15.30**
		U$_4$ - L$_5$	153.14	6.69	43.66	3.12	7.00	0.90	1.24	48.61	7.44	7.00	3.12	Vehicle	Pedestrian	262.27	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.64**	**7.64**	-----	-----
		U$_5$ - L$_6$	186.37	1.43	47.81	2.79	10.66	0.90	1.24	53.22	1.59	10.66	2.79	Vehicle	Pedestrian	311.47	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.72**	**8.72**	-----	-----
		U$_6$ - L$_7$	177.53	-10.59	39.08	1.60	12.54	0.90	1.24	43.50	-11.79	12.54	1.60	Vehicle	Vehicle	287.34	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.88**	**10.88**	-----	-----
		U$_7$ - L$_8$	173.15	-2.42	40.35	0.41	13.46	0.90	1.24	44.93	-2.69	13.46	0.41	Vehicle	Vehicle	283.50	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**10.63**	**10.63**	-----	-----
		U$_8$ - L$_9$	328.03	-1.43	64.65	-0.14	19.45	0.90	1.20	69.70	-1.54	19.45	-0.14	Vehicle	Vehicle	517.04	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**9.10**	**9.10**	-----	-----
		U$_9$ - L$_{10}$	339.64	-1.02	69.18	0.85	18.90	0.90	1.20	74.59	-1.10	18.90	0.85	Vehicle	Vehicle	538.50	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.35**	**8.35**	-----	-----
		U$_{10}$ - L$_{11}$	313.15	3.68	61.66	1.69	16.46	0.90	1.20	66.48	3.97	16.46	1.69	Vehicle	Pedestrian	493.52	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**8.99**	**8.99**	-----	-----
		U$_{11}$ - L$_{12}$	270.62	4.48	50.56	1.81	13.03	0.90	1.20	54.51	4.83	13.03	1.81	Vehicle	Pedestrian	422.66	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**9.30**	**9.30**	-----	-----
		U$_{12}$ - L$_{13}$	194.11	-1.09	46.28	0.00	10.79	0.90	1.20	49.90	-1.18	10.79	0.00	Vehicle	Vehicle	317.21	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**8.76**	**8.76**	-----	-----
		U$_{13}$ - L$_{14}$	123.52	-8.33	33.14	0.00	5.97	0.90	1.20	35.73	-8.98	5.97	0.00	Vehicle	Vehicle	207.02	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.51**	**8.51**	-----	-----
		U$_{14}$ - L$_{15}$	-16.31	-18.91	26.60	-2.35	1.47	0.90	1.20	28.68	-20.39	1.47	-2.35	Vehicle	Vehicle	16.08	-47.71	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**15.48**	**15.48**	**15.30**	**15.30**
		U$_{15}$ - L$_{16}$	59.11	-8.13	35.15	-2.09	6.08	0.90	1.20	37.89	-8.77	6.08	-2.09	Vehicle	Vehicle	126.10	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**9.73**	**9.73**	-----	-----
		U$_{17}$ - L$_{16}$	172.05	-8.68	45.75	-1.86	9.93	0.90	1.20	49.33	-9.36	9.93	-1.86	Vehicle	Vehicle	287.79	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**7.15**	**7.15**	-----	-----
		U$_{18}$ - L$_{17}$	210.69	-7.36	47.08	-1.53	12.50	0.90	1.20	50.77	-7.93	12.50	-1.53	Vehicle	Vehicle	339.90	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.67**	**8.67**	-----	-----
		U$_{19}$ - L$_{18}$	242.30	-5.87	47.93	-1.21	13.72	0.90	1.20	51.68	-6.33	13.72	-1.21	Vehicle	Vehicle	382.18	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**9.05**	**9.05**	-----	-----
		U$_{20}$ - L$_{19}$	257.77	-4.82	40.44	-1.03	15.71	0.90	1.20	43.60	-5.20	15.71	-1.03	Pedestrian	Vehicle	412.20	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.63**	**7.63**	-----	-----
		U$_0$ - L$_1$	299.01	-4.30	27.30	-2.21	14.21	0.90	1.18	29.07	-4.58	14.21	-2.21	Pedestrian	Pedestrian	444.96	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**11.06**	**11.06**	-----	-----
		U$_1$ - L$_2$	284.23	-12.74	62.85	-2.66	14.05	0.90	1.18	66.92	-13.56	14.05	-2.66	Vehicle	Vehicle	456.49	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.37**	**7.37**	-----	-----
		U$_2$ - L$_3$	221.45	-13.59	51.89	-2.85	11.83	0.90	1.18	55.25	-14.46	11.83	-2.85	Vehicle	Vehicle	359.70	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.77**	**7.77**	-----	-----
		U$_3$ - L$_4$	178.33	-15.34	55.11	-3.23	10.08	0.90	1.18	58.68	-16.33	10.08	-3.23	Vehicle	Vehicle	308.11	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U$_4$ - L$_5$	53.52	-13.11	34.13	-2.87	5.38	0.90	1.18	36.34	-13.96	5.38	-2.87	Vehicle	Vehicle	116.81	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**10.30**	**10.30**	-----	-----
		U$_5$ - L$_6$	-16.50	-18.63	29.26	-2.92	2.23	0.90	1.18	31.15	-19.83	2.23	-2.92	Vehicle	Vehicle	19.05	-47.23	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**14.26**	**14.26**	**15.59**	**15.59**
		U$_6$ - L$_7$	-133.20	-33.80	12.87	-2.50	-2.48	0.90	1.18	13.70	-35.98	-2.48	-2.50	Vehicle	Vehicle	-----	-219.94	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**6.28**	**6.28**
		U$_7$ - L$_7$	208.77	-8.61	35.02	0.00	8.33	0.90	1.18	37.29	-9.17	8.33	0.00	Vehicle	Vehicle	319.87	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**10.58**	**10.58**	-----	-----
		U$_8$ - L$_8$	289.58	0.13	55.78	0.00	8.99	0.90	1.18	59.39	0.14	8.99	0.00	Vehicle	Vehicle	453.66	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.08**	**7.08**	-----	-----
		U$_{10}$ - L$_9$	327.97	-0.04	54.26	1.53	11.09	0.90	1.18	57.77	-0.04	11.09	1.53	Vehicle	Pedestrian	501.46	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.78**	**7.78**	-----	-----
		U$_{11}$ - L$_{10}$	349.27	-3.45	59.36	0.55	12.45	0.90	1.18	63.20	-3.67	12.45	0.55	Vehicle	Vehicle	536.21	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.83**	**7.83**	-----	-----
		U$_{12}$ - L$_{11}$	358.20	-8.32	56.00	0.48	13.32	0.90	1.18	59.62	-8.86	13.32	0.48	Vehicle	Vehicle	543.16	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**8.16**	**8.16**	-----	-----
		U$_{13}$ - L$_{12}$	307.76	-16.16	43.44	-0.24	12.26	0.90	1.18	46.25	-17.21	12.26	-0.24	Vehicle	Vehicle	460.21	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**10.16**	**10.16**	-----	-----
		U$_{14}$ - L$_{13}$	260.25	-10.23	37.50	-1.50	11.73	0.90	1.18	39.93	-10.89	11.73	-1.50	Vehicle	Vehicle	390.23	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**12.96**	**12.96**	-----	-----
		U$_{15}$ - L$_{15}$	208.41	-6.64	50.47	-2.52	11.04	0.90	1.17	53.10	-6.99	11.04	-2.52	Vehicle	Pedestrian	339.97	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**8.33**	**8.33**	-----	-----
		U$_{16}$ - L$_{16}$	243.53	-4.78	58.73	-1.48	11.54	0.90	1.17	61.79	-5.03	11.54	-1.48	Vehicle	Vehicle	396.92	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.59**	**6.59**	-----	-----
		U$_{17}$ - L$_{17}$	255.83	-7.17	56.92	-0.85	11.67	0.90	1.17	59.89	-7.54	11.67	-0.85	Vehicle	Vehicle	410.42	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U$_{18}$ - L$_{18}$	235.25	-8.40	54.64	-0.75	10.45	0.90	1.17	57.48	-8.84	10.45	-0.75	Vehicle	Vehicle	380.55	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.23**	**7.23**	-----	-----
		U$_{19}$ - L$_{19}$	212.06	-10.25	53.82	0.01	8.95	0.90	1.17	56.62	-10.79	8.95	0.01	Vehicle	Vehicle	349.29	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.75**	**7.75**	-----	-----
		U$_{20}$ - L$_{20}$	168.18	-11.35	48.33	0.06	9.14	0.90	1.17	50.85	-11.94	9.14	0.06	Vehicle	Vehicle	284.75	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
	Structure 2	U$_{26}$ - L$_{21}$	97.21	-11.06	36.34	0.45	6.66	0.90	1.17	38.24	-11.64	6.66	0.45	Vehicle	Vehicle	176.08	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**8.64**	**8.64**	-----	-----
		U$_{21}$ - L$_{22}$	30.55	-20.58	29.72	0.58	3.66	0.90	1.17	31.27	-21.65	3.66	0.58	Vehicle	Vehicle	80.37	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**12.70**	**12.70**	-----	-----
		U$_{23}$ - L$_{22}$	49.81	-13.23	26.65	-0.72	5.11	0.90	1.17	28.04	-13.92	5.11	-0.72	Vehicle	Vehicle	101.21	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**13.48**	**13.48**	-----	-----
		U$_{24}$ - L$_{23}$	115.09	-12.37	40.90	-0.72	8.00	0.90	1.17	43.03	-13.02	8.00	-0.72	Vehicle	Vehicle	205.56	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.27**	**7.27**	-----	-----
		U$_{25}$ - L$_{24}$	179.20	-12.03	49.00	-0.73	10.10	0.90	1.17	51.56	-12.66	10.10	-0.73	Vehicle	Vehicle	299.99	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**8.23**	**8.23**	-----	-----
		U$_{26}$ - L$_{25}$	220.95	-10.55	51.63	-0.57	11.89	0.90	1.17	54.32	-11.10	11.89	-0.57	Vehicle	Vehicle	357.85	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.91**	**7.91**	-----	-----
		U$_{27}$ - L$_{26}$	234.79	-6.97	50.32	-0.35	11.44	0.90	1.17	52.95	-7.34	11.44	-0.35	Vehicle	Vehicle	374.05	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**7.85**	**7.85**	-----	-----
		U$_{28}$ - L$_{27}$	253.01	-7.57	48.91	-0.28	12.25	0.90	1.17	51.46	-7.96	12.25	-0.28	Vehicle	Vehicle	395.81	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**8.88**	**8.88**	-----	-----
		U$_{29}$ - L$_{28}$	215.83	-16.12	41.43	0.00	10.20	0.90	1.17	43.59	-16.95	10.20	0.00	Vehicle	Vehicle	337.24	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**9.98**	**9.98**	-----	-----
		U$_{30}$ - L$_{29}$	179.92	-8.22	35.66	-0.93	8.89	0.90	1.17	37.51	-8.65	8.89	-0.93	Vehicle	Vehicle	282.66	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**12.55**	**12.55**	-----	-----
		U$_{31}$ - L$_{31}$	294.37	-7.70	51.65	-1.65	12.88	0.90	1.18	54.99	-8.19	12.88	-1.65	Vehicle	Vehicle	454.16	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.79**	**8.79**	-----	-----
		U$_{32}$ - L$_{32}$	342.78	-7.02	58.73	-0.55	13.71	0.90	1.18	62.53	-7.48	13.71	-0.55	Vehicle	Vehicle	526.90	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.95**	**6.95**	-----	-----
		U$_{33}$ - L$_{33}$	363.31	-1.49	56.34	0.37	13.77	0.90	1.18	59.98	-1.58	13.77	0.37	Vehicle	Vehicle	550.28	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64

Moment (Start) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Condition: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 w/o 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-131.25	-22.60	3.29	-8.25	-7.15	-4.66	44.01	-110.19	-99.47	-62.27
	L_1-L_2	-54.49	-51.15	0.89	-5.35	-7.26	-7.27	11.94	-4.62	-97.02	-97.11
	L_2-L_3	-54.49	-51.15	0.89	-5.35	-11.45	-5.93	13.19	45.49	-152.68	-79.26
	L_3-L_4	-52.26	-61.06	2.11	3.37	-12.60	-7.53	28.19	45.01	-168.26	-100.98
	L_4-L_5	-28.29	-50.99	2.35	3.37	-12.60	-7.53	31.41	41.50	-236.36	-87.49
	L_5-L_6	2.12	145.13	2.77	3.60	-12.77	-6.41	36.99	41.03	-170.63	-5.48
	L_6-L_7	54.63	69.27	2.56	1.91	-13.07	-4.24	39.21	25.46	-143.34	-50.68
	L_7-L_8	-69.92	603.38	1.81	3.30	-18.63	14.39	24.21	44.09	-222.14	-192.26
	L_8-L_9	531.73	-129.19	9.77	-12.61	-0.46	0.71	126.38	-163.10	-5.96	9.16
	L_9-L_{10}	68.54	43.95	2.30	-2.16	3.87	-2.49	29.81	-27.77	-30.71	-54.54
	L_{10}-L_{11}	100.48	-176.70	2.99	2.39	-3.63	-5.93	38.72	30.87	-46.99	-76.78
	L_{11}-L_{12}	-66.96	-160.18	2.62	2.39	-3.63	-6.42	44.22	30.87	-47.98	-83.30
	L_{12}-L_{13}	-56.66	-218.08	2.66	0.90	-8.67	-9.08	34.44	11.64	-117.39	-117.53
	L_{13}-L_{14}	-173.90	-344.75	1.75	-1.46	-14.23	-13.80	44.12	-12.95	-184.13	-159.92
	L_{14}-L_{15}	-287.80	-237.44	2.31	-1.33	-25.29	-10.06	29.91	17.22	-327.24	-130.21
	L_{15}-L_{16}	-196.20	-337.71	2.24	0.08	-18.98	-11.76	29.62	1.02	-245.56	-152.14
	L_{16}-L_{17}	-291.63	-154.75	0.97	0.19	-24.83	-7.85	29.62	1.02	-367.31	-107.50
	L_{17}-L_{18}	-189.93	-29.96	0.74	-0.69	-15.25	0.16	9.59	-8.91	-197.37	2.04
	L_{18}-L_{19}	-179.63	-28.55	0.84	-2.26	-12.06	-2.79	8.57	-8.45	-183.53	-24.97
	L_{19}-L_{20}	-249.78	258.69	0.98	-6.52	-13.60	4.41	12.65	-84.29	-175.96	97.10
	L_{20}-L_{21}	-28.62	-172.11	5.83	-8.74	-7.74	-8.37	74.50	-111.60	-98.83	-166.89
	L_{21}-L_{22}	-24.91	-199.34	-1.56	-4.41	-7.74	-8.46	74.50	-111.60	-98.83	-166.89
	L_{22}-L_{23}	-53.03	-283.30	3.35	-6.38	-10.64	-12.33	42.85	-81.49	-135.89	-157.48
	L_{23}-L_{24}	-309.66	-87.29	3.16	-3.16	-13.75	-6.64	6.81	-53.47	-221.35	-175.68
	L_{24}-L_{25}	-360.46	-389.97	0.73	1.45	-23.33	-19.20	9.28	18.49	-298.06	-245.29
	L_{25}-L_{26}	-403.42	-367.75	1.85	4.15	-24.06	-19.20	9.28	18.49	-362.79	-231.88
	L_{26}-L_{27}	-349.63	-209.87	3.45	2.41	-22.08	-23.84	44.12	43.57	-282.04	-304.61
	L_{27}-L_{28}	-253.78	-280.71	2.68	3.71	-35.29	-12.40	34.25	47.36	-450.89	-158.45
	L_{28}-L_{29}	-252.30	-73.70	2.73	0.79	-13.64	-4.24	36.78	56.61	-297.05	-50.33
	L_{29}-L_{30}	-237.02	-39.91	3.86	4.88	-21.50	-5.29	49.29	62.32	-274.64	-47.59
	L_{30}-L_{31}	-152.28	-33.84	2.83	4.63	-16.29	-4.28	60.87	62.32	-169.00	-39.53
	L_{31}-L_{32}	-116.69	-110.75	4.12	3.52	-17.21	-2.20	52.64	42.40	-219.82	-28.13
	L_{32}-L_{33}	-64.44	-191.61	3.31	4.34	-17.21	-4.46	52.64	42.40	-219.82	-28.13
	L_{33}-L_{34}	-211.04	-121.08	3.10	2.30	-25.78	17.83	39.54	40.91	-265.43	-227.80
	L_{34}-L_{35}	1028.71	-26.69	22.50	-19.91	-1.05	0.91	284.12	-251.37	-13.27	11.46
	L_{35}-L_{36}	9.97	33.63	1.85	4.15	-3.72	-5.93	35.44	4.29	-160.59	-48.24
	L_{36}-L_{37}	-271.38	-25.19	5.84	-4.76	-7.15	-8.12	73.68	-60.11	-80.31	-102.48
	L_{37}-L_{38}	-271.38	-25.19	5.84	-4.76	-7.15	-8.12	73.68	-60.11	-80.31	-102.48
	L_{38}-L_{39}	-156.55	-8.67	4.00	-5.36	-8.69	-8.11	50.95	-47.67	-102.13	-102.39
	L_{39}-L_{40}	-48.55	11.41	3.86	-3.11	-13.02	-12.05	48.11	39.23	-164.93	-152.07
	L_{40}-L_{41}	-92.57	-65.85	1.65	1.70	-15.88	-18.72	19.62	21.45	-200.45	-236.39
	L_{41}-L_{42}	-59.44	-59.11	1.66	1.70	-15.88	-18.72	19.62	21.45	-200.45	-236.39
	L_{42}-L_{43}	-48.31	-31.52	2.84	-0.36	-20.47	-8.06	35.79	-4.57	-268.45	-101.71
	L_{43}-L_{44}	10.77	13.62	2.84	-0.36	-18.11	-4.19	30.43	45.29	-228.65	-52.85
	L_{44}-L_{45}	57.22	-122.85	3.07	2.69	-18.05	-1.97	38.73	33.97	-227.86	-24.91
	L_{45}-L_{46}	85.41	4.86	2.92	1.35	-17.42	-8.35	36.85	16.98	-219.96	-105.42
	L_{46}-L_{47}	13.52	806.37	1.77	2.03	-19.62	-23.83	23.05	52.83	-183.70	-285.15
	L_{47}-L_{48}	821.42	-89.58	20.09	-20.75	-1.20	-5.52	256.69	-265.08	-15.34	-6.62
	L_{48}-L_{49}	-25.32	87.40	2.12	-2.12	-2.21	-2.21	27.09	-27.09	-58.56	-58.56
	L_{49}-L_{50}	145.61	-52.49	4.18	-5.78	-5.73	-6.20	53.34	-73.83	-73.17	-79.35
	L_{50}-L_{51}	17.52	-88.46	3.69	-7.30	-6.68	-8.33	47.18	49.80	-93.20	-85.31
	L_{51}-L_{52}	36.01	-32.46	3.69	-7.30	-6.68	-8.33	47.18	49.80	-93.20	-85.31
	L_{52}-L_{53}	-75.13	-230.47	3.89	2.39	-12.82	-10.43	49.69	30.59	-163.79	-133.55
	L_{53}-L_{54}	-208.03	-208.03	3.89	2.39	-12.82	-10.43	41.93	30.59	-163.79	-133.55
	L_{54}-L_{55}	-64.17	-278.54	3.84	3.33	-31.54	-15.19	49.07	42.56	-403.02	-194.07
	L_{55}-L_{56}	-138.59	-138.59	3.84	3.33	-31.54	-15.19	49.07	42.56	-403.02	-194.07
	L_{56}-L_{57}	-274.89	-274.55	2.44	0.34	-32.42	-14.11	31.14	4.29	-414.24	-180.28
	L_{57}-L_{58}	-296.96	-269.01	1.46	-0.22	-33.16	-15.49	18.65	2.81	-423.67	-197.94
	L_{58}-L_{59}	-296.96	-269.01	1.46	-0.22	-33.16	-15.49	18.65	2.81	-423.67	-197.94
	L_{59}-L_{60}	-154.33	-34.80	0.98	-0.24	-16.99	-4.63	12.52	-3.03	-217.03	-51.43
	L_{60}-L_{61}	-136.96	-136.96	1.01	-0.24	-16.99	-4.63	12.52	-3.03	-217.03	-51.43
	L_{61}-L_{62}	40.05	-167.81	5.52	-10.13	-3.48	-6.89	71.41	-131.10	-45.01	-89.17
	L_{62}-L_{63}	-10.43	-132.23	2.36	-7.20	-3.25	-7.00	30.51	-93.16	-42.04	-90.57
	L_{63}-L_{64}	-136.96	-136.96	3.26	-5.36	-10.41	-6.53	12.42	-26.76	-70.12	-44.98
	L_{64}-L_{65}	-140.08	-260.72	0.38	-1.44	-12.32	-10.53	4.90	-18.57	-159.44	-140.15
	L_{65}-L_{66}	-187.91	-275.87	1.25	-1.74	-17.08	-15.99	16.20	22.53	-221.04	-206.38
	L_{66}-L_{67}	-322.39	-140.13	2.31	-1.33	-25.29	-10.06	29.91	17.22	-327.24	-130.21
	L_{67}-L_{68}	-162.87	-104.84	3.94	2.76	-16.76	-8.04	12.20	35.66	-216.82	-103.99
	L_{68}-L_{69}	-147.74	-26.71	2.08	3.29	-17.02	-4.11	26.91	42.50	-220.31	-53.15
	L_{69}-L_{70}	-136.96	-136.96	2.08	3.29	-17.02	-4.11	26.91	42.50	-220.31	-53.15
	L_{70}-L_{71}	-10.81	-46.01	2.98	-1.71	-9.91	-0.62	38.58	22.14	-128.15	-8.01
	L_{71}-L_{72}	-10.81	-46.01	2.98	-1.71	-9.91	-0.62	38.58	22.14	-128.15	-8.01
	L_{72}-L_{73}	-426.14	-9.08	15.28	-14.86	-6.60	-6.02	204.12	-198.56	-8.06	-6.00
	L_{73}-L_{74}	-426.14	-9.08	15.28	-14.86	-6.60	-6.02	204.12	-198.56	-8.06	-6.00
	L_{74}-L_{75}	-128.06	64.05	3.30	-3.70	-3.87	-6.58	44.10	-49.47	-0.73	-87.84
	L_{75}-L_{76}	-70.11	-43.65	3.51	2.55	-8.13	-6.10	46.89	34.01	-108.61	-108.23
	L_{76}-L_{77}	-70.11	-43.65	3.51	2.55	-8.13	-6.10	46.89	34.01	-108.61	-108.23
	L_{77}-L_{78}	-8.37	-50.48	4.72	0.97	-15.80	-8.86	83.60	27.12	-172.59	-101.51
	L_{78}-L_{79}	-52.08	-52.08	2.64	-0.33	-13.24	-5.31	28.88	-41.36	-205.65	-76.38
	L_{79}-L_{80}	-8.37	-50.48	2.14	-3.10	-16.14	-5.72	28.88	-41.36	-205.65	-76.38

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	4.32	-17.87	-9.98	0.21	5.02	-5.48	-13.09	2.77	67.09	-73.77
	L_1-L_2	-57.34	21.56	-104.30	22.96	0.00	0.00	-57.34	21.56	-104.30	22.96
	L_2-L_3	2.40	-2.73	-0.38	-0.85	0.00	0.00	2.40	-2.73	-0.38	-0.85
	L_3-L_4	-12.69	-3.31	1.66	0.53	0.00	0.00	-12.69	-3.31	1.66	0.53
	L_4-L_5	-4.66	-1.42	0.35	0.50	0.00	0.00	-4.66	-1.42	0.35	0.50
	L_5-L_6	-17.82	-4.45	64.95	11.81	0.00	0.00	-17.82	-4.45	64.95	11.81
	L_6-L_7	-33.02	-1.90	86.91	-14.05	0.00	0.00	-33.02	-1.90	86.91	-14.05
	L_7-L_8	-32.92	20.64	84.71	-4.26	0.00	0.00	-32.92	20.64	84.71	-4.26
	L_8-L_9	-182.47	-82.09	-0.10	3.71	-3.14	-0.16	-182.47	-82.09	-0.10	3.71
	L_9-L_{10}	0.65	37.45	-26.91	22.82	0.00	0.00	0.65	37.45	-26.91	22.82
	L_{10}-L_{11}	-19.19	1.85	1.66	21.35	0.00	0.00	-19.19	1.85	1.66	21.35
	L_{11}-L_{12}	-16.33	3.85	1.66	21.35	0.00	0.00	-16.33	3.85	1.66	21.35
	L_{12}-L_{13}	-18.35	-2.78	17.96	50.90	0.00	0.00	-18.35	-2.78	17.96	50.90
	L_{13}-L_{14}	-12.95	-10.14	12.41	34.61	0.00	0.00	-12.95	-10.14	12.41	34.61
	L_{14}-L_{15}	-14.23	-3.48	110.00	48.88	0.00	0.00	-14.23	-3.48	110.00	48.88
	L_{15}-L_{16}	-10.38	3.00	96.54	51.83	0.00	0.00	-10.38	3.00	96.54	51.83
	L_{16}-L_{17}	-2.57	4.02	127.13	62.44	0.00	0.00	-2.57	4.02	127.13	62.44
	L_{17}-L_{18}	-10.27	2.41	107.13	23.82	0.00	0.00	-10.27	2.41	107.13	23.82
	L_{18}-L_{19}	-9.25	3.50	84.54	-10.75	0.00	0.00	-9.25	3.50	84.54	-10.75
	L_{19}-L_{20}	-64.72	-122.10	1.01	-5.58	4.78	-3.14	13.04	-72.20	61.78	-40.59
	L_{20}-L_{21}	-6.32	-4.43	91.24	-9.45	0.00	0.00	-6.32	-4.43	91.24	-9.45
	L_{21}-L_{22}	-14.48	-5.61	-127.12	32.08	0.00	0.00	-14.48	-5.61	-127.12	32.08
	L_{22}-L_{23}	-3.00	-33.37	-38.56	42.97	0.00	0.00	-3.00	-33.37	-38.56	42.97
	L_{23}-L_{24}	-30.96	-61.21	-43.09	59.64	0.00	0.00	-30.96	-61.21	-43.09	59.64
	L_{24}-L_{25}	-49.78	-24.62	-69.81	7.37	0.00	0.00	-49.78	-24.62	-69.81	7.37
	L_{25}-L_{26}	-53.83	-18.97	-73.71	13.86	0.00	0.00	-53.83	-18.97	-73.71	13.86
	L_{26}-L_{27}	-24.54	-14.99	82.84	76.53	0.00	0.00	-24.54	-14.99	82.84	76.53
	L_{27}-L_{28}	-14.53	-15.04	62.68	47.06	0.00	0.00	-14.53	-15.04	62.68	47.06
	L_{28}-L_{29}	-20.23	11.72	53.16	19.87	0.00	0.00	-20.23	11.72	53.16	19.87
	L_{29}-L_{30}	-19.02	-9.98	73.69	24.60	0.00	0.00	-19.02	-9.98	73.69	24.60
	L_{30}-L_{31}	-24.04	-10.96	59.54	11.68	0.00	0.00	-24.04	-10.96	59.54	11.68
	L_{31}-L_{32}	-30.69	-7.21	97.97	21.60	0.00	0.00	-30.69	-7.21	97.97	21.60
	L_{32}-L_{33}	-24.04	-10.96	59.54	11.68	0.00	0.00	-24.04	-10.96	59.54	11.68
	L_{33}-L_{34}	-42.90	4.60	68.36	20.58	0.00	0.00	-42.90	4.60	68.36	20.58
	L_{34}-L_{35}	-24.81	31.02	-43.71	-1.87	0.00	0.00	-579.20	391.29	-403.77	-434.05
	L_{35}-L_{36}	-10.58	2.22	-42.79	67.12	0.00	0.00	-10.58	2.22	-42.79	67.12
	L_{36}-L_{37}	22.28	1.09	32.88	34.98	0.00	0.00	22.28	1.09	32.88	34.98
	L_{37}-L_{38}	-1.46	27.91	-6.25	42.97	0.00	0.00	-1.46	27.91	-6.25	42.97
	L_{38}-L_{39}	6.63	6.38	22.50	36.96	0.00	0.00	6.63	6.38	22.50	36.96
	L_{39}-L_{40}	-16.16	-16.40	23.26	81.99	0.00	0.00	-16.16	-16.40	23.26	81.99
	L_{40}-L_{41}	-22.61	-46.46	22.68	84.98	0.00	0.00	-22.61	-46.46	22.68	84.98
	L_{41}-L_{42}	-13.00	-4.66	16.69	77.96	0.00	0.00	-13.00	-4.66	16.69	77.96
	L_{42}-L_{43}	-10.40	-3.73	13.35	62.37	0.00	0.00	-10.40	-3.73	13.35	62.37
	L_{43}-L_{44}	-10.72	6.60	82.53	32.04	0.00	0.00	-10.72	6.60	82.53	32.04
	L_{44}-L_{45}	-13.17	-6.93	73.93	9.17	0.00	0.00	-13.17	-6.93	73.93	9.17
	L_{45}-L_{46}	-12.56	-85.22	29.26	-87.12	0.00	0.00	-12.56	-85.22	29.26	-87.12
	L_{46}-L_{47}	-21.64	2.76	26.91	27.18	0.00	0.00	-21.64	2.76	26.91	27.18
	L_{47}-L_{48}	-26.75	-9.09	78.28	2.36	0.00	0.00	-26.75	-9.09	78.28	2.36
	L_{48}-L_{49}	-137.51	-171.76	-5.97	-156.90	0.00	0.00	-137.51	-171.76	-5.97	-156.90
	L_{49}-L_{50}	-37.89	3.89	104.63	43.03	0.00	0.00	-37.89	3.89	104.63	43.03
	L_{50}-L_{51}	-24.25	36.54	19.18	12.55	0.00	0.00	-24.25	36.54	19.18	12.55
	L_{51}-L_{52}	-344.22	-147.31	-300.75	-178.51	0.00	0.00	-344.22	-147.31	-300.75	-178.51
	L_{52}-L_{53}	-11.29	21.53	129.90	53.64	0.00	0.00	-11.29	21.53	129.90	53.64
	L_{53}-L_{54}	-24.04	13.39	21.31	38.65	0.00	0.00	-24.04	13.39	21.31	38.65
	L_{54}-L_{55}	-27.55	-24.22	9.06	64.14	0.00	0.00	-27.55	-24.22	9.06	64.14
	L_{55}-L_{56}	-27.01	-12.18	128.38	108.76	0.00	0.00	-27.01	-12.18	128.38	108.76
	L_{56}-L_{57}	-19.11	-7.00	9.97	87.42	0.00	0.00	-19.11	-7.00	9.97	87.42
	L_{57}-L_{58}	-13.39	-2.15	8.64	76.84	0.00	0.00	-13.39	-2.15	8.64	76.84
	L_{58}-L_{59}	-13.39	-2.15	8.64	76.84	0.00	0.00	-13.39	-2.15	8.64	76.84
	L_{59}-L_{60}	-7.67	0.56	11.28	66.59	0.00	0.00	-7.67	0.56	11.28	66.59
	L_{60}-L_{61}	-7.67	0.56	11.28	66.59	0.00	0.00	-7.67	0.56	11.28	66.59
	L_{61}-L_{62}	-4.16	-59.07	95.36	-52.68	0.00	0.00	-4.16	-59.07	95.36	-52.68
	L_{62}-L_{63}	-14.92	-49.69	44.67	30.41	0.00	0.00	-14.92	-49.69	44.67	30.41
	L_{63}-L_{64}	-14.92	-49.69	44.67	30.41	0.00	0.00	-14.92	-49.69	44.67	30.41
	L_{64}-L_{65}	-60.64	-86.66	-19.95	-11.53	0.00	0.00	-60.64	-86.66	-19.95	-11.53
	L_{65}-L_{66}	-37.09	-46.90	-17.15	17.67	0.00	0.00	-37.09	-46.90	-17.15	17.67
	L_{66}-L_{67}	-24.25	36.54	19.18	12.55	0.00	0.00	-24.25	36.54	19.18	12.55
	L_{67}-L_{68}	-4.19	-13.62	5.84	123.35	0.00	0.00	-4.19	-13.62	5.84	123.35
	L_{68}-L_{69}	-14.53	-8.88	-66.02	82.16	0.00	0.00	-14.53	-8.88	-66.02	82.16
	L_{69}-L_{70}	-10.27	-11.81	84.73	29.07	0.00	0.00	-10.27	-11.81	84.73	29.07
	L_{70}-L_{71}	-17.70	-5.59	86.61	2.23	0.00	0.00	-17.70	-5.59	86.61	2.23
	L_{71}-L_{72}	-14.52	-8.88	-66.02	82.16	0.00	0.00	-14.52	-8.88	-66.02	82.16
	L_{72}-L_{73}	-18.05	-0.61	74.43	-7.72	0.00	0.00	-18.05	-0.61	74.43	-7.72
	L_{73}-L_{74}	-18.05	-0.61	74.43	-7.72	0.00	0.00	-18.05	-0.61	74.43	-7.72
	L_{74}-L_{75}	-42.39	-4.69	68.25	4.60	0.00	0.00	-42.39	-4.69	68.25	4.60
	L_{75}-L_{76}	-15.68	22.55	68.24	-36.12	0.00	0.00	-15.68	22.55	68.24	-36.12
	L_{76}-L_{77}	-15.68	22.55	68.24	-36.12	0.00	0.00	-15.68	22.55	68.24	-36.12
	L_{77}-L_{78}	-38.52	-3.44	72.28	-79.72	0.00	0.00	-38.52	-3.44	72.28	-79.72
	L_{78}-L_{79}	-38.52	-3.44	72.28	-79.72	0.00	0.00	-38.52	-3.44	72.28	-79.72
	L_{79}-L_{80}	-38.52	-3.44	72.28	-79.72	0.00	0.00	-38.52	-3.44	72.28	-79.72

M_y Information

ZZ Axis Moment Properties

Location	Member	Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term 1 F/F_{cr}	M_n (k-in)
Structure 1	U_0-L_1	-113.41	-172.63	-294.73	-116.33	90.2	90.24	72.24	127.46	2147	1328.6	f	4206	0.99880041
	L_1-L_2	-54.17	-117.26	-319.81	-44.55	90.2	90.24	76.71	127.46	2147	1328.6	f	4206	0.99880041
	L_2-L_3	-54.17	-117.26	-319.81	-44.55	90.2	90.24	76.71	127.46	2147	1328.6	f	4206	0.99880041
	L_3-L_4	-31.30	-137.88	-288.68	-51.39	90.2	90.24	72.24	127.46	2147	1328.6	f	4206	0.99880041
	L_4-L_5	-4.06	-137.88	-288.68	-51.39	90.2	90.24	72.24	127.46	2147	1328.6	f	4206	0.99880041
	L_5-L_6	2.02	245.02	-219.06	181.54	90.2	90.24	76.71	127.46	2147	1328.6	f	4206	0.99880041
	L_6-L_7	33.02	-1.90	86.91	-14.05	78.78	142.56	2586	1649.1	1474	1.119	4704	0.99901381
	L_7-L_8	-59.92	603.38	-222.14	-192.26	90.2	90.24	76.71	127.46	2147	1328.6	f	4206	0.99880041
	L_8-L_9	531.73	-129.19	9.77	-12.61	-0.46	0.71	126.38	-163.10	-5.96	9.16	6699	0.99894541	4564.8
	L_9-L_{10}	68.54	43.95	2.30	-2.16	3.87	-2.49	29.81	-27.77	-30.71	-54.54	6699	0.99894541	4564.8
	L_{10}-L_{11}	100.48	-176.70	2.99	2.39	-3.63	-5.93	38.72	30.87	-46.99	-76.78	6699	0.99894541	4564.8
	L_{11}-L_{12}	-66.96	-160.18	2.62	2.39	-3.63	-6.42	44.22	30.87	-47.98	-83.30	6699	0.99894541	4564.8
	L_{12}-L_{13}	-56.66	-218.08	2.66	0.90	-8.67	-9.08	34.44	11.64	-117.39	-117.53	6699	0.99894541	4564.8
	L_{13}-L_{14}	-173.90	-344.75	1.75	-1.46	-14.23	-13.80	44.12	-12.95	-184.13	-159.92	6699	0.99894541	4564.8
	L_{14}-L_{15}	-287.80	-237.44	2.31	-1.33	-25.29	-10.06	29.91	17.22	-327.24	-130.21	6699	0.99894541	4564.8
	L_{15}-L_{16}	-196.20	-337.71	2.24	0.08	-18.98	-11.76	29.62	1.02	-245.56	-152.14	6699	0.99894541	4564.8
	L_{16}-L_{17}	-291.63	-154.75	0.97	0.19	-24.83	-7.85	29.62	1.02	-367.31	-107.50	6699	0.99894541	4564.8
	L_{17}-L_{18}	-189.93	-29.96	0.74	-0.69	-15.25	0.16	9.59	-8.91	-197.37	2.04	6699	0.99894541	4564.8
	L_{18}-L_{19}	-179.63	-28.55	0.84	-2.26	-12.06	-2.79	8.57	-8.45	-183.53	-24.97	6699	0.99894541	4564.8
	L_{19}-L_{20}	-249.78	258.69	0.98	-6.52	-13.60	4.41	12.65	-84.29	-175.96	97.10	6699	0.99894541	4564.8
	L_{20}-L_{21}	-28.62	-172.11	5.83	-8.74	-7.74	-8.37	74.50	-111.60	-98.83	-166.89	5891	0.99861382	4212.5
	L_{21}-L_{22}	-24.91	-199.34

Moment (Start) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-inspected**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
AASHTO Specifications for Strength Design of Truss Bridges (LFD) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load (k-ft)	Live Load (Max) (k-ft)	Live Load (Min) (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load (Max) Start-Ib (k-ft)	Lane Reduction & Impact Live Load (Min) Start-Ib (k-ft)	Impact Pedestrian Load Max End-Ib (k-ft)	Impact Pedestrian Load Min End-Ib (k-ft)	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{bb} (in^3)	S_{tb} (in^3)	Z_b (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bb}	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}/C_{bb}	Pass
Structure 1	L_0-L_1	-49.04	-101.19	3.86	-6.35	-0.70	0.79				51.53	-84.81	-9.28	10.53	0.00	0.00	0.00	3.24	-241.79	75.82	-117.86	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99500394	2755.4	-0.013	0.59	0.59	-2.22	-8.14	-1.34	-4.94	-0.06	-0.21			

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: HF1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)
Structure 1	U_0–L_1	-55.75	82.39	0.52	-0.68	3.33	3.71	6.93	-9.10	-44.47	49.52	0.00	0.00	-63.46	95.28	-130.29	171.49
	L_1–U_1	-14.37	23.26	0.70	-0.70	-3.50	3.34	9.39	-9.39	-46.75	44.66	0.00	0.00	-6.47	18.02	-79.45	88.29
	U_1–L_2	36.81	-5.17	3.96	-0.95	-3.09	3.53	11.26	-12.65	-47.24	47.25	0.00	0.00	22.91	-23.74	-40.37	54.12
	L_2–U_2	36.81	-39.20	1.89	-1.69	-2.35	2.58	25.24	-22.59	-31.33	34.51	0.00	0.00	80.66	-75.13	7.13	-0.90
	U_2–L_3	49.94	-69.31	2.52	-1.54	-1.60	1.75	33.68	-32.73	-11.54	10.55	0.00	0.00	138.75	-116.66	43.02	15.14
	L_3–U_3	57.83	-70.07	3.16	-3.53	-0.24	-0.03	42.26	-47.12	-3.25	-0.37	0.00	0.00	130.12	-132.34	70.96	-91.57
	U_3–L_4	67.52	-62.43	3.85	-3.85	0.32	-0.40	49.51	-49.51	5.82	-5.82	0.00	0.00	106.18	-107.38	85.82	86.71
	L_4–U_4	102.14	-112.44	4.49	-4.62	-0.12	0.11	60.02	-61.65	-1.60	1.60	0.00	0.00	210.91	-226.33	130.69	-144.28
	U_4–L_5	-10.55	7.04	5.45	-6.48	-4.11	4.10	4.12	-4.12	-52.06	50.36	0.00	0.00	80.85	-103.30	85.17	94.70
	L_5–U_5	-144.53	166.25	0.32	-0.33	-4.02	4.27	4.10	-4.12	-52.06	50.36	0.00	0.00	-162.65	210.89	-256.70	297.96
	U_5–L_6	-101.27	95.46	0.17	-0.23	-3.24	3.40	2.24	-2.95	-41.92	43.99	0.00	0.00	-128.75	120.27	-185.15	181.29
	L_6–U_6	-111.05	104.71	0.39	0.05	-3.71	4.42	2.24	-2.95	-41.92	47.36	0.00	0.00	-137.61	204.82	-196.78	278.54
	U_6–L_7	-96.41	93.86	0.09	-5.91	-4.42	4.74	7.69	-5.91	-44.72	49.74	0.00	0.00	-115.34	114.33	-183.46	181.48
	L_7–U_7	-90.90	75.53	0.84	-0.82	-3.21	3.39	10.84	-10.66	-41.58	43.69	0.00	0.00	-65.07	84.85	-133.23	155.51
	U_7–L_8	-33.53	39.66	0.43	-0.43	-2.33	2.42	13.88	-13.43	-37.13	39.03	0.00	0.00	-22.32	26.27	-83.23	93.64
	L_8–U_8	8.32	-15.89	3.13	-3.28	-1.49	1.53	40.46	-42.45	-19.21	19.82	0.00	0.00	63.41	-75.83	-14.16	5.13
	U_8–L_9	47.73	-50.39	3.24	-3.34	-0.90	0.74	49.51	-48.15	-11.65	8.26	0.00	0.00	116.56	-121.60	48.89	-53.46
	L_9–U_9	61.54	-72.81	3.27	-3.44	-0.46	0.47	42.32	-44.46	-5.99	6.00	0.00	0.00	135.02	-152.45	72.21	-86.78
	U_9–L_{10}	133.07	-138.03	5.56	-5.76	-0.64	0.60	72.18	-74.45	-8.35	8.35	0.00	0.00	266.80	-276.26	162.18	-164.61
	L_{10}–U_{10}	158.01	-154.56	6.27	-6.14	-0.66	0.59	81.15	-79.45	-8.51	7.66	0.00	0.00	310.90	-304.22	194.34	-190.97
	U_{10}–L_{11}	131.43	-213.81	4.45	-5.73	-0.29	0.48	57.52	-74.18	-3.69	6.16	0.00	0.00	245.67	-374.38	166.10	-269.94
	L_{11}–U_{11}	144.68	187.26	0.44	-0.59	-5.26	5.35	7.72	-7.53	-62.77	63.09	0.00	0.00	-179.52	230.91	-272.79	353.76
	U_{11}–L_{12}	-122.98	131.23	0.60	-0.62	-4.91	4.94	7.72	-7.53	-62.77	63.09	0.00	0.00	-141.03	160.29	-241.44	252.62
	L_{12}–U_{12}	117.72	-126.56	0.75	-0.74	-4.26	4.27	6.11	-6.23	-37.29	37.77	0.00	0.00	-140.63	154.49	-210.89	230.76
	U_{12}–L_{13}	-62.37	68.86	0.48	-0.49	-2.92	2.96	6.11	-6.23	-37.29	37.77	0.00	0.00	-73.14	81.54	-129.56	138.75
	L_{13}–U_{13}	-37.80	43.18	0.72	-0.72	-2.67	2.69	17.68	-17.04	-26.42	27.91	0.00	0.00	-37.16	46.12	-57.94	71.42
	U_{13}–L_{14}	-9.72	15.71	1.38	-1.33	-2.84	2.99	17.68	-17.04	-26.42	38.19	0.00	0.00	11.14	-1.74	-39.67	70.14
	L_{14}–U_{14}	14.83	-14.93	1.68	-1.71	-2.50	2.55	21.45	-21.85	-31.93	32.63	0.00	0.00	47.17	-47.80	-22.23	23.02
	U_{14}–L_{15}	39.68	-43.44	1.93	-1.96	-2.31	2.40	23.57	-25.12	-12.83	14.93	0.00	0.00	82.22	-87.72	-43.23	53.14
	L_{15}–U_{15}	88.70	-97.90	3.87	-4.03	-1.01	0.84	49.47	-51.48	-12.89	10.74	0.00	0.00	179.74	-194.17	98.67	-113.30
	U_{15}–L_{16}	133.02	-133.03	5.11	-5.37	-0.64	0.72	81.15	-85.22	-10.46	13.50	0.00	0.00	271.13	-288.13	164.24	-183.71
	L_{16}–U_{16}	140.07	-146.97	4.87	-5.15	-0.20	-0.06	62.22	-65.73	-2.50	-0.75	0.00	0.00	282.97	-276.52	178.83	-162.05
	U_{16}–L_{17}	148.94	-153.41	4.78	-4.95	-0.12	0.18	61.01	-63.22	-1.51	2.29	0.00	0.00	272.93	-281.61	191.66	-196.48
	L_{17}–U_{17}	139.36	-142.48	5.62	-5.82	-0.14	0.21	70.56	-73.10	-1.74	2.64	0.00	0.00	257.98	-264.93	226.91	-233.61
	U_{17}–L_{18}	185.37	-182.48	5.82	-5.56	-0.54	0.54	74.32	-71.06	-6.87	6.84	0.00	0.00	337.59	-329.60	232.04	-228.34
	L_{18}–U_{18}	72.78	7.71	7.94	-8.14	-5.76	5.75	74.32	-71.06	-6.87	73.50	0.00	0.00	198.54	-139.28	47.74	31.72
	U_{18}–L_{19}	-128.23	-129.95	0.55	-0.49	-5.14	4.77	6.92	-6.12	-64.89	60.21	0.00	0.00	-157.71	-160.97	-251.06	247.20
	L_{19}–U_{19}	112.82	112.33	0.52	-0.53	-4.70	4.72	6.92	-6.12	-64.89	60.21	0.00	0.00	-120.43	-121.92	-233.61	227.67
	U_{19}–L_{20}	-125.93	122.62	0.56	-0.52	-5.50	5.42	7.01	-6.58	-69.44	68.39	0.00	0.00	-134.60	150.85	-253.98	248.31
	L_{20}–U_{20}	-109.68	106.90	0.73	-0.72	-5.52	5.72	9.23	-9.06	-69.67	72.20	0.00	0.00	-130.59	129.79	-233.15	235.44
	U_{20}–L_{21}	133.02	-133.03	5.11	-5.37	-0.64	0.72	81.15	-85.22	-10.46	13.50	0.00	0.00	271.13	-288.13	164.24	-183.71
	L_{21}–U_{21}	-43.26	43.75	0.79	-0.70	-3.12	3.12	10.01	-8.83	-39.42	39.98	0.00	0.00	-43.23	49.40	-107.48	108.85
	U_{21}–L_{22}	29.76	-34.29	1.31	-1.31	-2.13	2.13	21.60	-19.74	-24.61	24.61	0.00	0.00	-21.60	32.19	-59.73	72.24
	L_{22}–U_{22}	-5.29	1.62	1.58	-1.59	-1.75	1.75	19.95	-20.01	-22.11	22.65	0.00	0.00	24.26	-23.91	-30.42	31.55
	U_{22}–L_{23}	28.80	-28.81	3.04	-3.04	-1.69	1.69	37.80	-39.34	-11.99	9.06	0.00	0.00	57.98	-58.25	-14.81	10.13
	L_{23}–U_{23}	46.56	-51.19	2.99	-3.12	-0.95	0.72	37.80	-39.34	-11.99	9.06	0.00	0.00	109.66	-117.69	44.93	-54.76
	U_{23}–L_{24}	62.64	-61.32	4.12	-4.08	-0.74	0.71	52.05	-51.51	-9.29	8.98	0.00	0.00	149.10	-146.68	69.35	-68.04
	L_{24}–U_{24}	108.55	-109.78	6.27	-6.46	-0.79	0.76	79.19	-81.55	-9.91	9.61	0.00	0.00	241.46	-243.30	125.63	-125.00
	U_{24}–L_{25}	108.55	-109.78	6.27	-6.46	-0.79	0.76	79.19	-81.55	-9.91	9.61	0.00	0.00	241.46	-243.30	125.63	-125.00
	L_{25}–U_{25}	114.59	-114.85	6.29	-6.56	-0.38	0.32	79.40	-75.30	-4.81	4.00	0.00	0.00	252.19	-247.18	142.71	-144.10
	U_{25}–L_{26}	-12.82	6.66	6.39	-6.53	-4.11	4.08	79.40	-75.30	-4.81	64.16	0.00	0.00	89.34	-103.68	87.71	92.63
	L_{26}–U_{26}	-122.25	119.98	0.60	-0.56	-4.64	4.37	7.68	-7.17	-59.27	56.86	0.00	0.00	-148.94	146.65	-230.97	228.09
	U_{26}–L_{27}	-93.65	87.71	0.48	-0.61	-4.21	4.11	6.17	-5.42	-53.83	52.47	0.00	0.00	-113.72	103.08	-161.72	162.24
	L_{27}–U_{27}	-130.24	126.14	0.63	-0.59	-4.89	4.68	6.17	-5.42	-53.83	52.47	0.00	0.00	-152.24	127.78	-235.00	214.53
	U_{27}–L_{28}	-96.77	103.24	0.23	-0.15	-4.44	4.60	2.93	-1.85	-56.74	58.81	0.00	0.00	-121.97	131.80	-199.56	215.66
	L_{28}–U_{28}	-72.25	77.19	0.57	-0.57	-3.31	3.31	8.54	-7.67	-42.27	42.27	0.00	0.00	-84.27	93.23	-151.06	164.46
	U_{28}–L_{29}	-63.45	70.58	0.59	-0.51	-4.19	4.21	7.50	-6.53	-53.56	53.81	0.00	0.00	-72.73	83.27	-152.11	164.45
	L_{29}–U_{29}	-32.67	38.68	0.78	-0.67	-2.13	2.31	10.02	-11.08	-27.15	29.53	0.00	0.00	-29.45	35.88	-77.77	88.66
	U_{29}–L_{30}	-13.07	16.25	1.04	-0.98	-1.72	1.72	10.02	-11.08	-27.15	29.53	0.00	0.00	-12.64	15.61	-46.58	58.46
	L_{30}–U_{30}	4.43	-6.37	2.50	-2.70	-1.79	1.57	31.89	-34.45	-22.91	20.05	0.00	0.00	24.41	-25.66	-24.03	15.17
	U_{30}–L_{31}	24.84	-30.65	1.93	-2.08	-1.33	1.33	31.89	-34.45	-22.91	20.05	0.00	0.00	54.47	-58.01	-28.11	15.17
	L_{31}–U_{31}	47.21	-50.58	3.16	-3.29	-0.58	0.59	40.21	-41.97	-7.41	7.49	0.00	0.00	113.78	-120.31	51.74	-56.02
	U_{31}–L_{32}	97.75	-97.49	4.64	-4.64	-0.23	0.24	72.29	-73.16	-4.16	11.61	0.00	0.00	213.19	-214.56	114.66	-114.81
	L_{32}–U_{32}	104.42	-111.67	5.37	-5.30	-0.83	0.79	81.36	-80.47	-10.63	9.98	0.00	0.00	241.51	-249.77	121.52	-132.20
	U_{32}–L_{33}	108.14	-132.78	4.49	-6.19	-0.42	0.69	57.37	-79.05	-5.35	9.76	0.00	0.00	-215.16	-275.39	133.62	-161.24
	L_{33}–U_{33}	-123.31	165.61	0.45	-0.43	-5.43	5.47	6.62	-6.30	-64.23	63.89	0.00	0.00	-154.29	204.64	-251.15	315.73
	U_{33}–L_{34}	-109.30	117.29	0.43	-0.41	-4.96	4.94	5.62	-5.30	-64.23	63.89	0.00	0.00	-134.78	145.57	-229.58	235.53
	L_{34}–U_{34}	-48.62	51.77	0.30	-0.36	-2.99	2.99	4.64	-4.71	-38.69	38.69	0.00	0.00	-47.17	59.27	-113.00	126.66
	U_{34}–L_{35}	-48.62	51.77	0.30	-0.36	-2.99	2.99	4.64	-4.71	-38.69	38.69	0.00	0.00	-47.17	59.27	-113.00	126.66
	L_{35}–U_{35}	-5.41	11.54	0.18	-0.23	-3.18	3.33	15.22	-15.46	-41.13	43.11	0.00	0.00	12.75	0.09	-60.50	71.05
	U_{35}–L_{36}	27.84	-30.65	1.93	-2.03	-1.83	1.92	24.96	-26.29	-23.61	24.79	0.00	0.00	68.64	-74.03	5.49	-7.62
	L_{36}–U_{36}	46.61	-47.96	2.51	-2.64	-1.22	1.22	46.61	-47.96	-8.51	7.22	0.00	0.00	121.32	-126.26	49.55	-54.30
	U_{36}–L_{37}	78.46	-77.43	3.94	-3.94	-0.33	0.33	78.46	-77.43	-7.24	7.24	0.00	0.00	196.61	-196.61	78.68	-78.68
	L_{37}–U_{37}	94.97	-87.87	3.71	-4.17	-0.07	0.11	94.97	-87.87	-3.71	4.17	0.00	0.00	179.79	-168.21	97.95	-93.97
	U_{37}–L_{38}	94.97	-87.87	3.71	-4.17	-0.07	0.11	47.90	-53.97	-0.87	1.47	0.00	0.00	179.79	-197.39	122.33	-129.13
	L_{38}–U_{38}	46.56	-51.19	2.99	-3.12	-0.95	0.72	37.80	-39.34	-11.99	9.06	0.00	0.00	109.66	-117.69	44.93	-54.76
	U_{38}–L_{39}	29.76	-34.29	1.31	-1.31	-2.13	2.13	21.60	-19.74	-24.61	24.61	0.00	0.00	-21.60	32.19	-59.73	72.24
	L_{39}–U_{39}	-43.26	43.75	0.79	-0.70	-3.12	3.12	10.01	-8.83	-39.42	39.98	0.00	0.00	-43.23	49.40	-107.48	108.85
	U_{39}–L_{40}	-13.07	16.25	1.04	-0.98	-1.72	1.72	10.02	-11.08	-27.15	29.53	0.00	0.00	-12.64	15.61	-46.58	58.46
	L_{40}–U_{40}	-32.67	38.68	0.78	-0.67	-2.13	2.31	10.02	-11.08	-27.15	29.53	0.00	0.00	-29.45	35.88	-77.77	88.66
	U_{40}–L_{41}	-63.45	70.58	0.59	-0.51	-4.19	4.21	7.50	-6.53	-53.56	53.81	0.00	0.00	-72.73	83.27	-152.11	164.45
	L_{41}–U_{41}	-48.62	51.77	0.30	-0.36	-2.99	2.99	4.64	-4.71	-38.69	38.69	0.00	0.00	-47.17	59.27	-113.00	126.66
	U_{41}–L_{42}	-5.41	11.54	0.18	-0.23	-3.18	3.33	15.22	-15.46	-41.13	43.11	0.00	0.00	12.75	0.09	-60.50	71.05
	L_{42}–U_{42}	27.84	-30.65	1.93	-2.03	-1.83	1.92	24.96	-26.29	-23.61	24.79	0.00	0.00	68.64	-74.03	5.49	-7.62
	U_{42}–L_{43}	46.61	-47.96	2.51	-2.64	-1.22	1.22	46.61	-47.96	-8.51	7.22	0.00	0.00	121.32	-126.26	49.55	-54.30
	L_{43}–U_{43}	78.46	-77.43	3.94	-3.94	-0.33	0.33	78.46	-77.43	-7.24	7.24	0.00	0.00	196.61	-196.61	78.68	-78.68
	U_{43}–L_{44}	94.97	-87.87	3.71	-4.17	-0.07	0.11	94.97	-87.87	-3.71	4.17	0.00	0.00	179.79	-168.21	97.95	-93.97
	L_{44}–U_{44}	94.97	-87.87	3.71	-4.17	-0.07	0.11	47.90	-53.97	-0.87	1.47	0.00	0.00	179.79	-197.39	122.33	-129.13
	U_{44}–L_{45}	46.56	-51.19	2.99	-3.12	-0.95	0.72	37.80	-39.34	-11.99	9.06	0.00	0.00	109.66	-117.69	44.93	-54.76
	L_{45}–U_{45}	29.76	-34.29	1.31	-1.31	-2.13	2.13	21.60	-19.74	-24.61	24.61	0.00	0.00	-21.60	32.19	-59.73	72.24
	U_{45}–L_{46}	-5.29	1.62	1.58	-1.59	-1.75	1.75	19.95	-20.01	-22.11	22.65	0.00	0.00	24.26	-23.91	-30.42	31.55
	L_{46}–U_{46}	28.80	-28.81	3.04	-3.04	-1.69	1.69	37.80	-39.34	-11.99	9.06	0.00	0.00	57.98	-58.25	-14.81	10.13
	U_{46}–L_{47}	62.64	-61.32	4.12	-4.08	-0.74	0.71	52.05	-51.51	-9.29	8.98	0.00	0.00	149.10	-146.68	69.35	-68.04
	L_{47}–U_{47}	108.55	-109.78	6.27	-6.46	-0.79	0.76	79.19	-81.55	-9.91	9.61	0.00	0.00	241.46	-243.30	125.63	-125.00
	U_{47}–L_{48}	114.59	-114.85	6.29	-6.56	-0.38	0.32	79.40	-75.30	-4.81	4.00	0.00	0.00	252.19	-247.18	142.71	-144.10
	L_{48}–U_{48}	-12.82	6.66	6.39	-6.53	-4.11	4.08	79.40	-75.30	-4.81	64.16	0.00	0.00	89.34	-103.68	87.71	92.63
	U_{48}–L_{49}	-122.25	119.98	0.60	-0.56	-4.64	4.37	7.68	-7.17	-59.27	56.86	0.00	0.00	-148.94	146.65	-230.97	228.09
	L_{49}–U_{49}	-93.65	87.71	0.48	-0.61	-4.21	4.11	6.17	-5.42	-53.83	52.47	0.00	0.00	-113.72	103.08	-161.72	162.24
	U_{49}–L_{50}	-130.24	126.14	0.63	-0.59	-4.89	4.68	6.17	-5.42	-53.83	52.47	0.00	0.00	-152.24	127.78	-235.00	214.53
	L_{50}–U_{50}	-96.77	103.24	0.23	-0.15	-4.44	4.60	2.93	-1.85	-56.74	58.81	0.00	0.00	-121.97	131.80	-199.56	215.66
	U_{50}–L_{51}	-72.25	77.19	0.57	-0.57	-3.31	3.31	8.54	-7.67	-42.27	42.27	0.00	0.00	-84.27	93.23	-151.06	164.46
	L_{51}–U_{51}	-63.45	70.58	0.59	-0.51	-4.19	4.21	7.50	-6.53	-53.56	53.81	0.00	0.00	-72.73	83.27	-152.11	164.45
	U_{51}–L_{52}	-32.67	38.68	0.78	-0.67	-2.13	2.31	10.02	-11.08	-27.15	29.53	0.00	0.00	-29.45	35.88	-77.77	88.66
	L_{52}–U_{52}	-13.07	16.25	1.04	-0.98	-1.72	1.72	10.02	-11.08	-27.15	29.53	0.00	0.00	-12.64	15.61	-46.58	58.46
	U_{52}–L_{53}	4.43	-6.37	2.50	-2.70	-1.79	1.57	31.89	-34.45	-22.91	20.05	0.00	0.00	24.41	-25.66	-24.03	15.17
	L_{53}–U_{53}	24.84	-30.65	1.93	-2.08	-1.33	1.33	31.89	-34.45	-22.91	20.05	0.00	0.00	54.47	-58.01	-28.11	15.17
	U_{53}–L_{54}	47.21	-50.58	3.16	-3.29	-0.58	0.59	40.21	-41.97	-7.41	7.49	0.00	0.00	113.78	-120.31	51.74	-56.02
	L_{54}–U_{54}	97.75	-97.49	4.64	-4.64	-0.23	0.24	72.29	-73.16	-4.16	11.61	0.00	0.00	213.19	-214.56	114.66	-114.81
	U_{54}–L_{55}	104.42	-111.67	5.37	-5.30	-0.83	0.79	81.36	-80.47	-10.63	9.98	0.00	0.00	241.51	-249.77	121.52	-132.20
	L_{55}–U_{55}	108.14	-132.78	4.49	-6.19	-0.42	0.69	57.37	-79.05	-5.35	9.76	0.00	0.00	-215.16	-275.39	133.62	-161.24
	U_{55}–L_{56}	-123.31	165.61	0.45	-0.43	-5.43	5.47	6.62	-6.30	-64.23	63.89	0.00	0.00	-154.29	204.64	-251.15	315.73
	L_{56}–U_{56}	-109.30	117.29	0.43	-0.41	-4.96	4.94	5.62	-5.30	-64.23	63.89	0.00	0.00	-134.78	145.57	-229.58	235.53
	U_{56}–L_{57}	-48.62	51.77	0.30	-0.36	-2.99	2.99	4.64	-4.71	-38.69	38.69	0.00	0.00	-47.17	59.27	-113.00	126.66
	L_{57}–U_{57}	-48.62	51.77	0.30	-0.36	-2.99	2.99	4.64	-4.71	-38.69	38.69	0.00	0.00	-47.17	59.27	-113.00	126.66
	U_{57}–L_{58}	-5.41	11.54	0.18	-0.23	-3.18	3.33	15.22	-15.46	-41.13	43.11	0.00	0.00	12.75	0.09	-60.50	71.05
	L_{58}–U_{58}	27.84	-30.65	1.93	-2.03	-1.83	1.92	24.96	-26.29	-23.61	24.79	0.00	0.00	68.64	-74.03	5.49	-7.62
	U_{58}–L_{59}	46.61	-47.96	2.51	-2.64	-1.22	1.22	46.61	-47.96	-8.51	7.22	0.00	0.00	121.32	-126.26	49.55	-54.30
	L_{59}–U_{59}	78.46	-77.43	3.94	-3.94	-0.33	0.33	78.46	-77.43	-7.24	7.24	0.00	0.00	196.61	-196.61	78.68	-78.68
	U_{59}–L_{60}	94.97	-87.87	3.71	-4.17	-0.07	0.11	47.90	-53.97	-0.87	1.47	0.00	0.00	179.79	-197.39	122.33	-129.13
Structure 2	U_{60}–L_{61}	94.97	-87.87	3.71	-4.17	-0.07	0.11	94.97	-87.87	-3.71	4.17	0.00	0.00	179.79	-168.21	97.95	-93.97
	L_{60}–U_{61}	46.56	-51.19	2.99	-3.12	-0.95	0.72	37.80	-39.34	-11.99	9.06	0.00	0.00	109.66	-117.69	44.93	-54.76
	U_{61}–L_{62}	29.76	-34.29	1.31	-1.31	-2.13	2.13	21.60	-19.74	-24.61	24.61	0.00	0.00	-21.60	32.19	-59.73	72.24
	L_{62}–U_{62}	-43.26	43.75	0.79	-0.70	-3.12	3.12	10.01	-8.83	-39.42	39.98	0.00	0.00	-43.23	49.40	-107.48	108.85
	U_{62}–L_{63}	-13.07	16.25	1.04	-0.98	-1.72	1.72	10.02	-11.08	-27.15	29.53	0.00	0.00	-12.64	15.61	-46.58	58.46
	L_{63}–U_{63}	-32.67	38.68	0.78	-0.67	-2.13	2.31	10.02	-11.08	-27.15	29.53	0.00	0.00	-29.45	35.88	-77.77	88.66
	U_{63}–L_{64}	-63.45	70.58	0.59	-0.51	-4.19	4.21	7.50	-6.53	-53.56	53.81	0.00	0.00	-72.73	83.27	-152.11	164.45
	L_{64}–U_{64}	-48.62	51.77	0.30	-0.36	-2.99	2.99	4.64	-4.71	-38.69	38.69	0.00	0.00	-47.17	59.27	-113.00	126.66
	U_{64}–L_{65}	-5.41	11.54	0.18	-0.23	-3.18	3.33	15.22	-15.46	-41.13	43.11	0.00	0.00	12.75	0.09	-60.50	71.05
	L_{65}–U_{65}	27.84	-30.65	1.93	-2.03	-1.83	1.92	24.96	-26.29	-23.61	24.79	0.00	0.00	68.64	-74.03	5.49	-7.62
	U_{65}–L_{66}	46.61	-47.96	2.51	-2.64	-1.22	1.22	46.61	-47.96	-8.51	7.22	0.00	0.00	121.32	-126.26	49.55	-54.30
	L_{66}–U_{66}	78.46	-77.43	3.94	-3.94	-0.33	0.33	78.46	-77.43	-7.24	7.24	0.00	0.00	196.61	-196.61	78.68	-78.68
	U_{66}–L_{67}	94.97

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1-L_1	-23.63	-7.60	0.21	-0.17	-1.63	0.80	2.82	-2.20	-21.76	10.66
	U_1-L_2	-3.36	-8.44	0.28	-0.11	-1.33	0.12	3.77	-1.50	-17.31	1.58
	U_1-U_2	7.82	7.82	0.32	-0.12	-0.74	-0.40	1.06	-1.60	-15.20	-5.93
	L_1-L_2	7.94	-13.41	0.32	0.08	-0.92	-0.82	4.25	1.06	-12.24	-10.98
	L_1-U_2	-14.37	-18.47	0.14	0.61	-20.75	-5.54	0.00	0.00	0.00	0.00
	L_2-U_2	-37.80	77.38	0.32	-0.82	-2.97	1.41	0.00	0.00	0.00	0.00
	L_2-U_3	-37.30	77.00	0.32	-0.82	-2.92	1.38	4.13	4.48	-59.29	38.07
	L_2-L_3	-9.33	102.64	0.67	0.55	-1.82	3.30	8.95	7.42	-24.27	44.09
	U_3-L_3	-5.01	118.90	1.41	0.81	-1.21	2.28	18.24	13.44	-15.69	29.49
	U_3-U_4	-78.52	74.40	2.32	-0.12	-2.78	1.38	4.14	-1.53	-39.56	17.84
	L_3-U_4	-64.28	73.58	0.39	0.84	-2.26	0.57	4.98	10.82	-29.23	7.41
	L_3-L_4	-65.20	73.58	0.39	0.84	-2.26	0.57	4.98	10.82	-29.23	7.41
	U_4-L_4	-65.20	48.77	0.17	-0.35	-2.06	0.98	2.20	-4.50	-26.59	12.64
	L_4-U_4	-24.89	6.62	0.31	-0.58	-1.23	0.35	4.04	-7.52	-15.90	4.48
	L_4-L_5	-24.89	6.62	0.31	-0.58	-1.23	0.35	4.04	-7.52	-15.90	4.48
	U_4-L_5	-25.30	9.99	0.44	-0.71	-1.54	0.56	5.68	-9.19	-19.93	12.39
	L_5-U_5	-37.30	20.00	0.50	-0.35	-2.92	1.38	3.92	-3.50	-26.46	18.94
	U_5-L_5	-101.98	74.35	0.42	-0.42	-3.81	2.55	5.47	-5.41	-49.33	32.95
	L_5-L_6	-115.65	79.79	0.38	-0.75	-4.34	2.91	4.96	-5.44	-54.85	37.68
	U_5-L_6	-76.53	79.74	0.17	-0.16	-3.34	2.88	2.20	-6.12	-43.16	37.37
	L_6-U_6	-109.78	99.44	0.39	-0.40	-4.12	3.31	4.93	-5.12	-52.69	42.26
	U_6-L_6	-89.86	78.41	0.25	-0.56	-3.55	2.85	3.25	-6.54	-48.37	39.93
	L_6-L_7	-90.94	71.81	0.56	-0.48	-3.76	2.84	7.18	-6.18	-48.06	38.27
	U_7-L_7	-20.34	9.87	0.39	-0.57	-1.68	1.32	4.96	-7.32	-21.43	16.89
	L_7-L_8	-20.34	9.87	0.39	-0.57	-1.68	1.32	4.96	-7.32	-21.43	16.89
	U_7-L_8	-8.85	-23.86	0.76	-1.17	-1.19	0.14	9.66	-14.99	-15.22	1.75
	L_8-U_8	-44.40	35.30	0.43	-0.97	-1.93	0.75	5.54	-12.43	-24.67	9.61
	U_8-L_8	-96.54	69.68	0.13	-0.14	-3.66	2.41	1.66	-10.71	-42.61	28.22
	L_8-L_9	-85.37	67.30	0.27	-0.55	-3.32	1.58	3.41	-7.55	-42.47	20.23
	U_9-L_9	-30.57	20.00	0.50	-0.35	-2.92	1.38	3.92	-3.50	-26.46	18.94
	L_9-U_{10}	-109.81	116.32	0.46	0.19	-3.84	3.16	5.93	2.44	-49.10	43.91
	U_{10}-L_{10}	-141.94	130.59	0.63	-0.31	-4.90	3.66	8.04	-3.94	-66.92	47.03
	L_{10}-U_{11}	-90.17	133.38	0.24	0.65	-3.05	2.95	3.46	7.89	-39.61	43.77
	U_{11}-L_{11}	-11.95	79.18	1.01	0.28	-2.61	3.13	12.71	3.52	-32.94	39.53
	L_{11}-U_{12}	-77.25	73.48	0.32	-0.45	-4.04	2.96	4.97	-5.34	-52.30	38.32
	U_{12}-L_{12}	-66.17	89.96	0.40	-0.25	-3.65	2.95	5.03	-2.31	-46.62	37.21
	L_{12}-U_{13}	-66.17	89.96	0.40	-0.25	-3.65	2.95	5.03	-2.31	-46.62	37.21
	U_{13}-L_{13}	-56.05	72.68	0.36	-0.40	-3.46	2.33	4.52	-5.08	-43.65	29.46
	L_{13}-U_{14}	-31.83	37.59	0.35	-0.36	-2.41	1.31	4.46	-4.53	-30.36	16.49
	U_{14}-L_{14}	-31.83	37.59	0.35	-0.36	-2.41	1.31	4.46	-4.53	-30.36	16.49
	L_{14}-U_{15}	-10.04	3.78	0.47	-0.78	-1.42	0.28	5.96	-9.78	-17.97	3.93
	U_{15}-L_{15}	-10.04	3.78	0.47	-0.78	-1.42	0.28	5.96	-9.78	-17.97	3.93
	L_{15}-U_{16}	-19.42	19.56	0.49	-0.80	-1.57	1.18	6.17	-10.07	-19.82	14.85
	U_{16}-L_{16}	-46.48	58.24	0.48	-0.54	-3.92	2.48	6.49	-7.36	-36.26	23.18
	L_{16}-U_{17}	-46.48	58.24	0.48	-0.54	-3.92	2.48	6.07	-6.77	-44.23	31.07
	U_{17}-L_{17}	-54.27	68.32	0.40	-0.49	-3.62	2.96	5.00	-6.17	-45.73	37.33
	L_{17}-U_{18}	-69.31	71.94	0.28	-0.17	-4.61	3.86	3.57	-2.18	-58.23	48.67
	U_{18}-L_{18}	-69.31	71.94	0.28	-0.17	-4.61	3.86	3.57	-2.18	-58.23	48.67
	L_{18}-U_{19}	-17.78	19.56	0.49	-0.80	-1.57	1.18	6.17	-10.07	-19.82	14.85
	U_{19}-L_{19}	-36.18	34.54	1.26	-0.28	-2.71	3.27	16.10	3.62	-34.66	41.73
	L_{19}-U_{20}	-77.08	85.18	0.51	-0.20	-3.45	2.84	6.46	-2.56	-44.09	36.23
	U_{20}-L_{20}	-78.35	71.28	0.46	-0.03	-3.36	2.09	5.81	-0.32	-42.86	26.75
	L_{20}-U_{21}	-76.52	55.14	0.19	-0.17	-3.47	2.34	2.41	2.16	-44.32	29.90
	U_{21}-L_{21}	-76.52	55.14	0.19	-0.17	-3.47	2.34	2.41	2.16	-44.32	29.90
	L_{21}-U_{22}	-73.06	33.91	0.08	-0.08	-3.31	1.93	1.06	1.06	-42.31	24.66
	U_{22}-L_{22}	-53.83	37.97	0.14	-0.39	-2.05	1.51	1.81	-7.56	-26.52	19.01
	L_{22}-U_{23}	-61.79	22.37	0.26	0.74	-2.85	0.72	3.35	9.54	-36.28	9.25
	U_{23}-L_{23}	-54.27	68.32	0.40	-0.49	-3.62	2.96	5.00	-6.17	-45.73	37.33
	L_{23}-U_{24}	-73.25	65.79	0.29	0.55	-3.28	1.65	3.75	7.08	-42.20	19.04
	U_{24}-L_{24}	-64.89	0.79	0.79	-1.68	-2.77	0.10	10.50	10.49	-22.40	36.94
	L_{24}-U_{25}	-38.98	50.40	0.72	-0.12	-3.67	2.25	4.72	-1.64	-49.06	36.49
	U_{25}-L_{25}	-7.78	19.68	0.15	-0.54	-1.49	-0.26	2.14	-7.27	-19.88	-3.47
	L_{25}-U_{26}	-2.61	-8.77	0.43	-0.15	-1.10	-0.02	5.73	-2.02	-14.71	-0.91
	U_{26}-L_{26}	-5.73	-35.10	0.98	-0.09	-1.06	0.50	14.39	-1.22	-14.13	6.65

ZZ Axis Moments from STAAD (continued)

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{req} (in^3)	S_x (in^3)	Z_x (in^3)	I (in^4)	$I_{x/c}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m/a}$	$C_{m/b}$
Structure 1	U_1-L_1	-27.05	7.01	-59.01	23.74	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.402	0.44
	U_1-L_2	-18.24	13.44	-15.69	29.49	10.4	10.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.326	0.73
	U_1-U_2	-87.08	54.80	-148.19	119.07	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2314.7	-0.140	0.54
	L_1-L_2	-77.09	109.72	-121.56	105.30	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.866	0.25
	L_1-U_2	-85.92	42.01	-130.96	48.97	42.4	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.360	0.46
	L_2-U_2	-81.90	57.55	-119.32	79.84	20.8	20.80	20.67	34.66	2	1076.0	1.67	1444	1.5	1029.6	-0.669	0.33
	L_2-U_3	-27.11	1.44	-53.03	17.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.321	0.47
	L_2-L_3	-9.13	-48.25	-0.18	-76.64	10.4	10.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.465	0.40
	U_3-L_3	-25.51	1.05	-58.79	29.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.495	0.40
	U_3-U_4	-59.50	50.63	-134.81	93.63	42.4	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.665	0.33
	L_3-U_4	-125.44	89.62	-196.69	139.50	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.709	0.32
	L_3-L_4	-143.50	97.83	-221.64	157.71	38.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.689	0.32
	U_4-L_4	-96.70	101.04	-150.60	152.24	38.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.979	0.21
	L_4-U_4	-136.30	122.61	-211.21	184.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.872	0.25
	L_4-L_5	-127.43	84.72	-197.55	127.78	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.778	0.29
	U_4-L_5	-108.88	85.31	-160.70	140.50	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.778	0.29
	L_5-U_5	-54.89	3.31	-84.75	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	U_5-L_5	-20.00	3.31	-54.89	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	L_6-U_6	-20.00	3.31	-54.89	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	U_6-L_6	-21.46	-50.50	-10.88	-28.75	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.425	0.43
	L_6-L_7	-50.51	29.73	-89.79	58.38	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.650	0.34
	U_7-L_7	-123.35	78.66	-190.50	139.72	38.5	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.689	0.32
	L_7-L_8	-156.55	96.65	-168.19	113.78	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.685	0.33
	U_7-L_8	-119.97	125.17	-197.29	184.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.872	0.25
	L_8-U_8	-66.70	101.04	-150.60	152.24	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.979	0.21
	U_8-L_8	-136.30	122.61	-211.21	184.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.872	0.25
	L_8-L_9	-127.43	84.72	-197.55	127.78	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.778	0.29
	U_9-L_9	-54.89	3.31	-84.75	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	L_9-U_{10}	-129.85	154.39	-201.38	203.76	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{10}-L_{10}	-114.07	164.66	-249.52	230.91	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.685	0.33
	L_{10}-U_{11}	-99.55	66.65	-166.19	113.78	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.685	0.33
	U_{11}-L_{11}	-119.97	125.17	-197.29	184.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.872	0.25
	L_{11}-U_{12}	-49.73	112.78	-145.85	165.31	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.882	0.25
	U_{12}-L_{12}	-49.73	112.78	-145.85	165.31	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.882	0.25
	L_{12}-U_{13}	-129.60	132.65	-35.10	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.977	0.21
	U_{13}-L_{13}	-129.60	132.65	-35.10	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.977	0.21
	L_{13}-U_{14}	-46.99	87.76	-129.60	132.65	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.946	0.22
	U_{14}-L_{14}	-46.99	87.76	-129.60	132.65	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.946	0.22
	L_{14}-U_{15}	-19.43	112.78	-145.85	165.31	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.882	0.25
	U_{15}-L_{15}	-19.43	112.78	-145.85	165.31	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.882	0.25
	L_{15}-U_{16}	-46.99	87.76	-129.60	132.65	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.946	0.22
	U_{16}-L_{16}	-26.10	127.60	-52.09	177.15	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.520	0.39
	L_{16}-U_{17}	-62.01	74.62	-138.59	102.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.665	0.33
	U_{17}-L_{17}	-96.47	74.49	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	L_{17}-U_{18}	-61.80	107.41	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	L_{18}-U_{19}	-64.30	92.25	-157.58	127.45	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{19}-L_{19}	-42.01	74.62	-138.59	102.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.665	0.33
	L_{19}-U_{20}	-96.47	74.49	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{20}-L_{20}	-61.80	107.41	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	L_{20}-U_{21}	-64.30	92.25	-157.58	127.45	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{21}-L_{21}	-26.10	127.60	-52.09	177.15	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.520	0.39
	L_{21}-U_{22}	-42.01	74.62	-138.59	102.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.665	0.33
	U_{22}-L_{22}	-96.47	74.49	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	L_{22}-U_{23}	-61.80	107.41	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	L_{23}-U_{24}	-64.30	92.25	-157.58	127.45	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{24}-L_{24}	-42.01	74.62	-138.59	102.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.665	0.33
	L_{24}-U_{25}	-96.47	74.49	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{25}-L_{25}	-61.80	107.41	-157.53	157.82	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	L_{25}-U_{26}	-64.30	92.25	-157.58	127.45	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{26}-L_{26}	-42.01	74.62	-138.59	102.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.665	0.33
Structure 2	U_1-L_1	-27.05	7.01	-59.01	23.74	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.402	0.44
	U_1-L_2	-18.24	13.44	-15.69	29.49	10.4	10.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.326	0.73
	U_1-U_2	-87.08	54.80	-148.19	119.07	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2314.7	-0.140	0.54
	L_1-L_2	-77.09	109.72	-121.56	105.30	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.866	0.25
	L_1-U_2	-85.92	42.01	-130.96	48.97	42.4	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.360	0.46
	L_2-U_2	-81.90	57.55	-119.32	79.84	20.8	20.80	20.67	34.66	2	1076.0	1.67	1444	1.5	1029.6	-0.669	0.33
	L_2-U_3	-27.11	1.44	-53.03	17.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.321	0.47
	L_2-L_3	-9.13	-48.25	-0.18	-76.64	10.4	10.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.465	0.40
	U_3-L_3	-25.51	1.05	-58.79	29.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.495	0.40
	U_3-U_4	-59.50	50.63	-134.81	93.63	42.4	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.665	0.33
	L_3-U_4	-125.44	89.62	-196.69	139.50	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.709	0.32
	L_3-L_4	-143.50	97.83	-221.64	157.71	38.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.689	0.32
	U_4-L_4	-96.70	101.04	-150.60	152.24	38.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.979	0.21
	L_4-U_4	-136.30	122.61	-211.21	184.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.872	0.25
	L_4-L_5	-127.43	84.72	-197.55	127.78	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.778	0.29
	U_4-L_5	-108.88	85.31	-160.70	140.50	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.778	0.29
	L_5-U_5	-54.89	3.31	-84.75	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	U_5-L_5	-20.00	3.31	-54.89	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	L_6-U_6	-20.00	3.31	-54.89	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	U_6-L_6	-21.46	-50.50	-10.88	-28.75	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.425	0.43
	L_6-L_7	-50.51	29.73	-89.79	58.38	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1010.2	-0.650	0.34
	U_7-L_7	-123.35	78.66	-190.50	139.72	38.5	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.689	0.32
	L_7-L_8	-156.55	96.65	-168.19	113.78	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.685	0.33
	U_7-L_8	-119.97	125.17	-197.29	184.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.872	0.25
	L_8-U_8	-66.70	101.04	-150.60	152.24	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.979	0.21
	U_8-L_8	-136.30	122.61	-211.21	184.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2116.6	-0.872	0.25
	L_8-L_9	-127.43	84.72	-197.55	127.78	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.778	0.29
	U_9-L_9	-54.89	3.31	-84.75	17.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.641	0.34
	L_9-U_{10}	-129.85	154.39	-201.38	203.76	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.999	0.20
	U_{10}-L_{10}	-114.07	164.66	-249.52	230.91

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load (k-in)	Dead Load (k-in)	Live Load (Max) (k-in)	Live Load (Min) (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Max (k-in)	Lane Reduction & Impact Live Load Min (k-in)	Impact Pedestrian Load Max (k-in)	Impact Pedestrian Load Min (k-in)
Structure 1	U_1-L_1	-75.17	-0.72	7.50	-6.39	-14.32	-6.60	83.54	-71.16	-159.47	-73.44
	U_1-U_2	46.62	-20.29	3.33	-0.71	-13.04	-5.40	3.60	-7.87	-111.80	-51.27
	U_2-L_2	-112.29	86.52	1.10	2.71	-12.64	-8.11	12.24	30.14	-140.71	-90.26
	L_1-L_2	-75.71	66.12	7.77	2.82	-13.35	-7.64	20.00	25.92	-159.93	-97.64
	L_2-U_3	-9.25	61.62	1.78	2.57	-18.29	-4.62	19.82	28.59	-203.57	-51.42
	U_3-L_3	42.76	120.21	1.99	2.51	-14.67	-1.50	22.19	27.97	-163.31	-21.01
	L_3-L_4	93.78	174.80	2.38	2.98	-14.34	-0.85	22.80	18.56	-143.34	-9.85
	L_4-U_5	-47.38	326.15	1.03	2.96	-20.82	16.54	11.48	33.00	-231.73	184.11
	U_5-L_5	475.03	-124.16	12.65	11.03	-5.14	0.47	140.26	-118.90	-1.47	5.08
	L_5-L_6	46.82	20.59	2.44	-1.98	-5.84	-3.76	26.30	-21.36	-62.98	-40.50
	L_6-U_7	64.59	-138.73	3.10	-5.53	-4.41	-6.21	33.42	-77.35	-48.89	-67.20
	U_7-L_7	27.91	-140.51	2.71	-3.05	-8.20	-6.76	29.26	-32.84	-88.41	-72.91
	L_7-L_8	-106.12	-155.13	3.37	-0.41	-12.08	-9.00	36.37	-4.37	-130.19	-99.76
	L_8-U_9	-138.04	-162.36	3.60	-1.20	-11.27	-8.34	39.08	-2.70	-161.48	-143.03
	U_9-L_9	-245.82	-183.07	1.33	-7.00	-26.93	-12.03	14.34	-75.43	-290.32	-129.75
	L_9-L_{10}	-223.51	-327.01	3.50	-10.03	-25.18	-9.29	38.47	-110.52	-277.02	-109.19
	U_{10}-L_{10}	-269.97	-145.19	0.63	0.08	-27.25	-8.88	6.77	0.83	-293.85	-95.77
	L_{10}-L_{11}	-164.36	-67.49	2.66	-2.29	-13.03	-7.64	7.66	-24.15	-181.45	-81.85
	L_{11}-U_{12}	-170.82	-20.32	3.51	-0.06	-15.17	-9.99	5.49	-0.63	-163.61	-10.22
	U_{12}-L_{12}	-186.22	23.42	1.87	-12.00	-12.71	-2.71	20.18	-129.33	-137.00	-7.64
	L_{12}-L_{13}	-114.82	-21.16	3.56	-3.60	-12.64	-8.11	38.38	-38.80	-125.36	-38.80
	L_{13}-U_{14}	-71.24	-180.99	1.65	-3.29	-7.57	-7.75	17.54	-35.00	-80.64	-82.94
	U_{14}-L_{14}	-58.39	-252.13	1.65	-5.13	-13.43	-13.43	5.77	-23.63	-102.83	-102.83
	L_{14}-L_{15}	-327.34	-325.40	1.05	2.25	-23.62	-17.41	11.22	-23.96	-251.49	-185.33
	L_{15}-U_{16}	-339.58	-341.21	2.71	-2.88	-41.41	-31.27	10.19	-23.21	-260.25	-193.57
	U_{16}-L_{16}	-396.14	-197.74	2.21	4.26	-32.94	-6.70	23.55	45.31	-350.67	-71.35
	L_{16}-L_{17}	-344.18	-179.44	3.29	2.86	-24.51	-21.09	35.03	30.45	-260.96	-224.33
	L_{17}-U_{18}	-226.16	-295.72	2.41	2.63	-34.60	-25.42	24.82	34.60	-258.42	-191.87
	U_{18}-L_{18}	-350.21	-90.73	2.80	3.64	-22.00	-8.07	29.85	38.73	-250.18	-85.92
	L_{18}-L_{19}	-275.79	-29.53	3.28	3.76	-22.00	-8.07	34.11	39.21	-250.18	-85.92
	U_{19}-L_{19}	-167.09	39.84	3.59	3.52	-19.21	-6.11	38.17	37.46	-204.48	-65.01
	L_{19}-L_{20}	-109.78	170.74	3.20	2.85	-19.67	-2.52	34.11	30.16	-204.48	-65.01
	U_{20}-L_{20}	-81.79	179.50	3.12	3.05	-19.67	-2.52	33.25	29.50	-204.48	-65.01
	L_{20}-L_{21}	-261.01	1066.00	3.28	1.23	-27.73	22.51	24.29	13.09	-299.21	239.62
	U_{21}-L_{21}	-1192.78	-82.79	8.09	-29.79	-1.77	-1.77	301.48	-188.61	-118.64	-118.64
	L_{21}-L_{22}	-25.29	11.66	2.37	0.56	-18.74	-7.86	24.98	5.89	-197.13	-82.67
	L_{22}-U_{23}	-34.61	34.61	2.36	0.56	-18.74	-7.86	24.98	5.89	-197.13	-82.67
	U_{23}-L_{23}	-150.60	33.06	3.85	-4.22	-11.35	-6.02	40.54	-44.36	-119.40	-63.32
	L_{23}-L_{24}	-147.31	4.37	4.09	-6.83	-9.84	-11.25	48.26	-71.82	-103.52	-118.33
	U_{24}-L_{24}	-141.64	4.37	4.09	-6.83	-9.84	-11.25	48.26	-71.82	-103.52	-118.33
	L_{24}-L_{25}	-31.69	-33.99	3.14	-3.48	-17.05	-7.53	33.07	-36.59	-179.43	-83.43
	L_{25}-U_{26}	-86.03	-71.70	1.99	-1.79	-15.52	-13.47	16.73	-19.53	-135.33	-141.32
	U_{26}-L_{26}	-60.96	-66.58	2.88	-14.93	-28.13	-10.36	30.29	-157.12	-295.95	-108.94
	L_{26}-L_{27}	-21.15	-21.15	2.52	-7.94	-16.65	-6.00	30.29	-157.12	-295.95	-108.94
	L_{27}-U_{28}	-33.03	-28.69	2.37	3.03	-22.78	-8.64	24.91	31.89	-239.69	-101.39
	U_{28}-L_{28}	-15.13	112.78	2.34	3.07	-22.00	-2.98	24.60	32.25	-231.47	-31.32
	L_{28}-L_{29}	-26.78	112.78	2.34	3.07	-22.00	-2.98	24.60	32.25	-231.47	-31.32
	U_{29}-L_{29}	-2.74	209.84	1.93	2.42	-20.05	-3.14	20.25	25.48	-211.04	-32.98
	L_{29}-L_{30}	-5.42	209.84	1.93	2.42	-20.05	-3.14	20.25	25.48	-211.04	-32.98
	U_{30}-L_{30}	-122.51	1157.56	1.54	2.87	-29.39	24.41	271.99	-183.05	-11.96	24.96
	L_{30}-L_{31}	-1154.91	-197.36	25.50	-17.19	-1.12	2.34	271.99	-183.05	-11.96	24.96
	U_{31}-L_{31}	-58.04	-362.39	3.11	-2.11	-9.39	-5.32	32.47	-42.81	-109.43	-62.01
	L_{31}-L_{32}	-178.89	-59.81	4.32	-6.77	-7.65	-7.05	45.98	-72.12	-81.47	-75.10
	U_{32}-L_{32}	-68.66	-178.68	3.85	3.07	-12.19	-11.38	41.02	32.73	-129.77	-121.14
	L_{32}-L_{33}	-65.64	-294.61	3.87	3.12	-18.19	-23.92	39.08	33.16	-206.10	-271.76
	U_{33}-L_{33}	-236.51	-153.10	2.98	2.30	-18.19	-23.92	31.67	24.47	-193.70	-254.72
	L_{33}-L_{34}	-98.60	-313.27	3.59	-16.74	-40.81	-12.02	38.23	-178.21	-432.41	-127.98
	U_{34}-L_{34}	-154.36	-67.49	2.66	-2.29	-13.03	-7.64	7.66	-24.15	-181.45	-81.85
	L_{34}-L_{35}	-350.37	-386.86	2.29	0.63	-39.68	-16.90	24.33	6.67	-422.48	-179.93
	U_{35}-L_{35}	-262.51	-311.61	1.07	-9.61	-15.48	-1.18	21.91	-97.70	-182.71	-13.67
	L_{35}-L_{36}	-279.98	-117.76	1.54	-0.41	-31.18	-5.79	16.42	-4.32	-332.02	-51.54
	U_{36}-L_{36}	-262.51	-311.61	1.07	-9.61	-15.48	-1.18	21.91	-97.70	-182.71	-13.67
	L_{36}-L_{37}	-186.32	-74.12	1.97	-18.61	-15.28	-1.28	21.91	-97.70	-182.71	-13.67
	L_{37}-U_{38}	-139.08	-187.97	0.10	-9.03	-15.83	-3.24	98.16	-97.35	-170.63	-34.89
	U_{38}-L_{38}	-47.38	-119.55	0.46	-5.48	-6.48	-6.48	48.64	-112.67	-77.13	-88.52
	L_{38}-L_{39}	-52.58	-129.17	4.51	-10.45	-7.15	-8.21	48.64	-112.67	-77.13	-88.52
	U_{39}-L_{39}	-277.84	-111.66	1.68	-1.51	-18.77	-8.53	18.07	-16.26	-202.38	-91.95
	L_{39}-L_{40}	-166.98	-243.52	1.71	-1.19	-19.63	-13.54	12.86	-17.54	-206.74	-145.99
	U_{40}-L_{40}	-287.74	-127.82	3.31	-7.15	-38.64	-7.27	35.32	-167.35	-309.77	-76.19
	L_{40}-L_{41}	-141.43	-113.94	1.00	-1.82	-21.20	-5.82	10.78	-19.64	-228.54	-62.78
	U_{41}-L_{41}	-136.67	-67.04	2.04	-2.54	-16.13	-10.99	18.22	-21.75	-166.69	-120.70
	L_{41}-L_{42}	-497.26	-34.44	18.83	-20.46	-0.65	0.08	209.67	-227.80	-0.51	0.90
	U_{42}-L_{42}	-59.35	-179.75	4.49	-7.90	-14.07	-7.99	50.02	-74.92	-156.67	-88.99
	L_{42}-L_{43}	-80.39	-119.58	2.63	0.54	-18.20	-6.91	29.30	5.99	-202.62	-76.88
	U_{43}-L_{43}	-24.63	-27.07	2.18	-3.31	-19.93	-5.64	24.90	-36.82	-217.12	-82.81
	L_{43}-L_{44}	-29.38	-160.66	1.78	-1.66	-15.39	-2.20	12.91	-18.49	-170.90	-22.24

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bb} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor r	M_p (k-in)	Formula 1.8 Term * F-S_{bb}	M_y k-in
Structure 1	U_1-L_1	17.38	-83.43	-298.53	-96.42	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042
	U_1-U_2	-56.17	-56.61	-328.72	-214.64	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042
	U_2-L_2	-130.07	151.65	-328.90	-4.86	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_1-L_2	5.20	-12.29	-329.07	-22.47	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042
	L_2-U_3	13.74	117.28	-276.68	13.26	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042
	U_3-L_3	84.43	192.62	-156.72	128.30	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_3-L_4	150.51	81.81	-143.34	43.85	0.0	90.24	76.71	78.18	142.56	2586	1649.1	1.47	4704
	L_4-U_5	-46.68	726.90	-362.85	923.34	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6099	0.99895945
	U_5-L_5	794.79	-316.24	619.63	-155.06	130.3	130.26	105.11	180.77	2960	1799.3	1.39	5665	0.99892839
	L_5-L_6	95.05	-1.00	-21.01	-25.88	96.6	96.61	79.12	135.29	2174	1387.9	1.40	4465	0.99873194
	L_6-U_7	127.42	-217.87	14.38	-321.78	83.55	83.55	69.15	135.29	2174	1387.9	1.40	4465	0.99873194
	U_7-L_7	74.32	-225.36	-78.66	-277.44	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875895
	L_7-L_8	36.37	-4.37	-130.19	-99.76	88.5	88.51	69.41	214.68	5476	3413.6	1.46	9064	0.99895944
	L_8-U_9	-161.48	-303.03	-412.06	-307.32	88.5	88.51	69.41	214.68	5476	3413.6	1.46	9064	0.99895944
	U_9-L_9	-300.90	-336.05	-696.96	-406.67	88.5	88.51	157.55	214.68	5476	3413.6	1.46	9064	0.99895944
	L_9-L_{10}	-223.51	-327.01	-556.38	-388.53	88.5	88.51	157.55	214.68	5476	3413.6	1.46	9064	0.99895944
	U_{10}-L_{10}	-342.16	-187.66	-732.92	-313.24	88.5	88.51	157.55	214.68	5476	3413.6	1.46	9064	0.99895944
	L_{10}-L_{11}	-191.45	-81.85	-467.33	-113.37	127.3	127.31	110.40	199.23	3668	2589.5	1.46	6146	0.99907149
	L_{11}-U_{12}	-214.93	-27.23	-434.75	-39.71	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880452
	L_{12}-U_{12}	-215.85	-137.68	-420.19	20.51	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880452
	L_{12}-L_{13}	-268.75	-381.26	-371.57	-325.84	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880452
	L_{13}-U_{14}	-69.81	-280.86	-157.44	-343.10	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99895981
	L_{14}-U_{14}	-58.39	-252.13	-102.83	-102.83	138.2	138.15	119.05	199.70	3434	1990.9	1.45	6099	0.99895981
	L_{14}-L_{15}	-13.22	-23.96	-251.49	-185.33	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{15}-U_{16}	-410.95	-391.88	-752.48	-663.96	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838
	U_{16}-L_{16}	-409.75	-344.60	-663.96	-350.67	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.99885838
	L_{16}-L_{17}	-484.37	-198.10	-949.82	-251.21	291.73	291.41	365.62	7161	38705.6	1.45	12665	0.99891931	8298.1
	L_{17}-U_{18}	-351.03	-30.45	-780.98	-224.33	232.7	232.70	198.45	340.10	6520	3217.6	1.46	11223	0.99885838
	U_{18}-L_{18}	-260.69	-339.46	-691.97	-503.87	232.7	232.70	189.45	340.10	6520	3217.6	1.46	11223	0.99885838
	L_{18}-L_{19}	-416.47	-67.60	-780.51	-229.65	294.3	294.32	72.72	342.72	6520	3217.6	1.46	11223	0.99885838
	U_{19}-L_{19}	-167.09	39.84	-449.48	-65.01	294.3	294.32	72.72	342.72	6520	3217.6	1.46	11223	0.99885838
	L_{19}-L_{20}	-167.09	170.49	-483.03	-32.72	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.99854451
	U_{20}-L_{20}	-88.36	261.42	-414.97	-107.08	156.8	156.80	72.24	214.81	3285	1852.3	1.37	7089	0.99854451
	L_{20}-L_{21}	33.25	-209.26	-324.34	-109.79	0.0	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042
	U_{21}-L_{21}	-307.75	1662.80	-723.09	1957.30	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092
	L_{21}-L_{22}	301.48	-188.61	-118.64	-118.64	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092
	L_{22}-U_{23}	-4.79	22.51	-9.75	-197.13	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.99893092
	L_{23}-U_{23}	-150.60	33.06	-119.40	-63.32	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{23}-L_{24}	-147.31	4.37	-119.40	-118.33	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	U_{24}-L_{24}	-141.64	4.37	-119.40	-118.33	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{24}-L_{25}	-31.69	-33.99	-179.43	-83.43	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{25}-U_{26}	-86.03	-71.70	-135.33	-141.32	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	U_{26}-L_{26}	-60.96	-66.58	-295.95	-108.94	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{26}-L_{27}	-21.15	-21.15	-295.95	-108.94	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{27}-U_{28}	-33.03	-28.69	-239.69	-101.39	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	U_{28}-L_{28}	-15.13	112.78	-231.47	-31.32	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{28}-L_{29}	-26.78	112.78	-231.47	-31.32	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	U_{29}-L_{29}	-2.74	209.84	-211.04	-32.98	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{29}-L_{30}	-5.42	209.84	-211.04	-32.98	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	U_{30}-L_{30}	-122.51	1157.56	-11.96	24.96	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{30}-L_{31}	-1154.91	-197.36	-25.50	-17.19	-1.12	2.34	271.99	-183.05	-11.96	24.96	0.0	90.24	76.71
	U_{31}-L_{31}	-58.04	-362.39	-109.43	-62.01	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	L_{31}-L_{32}	-178.89	-59.81	-81.47	-75.10	0.0	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042
	U_{32}-L_{32}	-68.66	-178.68	3.85	3.07	-12.19	-11.38	41.02	32.73	-129.77	-121.14	0.0	90.24	76.71
	L_{32}-L_{33}	-65.64	-294.61	3.87	3.12	-18.19	-23.92	39.08	33.16	-206.10	-271.76	0.0	90.24	76.71
	U_{33}-L_{33}	-236.51	-153.10	2.98	2.30	-18.19	-23.92	31.67	24.47	-193.70	-254.72	0.0	90.24	76.71
	L_{33}-L_{34}	-98.60	-313.27	3.59	-16.74	-40.81	-12.02	38.23	-178.21	-432.41	-127.98	0.0	90.24	76.71
	U_{34}-L_{34}	-154.36	-67.49	2.66	-2.29	-13.03	-7.64	7.66	-24.15	-181.45	-81.85	-467.33	-113.37	127.3
	L_{34}-L_{35}	-350.37	-386.86	2.29	0.63	-39.68	-16.90	24.33	6.67	-422.48	-179.93	0.0	90.24	76.71
	U_{35}-L_{35}	-262.51	-311.61	1.07	-9.61	-15.48	-1.18	21.91	-97.70	-182.71	-13.67	-434.75	-39.71	104.8
	L_{35}-L_{36}	-279.98	-117.76	1.54	-0.41	-31.18	-5.79	16.42	-4.32	-332.02	-51.54	0.0	90.24	76.71
	U_{36}-L_{36}	-262.51	-311.61	1.07	-9.61	-15.48	-1.18	21.91	-97.70	-182.71	-13.67	-420.19	20.51	104.8
	L_{36}-L_{37}	-186.32	-74.12	1.97	-18.61	-15.28	-1.28	21.91	-97.70	-182.71	-13.67	0.00	90.24	76.71
	L_{37}-U_{38}	-139.08	-187.97	0.10	-9.03	-15.83	-3.24	98.16	-97.35	-170.63	-34.89	0.00	90.24	76.71
	U_{38}-L_{38}	-47.38	-119.55	0.46	-5.48	-6.48	-6.48	48.64	-112.67	-77.13	-88.52	0.00	90.24	76.71
	L_{38}-L_{39}	-52.58	-129.17	4.51	-10.45	-7.15	-8.21	48.64	-112.67	-77.13	-88.52	0.00	90.24	76.71
	U_{39}-L_{39}	-277.84	-111.66	1.68	-1.51	-18.77	-8.53	18.07	-16.26	-202.38	-91.95	0.00	90.24	76.71
	L_{39}-L_{40}	-166.98	-243.52	1.71	-1.19	-19.63	-13.54	12.86	-17.54	-206.74	-145.99	0.00	90.24	76.71
	U_{40}-L_{40}	-287.74	-127.82	3.31	-7.15	-38.64	-7.27	35.32	-167.35	-309.77	-76.19	0.00	90.24	76.71
	L_{40}-L_{41}	-141.43	-113.94	1.00	-1.82	-21.20	-5.82	10.78	-19.64	-228.54	-62.78	0.00	90.24	76.71
	U_{41}-L_{41}	-136.67	-67.04	2.04	-2.54	-16.13	-10.99	18.22	-21.75	-166.69	-120.70	0.00	90.24	76.71
	L_{41}-L_{42}	-497.26	-34.44	18.83	-20.46	-0.65	0.08	209.67	-227.80	-0.51	0.90	0.00	90.24	76.71
	U_{42}-L_{42}	-59.35	-179.75	4.49	-7.90	-14.07	-7.99	50.02	-74.92	-156.67	-88.99	0.00	90.24	76.71
	L_{42}-L_{43}	-80.39	-119.58	2.63	0.54	-18.20	-6.91	29.30	5.99	-202.62	-76.88	0.00	90.24	76.71
	U_{43}-L_{43}	-24.63	-27.07	2.18	-3.31	-19.93	-5.64	24.90	-36.82	-217.12	-82.81	0.00	90.24	76.71
	L_{43}-L_{44}	-29.38	-160.66	1.78	-1.66	-15.39	-2.20	12.91	-18.49	-170.90	-22.24	0.00	90.24	76.71

M_3 Information

YY Axis Moments from STAAD

Location	Member	Dead Load (k-in)	Dead Load (k-in)	Live Load (Max) (k-in)	Live Load (Min) (k-in)	Pedestrian Load (Max) (k-in)	Pedestrian Load (Min) (k-in)	Lane Reduction & Impact Live Load Max (k-in)	Lane Reduction & Impact Live Load Min (k-in)	Impact Pedestrian Load Max (k-in)	Impact Pedestrian Load Min (k-in)
Structure 1	U_1-L_1	-1.07	-32.47	47.23	-12.69	0.00	0.00	0.00	0.00	41.80	-19.64
	U_1-U_2	17.58	-0.19	-12.48	-1.38	0.00	0.00	0.00	0.00	17.58	-0.19
	U_2-L_2	-13.35	0.30	14.71	0.97	0.00	0.00	0.00	0.00	43.35	-89.93
	L_1-L_2	-19.22	-4.34	-2.27	-2.76	0.00	0.00	0.00	0.00	18.67	-55.57
	L_2-U_3	-20.50	5.11	-19.53	-15.03	0.00	0.00	0.00	0.00	61.49	-43.74
	U_3-L_3	-21.05	7.45	-2.27	-28.32	0.00	0.00	0.00	0.00	-209.95	-71.21
	L_3-L_4	-8.54	16.51	-29.36	-13.60	0.00	0.00	0.00	0.00	-262.44	-77.77
	L_4-U_5	9.90	32.99	3.69	-3.33	0.00	0.00	0.00	0.00	-229.76	216.68
	U_5-L_5	-0.25	17.39	3.21	-1.61	0.00	0.00	0.00	0.00	31.51	-207.34
	L_5-L_6	6.64	6.83	1.14	9.74	0.00	0.00	0.00	0.00	166.30	310.36
	L_6-U_7	8.33	-23.93	10.36	17.38	0.00	0.00	0.00	0.00	216.35	32.99
	U_7-L_7	1.06	-34.44	29.46	18.38	0.00	0.00	0.00	0.00	244.39	-121.05
	L_7-L_8	-3.29	6.65	36.90	-15.40	0.00	0.00	0.00	0.00	65.71	-199.60
	L_8-U_9	4.35	16.51	0.34	14.38	0.00	0.00	0.00	0.00	-171.12	-236.35
	U_9-L_9	17.13	8.13	31.73	1.85	0.00	0.00	0.00	0.00	-248.81	-198.61
	L_9-L_{10}	4.59	-43.93	70.71	-11.58	0.00	0.00	0.00	0.00	-170.95	-92.43
	L_{10}-L_{11}	-7.05	-1.31	14.31	-32.72	0.00	0.00	0.00	0.00	-135.97	-39.39
	$L_{11}

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-inspected**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information — ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Pos. Mom. Start k-in	Max. Pos. Mom. End k-in	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_u k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}	Pass
Structure 1	L_0-L_1	-15.50	-73.38	4.60	-6.89	-0.77	0.78					49.30	-195.06	31.23	-84.08	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.253	0.50	0.50										
	L_1-L_2	39.75	-88.06	3.42	-9.37	-7.79	-7.88					101.17	-250.09	-61.07	-228.48	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.405	0.44	0.44										
	L_2-L_3	30.00	-42.24	1.64	-12.08	-8.50						12.17	-20.36	-140.00	-84.62	83.6	83.58	-177.58	99.9	99.93	51.40	1.21	4141	0.99991186	5294.8	-0.087	0.55	0.55										
	L_3-L_4	-11.39	11.52	1.76	-12.08	-16.15	-8.22					19.54	-134.43	-179.84	91.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_4-L_5	-49.18	2.08	14.21	-2.25	-27.12	-16.76					25.28	-277.52	-176.76	20.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_5-L_6	-0.43	187.22	1.71	4.00	-15.00	-1.74					19.03	44.58	-111.39	-139.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_6-L_7	41.36	78.74	7.22	-0.13	-11.62	-13.89	11.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_7-L_8	-25.09	448.92	0.84	2.83	-8.91	11.67					9.33	31.45	-99.15	129.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_8-L_9	426.08	-36.00	10.55	-3.19	-5.10	0.24					70.78	-81.56	552.49	-43.50	145.5	145.75	136.74	228.84	6550	2932.4	1.57	7552	0.99952915	4806.4	-0.130	0.55	0.55										
	L_9-L_{10}	150.12	-126.55	4.72	-6.79	-6.71	-2.07	-22.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{10}-L_{11}	120.53	-116.03	3.40	1.37	-4.39	-5.65					36.62	-14.80	-47.38	-60.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{11}-L_{12}	39.16	-38.23	2.71	-0.30	-3.24	-5.13					40.03	-72.40	-42.20	-50.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{12}-L_{13}	-45.20	-121.29	2.36	0.46	-8.16	-9.37					25.46	-9.91	-97.83	-101.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{13}-L_{14}	96.42	-269.16	1.26	-15.37	-10.49	-5.90					78.28	-165.75	-113.12	-64.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{14}-L_{15}	-352.17	46.21	0.52	-3.98	-16.10	-9.24					14.16	-62.49	-367.05	-74.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{15}-L_{16}	-192.00	-318.69	0.69	0.31	-18.23	-7.62					7.42	3.33	-196.51	-82.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{16}-L_{17}	-339.87	44.80	0.59	2.93	-21.60	-10.83					6.37	2.93	-167.94	-0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{17}-L_{18}	-154.69	-31.48	0.31	-0.19	-10.05	-5.21					3.33	-2.06	-108.32	-2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{18}-L_{19}	-216.17	148.84	0.45	-0.47	-7.80	2.80					4.90	-11.83	-151.80	31.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{19}-L_{20}	-136.64	49.93	0.39	-0.20	-8.69	4.00					3.70	-2.10	-93.07	43.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{20}-L_{21}	2.99	-170.85	3.69	-9.31	-0.54	1.04					39.30	-99.14	-5.79	11.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{21}-L_{22}	56.19	-245.54	4.97	-4.28	-2.58	-0.26					56.90	-155.57	-36.30	-86.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{22}-L_{23}	-6.26	-160.81	4.84	-9.26	-6.85	-7.30					51.52	-88.56	-72.89	-77.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{23}-L_{24}	-75.76	-103.15	1.51	-0.15	-12.36	-13.93					37.39	-141.27	-13.26	-93.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{24}-L_{25}	-253.03	-295.08	4.16	-14.46	-18.38	-8.80					44.25	-153.97	-195.65	-104.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{25}-L_{26}	-317.48	-413.31	1.26	-13.50	-19.53	-10.79					13.50	-183.56	-239.57	-213.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_0-L_2	-475.14	-252.78	2.86	2.86	-24.70	-16.54					30.49	30.40	-263.02	-176.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_1-L_3	-280.52	-64.48	2.34	4.12	-27.43	-1.96					24.86	43.83	-292.02	20.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_2-L_4	-292.37	-219.77	2.62	-0.62	-3.98	1.16					31.17	25.35	-160.42	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_3-L_5	-225.89	141.33	2.01	3.93	-13.39	-2.14					21.41	-81.81	-142.60	-22.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_4-L_6	-203.56	295.05	3.24	2.37	-13.28	1.57					20.56	-272.21	-213.45	-448.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_5-L_7	-160.09	387.18	2.09	4.33	-12.70	1.36					22.22	-46.13	-135.21	14.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_6-L_8	-202.72	-204.41	3.19	0.10	-15.30	-7.82					36.06	1.01	-162.94	-83.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_7-L_9	-75.76	-103.15	1.51	-0.15	-12.36	-13.93					37.39	-141.27	-13.26	-93.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_8-L_{10}	1072.48	-412.36	23.27	-16.93	-1.37	-5.10					244.83	-178.10	-14.36	-350.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_9-L_{11}	539.48	-41.53	7.26	-2.62	-7.48	4.76					72.22	-183.96	-39.24	-237.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{10}-L_{12}	475.61	-49.01	8.83	-8.89	-5.81	-5.33					92.88	-104.00	-61.15	-56.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{11}-L_{13}	212.22	-38.53	3.65	-0.33	-3.39	-3.15					52.58	-60.01	-30.68	-40.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{12}-L_{14}	226.53	-41.80	4.92	-6.72	-8.33	-6.86					51.73	-70.72	-67.62	-201.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{13}-L_{15}	214.46	-56.44	3.98	-9.19	-8.72	-7.26					41.83	-96.66	-91.70	-76.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{14}-L_{16}	201.58	-95.05	3.24	-2.37	-3.28	-1.02					39.80	-111.23	-279.87	-50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{15}-L_{17}	49.26	-202.49	2.36	-15.03	-17.75	-16.39					24.78	-158.17	-186.71	-172.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{16}-L_{18}	-197.12	-34.33	0.51	-0.23	-9.31	-4.23					15.84	-3.91	-202.10	-63.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{17}-L_{19}	-111.93	0.87	0.51	3.28	-19.21	-3.99					15.84	34.51	-202.10	-41.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{18}-L_{20}	-75.76	-103.15	1.51	-0.15	-12.36	-13.93					37.39	-141.27	-13.26	-93.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{19}-L_{21}	-60.79	179.83	1.61	3.74	-12.89	-0.16					16.94	39.37	-139.41	-1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{20}-L_{22}	-81.88	265.66	2.77	1.63	-14.97	2.32					29.11	17.13	-157.48	24.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{21}-L_{23}	-100.08	-279.84	2.51	-1.04	-15.86	-8.72					26.43	-10.96	-166.82	-91.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{22}-L_{24}	-100.08	-279.84	2.51	-1.04	-15.86	-8.72					26.43	-10.96	-166.82	-91.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{23}-L_{25}	1027.57	362.88	22.17	-10.94	-1.43	1.49					236.03	-148.41	-15.17	-15.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{24}-L_{26}	-227.20	-125.85	1.57	-1.04	-16.79	-4.14					16.74	-11.03	-178.71	-44.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{25}-L_{27}	-227.20	-125.85	1.57	-1.04	-16.79	-4.14					16.74	-11.03	-178.71	-44.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{26}-L_{28}	-278.16	-133.13	4.83	-11.25	-5.31	-2.55					51.40	-119.74	-56.52	-27.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{27}-L_{29}	-278.16	-133.13	4.83	-11.25	-5.31	-2.55					51.40	-119.74	-56.52	-27.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{28}-L_{30}	-222.98	-243.33	5.10	-8.75	-9.23	-5.77					54.32	-83.19	-88.28	-61.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{29}-L_{31}	-187.99	-470.88	3.90	-10.16	-27.77	-13.07					41.48	-108.16	-299.68	-139.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{30}-L_{32}	-445.18	-93.53	2.69	0.80	-25.40	-9.16					26.50	6.42	-270.46	-67.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{31}-L_{33}	-291.76	-319.65	1.74	-0.34	-16.31	-7.24					16.15	-13.86	-221.61	-8.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{32}-L_{34}	-392.42	-38.25	1.22	-0.33	-19.61	-3.51					12.56	-3.50	-208.73	-37.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{33}-L_{35}	-341.21	86.25	1.39	-1.29	-20.00	0.77					9.07	-12.50	-242.29	-89.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{34}-L_{36}	-297.27	-199.08	0.96	-0.40	-12.43	2.44					10.18	-4.26	-132.37	26.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{35}-L_{37}	-201.12	-192.50	0.77	-0.20	-9.01	1.79					8.60	-3.72	-87.65	28.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{36}-L_{38}	24.89	-109.65	4.59	-8.60	-0.33	0.51					90.49	-92.67	-3.96	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{37}-L_{39}	-139.96	-178.06	4.17	-8.34	-1.69	-1.34					44.98	-89.97	-16.17	-14.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{38}-L_{40}	-31.12	-282.61	2.62	-8.62	-0.72	-0.39					14.02	-54.87	-6.70	-26.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{39}-L_{41}	47.96	-259.32	4.26	-5.17	-7.53	-6.27					90.45	-58.84	-81.19	-87.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{40}-L_{42}	-263.32	-55.21	1.46	-0.27	-11.08	-1.02					14.47	-3.38	-214.05	-0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{41}-L_{43}	-41.79	-343.26	3.43	-19.34	-15.69	-16.87					36.96	-208.47	-169.18	-181.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{42}-L_{44}	-341.21	86.25	1.39	-1.29	-20.00	0.77					15.16	13.86	-221.61	8.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{43}-L_{45}	-201.12	-192.50	0.77	-0.20	-9.01	1.79					8.60	-3.72	-87.65	28.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{44}-L_{46}	-201.12	-192.50	0.77	-0.20	-9.01	1.79					12.56	-19.30	-104.63	-2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{45}-L_{47}	-147.72	-149.48	0.24	-0.06	-0.15						23.18	0.42	-108.45	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{46}-L_{48}	-428.40	-26.47	12.66	-6.75	-0.03	0.06					140.98	-75.16	-6.36	6.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{47}-L_{49}	-70.64	-27.53	5.70	-7.76	-7.77	-2.73					52.33	-56.29	-85.81	-30.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{48}-L_{50}	-194.51	-25.06	0.05	-11.61	-6.57	-5.55					67.33	-129.21	-70.89	-106.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{49}-L_{51}	-45.44	-80.85	1.55	-0.53	-14.31	-7.21					17.28	8.57	-199.02	-89.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{50}-L_{52}	-74.43	-5.53	0.60	-0.55	-9.43	4.24					13.12	5.67	-119.09	-0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00						

M_2 Information — YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)	Max. Neg. Mom. Start k-in	Max. Neg. Mom. End k-in	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	σ_{cr} (ksi)	Formula 1.8 Term * F_y/S_top	M_u k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}	Pass
Structure 2	L_0-L_1	-15.50	-73.38	4.60	-6.89	-0.77	0.78					49.30	-195.06	31.23	-84.08	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.253	0.50	0.50										
	L_1-L_2	39.75	-88.06	3.42	-9.37	-7.79	-7.88					101.17	-250.09	-61.07	-228.48	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.405	0.44	0.44										
	L_2-L_3	30.00	-42.24	1.64	-12.08	-8.50						12.17	-20.36	-140.00	-84.62	83.6	83.58	-177.58	99.9	99.93	51.40	1.21	4141	0.99991186	5294.8	-0.087	0.55	0.55										
	L_3-L_4	-11.39	11.52	1.76	-12.08	-16.15	-8.22					19.54	-134.43	-179.84	91.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_4-L_5	-49.18	2.08	14.21	-2.25	-27.12	-16.76					25.28	-277.52	-176.76	20.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_5-L_6	-0.43	187.22	1.71	4.00	-15.00	-1.74					19.03	44.58	-111.39	-139.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_6-L_7	41.36	78.74	7.22	-0.13	-11.62	-13.89	11.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_7-L_8	-25.09	448.92	0.84	2.83	-8.91	11.67					9.33	31.45	-99.15	129.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_8-L_9	426.08	-36.00	10.55	-3.19	-5.10	0.24					70.78	-81.56	552.49	-43.50	145.5	145.75	136.74	228.84	6550	2932.4	1.57	7552	0.99952915	4806.4	-0.130	0.55	0.55										
	L_9-L_{10}	150.12	-126.55	4.72	-6.79	-6.71	-2.07	-22.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{10}-L_{11}	120.53	-116.03	3.40	1.37	-4.39	-5.65					36.62	-14.80	-47.38	-60.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{11}-L_{12}	39.16	-38.23	2.71	-0.30	-3.24	-5.13					40.03	-72.40	-42.20	-50.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{12}-L_{13}	-45.20	-121.29	2.36	0.46	-8.16	-9.37					25.46	-9.91	-97.83	-101.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{13}-L_{14}	96.42	-269.16	1.26	-15.37	-10.49	-5.90					78.28	-165.75	-113.12	-64.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{14}-L_{15}	-352.17	46.21	0.52	-3.98	-16.10	-9.24					14.16	-62.49	-367.05	-74.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{15}-L_{16}	-192.00	-318.69	0.69	0.31	-18.23	-7.62					7.42	3.33	-196.51	-82.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{16}-L_{17}	-339.87	44.80	0.59	2.93	-21.60	-10.83					6.37	2.93	-167.94	-0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{17}-L_{18}	-154.69	-31.48	0.31	-0.19	-10.05	-5.21					3.33	-2.06	-108.32	-2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{18}-L_{19}	-216.17	148.84	0.45	-0.47	-7.80	2.80					4.90	-11.83	-151.80	31.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{19}-L_{20}	-136.64	49.93	0.39	-0.20	-8.69	4.00					3.70	-2.10	-93.07	43.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{20}-L_{21}	2.99	-170.85	3.69	-9.31	-0.54	1.04					39.30	-99.14	-5.79	11.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{21}-L_{22}	56.19	-245.54	4.97	-4.28	-2.58	-0.26					56.90	-155.57	-36.30	-86.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{22}-L_{23}	-6.26	-160.81	4.84	-9.26	-6.85	-7.30					51.52	-88.56	-72.89	-77.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{23}-L_{24}	-75.76	-103.15	1.51	-0.15	-12.36	-13.93					37.39	-141.27	-13.26	-93.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{24}-L_{25}	-253.03	-295.08	4.16	-14.46	-18.38	-8.80					44.25	-153.97	-195.65	-104.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_{25}-L_{26}	-317.48	-413.31	1.26	-13.50	-19.53	-10.79					13.50	-183.56	-239.57	-213.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_0-L_2	-475.14	-252.78	2.86	2.86	-24.70	-16.54					30.49	30.40	-263.02	-176.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_1-L_3	-280.52	-64.48	2.34	4.12	-27.43	-1.96					24.86	43.83	-292.02	20.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_2-L_4	-292.37	-219.77	2.62	-0.62	-3.98	1.16					31.17	25.35	-160.42	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_3-L_5	-225.89	141.33	2.01	3.93	-13.39	-2.14					21.41	-81.81	-142.60	-22.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
	L_4-L_6	-203.56	295.05	3.24	2.37	-13.28	1.57					20.56	-272.21	-213.45	-448.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00						

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0–L_1	-29.87	-49.03	8.65	-5.71	-4.79	4.87	0.00	0.00	0.00	0.00
	U_1–L_1	-9.08	15.18	0.55	-0.39	-3.91	3.54	0.00	0.00	0.00	0.00
	U_1–L_2	15.20	9.70	1.10	-0.63	-3.38	3.80	0.00	0.00	0.00	0.00
	U_2–L_2	33.45	-34.40	2.35	-2.16	-2.95	3.11	0.00	0.00	0.00	0.00
	U_2–L_3	41.64	-62.40	2.78	-2.58	-2.50	2.50	0.00	0.00	0.00	0.00
	U_3–L_3	45.56	-51.10	3.23	-3.53	-0.74	0.92	0.00	0.00	0.00	0.00
	U_3–L_4	55.60	-55.58	3.60	-4.46	2.40	2.75	0.00	0.00	0.00	0.00
	U_4–L_4	91.24	-101.87	4.89	-5.10	-0.03	0.03	0.00	0.00	0.00	0.00
	U_4–L_5	-20.57	21.23	5.90	-6.95	-4.93	5.52	0.00	0.00	0.00	0.00
	U_5–L_5	-135.26	104.05	2.30	-2.21	-2.01	2.57	0.00	0.00	0.00	0.00
	U_5–L_6	-88.47	88.21	0.26	0.31	-3.65	3.77	0.00	0.00	0.00	0.00
	U_6–L_6	-91.11	124.05	0.80	0.25	-3.65	4.66	0.00	0.00	0.00	0.00
	U_6–L_7	-79.57	78.39	1.06	0.73	-3.75	3.73	0.00	0.00	0.00	0.00
	U_7–L_7	-49.26	60.16	1.29	-1.20	-3.58	3.65	0.00	0.00	0.00	0.00
	U_7–L_8	-29.77	34.66	1.50	-1.78	-2.82	2.93	0.00	0.00	0.00	0.00
	U_8–L_8	-1.50	-2.65	3.25	-3.36	-2.30	2.32	0.00	0.00	0.00	0.00
	U_8–L_9	34.13	-36.05	3.32	-3.48	-1.61	1.36	0.00	0.00	0.00	0.00
	U_9–L_9	46.23	-55.85	3.21	-3.33	-0.61	0.31	0.00	0.00	0.00	0.00
	U_9–L_{10}	110.44	-114.63	5.56	-6.66	-0.37	0.39	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	-121.36	-131.26	5.78	-6.79	-0.28	-0.27	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	-134.59	-173.50	5.71	-6.44	-0.46	0.01	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	-114.23	168.91	3.75	-4.23	-0.36	0.99	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	-123.79	131.39	0.72	0.76	-5.44	5.22	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	-113.42	132.82	0.84	0.72	-5.44	5.21	0.00	0.00	0.00	0.00
	U_{12}–L_{13}	-56.01	62.13	0.48	-0.51	-3.09	3.11	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	-34.05	39.79	1.15	-1.15	-3.13	3.07	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	-7.04	12.29	1.84	-1.82	-2.95	3.06	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	15.85	15.59	2.23	-2.35	-2.86	2.86	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	38.86	48.94	2.09	-2.22	-2.34	2.32	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	86.91	-86.07	4.38	-4.28	-1.68	1.56	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	155.08	-159.47	3.15	-3.28	-1.87	1.20	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	141.23	-149.41	4.76	-4.94	-1.66	0.74	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	192.55	-192.83	4.52	-4.65	-0.55	0.10	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	187.47	-188.81	4.23	-4.35	-0.45	0.00	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	203.52	-203.17	5.05	-5.82	-0.40	0.42	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	93.05	-93.11	2.31	-2.66	-0.20	0.21	0.00	0.00	0.00	0.00
	U_{18}–L_{19}	-109.89	162.81	0.64	-0.68	-6.44	6.08	0.00	0.00	0.00	0.00
	U_{19}–L_{19}	-130.37	127.18	0.61	-0.60	-6.89	5.79	0.00	0.00	0.00	0.00
	U_{19}–L_{20}	-130.37	127.18	0.61	-0.60	-6.89	5.79	0.00	0.00	0.00	0.00
	U_{20}–L_{20}	-113.07	114.60	0.93	-0.69	-5.76	5.53	0.00	0.00	0.00	0.00
	U_{20}–L_{21}	-62.70	67.44	1.01	-1.01	-3.20	3.20	0.00	0.00	0.00	0.00
	U_{21}–L_{21}	-44.77	46.58	1.20	-1.14	-3.24	3.24	0.00	0.00	0.00	0.00
	U_{21}–L_{22}	-30.50	31.39	1.34	-1.34	-3.25	3.25	0.00	0.00	0.00	0.00
	U_{22}–L_{22}	-3.69	4.33	1.91	-1.99	-2.17	2.28	0.00	0.00	0.00	0.00
	U_{22}–L_{23}	22.65	28.98	1.75	1.21	-2.50	2.50	0.00	0.00	0.00	0.00
	U_{23}–L_{23}	39.89	-42.14	3.14	3.25	-1.53	1.32	0.00	0.00	0.00	0.00
	U_{23}–L_{24}	68.57	-67.50	3.92	-3.87	-1.20	0.98	0.00	0.00	0.00	0.00
	U_{24}–L_{24}	128.23	-128.61	3.78	-3.76	-0.75	0.75	0.00	0.00	0.00	0.00
	U_{24}–L_{25}	138.29	-139.04	6.29	-6.41	-0.67	0.41	0.00	0.00	0.00	0.00
	U_{25}–L_{25}	118.54	-120.64	6.16	-6.29	-0.57	0.26	0.00	0.00	0.00	0.00
	U_{25}–L_{26}	173.56	-176.28	6.63	-6.39	-0.32	0.28	0.00	0.00	0.00	0.00
	U_{26}–L_{26}	174.39	-177.19	6.25	-6.16	-0.45	0.39	0.00	0.00	0.00	0.00
	U_{26}–L_{27}	-167.25	167.49	5.58	-5.65	-5.60	5.40	0.00	0.00	0.00	0.00
	U_{27}–L_{27}	-116.13	110.00	0.41	-0.41	-4.73	4.53	0.00	0.00	0.00	0.00
	U_{27}–L_{28}	-34.98	32.06	0.25	-0.16	-4.05	4.00	0.00	0.00	0.00	0.00
	U_{28}–L_{28}	-119.87	124.44	0.72	-0.53	-4.59	4.53	0.00	0.00	0.00	0.00
	U_{28}–L_{29}	-118.40	122.47	1.22	-0.97	-4.57	4.52	0.00	0.00	0.00	0.00
	U_{29}–L_{29}	-79.51	88.87	1.20	-1.10	-4.48	4.36	0.00	0.00	0.00	0.00
	U_{29}–L_{30}	-43.96	51.94	1.22	-1.30	-2.90	2.94	0.00	0.00	0.00	0.00
	U_{30}–L_{30}	-29.50	31.04	2.56	-2.76	-2.35	2.35	0.00	0.00	0.00	0.00
	U_{30}–L_{31}	-5.58	1.82	2.88	-3.09	-2.33	2.13	0.00	0.00	0.00	0.00
	U_{31}–L_{31}	16.93	19.79	2.66	-2.86	-1.99	1.99	0.00	0.00	0.00	0.00
	U_{31}–L_{32}	55.25	-51.69	3.01	-3.12	-0.68	0.39	0.00	0.00	0.00	0.00
	U_{32}–L_{32}	115.82	-122.77	3.64	-3.93	-0.63	0.57	0.00	0.00	0.00	0.00
	U_{32}–L_{33}	137.10	-150.77	5.56	-6.09	-0.62	0.63	0.00	0.00	0.00	0.00
	U_{33}–L_{33}	165.74	-206.85	5.65	-6.40	-0.45	0.61	0.00	0.00	0.00	0.00
	U_{33}–L_{34}	92.90	-144.10	3.39	-4.14	-0.32	0.49	0.00	0.00	0.00	0.00
	U_{34}–L_{34}	-109.90	113.02	0.41	-0.43	-5.59	5.53	0.00	0.00	0.00	0.00
	U_{34}–L_{35}	-93.97	96.25	0.43	-0.43	-5.07	5.02	0.00	0.00	0.00	0.00
	U_{35}–L_{35}	-38.43	48.15	0.36	-0.26	-3.20	3.17	0.00	0.00	0.00	0.00
	U_{35}–L_{36}	-29.58	34.15	1.21	-1.20	-2.97	2.97	0.00	0.00	0.00	0.00
	U_{36}–L_{36}	-2.76	8.97	1.83	-1.92	-3.31	3.41	0.00	0.00	0.00	0.00
	U_{37}–L_{37}	25.90	-28.71	2.40	-2.59	-2.19	2.27	0.00	0.00	0.00	0.00
	U_{38}–L_{38}	73.62	-77.51	3.70	-3.78	-1.39	1.29	0.00	0.00	0.00	0.00
	U_{39}–L_{39}	94.27	-125.94	3.76	-4.72	-1.07	0.82	0.00	0.00	0.00	0.00
	U_{40}–L_{40}	92.31	-95.87	3.69	-4.14	-0.48	0.36	0.00	0.00	0.00	0.00
	U_{41}–L_{41}	142.75	166.20	5.32	-5.86	-0.08	0.11	0.00	0.00	0.00	0.00
	U_{42}–L_{42}	37.53	-58.82	4.57	-5.85	-4.43	7.24	0.00	0.00	0.00	0.00
	U_{43}–L_{43}	-87.20	89.91	0.02	-0.03	-4.54	4.66	0.00	0.00	0.00	0.00
	U_{44}–L_{44}	-48.49	45.44	0.27	0.35	-3.39	3.62	0.00	0.00	0.00	0.00
	U_{45}–L_{45}	-38.99	42.97	0.42	-0.38	-3.10	3.22	0.00	0.00	0.00	0.00
	U_{46}–L_{46}	-39.90	40.31	1.28	-1.01	-3.13	3.00	0.00	0.00	0.00	0.00
	U_{47}–L_{47}	-37.48	38.74	2.65	-2.88	-2.94	2.89	0.00	0.00	0.00	0.00
	U_{48}–L_{48}	-10.30	11.14	3.20	-3.69	-1.40	1.41	0.00	0.00	0.00	0.00
	U_{49}–L_{49}	3.52	-11.96	4.12	-3.89	-0.58	0.56	0.00	0.00	0.00	0.00
	U_{50}–L_{50}	44.79	-53.88	4.09	-5.53	-0.42	-0.11	0.00	0.00	0.00	0.00
Structure 2	U_0–L_1	94.27	-125.94	3.76	-4.72	-1.07	0.82	0.00	0.00	0.00	0.00
	U_1–L_1	92.31	-95.87	3.69	-4.14	-0.48	0.36	0.00	0.00	0.00	0.00
	U_1–L_2	142.75	166.20	5.32	-5.86	-0.08	0.11	0.00	0.00	0.00	0.00
	U_2–L_2	37.53	-58.82	4.57	-5.85	-4.43	7.24	0.00	0.00	0.00	0.00
	U_2–L_3	-87.20	89.91	0.02	-0.03	-4.54	4.66	0.00	0.00	0.00	0.00
	U_3–L_3	-48.49	45.44	0.27	0.35	-3.39	3.62	0.00	0.00	0.00	0.00
	U_3–L_4	-38.99	42.97	0.42	-0.38	-3.10	3.22	0.00	0.00	0.00	0.00
	U_4–L_4	-39.90	40.31	1.28	-1.01	-3.13	3.00	0.00	0.00	0.00	0.00
	U_4–L_5	-37.48	38.74	2.65	-2.88	-2.94	2.89	0.00	0.00	0.00	0.00
	U_5–L_5	-10.30	11.14	3.20	-3.69	-1.40	1.41	0.00	0.00	0.00	0.00
	U_5–L_6	3.52	-11.96	4.12	-3.89	-0.58	0.56	0.00	0.00	0.00	0.00
	U_6–L_6	44.79	-53.88	4.09	-5.53	-0.42	-0.11	0.00	0.00	0.00	0.00
Structure 3	U_0–L_1	40.52	-50.91	-11.56	6.72	0.00	0.00	0.00	0.00	0.00	0.00
	U_1–L_1	39.80	-51.95	-5.21	3.86	0.00	0.00	0.00	0.00	0.00	0.00
	U_1–L_2	57.37	-63.18	-5.89	1.15	0.00	0.00	0.00	0.00	0.00	0.00
	U_2–L_2	50.63	-65.14	-11.09	80.63	0.00	0.00	0.00	0.00	0.00	0.00
	U_2–L_3	0.27	-0.29	-50.54	51.85	0.00	0.00	0.00	0.00	0.00	0.00
	U_3–L_3	3.03	3.93	-37.75	40.28	0.00	0.00	0.00	0.00	0.00	0.00
	U_3–L_4	14.19	-11.26	-34.88	33.43	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_4	29.55	-32.03	-32.68	32.22	0.00	0.00	0.00	0.00	0.00	0.00
	U_4–L_5	35.60	-41.04	-15.54	15.72	0.00	0.00	0.00	0.00	0.00	0.00
	U_5–L_5	45.69	-43.30	-6.43	9.25	0.00	0.00	0.00	0.00	0.00	0.00
	U_5–L_6	45.53	-51.95	-4.71	1.27	0.00	0.00	0.00	0.00	0.00	0.00

Max. Neg. Mom.

Member	Start (k-ft)	End (k-ft)	S_{NB} (in^3)	S_{NL} (in^3)	Z_Z (in^3)	J (in^4)	I_{YY} (in^4)	Shape Factor	M_P (k-in)	Formula 1.8 Term * F_y/S_{NL}	M_r (k-in)
U_0–L_1	-208.48	63.54	158.12	131.34	15.4	15.42	15.42	23.71	2	791.9	1.54
U_1–L_1	-3.81	111.17	68.46	70.97	15.4	15.42	15.42	23.71	2	791.9	1.54
U_1–L_2	29.15	-24.64	39.69	42.85	15.4	15.42	15.42	23.71	2	791.9	1.54
U_2–L_2	-77.42	-75.99	0.85	0.28	15.4	15.42	15.42	23.71	2	791.9	1.54
U_2–L_3	-94.30	-62.48	15.71	3.63	15.4	15.42	15.42	23.71	2	791.9	1.54
U_3–L_3	-106.03	-117.51	48.45	-58.93	19.4	19.37	19.31	29.87	3	907.0	1.54
U_3–L_4	-125.18	-130.68	60.23	48.68	25.8	20.80	20.67	34.66	9	1076.0	1.67
U_4–L_4	-206.29	118.23	-132.01	18.9	18.45	18.36	30.78	7	1020.9	1.67	1016
U_4–L_5	-206.29	118.23	-132.01	18.9	18.45	18.36	30.78	7	1020.9	1.67	1016
U_5–L_5	-72.93	88.09	113.26	107.1	107.13	107.11	162.71	26	2056.9	1.52	3269
U_5–L_6	-72.93	88.09	113.26	107.1	107.13	107.11	162.71	26	2056.9	1.52	3269
U_6–L_6	-88.63	91.74	-160.02	164.14	21.1	21.09	21.09	35.48	10	1137.6	1.68
U_6–L_7	-45.94	61.37	-114.25	129.40	17.2	17.24	17.24	28.54	2	824.7	1.54
U_7–L_7	-13.46	-20.17	-39.22	46.46	15.4	15.42	15.42	23.71	2	791.9	1.54
U_7–L_8	-34.12	29.15	15.42	15.42	15.4	15.42	15.42	23.71	2	791.9	1.54
U_8–L_8	-89.32	-83.24	15.42	15.42	15.4	15.42	15.42	23.71	2	791.9	1.54
U_8–L_9	-105.13	-119.33	51.62	-68.28	19.4	19.37	19.37	29.87	3	907.0	1.54
U_9–L_9	-221.46	-228.42	138.37	-143.18	33.1	33.05	33.05	51.51	14	1157.0	1.65
U_9–L_{10}	-238.75	-251.79	152.41	-174.42	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{10}–L_{10}	-254.99	-315.80	168.59	-224.51	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{10}–L_{11}	-254.99	-315.80	168.59	-224.51	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{11}–L_{11}	-138.06	207.82	152.53	-152.53	33.1	33.05	46.71	71.43	10	1711.0	1.53
U_{11}–L_{12}	-160.98	160.23	-266.32	243.05	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_{12}–L_{12}	-126.71	126.71	-209.63	209.63	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_{12}–L_{13}	-66.11	73.71	-115.58	123.80	21.5	21.54	21.54	33.27	3	987.9	1.54
U_{13}–L_{13}	-28.40	28.40	-52.02	52.02	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{13}–L_{14}	16.32	9.24	-49.39	58.36	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{14}–L_{14}	51.46	-52.73	-19.03	19.33	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{14}–L_{15}	-79.40	-90.04	-31.36	-37.72	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{15}–L_{15}	-173.65	-184.07	89.78	-103.28	20.8	20.80	20.67	34.64	5	1037.5	1.67
U_{15}–L_{16}	-267.34	-287.77	173.42	-188.61	33.1	33.05	46.71	71.43	10	1711.0	1.53
U_{16}–L_{16}	-249.50	-262.64	168.94	-184.05	43.0	43.01	42.96	68.66	14	1479.6	1.60
U_{16}–L_{17}	-258.28	-260.45	188.09	-194.14	43.0	43.01	43.24	68.66	14	1479.6	1.60
U_{17}–L_{17}	-258.52	-260.05	192.48	-204.74	43.0	43.01	43.24	68.66	14	1479.6	1.60
U_{17}–L_{18}	-348.26	-344.66	259.08	-258.25	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{18}–L_{18}	-166.76	-161.82	-274.27	272.08	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{18}–L_{19}	-199.03	252.41	-295.94	294.84	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{19}–L_{19}	-174.62	174.62	-277.62	277.62	39.2	39.17	46.71	71.43	10	1711.0	1.53
U_{19}–L_{20}	-174.62	174.62	-277.62	277.62	39.2	39.17	46.71	71.43	10	1711.0	1.53
U_{20}–L_{20}	-181.11	157.15	-292.07	244.51	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{20}–L_{21}	-134.23	139.55	-225.72	230.10	39.8	38.83	38.83	59.23	8	1264.6	1.53
U_{21}–L_{21}	-134.23	139.55	-225.72	230.10	39.8	38.83	38.83	59.23	8	1264.6	1.53
U_{21}–L_{22}	-41.84	45.00	-132.05	104.89	17.2	17.24	17.24	28.54	2	824.7	1.54
U_{22}–L_{22}	-18.08	24.99	-53.93	53.93	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{22}–L_{23}	-21.37	-21.58	-34.43	36.78	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{23}–L_{23}	-172.63	188.44	-243.48	277.42	33.1	33.05	32.91	54.51	14	1408.8	1.65
U_{24}–L_{24}	-111.31	119.04	-168.23	167.45	39.5	39.52	39.44	58.46	14	1309.7	1.65
U_{24}–L_{25}	-197.26	164.71	-173.42	226.58	42.7	42.74	42.74	65.30	8	1389.6	1.53
U_{25}–L_{25}	-88.63	91.74	-160.02	164.14	21.1	21.09	21.09	35.48	10	1137.6	1.68
U_{25}–L_{26}	-45.94	61.37	-114.25	129.40	17.2	17.24	17.24	28.54	2	824.7	1.54
U_{26}–L_{26}	-13.46	-20.17	-39.22	46.46	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{26}–L_{27}	-106.03	-117.51	48.45	-58.93	19.4	19.37	19.31	29.87	3	907.0	1.54
U_{27}–L_{27}	-125.18	-130.68	60.23	48.68	25.8	20.80	20.67	34.66	9	1076.0	1.67
U_{28}–L_{28}	-206.29	118.23	-132.01	18.9	18.45	18.36	30.78	7	1020.9	1.67	1016
U_{28}–L_{29}	-206.29	118.23	-132.01	18.9	18.45	18.36	30.78	7	1020.9	1.67	1016
U_{29}–L_{29}	-72.93	88.09	113.26	107.1	107.13	107.11	162.71	26	2056.9	1.52	3269
U_{29}–L_{30}	-72.93	88.09	113.26	107.1	107.13	107.11	162.71	26	2056.9	1.52	3269
U_{30}–L_{30}	-209.38	208.79	-294.98	292.50	39.2	39.17	39.11	63.33	14	1392.6	1.62
U_{31}–L_{31}	-145.34	137.26	-216.41	207.12	43.2	43.24	43.16	70.66	19	1515.6	1.63
U_{31}–L_{32}	-229.29	229.29	-342.45	342.45	43.2	43.24	43.16	70.66	19	1515.6	1.63
U_{32}–L_{32}	-145.87	154.37	-219.42	224.41	43.0	43.01	42.96	68.66	14	1479.6	1.60
U_{33}–L_{33}	-111.17	111.17	-168.46	168.46	46.7	46.71	46.71	71.43	10	1711.0	1.53
U_{33}–L_{34}	-86.77	-100.29	-160.40	175.60	20.80	20.80	20.67	34.64	5	1037.5	1.67
U_{34}–L_{34}	-40.08	-49.56	-88.79	102.71	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{35}–L_{35}	-60.36	-78.12	-107.51	127.03	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{36}–L_{36}	-8.36	-8.36	-13.36	13.36	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{37}–L_{37}	-34.64	-40.39	-59.52	61.93	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{38}–L_{38}	-78.42	-84.17	-122.55	122.55	15.4	15.42	15.42	23.71	2	791.9	1.54
U_{39}–L_{39}	-122.55	-62.49	-73.98	21.5	21.54	21.54	33.27	5	987.9	1.54	1098
U_{40}–L_{40}	-155.03	-133.02	-83.74	-62.01	21.1	21.09	21.09	35.48	10	1137.6	1.68
U_{41}–L_{41}	-278.90	169.75	-187.34	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
U_{42}–L_{42}	-269.50	46.71	-46.71	46.71	46.71	46.71	71.43	10	1711.0	1.53	2357
U_{43}–L_{43}	-307.52	209.19	-260.53	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357
U_{44}–L_{44}	-182.60	113.24	-118.61	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929
U_{45}–L_{45}	-298.20	184.41	-214.57	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799
U_{46}–L_{46}	-298.20	184.41	-43.76	28.35	107.1	107.13	107.11	162.71	26	2056.9	1.52
U_{47}–L_{47}	-171.27	184.28	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
U_{48}–L_{48}	-112.12	111.44	20.8	20.80	20.67	34.66	9	1076.0	1.67	1144	1.5
U_{49}–L_{49}	-98.58	102.49	19.4	19.37	19.31	29.87	3	907.0

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: HF1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-12.57	3.38	0.32	-9.18	-2.64	1.11				
	U_1-L_1	-1.68	-7.06	0.22	-0.06	-1.44	-0.06				
	U_1-L_2	-8.78	1.33	0.22	-0.08	-1.09	-0.24				
	U_1-L_3	-9.78	-11.76	0.34	-0.48	-1.00	-0.69				
	U_2-L_2	-10.33	-17.60	0.19	-0.08	-1.01	-0.26				
	U_2-L_3	-26.83	58.49	0.51	-0.34	-2.84	1.18				
	U_3-L_3	-28.79	54.20	0.13	-0.20	-2.81	0.53				
	U_3-L_4	-6.35	88.66	0.69	0.59	-1.94	3.49				
	U_4-L_4	-9.60	109.55	1.35	1.02	-1.54	2.86				
	U_4-L_5	-74.80	111.68	3.34	3.47	-3.26	3.36				
	U_5-L_5	-56.84	54.78	1.32	0.54	-2.53	1.02				
	U_5-L_6	-55.25	39.07	0.41	-0.67	-2.13	1.00				
	U_6-L_6	-55.25	39.07	0.41	-0.67	-2.13	1.00				
	U_6-L_7	-20.99	7.38	0.47	-0.62	-1.38	0.38				
	U_7-L_7	-19.00	1.19	0.20	-0.29	-1.38	-0.29				
	U_7-L_8	-19.00	4.09	0.80	-1.01	-1.51	0.50				
	U_8-L_8	-19.00	4.09	0.80	-1.01	-1.51	0.50				
	U_8-L_9	-89.35	58.15	0.29	-0.25	-3.84	2.31				
	U_9-L_9	-89.35	61.38	0.46	-0.24	-3.84	2.29				
	U_9-L_{10}	-105.39	89.05	0.34	0.02	-4.60	3.42				
	U_{10}-L_{10}	-82.31	86.26	0.62	-0.56	-4.84	3.65				
	U_{10}-L_{11}	-81.24	62.98	0.64	-0.52	-3.99	2.84				
	U_{11}-L_{11}	-81.24	62.98	0.64	-0.52	-3.99	2.84				
	U_{11}-L_{12}	-17.36	7.00	0.65	-0.91	-1.76	1.29				
	U_{12}-L_{12}	-16.64	-11.48	0.86	-1.18	-1.76	1.06				
	U_{12}-L_{13}	-7.43	-23.92	1.02	-1.41	-1.34	0.17				
	U_{13}-L_{13}	-44.32	35.88	0.79	-1.16	-2.05	0.33				
	U_{13}-L_{14}	-56.39	68.66	0.72	-1.16	-2.61	0.01				
	U_{14}-L_{14}	-88.55	73.83	0.48	-0.81	-3.21	1.44				
	U_{14}-L_{15}	-88.55	69.60	0.42	-0.81	-3.48	1.52				
	U_{15}-L_{15}	-108.38	116.68	0.61	-0.33	-3.74	2.53				
	U_{15}-L_{16}	-154.28	139.71	0.40	-0.16	-5.05	3.61				
	U_{16}-L_{16}	-21.35	13.70	0.75	-0.78	-1.34	0.42				
	U_{16}-L_{17}	-24.73	100.38	0.94	0.46	-3.28	3.54				
	U_{17}-L_{17}	-98.38	79.59	0.52	-0.32	-4.94	3.66				
	U_{17}-L_{18}	-74.14	95.51	0.35	-0.40	-4.13	3.65				
	U_{18}-L_{18}	-55.45	68.85	0.40	-0.60	-3.69	2.20				
	U_{18}-L_{19}	-55.45	68.85	0.40	-0.60	-3.69	2.20				
	U_{19}-L_{19}	-32.97	39.97	0.53	-0.77	-2.49	1.80				
	U_{19}-L_{20}	-28.24	0.75	0.73	-1.16	-1.78	0.79				
	U_{20}-L_{20}	-10.32	4.39	0.66	-0.91	-1.52	0.29				
	U_{20}-L_{21}	-6.27	2.07	0.60	-0.91	-1.40	0.19				
	U_{21}-L_{21}	-17.08	16.16	0.76	-0.97	-1.56	1.32				
	U_{21}-L_{22}	-21.35	13.70	0.75	-0.78	-1.34	0.42				
	U_{22}-L_{22}	-55.69	65.14	0.73	-1.02	-3.48	2.36				
	U_{22}-L_{23}	-69.22	80.41	0.52	-0.49	-3.71	2.43				
	U_{23}-L_{23}	-69.22	80.41	0.52	-0.49	-3.71	2.43				
	U_{23}-L_{24}	-106.11	102.57	0.26	-0.29	-4.85	3.98				
	U_{24}-L_{24}	-53.11	53.83	0.23	-0.29	-2.51	2.03				
	U_{24}-L_{25}	-47.87	128.15	1.21	0.46	-3.29	4.04				
	U_{25}-L_{25}	-89.53	99.33	0.61	0.56	-3.89	2.56				
	U_{25}-L_{26}	-89.53	99.33	0.61	0.56	-3.89	2.56				
	U_{26}-L_{26}	-86.54	82.57	0.39	-0.58	-3.58	1.93				
	U_{26}-L_{27}	-60.17	67.66	0.56	-0.91	-3.44	2.12				
	U_{27}-L_{27}	-60.17	67.66	0.56	-0.91	-3.44	2.12				
	U_{27}-L_{28}	-12.59	-26.40	1.30	-1.43	-1.17	-0.08				
	U_{28}-L_{28}	-6.51	-17.79	1.24	-1.38	-1.38	0.99				
	U_{28}-L_{29}	-17.08	8.87	0.11	-0.58	-1.56	0.64				
	U_{29}-L_{29}	-38.92	20.55	0.48	-0.69	-2.11	1.40				
	U_{29}-L_{30}	-38.92	20.55	0.48	-0.69	-2.11	1.40				
	U_{30}-L_{30}	-88.53	71.15	0.47	-0.40	-4.20	2.67				
	U_{30}-L_{31}	-88.53	71.15	0.47	-0.40	-4.20	2.67				
	U_{31}-L_{31}	-70.40	69.24	0.37	-0.30	-3.60	3.34				
	U_{31}-L_{32}	-86.92	56.40	0.34	-0.26	-4.10	2.58				
	U_{32}-L_{32}	-86.92	56.40	0.34	-0.26	-4.10	2.58				
	U_{32}-L_{33}	-28.11	12.70	0.25	-0.53	-2.15	1.52				
	U_{33}-L_{33}	-28.11	12.70	0.25	-0.53	-2.15	1.52				
	U_{33}-L_{34}	-5.07	-18.30	0.74	-0.96	-1.34	0.02				
	U_{34}-L_{34}	-50.49	35.10	0.56	-0.85	-2.00	0.76				
	U_{34}-L_{35}	-50.49	35.10	0.56	-0.85	-2.00	0.76				
	U_{35}-L_{35}	-69.60	20.61	0.26	-0.40	-2.80	0.02				
	U_{35}-L_{36}	-77.34	67.11	0.14	-0.32	-3.50	1.61				
	U_{36}-L_{36}	-77.34	67.11	0.14	-0.32	-3.50	1.61				
	U_{36}-L_{37}	-82.10	66.07	0.16	-0.37	-3.60	1.67				
	U_{37}-L_{37}	-2.84	82.10	0.66	1.97	-2.08	3.34				
	U_{37}-L_{38}	-54.59	58.66	0.21	-0.31	-4.38	2.48				
	U_{38}-L_{38}	-54.59	58.66	0.21	-0.31	-4.38	2.48				
	U_{38}-L_{39}	-9.15	17.58	0.11	-0.29	-1.52	-0.32				
	U_{39}-L_{39}	-9.15	17.58	0.11	-0.29	-1.52	-0.32				
	U_{39}-L_{40}	-9.13	-8.77	0.30	-0.12	-1.09	-0.90				
	U_{40}-L_{40}	-23.22	7.61	0.48	-0.09	-2.05	1.14				

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_2-L_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_2-L_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_3-L_3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_3-L_4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4-L_4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_4-L_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_5-L_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_5-L_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_6-L_6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_6-L_7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_7-L_7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_7-L_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_8-L_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_8-L_9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-L_9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9-L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}-L_{10}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}-L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}-L_{11}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11}-L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}-L_{12}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12}-L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}-L_{13}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13}-L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}-L_{14}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14}-L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}-L_{15}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15}-L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}-L_{16}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16}-L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}-L_{17}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17}-L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}-L_{18}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18}-L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-L_{19}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19}-L_{20}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}-L_{20}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}-L_{21}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}-L_{21}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21}-L_{22}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}-L_{22}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22}-L_{23}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}-L_{23}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23}-L_{24}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}-L_{24}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24}-L_{25}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}-L_{25}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25}-L_{26}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}-L_{26}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26}-L_{27}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}-L_{27}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27}-L_{28}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}-L_{28}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28}-L_{29}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}-L_{29}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29}-L_{30}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30}-L_{30}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30}-L_{31}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31}-L_{31}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31}-L_{32}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}-L_{32}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32}-L_{33}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}-L_{33}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33}-L_{34}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}-L_{34}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34}-L_{35}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35}-L_{35}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35}-L_{36}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36}-L_{36}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36}-L_{37}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37}-L_{37}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37}-L_{38}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{38}-L_{38}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{38}-L_{39}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39}-L_{39}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39}-L_{40}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{40}-L_{40}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

M_1 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 2	L_1-L_2	-1.68	-7.06	0.22	-0.06	-1.44	-0.06				
	L_2-L_3	-8.78	1.33	0.22	-0.08	-1.09	-0.24				
	L_3-L_4	-9.78	-11.76	0.34	-0.48	-1.00	-0.69				
	L_2-L_4	-10.33	-17.60	0.19	-0.08	-1.01	-0.26				
	L_3-L_5	-26.83	58.49	0.51	-0.34	-2.84	1.18				
	L_4-L_5	-28.79	54.20	0.13	-0.20	-2.81	0.53				
	L_5-L_6	-6.35	88.66	0.69	0.59	-1.94	3.49				
	L_6-L_7	-9.60	109.55	1.35	1.02	-1.54	2.86				
	L_7-L_8	-74.80	111.68	3.34	3.47	-3.26	3.36				
	L_8-L_9	-56.84	54.78	1.32	0.54	-2.53	1.02				
	L_9-L_{10}	-55.25	39.07	0.41	-0.67	-2.13	1.00				
	L_{10}-L_{11}	-55.25	39.07	0.41	-0.67	-2.13	1.00				
	L_{11}-L_{12}	-20.99	7.38	0.47	-0.62	-1.38	0.38				
	L_{12}-L_{13}	-19.00	1.19	0.20	-0.29	-1.38	-0.29				
	L_{13}-L_{14}	-19.00	4.09	0.80	-1.01	-1.51	0.50				
	L_{14}-L_{15}	-19.00	4.09	0.80	-1.01	-1.51	0.50				
	L_{15}-L_{16}	-89.35	58.15	0.29	-0.25	-3.84	2.31				
	L_{16}-L_{17}	-89.35	61.38	0.46	-0.24	-3.84	2.29				
	L_{17}-L_{18}	-105.39	89.05	0.34	0.02	-4.60	3.42				
	L_{18}-L_{19}	-82.31	86.26	0.62	-0.56	-4.84	3.65				
	L_{19}-L_{20}	-81.24	62.98	0.64	-0.52	-3.99	2.84				
	L_{20}-L_{21}	-81.24	62.98	0.64	-0.52	-3.99	2.84				
	L_{21}-L_{22}	-17.36	7.00	0.65	-0.91	-1.76	1.29				
	L_{22}-L_{23}	-16.64	-11.48	0.86	-1.18	-1.76	1.06				
	L_{23}-L_{24}	-7.43	-23.92	1.02	-1.41	-1.34	0.17				
	L_{24}-L_{25}	-44.32	35.88	0.79	-1.16	-2.05	0.33				
	L_{25}-L_{26}	-56.39	68.66	0.72	-1.16	-2.61	0.01				
	L_{26}-L_{27}	-88.55	73.83	0.48	-0.81	-3.21	1.44				
	L_{27}-L_{28}	-88.55	69.60	0.42	-0.81	-3.48	1.52				
	L_{28}-L_{29}	-108.38	116.68	0.61	-0.33	-3.74	2.53				
	L_{29}-L_{30}	-154.28	139.71	0.40	-0.16	-5.05	3.61				
	L_{30}-L_{31}	-21.35	13.70	0.75	-0.78	-1.34	0.42				
	L_{31}-L_{32}	-24.73	100.38	0.94	0.46	-3.28	3.54				
	L_{32}-L_{33}	-98.38	79.59	0.52	-0.32	-4.94	3.66				
	L_{33}-L_{34}	-74.14	95.51	0.35	-0.40	-4.13	3.65				
	L_{34}-L_{35}	-55.45	68.85	0.40	-0.60	-3.69	2.20				
	L_{35}-L_{36}	-55.45	68.85	0.40	-0.60	-3.69	2.20				
	L_{36}-L_{37}	-32.97	39.97	0.53	-0.77	-2.49	1.80				
	L_{37}-L_{38}	-28.24	0.75	0.73	-1.16	-1.78	0.79				
	L_{38}-L_{39}	-10.32	4.39	0.66	-0.91	-1.52	0.29				
	L_{39}-L_{40}	-6.27	2.07	0.60	-0.91	-1.40	0.19				
	L_{40}-L_{41}	-17.08	16.16	0.76	-0.97	-1.56	1.32				
	L_{41}-L_{42}	-21.35	13.70	0.75	-0.78	-1.34	0.42				
	L_{42}-L_{43}	-55.69	65.14	0.73	-1.02	-3.48	2.36				
	L_{43}-L_{44}	-69.22	80.41	0.52	-0.49	-3.71	2.43				
	L_{44}-L_{45}	-69.22	80.41	0.52	-0.49	-3.71	2.43				
	L_{45}-L_{46}	-106.11	102.57	0.26	-0.29	-4.85	3.98				
	L_{46}-L_{47}	-53.11	53.83	0.23	-0.29	-2.51	2.03				
	L_{47}-L_{48}	-47.87	128.15	1.21	0.46	-3.29	4.04				
	L_{48}-L_{49}	-89.53	99.33	0.61	0.56	-3.89	2.56				
	L_{49}-L_{50}	-89.53	99.33	0.61	0.56	-3.89	2.56				
	L_{50}-L_{51}	-86.54	82.57	0.39	-0.58	-3.58	1.93				
	L_{51}-L_{52}	-60.17	67.66	0.56	-0.91	-3.44	2.12				
	L_{52}-L_{53}	-60.17	67.66	0.56	-0.91	-3.44	2.12				
	L_{53}-L_{54}	-12.59	-26.40	1.30	-1.43	-1.17	-0.08				
	L_{54}-L_{55}	-6.51	-17.79	1.24	-1.38	-1.38	0.99				
	L_{55}-L_{56}	-17.08	8.87	0.11	-0.58	-1.56	0.64				
	L_{56}-L_{57}	-38.92	20.55	0.48	-0.69	-2.11	1.40				
	L_{57}-L_{58}	-38.92	20.55	0.48	-0.69	-2.11	1.40				
	L_{58}-L_{59}	-88.53	71.15	0.47	-0.40	-4.20	2.67				
	L_{59}-L_{60}	-88.53	71.15	0.47	-0.40	-

Columbia Parkway (HAM-471-0025)
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Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
Structure 1	U_1-U_2	88.99	-98.04	4.53	-4.13	-7.76	-1.89	2.38	-2.03	-0.65	0.45
	U_2-U_3	131.06	-134.63	6.65	-5.10	-7.32	0.43	3.51	-1.04	-0.49	0.85
	U_3-U_4	-130.85	58.79	1.01	2.79	-7.76	-3.90	0.20	0.80	-0.90	-1.36
	U_4-U_5	-80.24	76.71	1.00	1.00	-4.39	-2.38	0.25	0.25	-0.53	-0.53
	U_5-U_6	-26.00	75.03	2.03	2.56	-7.95	-3.09	0.47	0.77	-1.36	-0.71
	U_6-U_7	19.49	179.90	2.26	2.33	-6.42	-0.07	0.62	0.72	-1.37	0.17
	U_7-U_8	131.06	88.99	2.33	4.53	-6.51	0.41	0.80	1.31	-1.37	0.45
	U_8-U_9	-71.27	857.90	1.87	-2.12	-5.90	4.93	0.24	1.55	-1.57	2.45
	U_9-U_{10}	624.45	-195.13	7.14	-4.64	-6.90	-1.99	0.51	0.24	-1.72	-0.49
	U_{10}-U_{11}	71.48	-13.72	1.47	-2.05	-1.77	-2.95	0.51	0.60	-0.48	0.00
	U_{11}-U_{12}	97.31	222.34	1.11	1.62	-1.75	0.75	0.42	0.00	-1.42	0.00
	U_{12}-U_{13}	35.40	221.68	2.00	1.49	-4.13	-6.53	0.56	0.33	0.24	-1.72
	U_{13}-U_{14}	-120.52	-238.11	1.73	0.66	-6.30	-5.22	0.44	0.14	-0.62	-1.62
	U_{14}-U_{15}	-201.52	-322.36	1.30	0.00	-6.30	-11.52	0.00	0.00	-1.36	-2.31
	U_{15}-U_{16}	-380.34	-263.67	1.52	0.88	-16.20	-6.05	0.32	0.20	-2.38	-1.60
	U_{16}-U_{17}	-222.27	-366.78	1.46	0.15	-10.35	-7.95	0.33	0.00	-1.55	-2.38
	U_{17}-U_{18}	-353.09	-172.61	0.94	0.37	-11.48	-4.72	0.05	-0.04	-1.64	-0.73
	U_{18}-U_{19}	-201.52	-24.53	0.55	-0.37	-6.30	-0.30	0.10	0.00	-1.40	0.22
	U_{19}-U_{20}	-214.18	21.72	0.44	-0.18	-5.76	0.52	0.09	-0.06	-1.43	0.55
	U_{20}-U_{21}	-229.66	-4.97	0.53	-0.44	-3.89	1.78	0.06	-0.04	-1.34	-0.03
	U_{21}-U_{22}	-419.98	-219.72	0.35	-0.55	-2.18	-0.35	0.06	-0.04	-0.74	-0.14
	U_{22}-U_{23}	-113.09	-299.12	0.95	-0.33	-2.31	-8.39	0.00	0.18	-0.50	-1.31
	U_{23}-U_{24}	-433.77	-494.34	0.77	-0.53	-1.77	-4.67	0.00	0.00	-0.60	-1.99
	U_{24}-U_{25}	-433.77	-494.34	0.53	-1.66	-11.91	-11.81	0.08	0.31	-1.29	-2.04
	U_{25}-U_{26}	-483.42	-542.93	0.77	-2.33	-9.75	-11.81	0.00	0.00	-1.29	-2.04
	U_{26}-U_{27}	-543.33	-230.04	1.91	0.21	-15.90	-5.31	0.37	0.87	2.15	-1.73
	U_{27}-U_{28}	-414.64	-306.81	3.16	2.72	-14.07	-8.79	0.64	0.58	-1.77	-2.26
	U_{28}-U_{29}	-389.32	-328.61	2.28	3.79	-11.88	-9.23	0.64	0.64	-2.44	-2.44
	U_{29}-U_{30}	-443.98	-59.22	2.82	3.61	-12.94	-5.33	0.49	0.82	-2.01	-0.82
	U_{30}-U_{31}	-222.08	-222.08	3.29	3.29	-7.72	-7.72	0.82	0.82	-2.72	-2.72
	U_{31}-U_{32}	-186.00	101.73	3.83	3.25	-8.81	-2.52	0.77	0.79	1.44	-0.29
	U_{32}-U_{33}	-149.75	284.71	3.35	2.36	-7.47	-0.70	0.73	0.60	-1.58	0.29
	U_{33}-U_{34}	-80.05	464.29	2.69	1.60	-5.99	1.49	0.69	0.43	-1.36	0.95
	U_{34}-U_{35}	-290.99	1663.47	2.83	-3.88	-8.56	7.90	0.30	2.41	-1.79	2.99
	U_{35}-U_{36}	-1539.20	1539.20	1.93	-1.93	-4.32	4.32	-1.10	1.10	-0.66	0.66
	U_{36}-U_{37}	-27.64	20.42	1.56	-0.55	-7.25	-4.79	0.13	0.62	-0.37	-0.96
	U_{37}-U_{38}	301.84	-301.84	3.58	-3.58	-9.15	-9.15	0.96	0.96	-2.88	-2.88
	U_{38}-U_{39}	186.19	-237.97	2.25	2.65	-3.92	-7.26	0.80	-0.55	0.00	0.00
	U_{39}-U_{40}	179.26	-73.23	2.96	2.13	-5.65	-6.10	0.81	-0.78	-0.16	-1.19
	U_{40}-U_{41}	79.84	-79.84	2.72	2.72	-5.14	-5.14	0.81	0.81	-1.19	-1.19
	U_{41}-U_{42}	-76.59	-111.03	2.57	0.19	-9.14	-6.00	0.37	0.45	-0.86	-0.88
	U_{42}-U_{43}	-158.20	-180.94	2.43	1.23	-9.14	-6.53	0.68	0.50	-1.67	-1.21
	U_{43}-U_{44}	-164.13	-164.69	1.89	1.23	-14.11	-6.53	0.68	0.50	-1.67	-1.21
	U_{44}-U_{45}	-137.31	-69.80	2.60	1.60	-4.66	-4.66	0.49	0.49	-1.21	-1.21
	U_{45}-U_{46}	-44.00	54.78	2.65	2.68	-11.90	-4.06	0.49	0.43	0.96	-0.48
	U_{46}-U_{47}	-69.00	212.40	2.09	2.58	-8.75	-1.35	0.54	0.34	-1.17	0.41
	U_{47}-U_{48}	-40.57	345.28	1.86	1.69	-8.24	0.04	0.26	0.17	-0.97	0.88
	U_{48}-U_{49}	91.11	-72.05	2.06	1.02	-5.21	-1.10	0.00	-0.06	-0.66	-0.11
	U_{49}-U_{50}	-146.81	1530.88	2.85	-3.71	-8.95	7.73	0.00	-0.13	2.51	35.96
	U_{50}-U_{51}	1613.34	-340.01	13.22	-10.48	-2.77	-0.18	1.66	-1.52	0.00	0.00
	U_{51}-U_{52}	-85.52	117.22	2.73	3.02	-7.43	-0.74	0.58	-0.40	-1.98	0.26
	U_{52}-U_{53}	253.20	-149.43	2.43	-3.27	-2.97	-5.79	1.04	-0.73	0.00	0.00
	U_{53}-U_{54}	84.20	-327.18	3.39	2.85	-5.82	-7.43	0.74	0.58	-0.40	-1.98
	U_{54}-U_{55}	-85.52	117.22	2.73	3.02	-7.43	-0.74	0.58	-0.40	-1.98	0.26
	U_{55}-U_{56}	-358.50	-362.03	2.71	2.43	-11.27	-10.91	0.54	0.55	-1.52	-2.40
	U_{56}-U_{57}	-300.96	-456.91	2.97	2.63	-16.04	-9.99	0.69	0.52	-2.31	-1.72
	U_{57}-U_{58}	-327.33	-557.63	3.35	2.57	-8.35	-4.30	0.52	0.30	-1.72	-2.31
	U_{58}-U_{59}	-669.38	-449.72	1.96	0.30	-18.31	-8.58	0.36	-0.04	-2.55	-1.21
	U_{59}-U_{60}	-327.33	-557.63	3.35	2.57	-8.35	-4.30	0.52	0.30	-1.72	-2.31
	U_{60}-U_{61}	-407.37	-55.16	1.22	-0.63	-11.62	-3.04	0.21	-0.18	-1.89	0.04
	U_{61}-U_{62}	-290.40	-12.26	0.96	-0.97	-4.10	2.07	0.20	-0.01	-1.64	0.87
	U_{62}-U_{63}	-290.40	-12.26	0.96	-0.97	-4.10	2.07	0.20	-0.01	-1.64	0.87
	U_{63}-U_{64}	-431.42	-311.55	1.30	-4.76	-9.14	-2.39	3.50	-2.01	-4.25	0.87
	U_{64}-U_{65}	-344.47	-205.39	1.01	-4.01	-6.52	-1.61	2.77	-1.51	-3.41	0.65
	U_{65}-U_{66}	-21.98	-218.86	1.74	-3.35	-2.51	-4.72	0.40	-1.52	-2.10	0.20
	U_{66}-U_{67}	-361.39	-187.99	0.55	-1.15	-15.36	-4.13	0.00	0.00	-1.24	-0.40
	U_{67}-U_{68}	-252.02	-374.51	1.13	-7.12	-8.17	-11.92	0.20	-2.27	-1.33	-2.43
	U_{68}-U_{69}	-444.47	-197.92	1.25	-4.87	-4.82	-0.12	0.00	-0.00	-1.24	-0.40
	U_{69}-U_{70}	-235.18	-84.39	0.96	-1.95	-8.90	-2.68	0.14	0.46	-1.65	-0.50
	U_{70}-U_{71}	-214.86	-128.23	1.90	-1.81	-6.37	-6.96	0.39	-0.52	-1.79	0.34
	U_{71}-U_{72}	-186.98	-640.79	2.03	-1.80	-1.62	-6.18	0.90	-0.09	-1.16	-1.16
	U_{72}-U_{73}	-290.40	-12.26	0.96	-0.97	-4.10	2.07	0.20	-0.01	-1.64	0.87
	U_{73}-U_{74}	-431.42	-311.55	1.30	-4.76	-9.14	-2.39	3.50	-2.01	-4.25	0.87
	U_{74}-U_{75}	-344.47	-205.39	1.01	-4.01	-6.52	-1.61	2.77	-1.51	-3.41	0.65
	U_{75}-U_{76}	-21.98	-218.86	1.74	-3.35	-2.51	-4.72	0.40	-1.52	-2.10	0.20
	U_{76}-U_{77}	-361.39	-187.99	0.55	-1.15	-15.36	-4.13	0.00	0.00	-1.24	-0.40
	U_{77}-U_{78}	-252.02	-374.51	1.13	-7.12	-8.17	-11.92	0.20	-2.27	-1.33	-2.43
	U_{78}-U_{79}	-444.47	-197.92	1.25	-4.87	-4.82	-0.12	0.00	-0.00	-1.24	-0.40
	U_{79}-U_{80}	-235.18	-84.39	0.96	-1.95	-8.90	-2.68	0.14	0.46	-1.65	-0.50
	U_{80}-U_{81}	-214.86	-128.23	1.90	-1.81	-6.37	-6.96	0.39	-0.52	-1.79	0.34
	U_{81}-U_{82}	-186.98	-640.79	2.03	-1.80	-1.62	-6.18	0.90	-0.09	-1.16	-1.16

ZZ Axis Moment Properties: Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	S_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term = F_y*S_top	M_n (k-in)	Equivalent Mem. Factor: a	$C_{m(a)}$	$C_{m(b)}$
2974.3	-0.975	0.21	0.21	72.83	-4.52	2.58	-4.10	5.33	-5.40	1.16	0.06	-0.43	0.24
2974.3	-0.975	0.21	0.21	87.26	17.71	0.00	-4.09	6.66	-7.16	-0.07	0.40	-0.70	0.51
2974.3	-0.029	0.55	0.59	-73.63	3.08	-0.31	1.57	-5.60	-7.01	0.07	0.22	-0.69	0.24
2974.3	-0.029	0.55	0.59	-153.29	-68.57	-0.20	0.71	-11.66	-5.34	-0.04	0.17	-0.29	0.17
2974.3	0.235	0.65	0.69	31.94	-29.51	0.51	1.55	-3.63	-2.45	-0.04	0.35	0.47	-0.65
2974.3	0.235	0.65	0.69	86.45	-4.49	0.00	0.00	-9.82	-7.41	-0.89	0.25	0.39	-0.37
2974.3	0.557	0.57	0.57	248.85	327.83	5.27	3.36	-6.30	-1.67	0.75	0.74	0.45	0.13
2974.3	0.557	0.57	0.57	232.07	205.66	2.21	3.03	0.95	2.67	1.18	0.54	0.05	0.01
2974.3	0.235	0.69	0.69	87.12	110.35	1.39	-1.82	7.84	-5.26	-0.30	0.73	0.00	0.00
2974.3	0.235	0.69	0.69	87.12	110.35	1.39	-1.82	7.84	-5.26	-0.30	0.73	0.00	0.00
2974.3	0.557	0.57	0.57	232.07	205.66	2.21	3.03	0.95	2.67	1.18	0.54	0.05	0.01
2974.3	0.557	0.57	0.57	248.85	327.83	5.27	3.36	-6.30	-1.67	0.75	0.74	0.45	0.13
2974.3	0.235	0.69	0.69	86.45	-4.49	0.00	0.00	-9.82	-7.41	-0.89	0.25	0.39	-0.37
2974.3	0.235	0.65	0.69	31.94	-29.51	0.51	1.55	-3.63	-2.45	-0.04	0.35	0.47	-0.65
2974.3	0.029	0.55	0.59	-73.63	3.08	-0.31	1.57	-5.60	-7.01	0.07	0.22	-0.69	0.24
2974.3	0.029	0.55	0.59	-153.29	-68.57	-0.20	0.71	-11.66	-5.34	-0.04	0.17	-0.29	0.17
2974.3	0.975	0.21	0.21	72.83	-4.52	2.58	-4.10	5.33	-5.40	1.16	0.06	-0.43	0.24
2974.3	0.975	0.21	0.21	87.26	17.71	0.00	-4.09	6.66	-7.16	-0.07	0.40	-0.70	0.51
2974.3	0.975	0.21	0.21	72.83	-4.52	2.58	-4.10	5.33	-5.40	1.16	0.06	-0.43	0.24

YY Axis Moment Properties: Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	S_z (in^3)	I (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term = F_y*S_top	M_n (k-in)	Equivalent Mem. Factor: a	$C_{m(a)}$	$C_{m(b)}$
3194.1	-0.450	0.42	0.42	-197.75	162.80	0.26	1.14	-1.94	2.25	-0.04	0.21	0.65	-0.52
3194.1	-0.450	0.42	0.42	-197.75	162.80	0.26	1.14	-1.94	2.25	-0.04	0.21	0.65	-0.52
3194.1	0.509	0.80	0.80	-23.41	-53.18	0.87	1.63	-4.52	0.41	0.34	0.22	0.09	-0.78
3194.1	0.509	0.80	0.80	-23.41	-53.18	0.87	1.63	-4.52	0.41	0.34	0.22	0.09	-0.78
3194.1	-0.450	0.42	0.42	-197.75	162.80	0.26	1.14	-1.94	2.25	-0.04	0.21	0.65	-0.52
3194.1	-0.450	0.42	0.42	-197.75	162.80	0.26	1.14	-1.94	2.25	-0.04	0.21	0.65	-0.52

Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)
-60.26	90.2	90.24	72.24	127.46	2147
-60.26	90.2	90.24	72.24	127.46	2147
-60.26	90.2	90.24	72.24	127.46	2147
-60.26	90.2	90.24	76.71	127.46	2147
-60.26	90.2	90.24	76.71	127.46	2147
-60.26	90.2	90.24	76.71	127.46	2147
-60.26	90.2	90.24	72.24

Moment (Start) - Al2

Maximum Axial with Moment Interaction Check

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(+) Positive Stresses / Forces Indicate Tension
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Guide Specifications for Bridge Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Mxx, Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information | **M_y Information**

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (k-in) | Lane Reduction & Impact Live Load (Max) (k-in) | Lane Reduction & Impact Live Load (Min) (k-in) | Impact Pedestrian Load Max (k-in) | Impact Pedestrian Load Min (k-in) | Mxx: Pos. Mom. Start (k-in) | Mxx: Pos. Mom. End (k-in) | Mxx: Neg. Mom. Start (k-in) | Mxx: Neg. Mom. End (k-in) | S_{xx} (in^3) | S_{xx} (in^3) | Z_z (in^3) | I (in^4) | I_{xx} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F/S_{xx} | M_z (k-in) | Equivalent Mem. Factor C_m | C_b | C_{MAG} | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) (k-in) | Live Load (Min) (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (k-in) | Lane Reduction & Impact Live Load (Max) (k-in) | Lane Reduction & Impact Live Load (Min) (k-in) | Impact Pedestrian Load Max (k-in) | Impact Pedestrian Load Min (k-in) | Myy: Pos. Mom. Start (k-in) | Myy: Pos. Mom. End (k-in) | Myy: Neg. Mom. Start (k-in) | Myy: Neg. Mom. End (k-in) | S_{yy} (in^3) | S_{yy} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F/S_{yy} | M_y (k-in) | Equivalent Mem. Factor C_m | C_b | C_{MAG} | Tension: Axial Analysis | Moment Analysis | Total | Pass | Compression: Yield: Axial Analysis | Moment Analysis | Total | Pass | Fracture: Axial Analysis | Moment Analysis | Total | Pass | Buckle: Axial Analysis | Moment Analysis | Total | Pass | Yield: Axial Analysis | Moment Analysis | Total | Pass |
|---|---|---

Moment (Start) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) (k-ft)	Pedestrian Load (Min) (k-ft)	Lane Reduction & Impact Live Load Start (k-ft)	Lane Reduction & Impact Live Load End (k-ft)	Impact Pedestrian Load Start (k-ft)	Impact Pedestrian Load End (k-ft)
Structure 1	U_1–L_1	-15.73	54.50	0.36	-0.36	-2.72	2.91	0.03	-0.13	-0.04	0.43
	L_1–L_2	-27.56	29.23	0.75	-0.69	-2.47	2.33	0.20	-0.18	-0.12	0.41
	L_2–L_3	-39.39	3.96	1.14	-1.02	-2.21	1.74	0.36	-0.23	-0.26	0.39
	L_3–L_4	-40.63	-41.52	0.97	-0.92	-1.00	1.11	0.12	-0.25	-0.40	0.16
	L_4–L_5	-54.81	-77.81	1.38	-1.24	-0.84	0.47	0.31	-0.31	-0.70	0.00
	L_5–L_6	-64.44	-72.23	1.58	-1.37	-0.16	0.12	0.42	-0.47	0.00	0.00
	L_6–L_7	-73.27	-66.93	1.64	-1.50	-0.04	0.00	0.47	-0.47	0.00	0.00
	L_7–L_8	-109.02	-121.41	1.90	-1.56	-0.60	0.65	0.74	-0.47	0.00	0.00
	L_8–L_9	-42.58	47.08	2.26	-2.73	-2.75	3.30	0.77	-0.93	-0.77	0.63
	L_9–L_{10}	-101.49	205.17	3.13	-3.10	-2.95	3.13	0.80	-0.94	-1.08	1.72
	L_{10}–L_{11}	-123.88	126.08	3.04	-3.11	-2.21	2.52	0.00	0.00	-0.68	1.55
	L_{11}–L_{12}	-127.66	110.41	3.01	-3.01	-2.21	2.50	0.00	0.00	-0.68	1.55
	L_{12}–L_{13}	-106.25	107.52	0.15	-0.08	-2.00	2.09	0.00	0.00	-0.52	0.55
	L_{13}–L_{14}	-66.44	79.85	0.31	-0.25	-1.82	1.93	0.00	0.00	-0.30	0.40
	L_{14}–L_{15}	-31.82	36.77	0.78	-0.65	-1.63	1.70	0.00	0.00	-0.13	0.26
	L_{15}–L_{16}	-17.15	-23.67	1.62	-1.74	-0.68	0.64	0.26	-0.30	-0.10	0.11
	L_{16}–L_{17}	-60.44	-42.12	1.79	-1.85	-0.38	0.39	0.29	-0.32	-0.40	0.00
	L_{17}–L_{18}	-74.38	-85.04	1.76	-1.83	-0.28	0.29	0.43	-0.46	0.00	0.00
	L_{18}–L_{19}	-107.76	-162.61	2.71	-2.79	-0.38	0.83	0.67	-0.68	0.00	0.00
	L_{19}–L_{20}	-163.50	-173.08	2.63	-2.69	-0.33	0.91	-0.95	-0.97	0.07	0.00
	L_{20}–L_{21}	-187.90	-226.20	2.23	-2.61	-0.21	0.28	1.03	-1.13	-0.06	0.07
	U_1–U_2	-13.50	204.40	0.37	-0.36	-2.72	2.91	0.03	-0.13	-0.04	0.43
	U_2–U_3	-201.27	204.78	0.69	-0.66	-3.66	3.66	0.15	-0.14	-0.61	0.72
	U_3–U_4	-189.13	189.73	0.73	-0.73	-3.44	3.44	0.15	-0.14	-0.61	0.72
	U_4–U_5	-79.55	88.71	0.47	-0.48	-1.87	1.94	0.10	-0.10	-0.37	0.41
	U_5–U_6	-61.57	54.08	0.53	-0.53	-1.47	1.50	0.10	-0.11	-0.29	0.30
	U_6–U_7	-4.55	12.51	0.73	-0.65	-1.40	1.54	0.13	-0.13	-0.17	0.21
	U_7–U_8	27.52	-27.99	1.08	-1.11	-1.02	1.08	0.10	-0.12	-0.04	0.05
	U_8–U_9	59.94	-69.39	1.19	-1.25	-0.70	0.75	0.20	-0.23	0.00	0.00
	U_9–U_{10}	130.30	-141.79	2.28	-2.39	-0.26	0.20	0.47	-0.50	0.00	0.00
	U_{10}–U_{11}	219.97	-221.44	3.10	-3.25	-0.18	0.00	0.72	-0.74	0.00	0.00
	U_{11}–U_{12}	193.17	-200.18	2.72	-2.86	-0.19	0.29	0.67	-0.68	0.00	0.00
	U_{12}–U_{13}	194.78	-194.58	2.57	-2.62	-0.35	0.42	0.65	-0.65	0.00	0.00
	U_{13}–U_{14}	177.71	-169.90	2.41	-2.47	-0.46	0.61	0.61	-0.61	0.00	0.00
	U_{14}–U_{15}	231.79	-230.81	2.41	-2.27	-0.95	0.96	0.77	-0.77	0.00	0.00
	U_{15}–U_{16}	26.69	-26.69	1.04	-1.04	-0.30	0.30	0.18	-0.18	0.00	0.00
	U_{16}–U_{17}	-225.27	219.21	0.30	-0.36	-3.65	3.40	0.02	0.03	-0.83	0.81
	U_{17}–U_{18}	-197.07	197.07	0.32	-0.32	-3.18	3.18	0.00	0.00	-0.76	0.76
	U_{18}–U_{19}	-182.72	181.55	0.01	-0.49	-3.49	3.77	0.07	-0.08	0.77	-0.89
	U_{19}–U_{20}	-159.30	160.85	0.61	-0.62	-3.41	3.64	0.05	-0.09	-0.74	0.76
	U_{20}–U_{21}	-219.58	-221.44	3.10	-3.25	-0.18	0.00	0.72	-0.74	0.00	0.00
	U_{21}–U_{22}	-99.48	63.33	0.47	-0.47	-1.62	1.72	0.00	-0.01	-0.34	0.75
	U_{22}–U_{23}	-37.60	4.39	0.69	-0.67	-1.68	1.84	0.09	-0.11	-0.22	0.41
	U_{23}–U_{24}	-8.08	-5.03	0.99	-1.08	-0.84	0.88	0.13	-0.14	-0.07	0.09
	U_{24}–U_{25}	28.91	-55.10	1.84	-1.91	-0.53	0.53	0.40	-0.41	-0.05	0.07
	U_{25}–U_{26}	70.77	-74.09	1.84	-1.91	-0.53	0.53	0.40	-0.41	-0.05	0.07
	U_{26}–U_{27}	104.64	-104.99	2.23	-2.20	-0.50	0.48	0.52	-0.51	-0.06	0.06
	U_{27}–U_{28}	134.61	-176.11	2.63	-2.70	-0.36	0.34	0.66	-0.66	-0.07	0.07
	U_{28}–U_{29}	189.52	-191.09	3.42	-3.47	-0.50	0.48	0.80	-0.81	-0.06	0.05
	U_{29}–U_{30}	207.45	-212.55	2.66	-2.53	-1.00	1.01	0.80	-0.82	0.00	0.00
	U_{30}–U_{31}	262.53	-264.49	2.77	-2.62	-1.00	1.01	0.80	-0.82	0.00	0.00
	U_{31}–U_{32}	251.63	246.66	0.32	-0.31	-3.25	3.06	0.00	0.00	-0.82	0.80
	U_{32}–U_{33}	185.28	177.57	0.28	-0.49	-2.83	2.93	0.05	-0.11	-0.66	0.69
	U_{33}–U_{34}	185.33	192.16	0.04	0.01	-2.90	3.03	0.00	0.00	-0.64	0.64
	U_{34}–U_{35}	202.36	202.36	0.00	0.00	-3.13	3.13	0.00	0.00	-0.68	0.68
	U_{35}–U_{36}	189.27	189.27	0.00	0.00	-3.13	3.13	0.00	0.00	-0.68	0.68
	U_{36}–U_{37}	116.39	129.35	0.24	0.15	-2.26	2.26	0.00	0.00	-0.42	0.45
	U_{37}–U_{38}	-52.79	62.47	0.43	-0.47	-1.16	1.25	0.00	0.00	-0.18	0.25
	U_{38}–U_{39}	-19.75	29.04	0.79	-0.79	-0.59	0.59	0.00	0.00	-0.13	0.14
	U_{39}–U_{40}	18.85	25.58	1.09	-1.72	-0.74	0.67	0.22	-0.25	-0.14	0.14
	U_{40}–U_{41}	39.39	39.39	1.19	-1.25	-0.66	0.66	0.00	0.00	0.00	0.00
	U_{41}–U_{42}	89.93	-96.82	1.75	-1.83	-0.45	0.45	0.37	-0.40	-0.10	0.10
	U_{42}–U_{43}	147.10	-183.24	3.03	-3.02	-0.72	0.77	0.57	-0.57	-0.16	0.16
	U_{43}–U_{44}	189.59	-202.27	2.73	-2.85	-0.55	0.78	0.81	-0.12	0.11	0.00
	U_{44}–U_{45}	214.86	-270.07	2.21	-2.84	-0.38	0.42	0.72	-0.93	-0.06	0.10
Structure 2	U_1–L_1	140.57	-181.44	2.12	-2.59	-0.22	0.19	0.72	-0.89	0.00	0.00
	L_1–L_2	129.24	-129.17	1.84	-1.98	-0.23	0.21	0.67	-0.69	0.00	0.00
	L_2–L_3	180.45	-209.65	2.05	-2.18	-0.67	0.79	0.93	-1.09	0.00	0.00
	L_3–L_4	24.87	-49.22	1.89	-2.41	-3.21	3.64	0.79	-1.01	-0.77	0.86
	L_4–L_5	-121.63	132.23	0.09	-0.08	-2.60	2.89	0.00	0.00	-0.72	0.78
	L_5–L_6	-77.64	76.04	0.06	-0.12	-1.93	2.15	0.00	0.00	-0.47	0.49
	L_6–L_7	42.63	70.41	0.03	-0.05	-1.07	1.77	0.00	0.00	-0.40	0.45
	L_7–L_8	-57.66	58.81	0.36	-0.27	-1.19	1.18	0.00	0.00	-0.32	0.33
	L_8–L_9	-41.96	42.31	1.13	-1.27	-0.91	0.90	0.03	-0.06	-0.17	0.20
	L_9–L_{10}	-9.20	-2.43	1.62	-1.89	-0.66	0.74	0.28	-0.35	-0.19	0.21
	L_{10}–L_{11}	28.08	-38.33	1.83	-1.79	-0.58	0.55	0.50	-0.53	-0.15	0.18
	L_{11}–L_{12}	78.24	-95.55	1.56	-1.87	-0.36	0.53	0.56	-0.71	-0.15	0.17

ZZ Axis Moment Properties

Member	Max. Pos. Mom. Start (k-ft)	Max. Pos. Mom. End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	J (in^4)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_bc	M_n (k-in)
U_1–L_1	-0.553	0.38	38	123.29	39.52	0.22	0.07	-34.71	-11.13	0.12	0.04
L_1–L_2	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_2–L_3	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_3–L_4	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_4–L_5	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_5–L_6	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_6–L_7	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_7–L_8	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_8–L_9	-0.553	0.38	38	123.29	39.52	0.22	0.07	-34.71	-11.13	0.12	0.04
L_9–L_{10}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{10}–L_{11}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{11}–L_{12}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{12}–L_{13}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{13}–L_{14}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{14}–L_{15}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{15}–L_{16}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{16}–L_{17}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{17}–L_{18}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{18}–L_{19}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{19}–L_{20}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{20}–L_{21}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_1–U_2	-0.553	0.38	38	123.29	39.52	0.22	0.07	-34.71	-11.13	0.12	0.04
U_2–U_3	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_3–U_4	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_4–U_5	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_5–U_6	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_6–U_7	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_7–U_8	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_8–U_9	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_9–U_{10}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{10}–U_{11}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{11}–U_{12}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{12}–U_{13}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{13}–U_{14}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{14}–U_{15}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{15}–U_{16}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{16}–U_{17}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{17}–U_{18}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{18}–U_{19}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{19}–U_{20}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{20}–U_{21}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{21}–U_{22}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{22}–U_{23}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{23}–U_{24}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{24}–U_{25}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{25}–U_{26}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{26}–U_{27}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{27}–U_{28}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{28}–U_{29}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{29}–U_{30}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{30}–U_{31}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{31}–U_{32}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{32}–U_{33}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{33}–U_{34}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{34}–U_{35}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{35}–U_{36}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{36}–U_{37}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{37}–U_{38}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{38}–U_{39}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{39}–U_{40}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{40}–U_{41}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{41}–U_{42}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{42}–U_{43}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{43}–U_{44}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{44}–U_{45}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_1–L_1	-0.553	0.38	38	123.29	39.52	0.22	0.07	-34.71	-11.13	0.12	0.04
L_1–L_2	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_2–L_3	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_3–L_4	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_4–L_5	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_5–L_6	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_6–L_7	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_7–L_8	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_8–L_9	-0.553	0.38	38	123.29	39.52	0.22	0.07	-34.71	-11.13	0.12	0.04
L_9–L_{10}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{10}–L_{11}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{11}–L_{12}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{12}–L_{13}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{13}–L_{14}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{14}–L_{15}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{15}–L_{16}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{16}–L_{17}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{17}–L_{18}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{18}–L_{19}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
L_{19}–L_{20}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
L_{20}–L_{21}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_1–U_2	-0.553	0.38	38	123.29	39.52	0.22	0.07	-34.71	-11.13	0.12	0.04
U_2–U_3	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_3–U_4	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_4–U_5	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_5–U_6	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_6–U_7	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_7–U_8	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_8–U_9	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_9–U_{10}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{10}–U_{11}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{11}–U_{12}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{12}–U_{13}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{13}–U_{14}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{14}–U_{15}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{15}–U_{16}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{16}–U_{17}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{17}–U_{18}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{18}–U_{19}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{19}–U_{20}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{20}–U_{21}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{21}–U_{22}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{22}–U_{23}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{23}–U_{24}	-0.996	0.20	20	389.78	186.83	1.62	-0.19	-22.41	-7.65	-0.20	-0.24
U_{24}–U_{25}	-0.996	0.20	20	389.45	175.81	0.78	-0.25	-12.40	-3.74	70.84	33.77
U_{25}–U_{26}	-0.996	0.20

Moment (Start) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors — Pedestrian Load Factors
DL Factor: 1.30 — DL Factor: 1.30
LL Factor: 1.30 — LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_1–L_1	3.62	-1.41	0.17	-0.09	1.36	0.65	0.15	0.01	0.03	-0.02
	U_1–L_2	-11.46	-3.33	0.30	-0.12	-0.87	0.02	0.08	-0.04	-0.25	0.07
	U_2–L_2	-20.51	-11.79	0.33	-0.09	-0.67	-0.19	0.09	-0.03	-0.13	-0.05
	U_2–L_3	9.82	-15.00	0.26	0.07	-0.47	-0.47	0.08	0.01	-0.12	0.50
	L_1–L_2	-16.21	25.07	0.23	-0.05	0.56	-0.86	0.29	-0.06	0.29	-0.36
	L_2–L_3	-34.06	79.11	0.29	0.35	-1.07	1.04	0.05	-0.21	-0.33	0.22
	L_3–L_4	-39.17	72.57	0.45	0.31	-1.11	1.02	0.11	-0.57	0.41	-0.32
	L_4–L_5	-1.45	103.74	0.50	0.39	-0.74	1.37	0.15	0.18	-0.24	0.62
	L_5–L_6	-12.32	130.19	0.59	0.30	-0.80	1.76	0.21	0.13	-0.19	0.58
	L_6–L_7	-73.41	69.80	0.29	0.45	-1.65	0.58	0.06	0.14	-0.38	0.21
	L_7–L_8	-89.96	0.00	0.00	0.00	-0.89	0.00	0.00	0.12	-0.43	0.00
	L_8–L_9	-69.88	47.84	0.07	0.00	-1.31	0.71	0.00	0.00	-0.31	0.21
	L_9–L_{10}	-27.39	6.37	0.07	-0.29	-0.72	0.02	0.00	0.00	-0.15	0.03
	L_{10}–L_{11}	-5.38	3.28	0.00	-0.10	-0.10	0.00	0.00	0.00	-0.03	-0.10
	L_{11}–L_{12}	-31.03	12.71	0.20	-0.17	-0.91	0.63	0.05	-0.04	-0.19	0.11
	L_{12}–L_{13}	-46.63	27.25	0.19	-0.17	-1.15	0.71	-0.04	-0.04	-0.28	0.17
	L_{13}–L_{14}	-118.88	85.28	0.26	-0.26	-2.05	1.59	0.06	-0.05	-0.56	0.42
	L_{14}–L_{15}	-117.64	87.57	0.23	-0.33	-1.45	1.64	0.04	-0.04	-0.57	0.43
	L_{15}–L_{16}	-148.08	120.85	0.15	-0.16	-1.92	1.63	0.04	-0.04	-0.79	0.63
	L_{16}–L_{17}	-86.91	116.74	0.33	-0.22	-2.72	1.94	0.01	-0.06	-0.13	0.88
	L_{17}–L_{18}	-79.11	114.46	0.32	-0.19	-2.79	1.92	0.01	-0.10	-0.09	0.53
	L_{18}–L_{19}	-118.23	92.26	0.56	-0.49	-2.47	1.75	0.11	-0.10	-0.52	0.43
	L_{19}–L_{20}	-34.33	59.37	0.32	-0.37	-1.32	1.37	0.07	-0.06	-0.22	0.36
	L_{20}–L_{21}	-34.33	8.61	0.33	-0.28	-1.61	0.63	0.07	-0.06	-0.18	0.11
	L_{21}–L_{22}	-1.47	15.42	0.40	-0.40	-0.07	0.89	0.08	-0.08	-0.01	0.15
	L_{22}–L_{23}	13.33	-37.03	0.46	-0.76	0.62	0.06	-0.04	-0.03	-0.09	0.89
	L_{23}–L_{24}	-66.01	54.01	0.06	-0.34	-1.22	0.52	0.00	0.00	-0.23	0.00
	L_{24}–L_{25}	-133.77	104.34	0.10	-0.05	-2.50	1.25	0.00	0.00	-0.43	0.00
	L_{25}–L_{26}	-116.17	105.67	0.31	0.20	-1.95	1.25	0.04	0.11	-0.41	0.24
	L_{26}–L_{27}	-138.98	104.34	0.15	0.03	-2.13	1.50	0.07	0.10	-0.47	0.24
	L_{27}–L_{28}	-131.97	101.07	0.48	0.25	-2.00	1.80	0.05	0.08	-0.49	0.43
	L_{28}–L_{29}	-175.19	162.79	0.78	0.56	-2.15	1.62	0.14	0.02	-0.64	0.56
	L_{29}–L_{30}	-64.39	98.27	0.29	0.29	-1.07	1.23	0.07	0.07	-0.24	0.36
	L_{30}–L_{31}	-45.28	135.71	0.52	0.09	-1.75	2.21	0.18	-0.02	-0.36	0.69
	L_{31}–L_{32}	-143.90	147.29	0.29	0.29	-2.08	2.01	0.07	0.07	-0.52	0.74
	L_{32}–L_{33}	-112.48	135.83	0.25	0.20	-2.57	2.21	0.07	0.00	-0.50	0.49
	L_{33}–L_{34}	-83.86	128.08	0.28	0.28	-2.07	2.07	0.07	0.00	-0.50	0.49
	L_{34}–L_{35}	-83.86	94.66	0.34	0.34	-2.21	1.56	0.06	0.06	-0.37	0.27
	L_{35}–L_{36}	-91.74	54.21	0.30	-0.28	-1.49	0.63	0.03	0.05	-0.37	0.25
	L_{36}–L_{37}	-133.77	104.34	0.10	-0.05	-2.50	1.25	0.00	0.00	-0.43	0.00
	L_{37}–L_{38}	-116.17	105.67	0.31	0.20	-1.95	1.25	0.04	0.11	-0.41	0.24
	L_{38}–L_{39}	-138.98	104.34	0.15	0.03	-2.13	1.50	0.07	0.10	-0.47	0.24
	L_{39}–L_{40}	-131.97	101.07	0.48	0.25	-2.00	1.80	0.05	0.08	-0.49	0.43
	L_{40}–L_{41}	-175.19	162.79	0.78	0.56	-2.15	1.62	0.14	0.02	-0.64	0.56
	L_{41}–L_{42}	-64.39	98.27	0.29	0.29	-1.07	1.23	0.07	0.07	-0.24	0.36
	L_{42}–L_{43}	-45.28	135.71	0.52	0.09	-1.75	2.21	0.18	-0.02	-0.36	0.69
	L_{43}–L_{44}	-143.90	147.29	0.29	0.29	-2.08	2.01	0.07	0.07	-0.52	0.74
	L_{44}–L_{45}	-112.48	135.83	0.25	0.20	-2.57	2.21	0.07	0.00	-0.50	0.49
	L_{45}–L_{46}	-83.86	128.08	0.28	0.28	-2.07	2.07	0.07	0.00	-0.50	0.49
	L_{46}–L_{47}	-83.86	94.66	0.34	0.34	-2.21	1.56	0.06	0.06	-0.37	0.27
	L_{47}–L_{48}	-91.74	54.21	0.30	-0.28	-1.49	0.63	0.03	0.05	-0.37	0.25
	L_{48}–L_{49}	-133.77	104.34	0.10	-0.05	-2.50	1.25	0.00	0.00	-0.43	0.00
	L_{49}–L_{50}	-116.17	105.67	0.31	0.20	-1.95	1.25	0.04	0.11	-0.41	0.24
	L_{50}–L_{51}	-138.98	104.34	0.15	0.03	-2.13	1.50	0.07	0.10	-0.47	0.24
	L_{51}–L_{52}	-131.97	101.07	0.48	0.25	-2.00	1.80	0.05	0.08	-0.49	0.43
	L_{52}–L_{53}	-175.19	162.79	0.78	0.56	-2.15	1.62	0.14	0.02	-0.64	0.56
	L_{53}–L_{54}	-64.39	98.27	0.29	0.29	-1.07	1.23	0.07	0.07	-0.24	0.36
	L_{54}–L_{55}	-45.28	135.71	0.52	0.09	-1.75	2.21	0.18	-0.02	-0.36	0.69
	L_{55}–L_{56}	-143.90	147.29	0.29	0.29	-2.08	2.01	0.07	0.07	-0.52	0.74
	L_{56}–L_{57}	-112.48	135.83	0.25	0.20	-2.57	2.21	0.07	0.00	-0.50	0.49
	L_{57}–L_{58}	-83.86	128.08	0.28	0.28	-2.07	2.07	0.07	0.00	-0.50	0.49
	L_{58}–L_{59}	-83.86	94.66	0.34	0.34	-2.21	1.56	0.06	0.06	-0.37	0.27
	L_{59}–L_{60}	-91.74	54.21	0.30	-0.28	-1.49	0.63	0.03	0.05	-0.37	0.25
Structure 2	L_1–U_2	33.04	-14.00	0.31	0.29	-0.57	-0.72	0.14	0.00	0.00	0.04
	L_2–U_2	18.17	-14.00	0.29	0.29	-0.57	-0.72	0.14	0.00	0.00	0.04
	L_2–U_3	-32.82	30.91	0.29	-0.27	-1.00	0.79	0.03	0.00	-0.20	0.17
	L_3–U_3	-53.04	30.91	0.31	-0.27	-1.00	0.79	0.03	0.00	-0.20	0.17
	L_3–U_4	-83.89	100.04	0.33	-0.37	-2.03	1.62	0.06	0.03	-0.39	0.44
	L_4–U_4	-98.49	117.09	0.34	-0.12	-2.08	1.62	0.05	0.02	-0.49	0.25
	L_4–U_5	-125.53	123.56	0.38	0.08	-2.58	1.62	0.05	0.02	-0.49	0.25
	L_5–U_5	-125.53	123.56	0.77	-0.60	-2.02	1.85	0.00	0.00	-0.52	0.49
	L_5–U_6	-30.08	133.86	0.77	-0.60	-2.02	1.85	0.00	0.00	-0.52	0.49
	L_6–U_6	-83.58	187.86	0.63	0.14	-1.89	2.33	0.17	0.01	-0.45	0.61
	L_6–U_7	-83.58	177.37	0.41	0.12	-1.89	2.33	0.17	0.01	-0.45	0.61
	L_7–U_7	-138.54	150.45	0.23	1.28	1.72	0.04	0.06	0.51	-0.45	4.00
	L_7–U_8	-128.92	122.99	0.31	0.22	-2.18	1.45	0.04	0.09	-0.46	0.33
	L_8–U_8	-128.92	122.99	0.31	0.22	-2.18	1.45	0.04	0.09	-0.46	0.33
	L_8–U_9	-128.40	95.00	0.13	0.15	-2.05	1.52	0.00	0.00	-0.41	0.35
	L_9–U_9	-88.81	95.00	0.13	0.15	-2.05	1.52	0.00	0.00	-0.41	0.35
	L_9–U_{10}	-88.81	32.25	0.43	0.72	-0.56	-0.09	0.06	-0.04	-0.04	0.07
	L_{10}–U_{10}	-49.65	13.30	0.40	0.53	-0.19	0.49	0.07	-0.06	-0.11	0.03
	L_{10}–U_{11}	-49.65	13.30	0.40	0.53	-0.19	0.49	0.07	-0.06	-0.11	0.03
	L_{11}–U_{11}	-37.40	58.68	0.11	0.03	-1.26	0.86	0.00	0.00	-0.32	0.23
	L_{11}–U_{12}	-81.43	41.31	0.35	-0.65	0.31	0.03	0.14	-0.42	0.12	4.00
	L_{12}–U_{12}	-81.43	41.31	0.35	-0.65	0.31	0.03	0.14	-0.42	0.12	4.00
	L_{12}–U_{13}	-94.90	94.90	0.47	-0.48	1.13	-0.35	0.02	0.01	-0.50	0.41
	L_{13}–U_{13}	-94.90	94.90	0.47	-0.48	1.13	-0.35	0.02	0.01	-0.50	0.41
	L_{13}–U_{14}	-10.14	116.78	0.49	0.19	-1.67	1.97	0.16	0.13	-0.26	0.53
	L_{14}–U_{14}	-89.32	116.78	0.49	0.19	-2.62	1.97	0.16	0.13	-0.26	0.53
	L_{14}–U_{15}	-89.32	90.60	0.25	0.20	-2.62	1.41	0.05	0.08	-0.48	0.24
	L_{15}–U_{15}	-18.99	22.49	0.12	0.36	-0.82	-0.23	0.04	0.11	-0.18	0.04
	L_{15}–U_{16}	-18.99	22.49	0.12	0.36	-0.82	-0.23	0.04	0.11	-0.18	0.04
	L_{16}–U_{16}	-4.48	-12.52	0.28	-0.10	-0.67	-0.09	-0.09	-0.03	-0.14	0.05
	L_{16}–U_{17}	-4.48	-12.52	0.28	-0.10	-0.67	-0.09	-0.09	-0.03	-0.14	0.05
	L_{17}–U_{17}	-34.24	14.49	0.19	0.10	-0.68	0.48	0.07	-0.05	-0.20	0.13
Structure 3	L_{17}–U_{18}	-34.24	14.49	0.19	0.10	-0.68	0.48	0.07	-0.05	-0.20	0.13

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	$I_{t/n}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_z (k-in)
Structure 1	U_1–L_1	3.62	-1.41	0.17	-0.09	-1.36	0.65	0.15	0.01	0.03	-0.02	5.95	3.29	19.32
	U_1–L_2	-11.46	-3.33	0.30	-0.12	-0.87	0.02	0.08	-0.04	-0.25	0.07	9.95	3.49	32.64
	U_2–L_2	-20.51	-11.79	0.33	-0.09	-0.67	-0.19	0.09	-0.03	-0.13	-0.05	15.62	15.62	50.62
	U_2–L_3	9.82	-15.00	0.26	0.07	-0.47	-0.47	0.08	0.01	-0.12	0.50	18.48	18.06	4.65
	L_1–L_2	-16.21	25.07	0.23	-0.05	0.56	-0.86	0.29	-0.06	0.29	-0.36	15.62	15.62	77.31
	L_2–L_3	-34.06	79.11	0.29	0.35	-1.07	1.04	0.05	0.21	-0.33	0.22	35.09	35.09	53.13
	L_3–L_4	-39.17	72.57	0.45	0.31	-1.11	1.02	0.11	-0.57	0.41	-0.32	35.09	35.09	53.13
	L_4–L_5	-1.45	103.74	0.50	0.39	-0.74	1.37	0.15	0.18	-0.24	0.62	6.87	141.58	-14.72
	L_5–L_6	-12.32	130.19	0.59	0.30	-0.80	1.76	0.21	0.13	-0.19	0.58	-6.16	185.92	-29.49
	L_6–L_7	-73.41	69.80	0.29	0.45	-1.65	0.58	0.06	0.14	-0.38	0.21	-72.57	98.24	-129.03
	L_7–L_8	-89.96	0.00	0.00	0.00	-0.89	0.00	0.00	0.12	-0.43	0.00	-89.96	0.00	-89.96
	L_8–L_9	-69.88	47.84	0.07	0.00	-1.31	0.71	0.00	0.00	-0.31	0.21	-3.79	2.56	-89.61
	L_9–L_{10}	-27.39	6.37	0.07	-0.29	-0.72	0.02	0.00	0.00	-0.15	0.03	34.41	3.45	-47.73
	L_{10}–L_{11}	-5.38	3.28	0.00	-0.10	-0.10	0.00	0.00	0.00	-0.03	-0.10	-0.58	0.35	-5.38
	L_{11}–L_{12}	-31.03	12.71	0.20	-0.17	-0.91	0.63	0.05	-0.04	-0.19	0.11	2.55	-2.17	-11.80
	L_{12}–L_{13}	-46.63	27.25	0.19	-0.17	-1.15	0.71	-0.04	-0.04	-0.28	0.17	8.60	-0.56	-0.52
	L_{13}–L_{14}	-118.88	85.28	0.26	-0.26	-2.05	1.59	0.06	-0.05	-0.56	0.42	-9.59	5.04	-149.66
	L_{14}–L_{15}	-117.64	87.57	0.23	-0.33	-1.45	1.64	0.04	-0.04	-0.57	0.43	-4.70	5.46	-145.06
	L_{15}–L_{16}	-148.08	120.85	0.15	-0.16	-1.92	1.63	0.04	-0.04	-0.79	0.63	-8.47	7.56	-189.29
	L_{16}–L_{17}	-86.91	116.74	0.33	-0.22	-2.72	1.94	0.01	-0.06	-0.13	0.88	4.27	-2.86	-34.75
	L_{17}–L_{18}	-79.11	114.46	0.32	-0.19	-2.79	1.92	0.01	-0.10	-0.09	0.53	4.22	-2.86	-34.75
	L_{18}–L_{19}	-118.23	92.26	0.56	-0.49	-2.47	1.75	0.11	-0.10	-0.52	0.43	7.10	-6.27	-31.51
	L_{19}–L_{20}	-34.33	59.37	0.32	-0.37	-1.32	1.37	0.07	-0.06	-0.22	0.36	2.54	-0.62	-14.42
	L_{20}–L_{21}	-34.33	8.61	0.33	-0.28	-1.61	0.63	0.07	-0.06	-0.18	0.11	-26.08	6.62	-48.44
	L_{21}–L_{22}	-1.47	15.42	0.40	-0.40	-0.07	0.89	0.08	-0.08	-0.01	0.15	4.61	-4.61	-21.97
	L_{22}–L_{23}	13.33	-37.03	0.46	-0.76	0.62	0.06	-0.04	-0.03	-0.09	0.89	-8.76	-6.66	0.20
	L_{23}–L_{24}	-66.01	54.01	0.06	-0.34	-1.22	0.52	0.00	0.00	-0.23	0.00	4.70	-4.31	-15.61
	L_{24}–L_{25}	-133.77	104.34	0.10	-0.05	-2.50	1.25	0.00	0.00	-0.43	0.00	8.58	-8.04	-29.29
	L_{25}–L_{26}	-116.17	105.67	0.31	0.20	-1.95	1.25	0.04	0.11	-0.41	0.24	8.39	2.56	-24.90
	L_{26}–L_{27}	-138.98	104.34	0.15	0.03	-2.13	1.50	0.07	0.10	-0.47	0.24	8.39	-6.50	-24.90
	L_{27}–L_{28}	-131.97	101.07	0.48	0.25	-2.00	1.80	0.05	0.08	-0.49	0.43	7.24	-5.96	-24.90
	L_{28}–L_{29}	-175.19	162.79	0.78	0.56	-2.15	1.62	0.14	0.02	-0.64	0.56	14.02	-7.74	-24.90
	L_{29}–L_{30}	-64.39	98.27	0.29	0.29	-1.07	1.23	0.07	0.07	-0.24	0.36	7.24	-5.96	-24.90
	L_{30}–L_{31}	-45.28	135.71	0.52	0.09	-1.75	2.21	0.18	-0.02	-0.36	0.69	14.02	-7.74	-24.90
	L_{31}–L_{32}	-143.90	147.29	0.29	0.29	-2.08	2.01	0.07	0.07	-0.52	0.74	14.02	-7.74	-24.90
	L_{32}–L_{33}	-112.48	135.83	0.25	0.20	-2.57	2.21	0.07	0.00	-0.50	0.49	14.02	-7.74	-24.90
	L_{33}–L_{34}	-83.86	128.08	0.28	0.28	-2.07	2.07	0.07	0.00	-0.50	0.49	14.02	-7.74	-24.90
	L_{34}–L_{35}	-83.86	94.66	0.34	0.34	-2.21	1.56	0.06	0.06	-0.37	0.27	7.24	-5.96	-24.90
	L_{35}–L_{36}	-91.74	54.21	0.30	-0.28	-1.49	0.63	0.03	0.05	-0.37	0.25	3.84	-2.99	-24.90
	L_{36}–L_{37}	-133.77	104.34	0.10	-0.05	-2.50	1.25	0.00	0.00	-0.43	0.00	8.58	-8.04	-29.29
	L_{37}–L_{38}	-116.17	105.67	0.31	0.20	-1.95	1.25	0.04	0.11	-0.41	0.24	8.39	2.56	-24.90
	L_{38}–L_{39}	-138.98	104.34	0.15	0.03	-2.13	1.50	0.07	0.10	-0.47	0.24	8.39	-6.50	-24.90
	L_{39}–L_{40}	-131.97	101.07	0.48	0.25	-2.00	1.80	0.05	0.08	-0.49	0.43	7.24	-5.96	-24.90
	L_{40}–L_{41}	-175.19	162.79	0.78	0.56	-2.15	1.62	0.14	0.02	-0.64	0.56	14.02	-7.74	-24.90
	L_{41}–L_{42}	-64.39	98.27	0.29	0.29	-1.07	1.23	0.07	0.07	-0.24	0.36	7.24	-5.96	-24.90
	L_{42}–L_{43}	-45.28	135.71	0.52	0.09	-1.75	2.21	0.18	-0.02	-0.36	0.69	14.02	-7.74	-24.90
	L_{43}–L_{44}	-143.90	147.29	0.29	0.29	-2.08	2.01	0.07	0.07	-0.52	0.74	14.02	-7.74	-24.90
	L_{44}–L_{45}	-112.48	135.83	0.25	0.20	-2.57	2.21	0.07	0.00	-0.50	0.49	14.02	-7.74	-24.90
	L_{45}–L_{46}	-83.86	128.08	0.28	0.28	-2.07	2.07	0.07	0.00	-0.50	0.49	14.02	-7.74	-24.90
	L_{46}–L_{47}	-83.86	94.66	0.34	0.34	-2.21	1.56	0.06	0.06	-0.37	0.27	7.24	-5.96	-24.90
	L_{47}–L_{48}	-91.74	54.21	0.30	-0.28	-1.49	0.63	0.03	0.05	-0.37	0.25	3.84	-2.99	-24.90
	L_{48}–L_{49}	-133.77	104.34	0.10	-0.05	-2.50	1.25	0.00	0.00	-0.43	0.00	8.58	-8.04	-29.29
	L_{49}–L_{50}	-116.17	105.67	0.31	0.20	-1.95	1.25	0.04	0.11	-0.41	0.24	8.39	2.56	-24.90
	L_{50}–L_{51}	-138.98	104.34	0.15	0.03	-2.13	1.50	0.07	0.10	-0.47	0.24	8.39	-6.50	-24.90
	L_{51}–L_{52}	-131.97	101.07	0.48	0.25	-2.00	1.80	0.05	0.08	-0.49	0.43	7.24	-5.96	-24.90
	L_{52}–L_{53}	-175.19	162.79	0.78	0.56	-2.15	1.62	0.14	0.02	-0.64	0.56	14.02	-7.74	-24.90
	L_{53}–L_{54}	-64.39	98.27	0.29	0.29	-1.07	1.23	0.07	0.07	-0.24	0.36	7.24	-5.96	-24.90
	L_{54}–L_{55}	-45.28	135.71	0.52	0.09	-1.75	2.21	0.18	-0.02	-0.36	0.69	14.02	-7.74	-24.90
	L_{55}–L_{56}	-143.90	147.29	0.29	0.29	-2.08	2.01	0.07	0.07	-0.52	0.74	14.02	-7.74	-24.90
	L_{56}–L_{57}	-112.48	135.83	0.25	0.20	-2.57	2.21	0.07	0.00	-0.50	0.49	14.02	-7.74	-24.90
	L_{57}–L_{58}	-83.86	128.08	0.28	0.28	-2.07	2.07	0.07	0.00	-0.50	0.49	14.02	-7.74	-24.90
	L_{58}–L_{59}	-83.86	94.66	0.34	0.34	-2.21	1.56	0.06	0.06	-0.37	0.27	7.24	-5.96	-24.90
	L_{59}–L_{60}	-91.74	54.21	0.30	-0.28	-1.49	0.63	0.03	0.05	-0.37	0.25	3.84	-2.99	-24.90
Structure 2	L_1–U_2	33.04	-14.00	0.31	0.29	-0.57	-0.72	0.14	0.00	0.00	0.04	-0.61	0.61	0.61
	L_2–U_2	18.17	-14.00	0.29	0.29	-0.57	-0.72	0.14	0.00	0.00	0.04	-13.51	-8.01	-30.00
	L_2–U_3	-32.82	30.91	0.29	-0.27	-1.00	0.79	0.03	0.00	-0.20	0.17	3.61	-7.18	-0.08
	L_3–U_3	-53.04	30.91	0.31	-0.27	-1.00	0.79	0.03	0.00	-0.20	0.17	3.61	-7.18	-0.08
	L_3–U_4	-83.89	100.04	0.33	-0.37	-2.03	1.62	0.06	0.03	-0.39	0.44	4.20	-8.62	-25.62
	L_4–U_4	-98.49	117.09	0.34	-0.12	-2.08	1.62	0.05	0.02	-0.49	0.25	4.25	-8.62	-26.26
	L_4–U_5	-125.53	123.56	0.38	0.08	-2.58	1.62	0.05	0.02	-0.49	0.25	4.25	-8.62	-26.26
	L_5–U_5	-125.53	123.56	0.77	-0.60	-2.02	1.85	0.00	0.00	-0.52	0.49	9.72	-7.54	-25.48
	L_5–U_6	-30.08	133.86	0.77	-0.60	-2.02	1.85	0.00	0.00	-0.52	0.49	9.72	-7.54	-25.48
	L_6–U_6	-83.58	187.86	0.63	0.14	-1.89	2.33	0.17	0.01	-0.45	0.61	-5.60	9.72	-23.41
	L_6–U_7	-83.58	177.37	0.41	0.12	-1.89	2.33	0.17	0.01	-0.45	0.61	-5.60	9.72	-23.41
	L_7–U_7	-138.54	150.45	0.23	1.28	1.72	0.04	0.06	0.51	-0.45	4.00	1.82	0.02	53.63
	L_7–U_8	-128.92	122.99	0.31	0.22	-2.18	1.45	0.04	0.09	-0.46	0.33	4.59	-8.15	-26.22
	L_8–U_8	-128.92	122.99	0.31	0.22	-2.18	1.45	0.04	0.09	-0.46	0.33	4.59	-8.15	-26.22
	L_8–U_9	-128.40	95.00	0.13

Moment (Start) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression												Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield											
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass								
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																								
North Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-571.99	86	-671	-726	-392	-71	-7	396	-449	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.214	1.00	Yes	0.771	0.173	0.95	Yes	1.00	**4.48**
		U_1 - U_2	-----	-543.65	-15	-88	-527	-523	-276	26	-496	32	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.252	1.00	Yes	0.733	0.125	0.86	Yes	1.00	**3.62**
		U_2 - U_3	126.60	-579.94	-126	248	-818	-272	7	25	-48	240	0.145	0.235	0.39	Yes	0.098	0.153	0.26	Yes	0.789	0.208	1.00	Yes	0.782	0.194	0.98	Yes	1.00	**3.21**
		U_3 - U_4	294.12	-585.50	54	274	-796	-356	12	35	75	52	0.337	0.202	0.54	Yes	0.231	0.139	0.38	Yes	0.797	0.198	1.00	Yes	0.790	0.189	0.98	Yes	1.00	**3.33**
		U_4 - U_5	267.50	-570.03	84	234	-948	-193	25	-26	51	-50	0.307	0.234	0.55	Yes	0.210	0.161	0.38	Yes	0.776	0.209	0.99	Yes	0.769	0.225	1.00	Yes	1.00	**2.96**
		U_5 - U_6	603.04	-528.83	222	432	-1008	156	-131	-56	359	40	0.691	0.300	1.00	Yes	0.466	0.196	0.67	Yes	0.720	0.273	1.00	Yes	0.713	0.240	0.96	Yes	1.00	**4.56**
		U_6 - U_7	817.77	-86.41	356	215	-731	-273	-277	-107	447	-140	0.782	0.217	1.00	Yes	0.547	0.149	0.70	Yes	0.098	0.252	0.36	Yes	0.097	0.155	0.26	Yes	1.00	**4.57**
		U_7 - U_8	947.86	-----	51	1042	-1390	1909	-434	4	254	-141	0.657	0.333	1.00	Yes	0.458	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		U_8 - U_9	438.17	-----	2951	-3085	585	-4	-261	738	-964	-156	0.359	0.636	1.00	Yes	0.246	0.433	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.76**
		U_9 - U_{10}	59.24	-581.56	527	-351	-645	-744	-34	611	-568	1033	0.064	0.333	0.40	Yes	0.044	0.223	0.27	Yes	0.749	0.246	1.00	Yes	0.742	0.167	0.91	Yes	1.00	**11.30**
		U_{10} - U_{11}	402.21	-645.77	389	-24	-183	-742	-8	97	131	227	0.436	0.203	0.64	Yes	0.291	0.130	0.43	Yes	0.831	0.165	1.00	Yes	0.824	0.166	1.00	Yes	1.00	**5.13**
		U_{11} - U_{12}	-----	-866.52	266	-89	-353	-645	84	400	118	698	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.176	1.00	Yes	0.813	0.107	0.92	Yes	1.00	**3.60**
		U_{12} - U_{13}	-----	-1204.62	14	-236	-602	-760	335	214	482	431	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.175	1.00	Yes	0.805	0.105	0.91	Yes	1.00	**3.12**
		U_{13} - U_{14}	-----	-1360.59	-139	-375	-939	-1140	217	173	312	579	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.210	1.00	Yes	0.780	0.126	0.91	Yes	1.00	**2.98**
		U_{14} - U_{15}	-----	-1315.98	-278	-253	-1429	-728	216	31	616	194	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.235	1.00	Yes	0.754	0.158	0.92	Yes	1.00	**2.48**
		U_{15} - U_{16}	-----	-1369.89	-157	-436	-1085	-953	93	38	451	203	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.201	1.00	Yes	0.785	0.120	0.91	Yes	1.00	**2.60**
		U_{16} - U_{17}	-----	-1325.64	-339	-192	-1553	-570	158	-49	630	91	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.228	1.00	Yes	0.760	0.171	0.94	Yes	1.00	**2.80**
		U_{17} - U_{18}	-----	-1036.50	-212	-71	-956	-32	-1	-61	421	16	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.173	1.00	Yes	0.811	0.155	0.97	Yes	1.00	**2.76**
		U_{18} - U_{19}	-----	-698.98	-198	-70	-899	-195	24	-119	408	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.201	1.00	Yes	0.786	0.181	0.97	Yes	1.00	**3.15**
		U_{19} - U_{20}	-----	-537.38	-210	-430	-1925	856	35	-815	478	-528	-----	-----	-----	-----	-----	-----	-----	-----	0.610	0.270	0.89	Yes	0.605	0.387	1.00	Yes	1.00	**7.00**
	Structure 2	U_0 - U_1	-----	-647.85	723	-1362	-1045	-1314	-67	-113	928	-164	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.227	1.00	Yes	0.765	0.231	1.00	Yes	1.00	**7.85**
		U_1 - U_2	-----	-843.30	83	-580	-455	-825	-146	-365	-218	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.172	1.00	Yes	0.814	0.125	0.94	Yes	1.00	**4.46**
		U_2 - U_3	-----	-1160.84	155	-793	-778	-1190	-40	138	-226	536	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.163	1.00	Yes	0.824	0.121	0.95	Yes	1.00	**4.01**
		U_3 - U_4	-----	-1301.82	-409	-397	-1577	-1318	321	475	430	678	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1.00	Yes	0.741	0.140	0.89	Yes	1.00	**3.68**
		U_4 - U_5	-----	-1470.47	-429	-428	-1735	-1550	465	165	379	298	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1.00	Yes	0.755	0.144	0.90	Yes	1.00	**3.27**
		U_5 - U_6	-----	-1501.51	-425	-2	-2049	-811	187	-214	235	427	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1.00	Yes	0.771	0.170	0.95	Yes	1.00	**3.23**
		U_6 - U_7	-----	-1373.56	-285	-104	-1537	-1441	-135	-185	274	166	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1.00	Yes	0.782	0.137	0.92	Yes	1.00	**2.95**
		U_7 - U_8	-----	-1323.06	-207	-195	-1949	-934	-100	-179	177	44	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1.00	Yes	0.753	0.174	0.93	Yes	1.00	**2.76**
		U_8 - U_9	-----	-1167.67	-294	87	-1527	-494	-84	-193	385	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.198	1.00	Yes	0.792	0.162	0.96	Yes	1.00	**2.84**
		U_9 - U_{10}	100.67	-939.70	-104	309	-1445	-229	-129	-147	255	-5	0.074	0.204	0.28	Yes	0.050	0.138	0.19	Yes	0.816	0.181	1.00	Yes	0.811	0.176	0.99	Yes	1.00	**3.19**
		U_{10} - U_{11}	454.52	-751.74	146	347	-1502	-407	-167	-160	456	-42	0.384	0.267	0.66	Yes	0.261	0.174	0.44	Yes	0.752	0.242	1.00	Yes	0.747	0.212	0.96	Yes	1.00	**4.34**
		U_{11} - U_{12}	800.95	-451.90	225	526	-1727	20	-339	-124	583	83	0.677	0.315	1.00	Yes	0.454	0.210	0.67	Yes	0.452	0.211	0.67	Yes	0.449	0.244	0.70	Yes	1.00	**5.51**
		U_{12} - U_{13}	1097.88	-43.44	444	138	-1515	-753	-412	-376	632	-200	0.741	0.251	1.00	Yes	0.528	0.171	0.70	Yes	0.035	0.301	0.34	Yes	0.035	0.191	0.23	Yes	1.00	**6.39**
		U_{13} - U_{14}	1247.31	-----	78	1822	-2636	3485	-810	-413	162	-637	0.613	0.378	1.00	Yes	0.434	0.248	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		U_{14} - U_{15}	569.52	-----	6752	-4825	1084	184	-1020	160	-1380	-467	0.280	0.719	1.00	Yes	0.198	0.472	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.66**
		U_{15} - U_{16}	1115.63	-----	500	249	-2193	-473	-460	374	-565	809	0.674	0.318	1.00	Yes	0.480	0.214	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.57**
		U_{16} - U_{17}	-----	-774.97	1940	-1262	-1592	-2174	542	95	774	825	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.314	1.00	Yes	0.672	0.273	0.95	Yes	1.00	**16.57**
		U_{17} - U_{18}	-----	-612.67	684	-577	-1023	-888	81	657	5	1067	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.268	1.00	Yes	0.724	0.174	0.90	Yes	1.00	**8.57**
		U_{18} - U_{19}	-----	-696.82	619	-567	-635	-852	287	202	417	470	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.165	1.00	Yes	0.823	0.145	0.97	Yes	1.00	**6.32**
		U_{19} - U_{20}	307.88	-695.54	310	214	-771	-757	22	15	92	509	0.289	0.192	0.49	Yes	0.191	0.126	0.32	Yes	0.772	0.228	1.00	Yes	0.767	0.123	0.90	Yes	1.00	**3.91**
	Structure 3	U_0 - U_1	-----	-623.75	727	-1457	-373	-1061	-41	50	683	67	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.239	0.95	Yes	0.702	0.293	1.00	Yes	1.00	**7.27**
		U_1 - U_2	-----	-743.16	131	-615	-213	-602	-117	-407	-209	-290	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.153	1.00	Yes	0.836	0.124	0.96	Yes	1.00	**3.65**
		U_2 - U_3	-----	-1071.98	147	-804	-360	-666	-22	329	-285	509	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.145	1.00	Yes	0.839	0.131	0.97	Yes	1.00	**3.44**
		U_3 - U_4	-----	-1362.74	-157	-434	-998	-1056	263	339	384	723	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1.00	Yes	0.781	0.117	0.90	Yes	1.00	**3.94**
		U_4 - U_5	-----	-1387.68	-370	-130	-1242	-509	498	148	496	243	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1.00	Yes	0.796	0.137	0.94	Yes	1.00	**3.47**
		U_5 - U_6	-----	-1362.85	-181	-272	-1096	-1155	138	-154	177	374	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.203	1.00	Yes	0.781	0.127	0.91	Yes	1.00	**2.97**
		U_6 - U_7	-----	-1326.49	-380	-107	-1651	-523	-86	-185	402	66	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.228	1.00	Yes	0.760	0.182	0.95	Yes	1.00	**2.67**
		U_7 - U_8	-----	-1183.20	-167	-4	-1014	-521	-59	-176	293	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.192	1.00	Yes	0.790	0.140	0.94	Yes	1.00	**2.85**
		U_8 - U_9	-----	-876.12	-104	174	-914	-139	-30	-155	312	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.166	1.00	Yes	0.822	0.152	0.98	Yes	1.00	**2.52**
		U_9 - U_{10}	143.88	-618.01	-80	224	-917	28	-97	-104	249	-48	0.156	0.245	0.41	Yes	0.104	0.157	0.27	Yes	0.796	0.201	1.00	Yes	0.789	0.205	1.00	Yes	1.00	**2.99**
		U_{10} - U_{11}	649.37	-467.92	296	222	-923	1	-228	-137	511	-188	0.704	0.289	1.00	Yes	0.477	0.194	0.68	Yes	0.602	0.180	0.79	Yes	0.597	0.207	0.81	Yes	1.00	**5.63**
		U_{11} - U_{12}	864.03	-----	-12	922	-1341	1392	-428	-99	316	-249	0.708	0.286	1.00	Yes	0.484	0.195	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		U_{12} - U_{13}	481.90	-----	3916	-3259	422	148	-438	582	-685	-291	0.334	0.663	1.00	Yes	0.233	0.452	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.67**
		U_{13} - U_{14}	879.76	-----	240	443	-489	-3	-344	-230	-318	334	0.841	0.151	1.00	Yes	0.588	0.104	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		U_{14} - U_{15}	-----	-608.25	581	-395	-320	-756	204	-70	182	131	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1.00	Yes	0.820	0.180	1.00	Yes	1.00	**7.23**
		U_{15} - U_{16}	465.28	-566.11	361	252	-533	-566	-77	126	-14	486	0.533	0.217	0.75	Yes	0.366	0.148	0.52	Yes	0.770	0.228	1.00	Yes	0.763	0.134	0.90	Yes	1.00	**4.42**
		U_{16} - U_{17}	394.95	-571.14	382	121	-661	-443	80	74	440	216	0.453	0.231	0.69	Yes	0.311	0.158	0.47	Yes	0.777	0.216	1.00	Yes	0.770	0.157	0.93	Yes	1.00	**3.66**
		U_{17} - U_{18}	177.92	-553.79	286	-78	-646	-548	-38	71	292	222	0.204	0.203	0.41	Yes	0.138	0.133	0.28	Yes	0.754	0.244	1.00	Yes	0.747	0.154	0.91	Yes	1.00	**2.75**
		U_{18} - U_{19}	62.15	-517.26	133	-45	-806	-373	-12	25	459	13	0.071	0.269	0.35	Yes	0.049	0.184	0.24	Yes	0.704	0.291	1.00	Yes	0.698	0.192	0.89	Yes	1.00	**2.57**
		U_{19} - U_{20}	29.01	-513.92	155	-277	-1250	399	-107	97	376	-240	0.033	0.361	0.40	Yes	0.023	0.247	0.28	Yes	0.699	0.241	0.95	Yes	0.693	0.297	1.00	Yes	1.00	**4.42**

Moment (Start) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----										
North Truss - Lower Chord	Structure 1	L_0 - L_1			-----	-56.34	1447	-2618	-336	177	-529	-1947	-25	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.102	0.895	1.00	Yes	0.101	0.786	0.89	Yes	1.00	**22.56**
		L_1 - L_2			446.18	-----	339	-831	-210	-627	-246	-179	271	-107	0.683	0.308	1.00	Yes	0.417	0.206	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		L_2 - L_3			680.26	-27.30	-20	22	-761	-609	-32	22	-183	0	0.783	0.213	1.00	Yes	0.453	0.128	0.59	Yes	0.037	0.244	0.29	Yes	0.037	0.184	0.23	Yes	1.00	**3.31**
		L_3 - L_4			697.30	-113.17	78	223	-651	-552	52	69	203	78	0.802	0.190	1.00	Yes	0.476	0.122	0.60	Yes	0.155	0.222	0.38	Yes	0.153	0.157	0.32	Yes	1.00	**2.97**
		L_4 - L_5			262.92	-474.82	85	579	-1014	497	50	35	-201	210	0.340	0.306	0.65	Yes	0.204	0.201	0.41	Yes	0.730	0.207	0.94	Yes	0.723	0.269	1.00	Yes	1.00	**3.30**
		L_5 - L_6			-----	-726.90	163	593	-564	270	72	127	260	110	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.146	1.00	Yes	0.839	0.131	0.97	Yes	1.00	**3.75**
		L_6 - L_7			-----	-1042.74	190	182	-983	289	117	-109	-75	339	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.060	0.91	Yes	0.839	0.154	1.00	Yes	1.00	**4.90**
		L_7 - L_8			-----	-1221.88	101	954	-639	1631	51	180	371	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1.00	Yes	0.774	0.216	0.99	Yes	1.00	**5.91**
		L_8 - L_9			-----	-1230.76	1528	-43	539	-14	-174	7	-169	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1.00	Yes	0.779	0.202	0.99	Yes	1.00	**6.54**
		L_9 - L_{10}			-----	-1014.55	1162	-906	-787	-401	-156	91	934	291	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.135	0.97	Yes	0.817	0.183	1.00	Yes	1.00	**12.09**
		L_{10} - L_{11}			164.48	-554.74	525	-9	-35	-550	139	47	119	76	0.213	0.170	0.39	Yes	0.124	0.103	0.23	Yes	0.853	0.095	0.95	Yes	0.845	0.146	1.00	Yes	1.00	**4.44**
		L_{11} - L_{12}			544.65	-----	550	-943	-3	-502	-209	-193	93	26	0.705	0.286	1.00	Yes	0.423	0.188	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		L_{12} - L_{13}			1088.83	-----	177	-69	-576	-664	14	38	77	171	0.859	0.138	1.00	Yes	0.550	0.082	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		L_{13} - L_{14}			1262.92	-----	607	-1648	-301	-1191	-101	-202	260	65	0.743	0.249	1.00	Yes	0.481	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		L_{14} - L_{15}			1483.19	-----	-365	-27	-2092	-305	-117	-66	-228	95	0.725	0.268	1.00	Yes	0.471	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		L_{15} - L_{16}			1608.92	-----	-192	-403	-1573	-1272	-89	-40	116	-338	0.786	0.213	1.00	Yes	0.505	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_{16} - L_{17}			1124.19	-----	-427	89	-1635	149	-90	-56	-500	135	0.711	0.284	1.00	Yes	0.461	0.176	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_{17} - L_{18}			877.57	-----	-185	-35	-1049	-103	-59	8	141	-220	0.764	0.230	1.00	Yes	0.489	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		L_{18} - L_{19}			329.16	-----	-218	296	-1241	569	-36	-35	-578	235	0.504	0.492	1.00	Yes	0.341	0.311	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**
		L_{19} - L_{20}			192.80	-279.59	-60	-70	-1654	690	-19	-4	828	186	0.295	0.668	0.97	Yes	0.180	0.444	0.63	Yes	0.508	0.442	0.95	Yes	0.503	0.496	1.00	Yes	1.00	**10.92**
	Structure 2	L_0 - L_1			41.20	-92.90	1070	-3725	-126	29	-335	-1164	-19	-65	0.050	0.949	1.00	Yes	0.030	0.606	0.64	Yes	0.134	0.662	0.80	Yes	0.133	0.758	0.90	Yes	1.00	**21.85**
		L_1 - L_2			551.40	-----	678	-1341	-105	-895	-293	-277	-190	201	0.670	0.321	1.00	Yes	0.398	0.206	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.80**
		L_2 - L_3			1001.14	-----	322	-1122	-464	-1138	-117	13	61	271	0.799	0.197	1.00	Yes	0.526	0.114	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_3 - L_4			1296.60	-----	254	-1578	-588	-1617	-173	-110	418	181	0.769	0.226	1.00	Yes	0.519	0.145	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_4 - L_5			1738.81	-----	-267	-766	-1901	-1398	65	-82	-83	63	0.811	0.185	1.00	Yes	0.537	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		L_5 - L_6			1821.02	-----	-148	-396	-1602	-2238	110	-15	307	38	0.781	0.218	1.00	Yes	0.524	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		L_6 - L_7			1783.78	-----	-447	-116	-2424	-1504	-161	45	-34	465	0.755	0.242	1.00	Yes	0.502	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		L_7 - L_8			1330.70	-----	-220	278	-2023	-534	-132	8	159	-120	0.763	0.236	1.00	Yes	0.501	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		L_8 - L_9			1075.75	-269.05	-92	534	-1562	321	-26	16	-270	324	0.752	0.241	1.00	Yes	0.507	0.151	0.66	Yes	0.223	0.126	0.35	Yes	0.221	0.211	0.44	Yes	1.00	**4.74**
		L_9 - L_{10}			780.54	-646.24	-94	751	-1628	174	20	97	304	-163	0.697	0.297	1.00	Yes	0.406	0.185	0.60	Yes	0.683	0.163	0.85	Yes	0.679	0.261	0.94	Yes	1.00	**6.04**
		L_{10} - L_{11}			165.25	-671.19	84	526	-1185	450	54	1	-358	227	0.165	0.256	0.43	Yes	0.097	0.160	0.26	Yes	0.794	0.086	0.88	Yes	0.788	0.207	1.00	Yes	1.00	**4.34**
		L_{11} - L_{12}			-----	-1007.97	89	974	-1234	580	81	237	295	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.142	0.98	Yes	0.827	0.168	1.00	Yes	1.00	**5.54**
		L_{12} - L_{13}			-----	-1313.25	301	-284	-1776	-469	177	-141	-369	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.204	1.00	Yes	0.786	0.177	0.97	Yes	1.00	**6.96**
		L_{13} - L_{14}			-----	-1336.73	-225	1283	-2554	3647	-93	-66	459	72	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.227	0.91	Yes	0.673	0.318	1.00	Yes	1.00	**8.51**
		L_{14} - L_{15}			-----	-1254.62	4213	-2272	1059	-401	-374	-97	-423	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.255	0.90	Yes	0.631	0.368	1.00	Yes	1.00	**10.44**
		L_{15} - L_{16}			-----	-1344.95	21	260	-1879	-110	-415	-291	155	189	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.171	0.99	Yes	0.804	0.187	1.00	Yes	1.00	**7.08**
		L_{16} - L_{17}			-----	-1007.12	2094	-1008	-179	-1115	-13	-1049	-72	38	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.218	0.96	Yes	0.733	0.258	1.00	Yes	1.00	**11.81**
		L_{17} - L_{18}			489.09	-178.09	1983	-2740	-877	-1320	-1014	-709	450	156	0.437	0.560	1.00	Yes	0.254	0.346	0.60	Yes	0.188	0.354	0.55	Yes	0.187	0.438	0.63	Yes	1.00	**15.40**
		L_{18} - L_{19}			177.89	-635.39	661	113	-170	-576	-3	34	182	258	0.202	0.167	0.37	Yes	0.116	0.099	0.22	Yes	0.852	0.139	1.00	Yes	0.847	0.128	0.98	Yes	1.00	**4.28**
		L_{19} - L_{20}			645.88	-----	584	-806	-366	-986	-34	-262	464	-14	0.732	0.261	1.00	Yes	0.433	0.164	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		L_{20} - L_{21}			931.25	-417.51	516	31	-1024	-1343	-90	-94	96	368	0.753	0.240	1.00	Yes	0.495	0.140	0.64	Yes	0.400	0.224	0.63	Yes	0.397	0.200	0.60	Yes	1.00	**5.77**
		L_{21} - L_{22}			891.00	-199.41	224	-89	-1040	-1562	-88	-28	387	85	0.720	0.275	1.00	Yes	0.483	0.167	0.66	Yes	0.191	0.255	0.45	Yes	0.190	0.233	0.43	Yes	1.00	**4.49**
		L_{22} - L_{23}			805.25	-43.26	-23	51	-2092	-517	-1	-21	-82	301	0.651	0.344	1.00	Yes	0.436	0.209	0.65	Yes	0.041	0.277	0.32	Yes	0.041	0.311	0.36	Yes	1.00	**4.42**
		L_{23} - L_{24}			856.75	-295.18	3	367	-1789	-556	10	77	344	-72	0.692	0.304	1.00	Yes	0.455	0.176	0.64	Yes	0.283	0.274	0.56	Yes	0.281	0.266	0.55	Yes	1.00	**6.08**
		L_{24} - L_{25}			553.37	-419.93	228	348	-1534	-189	59	0	-329	493	0.627	0.371	1.00	Yes	0.371	0.235	0.61	Yes	0.563	0.217	0.79	Yes	0.560	0.296	0.86	Yes	1.00	**5.91**
		L_{25} - L_{26}			197.84	-576.82	91	632	-1197	20	34	116	249	-232	0.224	0.269	0.50	Yes	0.129	0.160	0.29	Yes	0.774	0.177	0.96	Yes	0.769	0.231	1.00	Yes	1.00	**5.89**
		L_{26} - L_{27}			-----	-718.40	300	371	-1527	525	157	54	-458	187	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.126	0.89	Yes	0.754	0.244	1.00	Yes	1.00	**6.32**
		L_{27} - L_{28}			-----	-1051.64	199	1054	-1880	1046	257	529	309	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.221	1.00	Yes	0.766	0.232	1.00	Yes	1.00	**9.34**
		L_{28} - L_{29}			-----	-1139.50	436	-609	-2315	-1236	441	-154	-561	237	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.304	1.00	Yes	0.682	0.230	0.92	Yes	1.00	**10.02**
		L_{29} - L_{30}			-----	-1142.98	-248	1257	-3730	4828	-407	-855	874	588	-----	-----	-----	-----	-----	-----	-----	-----	0.580	0.288	0.87	Yes	0.575	0.422	1.00	Yes	1.00	**12.86**
		L_{30} - L_{31}			-----	-937.08	5958	-3438	678	-318	732	982	-61	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.476	0.381	0.86	Yes	0.472	0.520	1.00	Yes	1.00	**16.77**
		L_{31} - L_{32}			-----	-1257.01	213	-196	-1996	-481	-331	108	506	223	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.231	1.00	Yes	0.758	0.201	0.96	Yes	1.00	**8.40**
		L_{32} - L_{33}			-----	-977.13	1448	-816	-435	-788	425	-213	110	122	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.133	0.95	Yes	0.801	0.197	1.00	Yes	1.00	**11.43**
		L_{33} - L_{34}			501.98	-----	1187	-2403	-546	-881	-359	-471	561	124	0.501	0.496	1.00	Yes	0.294	0.311	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.48**
		L_{34} - L_{35}			871.99	-664.72	679	61	-671	-1059	-42	64	178	401	0.778	0.218	1.00	Yes	0.453	0.134	0.59	Yes	0.703	0.175	0.88	Yes	0.698	0.169	0.87	Yes	1.00	**7.94**
		L_{35} - L_{36}			1088.95	-----	627	-1315	-557	-1042	-37	-229	580	100	0.762	0.232	1.00	Yes	0.513	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{36} - L_{37}			1363.92	-38.55	243	2	-1099	-1624	-103	12	-18	380	0.782	0.210	1.00	Yes	0.514	0.124	0.64	Yes	0.026	0.214	0.24	Yes	0.026	0.179	0.21	Yes	1.00	**4.88**
		L_{37} - L_{38}			1826.19	-----	101	-356	-2230	-2177	-2	-45	347	-99	0.773	0.217	1.00	Yes	0.514	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		L_{38} - L_{39}			1740.97	-----	-257	-160	-2626	-994	-56	5	-199	187	0.747	0.245	1.00	Yes	0.501	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_{39} - L_{40}			1686.21	-----	-147	-382	-1970	-1540	-26	-40	135	-375	0.786	0.212	1.00	Yes	0.520	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_{40} - L_{41}			1247.60	-----	-310	-48	-1944	-223	-60	-10	-412	245	0.733	0.260	1.00	Yes	0.494	0.162	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		L_{41} - L_{42}			979.77	-----	-130	-120	-1398	-54	-31	-31	240	-49	0.772	0.228	1.00	Yes	0.506	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		L_{42} - L_{43}			472.29	-----	-212	14	-1450	365	-62	-64	-421	217	0.604	0.389	1.00	Yes	0.361	0.225	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_{43} - L_{44}			217.64	-53.32	-68	-13	-2573	622	-153	-44	1262	369	0.264	0.731	1.00	Yes	0.157	0.463	0.63	Yes	0.077	0.473	0.55	Yes	0.076	0.524	0.60	Yes	1.00	**13.89**
	Structure 3	L_0 - L_1			180.51	-261.80	906	-1664	-13	-85	-138	-627	-9	-40	0.287	0.642	0.93	Yes	0.176	0.420	0.60	Yes	0.494	0.368	0.87	Yes	0.490	0.502	1.00	Yes	1.00	**11.99**
		L_1 - L_2			367.99	-----	745	-1337	100	-427	-76	-100	-38	155	0.563	0.433	1.00	Yes	0.381	0.269	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.38**
		L_2 - L_3			851.18	-----	407	-834	-352	-674	-30	-24	366	713	0.741	0.252	1.00	Yes	0.474	0.154	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		L_3 - L_4			1200.79	-----	425	-1384	-519	-1126	-265	-150	329	173	0.759	0.232	1.00	Yes	0.493	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_4 - L_5			1618.64	-----	-330	-217	-1540	-1126	80	119	94	254	0.791	0.203	1.00	Yes	0.508	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_5 - L_6			1551.73	-----	7	-1626	-874	-1787	-213	-240	347	142	0.758	0.240	1.00	Yes	0.493	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		L_6 - L_7			1238.96	-----	-403	238	-1761	125	-183	17	-117	282	0.729	0.266	1.00	Yes	0.472	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_7 - L_8			1030.29	-----	-90	105	-867	-438	-30	38	204	-14	0.813	0.178	1.00	Yes	0.520	0.106	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		L_8 - L_9			550.88	-122.93	-172	338	-835	204	-16	46	-210	324	0.713	0.278	1.00	Yes	0.428	0.181	0.61	Yes	0.189	0.134	0.33	Yes	0.187	0.221	0.41	Yes	1.00	**3.39**
		L_9 - L_{10}			199.32	-502.92	-7	471	-863	95	69	135	350	105	0.258	0.290	0.55	Yes	0.150	0.174	0.33	Yes	0.773	0.173	0.95	Yes	0.766	0.229	1.00	Yes	1.00	**5.02**
		L_{10} - L_{11}			-----	-978.30	203	170	-1304	603	127	-164	-392	176	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.095	0.90	Yes	0.787	0.205	1.00	Yes	1.00	**7.53**
		L_{11} - L_{12}			-----	-1227.32	125	1073	-874	1570	-101	-26	558	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.211	1.00	Yes	0.777	0.208	0.99	Yes	1.00	**8.49**
		L_{12} - L_{13}			-----	-1133.10	2119	-696	424	-5	-246	27	-191	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.268	1.00	Yes	0.718	0.281	1.00	Yes	1.00	**9.40**
		L_{13} - L_{14}			-----	-887.09	1564	-1793	-1693	-702	-1067	-677	1140	353	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.248	0.98	Yes	0.714	0.282	1.00	Yes	1.00	**18.59**
		L_{14} - L_{15}			-----	-748.73	570	167	10	-230	149	-6	-1	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.122	1.00	Yes	0.864	0.126	1.00	Yes	1.00	**3.62**
		L_{15} - L_{16}			458.46	-----	738	-1258	-215	-587	-379	-254	39	39	0.594	0.400	1.00	Yes	0.356	0.262	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{16} - L_{17}			663.09	-286.71	379	44	-843	-397	90	-40	116	172	0.763	0.231	1.00	Yes	0.453	0.150	0.61	Yes	0.392	0.172	0.57	Yes	0.388	0.204	0.60	Yes	1.00	**4.03**
		L_{17} - L_{18}			652.43	-118.25	92	-8	-858	-585	6	8	228	-39	0.751	0.244	1.00	Yes	0.434	0.146	0.59	Yes	0.162	0.262	0.43	Yes	0.160	0.207	0.37	Yes	1.00	**3.43**
		L_{18} - L_{19}			425.43	-21.31	47	1	-900	51	20	-101	-154	333	0.651	0.342	1.00	Yes	0.397	0.228	0.63	Yes	0.039	0.201	0.24	Yes	0.038	0.270	0.31	Yes	1.00	**3.45**
		L_{19} - L_{20}			55.79	-33.13	78	-195	-1981	700	-1	0	1485	404	0.085	0.914	1.00	Yes	0.050	0.551	0.61	Yes	0.060	0.658	0.72	Yes	0.060	0.595	0.66	Yes	1.00	**14.09**

Moment (Start) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
	Vehicle	Pedestrian	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in	-----	-----	-----	-----	-----	-----	-----	-----										
North Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-287.58	-57	87	-171	216	-30	-10	-339	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.244	0.96	Yes	0.672	0.322	1.00	Yes	1.00	**1.70**
		$U_1 - L_1$	20.05	-322.28	27	-15	-244	245	0	-2	-141	-14	0.036	0.354	0.40	Yes	0.020	0.195	0.22	Yes	0.704	0.115	0.82	Yes	0.682	0.313	1.00	Yes	1.00	**3.70**
		$U_2 - L_2$	98.90	-280.49	84	-94	-273	314	61	29	-329	-25	0.178	0.496	0.68	Yes	0.098	0.273	0.38	Yes	0.613	0.193	0.81	Yes	0.594	0.401	1.00	Yes	1.00	**5.23**
		$U_3 - L_3$	194.11	-283.76	309	-279	-276	311	225	187	50	36	0.349	0.462	0.82	Yes	0.192	0.254	0.45	Yes	0.622	0.170	0.80	Yes	0.600	0.397	1.00	Yes	1.00	**7.95**
		$U_4 - L_4$	-----	-213.63	426	-415	-59	43	-366	-112	-250	68	-----	-----	-----	-----	-----	-----	-----	-----	0.470	0.238	0.71	Yes	0.452	0.544	1.00	Yes	1.00	**8.24**
		$U_5 - L_5$	-----	-423.31	228	-261	63	-92	100	-73	7	33	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.101	0.87	Yes	0.730	0.265	1.00	Yes	1.00	**2.78**
		$U_6 - L_6$	-----	-488.81	242	-261	84	-87	252	25	59	59	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.118	0.90	Yes	0.738	0.253	1.00	Yes	1.00	**2.45**
		$U_7 - L_7$	-----	-411.17	272	-289	129	-143	176	23	-146	15	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.142	0.88	Yes	0.671	0.320	1.00	Yes	1.00	**1.79**
		$U_8 - L_8$	-----	-1193.16	464	-559	-375	441	974	281	233	121	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.138	1.00	Yes	0.827	0.104	0.94	Yes	1.00	**5.05**
		$U_9 - L_9$	-----	-636.13	-171	200	-399	441	-414	-170	-396	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.157	0.94	Yes	0.736	0.256	1.00	Yes	1.00	**3.12**
		$U_{10} - L_{10}$	-----	-677.74	-121	109	-340	343	-581	-313	-1029	-650	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.267	1.00	Yes	0.697	0.191	0.89	Yes	1.00	**3.83**
		$U_{11} - L_{11}$	-----	-657.82	-118	207	-394	503	-465	-277	-666	-495	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.197	0.99	Yes	0.766	0.233	1.00	Yes	1.00	**4.01**
		$U_{12} - L_{12}$	-----	-520.46	-90	95	-328	329	-346	-203	-144	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.157	0.91	Yes	0.714	0.281	1.00	Yes	1.00	**3.49**
		$U_{13} - L_{13}$	-----	-359.46	-37	57	-240	268	-185	6	-107	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.132	0.86	Yes	0.689	0.306	1.00	Yes	1.00	**2.98**
		$U_{14} - L_{14}$	-----	-170.84	214	-223	-469	496	118	36	101	272	-----	-----	-----	-----	-----	-----	-----	-----	0.381	0.210	0.60	Yes	0.361	0.633	1.00	Yes	1.00	**10.87**
		$U_{15} - L_{15}$	144.11	-309.75	245	-266	-100	94	343	-80	80	52	0.259	0.440	0.70	Yes	0.143	0.242	0.39	Yes	0.694	0.166	0.87	Yes	0.655	0.340	1.00	Yes	1.00	**4.45**
		$U_{16} - L_{16}$	8.35	-323.27	237	-246	13	-27	258	-154	47	-51	0.015	0.389	0.41	Yes	0.008	0.214	0.23	Yes	0.728	0.134	0.87	Yes	0.684	0.314	1.00	Yes	1.00	**3.21**
		$U_{17} - L_{17}$	-----	-438.00	219	-240	60	-75	215	-142	-122	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.123	0.95	Yes	0.756	0.244	1.00	Yes	1.00	**2.52**
		$U_{18} - L_{18}$	-----	-539.77	425	-440	144	-150	278	-170	-134	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.100	0.90	Yes	0.751	0.249	1.00	Yes	1.00	**2.69**
		$U_{19} - L_{19}$	-----	-643.57	534	-523	171	-170	211	-112	-118	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.105	0.91	Yes	0.749	0.248	1.00	Yes	1.00	**3.11**
		$U_{20} - L_{20}$	-----	-555.72	325	-476	161	-262	590	77	29	4	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.227	1.00	Yes	0.680	0.229	0.91	Yes	1.00	**2.05**
	Structure 2	$U_0 - L_0$	-----	-607.46	-167	216	-409	493	-37	-6	-853	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.236	1.00	Yes	0.681	0.222	0.91	Yes	1.00	**2.62**
		$U_1 - L_1$	-----	-720.79	-116	126	-515	527	-106	-6	-601	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.135	0.96	Yes	0.772	0.224	1.00	Yes	1.00	**4.35**
		$U_2 - L_2$	-----	-582.38	-105	115	-495	495	-107	-38	-298	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.111	0.90	Yes	0.742	0.253	1.00	Yes	1.00	**3.91**
		$U_3 - L_3$	-----	-487.34	-55	63	-240	251	77	-46	-100	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.093	0.93	Yes	0.764	0.228	1.00	Yes	1.00	**3.28**
		$U_4 - L_4$	-----	-342.23	-10	25	-209	211	-54	43	15	2	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.092	0.87	Yes	0.724	0.270	1.00	Yes	1.00	**3.27**
		$U_5 - L_5$	125.49	-318.86	93	-81	-228	248	-128	94	-113	-40	0.226	0.354	0.58	Yes	0.124	0.195	0.32	Yes	0.720	0.152	0.88	Yes	0.675	0.317	1.00	Yes	1.00	**4.58**
		$U_6 - L_6$	334.74	-260.00	207	-210	-260	266	170	158	95	7	0.602	0.389	1.00	Yes	0.331	0.214	0.55	Yes	0.585	0.148	0.74	Yes	0.550	0.340	0.89	Yes	1.00	**6.72**
		$U_7 - L_7$	-----	-281.94	289	-312	-77	87	511	116	-30	114	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.254	0.90	Yes	0.597	0.398	1.00	Yes	1.00	**7.74**
		$U_8 - L_8$	-----	-466.22	346	-367	55	-77	150	-139	-40	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.106	0.79	Yes	0.672	0.321	1.00	Yes	1.00	**3.58**
		$U_9 - L_9$	-----	-695.02	573	-593	152	-179	528	-39	-155	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.143	0.92	Yes	0.745	0.251	1.00	Yes	1.00	**4.41**
		$U_{10} - L_{10}$	-----	-796.72	542	-571	168	-195	479	-103	14	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.116	0.91	Yes	0.745	0.252	1.00	Yes	1.00	**4.45**
		$U_{11} - L_{11}$	-----	-812.85	511	-528	186	-188	200	-149	-171	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.103	0.93	Yes	0.760	0.233	1.00	Yes	1.00	**4.00**
		$U_{12} - L_{12}$	-----	-886.03	530	-538	156	-134	186	-62	-154	6	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.101	0.96	Yes	0.768	0.231	1.00	Yes	1.00	**4.29**
		$U_{13} - L_{13}$	-----	-748.20	575	-557	210	-206	418	46	-162	20	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.162	1.00	Yes	0.721	0.275	1.00	Yes	1.00	**3.46**
		$U_{14} - L_{14}$	-----	-1216.44	785	-749	-584	543	603	297	57	285	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.110	1.00	Yes	0.807	0.139	0.95	Yes	1.00	**6.65**
		$U_{15} - L_{15}$	-----	-711.17	-117	125	-637	606	-300	13	-492	-107	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.200	1.00	Yes	0.686	0.305	1.00	Yes	1.00	**5.58**
		$U_{16} - L_{16}$	-----	-699.30	-89	63	-524	505	-804	-260	-819	-409	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.192	1.00	Yes	0.749	0.222	0.98	Yes	1.00	**4.59**
		$U_{17} - L_{17}$	-----	-629.30	-124	122	-557	547	-275	-184	-678	-439	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.196	0.98	Yes	0.732	0.258	1.00	Yes	1.00	**4.36**
		$U_{18} - L_{18}$	-----	-575.23	-95	95	-499	511	-114	-127	-313	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.128	0.90	Yes	0.733	0.261	1.00	Yes	1.00	**3.93**
		$U_{19} - L_{19}$	-----	-478.15	-57	61	-295	294	-66	-33	-43	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.100	0.82	Yes	0.714	0.284	1.00	Yes	1.00	**3.40**
		$U_{20} - L_{20}$	-----	-374.71	-10	16	-240	243	-178	-30	-139	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.119	0.89	Yes	0.718	0.278	1.00	Yes	1.00	**3.59**
	Structure 3	$U_{21} - L_{21}$	53.28	-315.41	26	-21	-243	256	-88	48	-28	-39	0.096	0.353	0.45	Yes	0.053	0.194	0.25	Yes	0.713	0.112	0.83	Yes	0.667	0.327	1.00	Yes	1.00	**3.82**
		$U_{22} - L_{22}$	-----	-306.32	238	-238	-267	274	655	197	484	250	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.255	0.95	Yes	0.648	0.350	1.00	Yes	1.00	**9.23**
		$U_{23} - L_{23}$	94.11	-318.29	238	-255	-62	52	187	-64	33	118	0.169	0.380	0.55	Yes	0.093	0.209	0.31	Yes	0.719	0.131	0.85	Yes	0.673	0.326	1.00	Yes	1.00	**4.02**
		$U_{24} - L_{24}$	-----	-373.14	233	-246	6	-25	210	-67	160	68	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.105	0.87	Yes	0.715	0.281	1.00	Yes	1.00	**3.52**
		$U_{25} - L_{25}$	-----	-473.43	303	-299	42	-41	369	-44	-85	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.107	0.82	Yes	0.707	0.292	1.00	Yes	1.00	**3.28**
		$U_{26} - L_{26}$	-----	-570.21	502	-529	70	-73	372	-48	-121	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.131	0.90	Yes	0.727	0.271	1.00	Yes	1.00	**3.77**
		$U_{27} - L_{27}$	-----	-630.82	544	-555	88	-88	535	-3	-134	2	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.137	0.92	Yes	0.734	0.258	1.00	Yes	1.00	**3.94**
		$U_{28} - L_{28}$	-----	-708.21	546	-546	78	-74	567	19	-152	16	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.126	0.95	Yes	0.759	0.232	1.00	Yes	1.00	**4.12**
		$U_{29} - L_{29}$	-----	-718.38	635	-610	120	-125	471	20	-116	27	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.169	0.97	Yes	0.693	0.304	1.00	Yes	1.00	**4.71**
		$U_{30} - L_{30}$	-----	-1195.52	835	-821	-749	676	627	-47	313	356	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.109	1.00	Yes	0.808	0.150	0.96	Yes	1.00	**8.03**
		$U_{31} - L_{31}$	-----	-749.72	-108	109	-550	524	-311	-31	-214	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.163	1.00	Yes	0.723	0.263	0.99	Yes	1.00	**5.07**
		$U_{32} - L_{32}$	-----	-780.55	-82	60	-469	453	-687	-276	-995	-439	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.241	1.00	Yes	0.677	0.201	0.88	Yes	1.00	**4.96**
		$U_{33} - L_{33}$	-----	-810.47	-117	106	-490	488	-447	-339	-516	-468	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.170	1.00	Yes	0.764	0.219	0.99	Yes	1.00	**4.98**
		$U_{34} - L_{34}$	-----	-812.97	-105	121	-518	540	-276	-191	-24	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.100	0.91	Yes	0.760	0.239	1.00	Yes	1.00	**5.31**
		$U_{35} - L_{35}$	-----	-697.72	-96	119	-578	579	-215	1	-243	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.095	0.88	Yes	0.748	0.245	1.00	Yes	1.00	**5.01**
		$U_{36} - L_{36}$	-----	-472.84	-46	60	-346	357	-63	64	37	3	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.093	0.78	Yes	0.681	0.312	1.00	Yes	1.00	**3.79**
		$U_{37} - L_{37}$	-----	-243.31	68	-72	-342	376	-98	80	262	187	-----	-----	-----	-----	-----	-----	-----	-----	0.550	0.223	0.78	Yes	0.515	0.480	1.00	Yes	1.00	**8.48**
		$U_{38} - L_{38}$	345.62	-173.93	154	-159	-232	238	230	-73	42	101	0.622	0.371	1.00	Yes	0.342	0.204	0.55	Yes	0.391	0.109	0.51	Yes	0.368	0.304	0.68	Yes	1.00	**5.19**
		$U_{39} - L_{39}$	140.63	-326.91	218	-240	-146	122	185	-107	116	143	0.253	0.360	0.62	Yes	0.139	0.198	0.34	Yes	0.738	0.117	0.86	Yes	0.692	0.306	1.00	Yes	1.00	**5.11**
		$U_{40} - L_{40}$	17.55	-341.61	208	-209	-12	-1	295	-84	28	-30	0.032	0.353	0.39	Yes	0.017	0.194	0.22	Yes	0.775	0.106	0.89	Yes	0.723	0.268	1.00	Yes	1.00	**3.43**
		$U_{41} - L_{41}$	-----	-486.29	240	-252	29	-33	182	-133	6	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.229	1.00	Yes	1.00	**3.41**
		$U_{42} - L_{42}$	-----	-586.01	480	-489	60	-69	177	-179	11	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.082	0.87	Yes	0.747	0.250	1.00	Yes	1.00	**3.84**
		$U_{43} - L_{43}$	-----	-706.39	548	-553	82	-95	500	7	-49	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.114	0.93	Yes	0.757	0.235	1.00	Yes	1.00	**3.90**
		$U_{44} - L_{44}$	-----	-630.14	386	-511	118	-135	1002	170	-129	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.238	1.00	Yes	0.675	0.217	0.90	Yes	1.00	**3.29**
	Structure 4	$U_0 - L_0$	-----	-578.70	-144	192	-412	484	-57	-7	-617	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.211	1.00	Yes	0.695	0.232	0.93	Yes	1.00	**2.77**
		$U_1 - L_1$	-----	-659.31	-112	124	-487	496	-125	-3	16	127	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.082	0.91	Yes	0.767	0.230	1.00	Yes	1.00	**4.13**
		$U_2 - L_2$	-----	-542.05	-110	117	-413	424	-151	-46	-51	12	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.089	0.89	Yes	0.754	0.240	1.00	Yes	1.00	**3.36**
		$U_3 - L_3$	-----	-442.21	-44	57	-220	234	45	-64	-157	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.122	0.95	Yes	0.763	0.237	1.00	Yes	1.00	**3.13**
		$U_4 - L_4$	-----	-321.71	-11	25	-238	244	-28	51	-86	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.109	0.84	Yes	0.681	0.312	1.00	Yes	1.00	**3.43**
		$U_5 - L_5$	108.72	-315.76	78	-71	-237	256	-97	111	124	7	0.196	0.363	0.56	Yes	0.108	0.200	0.31	Yes	0.708	0.144	0.86	Yes	0.668	0.327	1.00	Yes	1.00	**4.30**
		$U_6 - L_6$	-----	-222.03	389	-411	-297	310	99	12	-272	136	-----	-----	-----	-----	-----	-----	-----	-----	0.495	0.216	0.72	Yes	0.470	0.525	1.00	Yes	1.00	**10.86**
		$U_7 - L_7$	-----	-367.84	236	-256	8	-27	200	-103	24	5	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.110	0.86	Yes	0.705	0.292	1.00	Yes	1.00	**3.18**
		$U_8 - L_8$	-----	-516.14	331	-336	71	-74	313	-73	-8	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.138	0.89	Yes	0.708	0.287	1.00	Yes	1.00	**3.66**
		$U_9 - L_9$	-----	-650.23	425	-523	97	-167	-181	-304	-43	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.132	0.92	Yes	0.757	0.243	1.00	Yes	1.00	**4.47**
		$U_{10} - L_{10}$	-----	-780.13	398	-437	118	-136	178	-72	-123	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.103	0.92	Yes	0.770	0.226	1.00	Yes	1.00	**4.41**
		$U_{11} - L_{11}$	-----	-648.75	425	-472	168	-193	429	99	-160	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.148	0.93	Yes	0.733	0.262	1.00	Yes	1.00	**2.90**
		$U_{12} - L_{12}$	-----	-1184.12	530	-686	-473	518	779	343	187	154	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.145	1.00	Yes	0.821	0.128	0.95	Yes	1.00	**5.92**
		$U_{13} - L_{13}$	-----	-449.83	-66	75	-293	303	-342	-39	-410	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.187	0.94	Yes	0.694	0.299	1.00	Yes	1.00	**3.22**
		$U_{14} - L_{14}$	-----	-510.72	-44	29	-250	261	-662	-323	-710	-426	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.224	1.00	Yes	0.732	0.228	0.97	Yes	1.00	**3.64**
		$U_{15} - L_{15}$	-----	-418.96	-34	42	-226	243	-475	-233	-605	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.235	1.00	Yes	0.723	0.247	0.97	Yes	1.00	**3.68**
		$U_{16} - L_{16}$	-----	-132.35	71	-53	-559	546	-848	-420	-450	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.291	0.413	0.71	Yes	0.280	0.715	1.00	Yes	1.00	**10.54**
		$U_{17} - L_{17}$	224.13	-264.51	213	-240	-341	335	-22	-135	155	167	0.403	0.485	0.89	Yes	0.222	0.266	0.49	Yes	0.580	0.146	0.73	Yes	0.560	0.436	1.00	Yes	1.00	**7.17**
		$U_{18} - L_{18}$	76.17	-296.77	237	-283	-109	105	141	-93	132	41	0.137	0.403	0.55	Yes	0.075	0.222	0.30	Yes	0.649	0.158	0.81	Yes	0.628	0.362	1.00	Yes	1.00	**5.13**
		$U_{19} - L_{19}$	39.68	-322.44	247	-236	-49	38	247	28	-83	-8	0.071	0.387	0.46	Yes	0.039	0.213	0.26	Yes	0.705	0.139	0.85	Yes	0.682	0.316	1.00	Yes	1.00	**3.09**
		$U_{20} - L_{20}$	-----	-319.22	108	-184	-16	-66	632	203	-601	-193	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.283	1.00	Yes	0.675	0.235	0.92	Yes	1.00	**1.67**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1	$U_0 - L_1$	505.85	-----	-15	-2	-149	68	-6	14	-626	-118	0.664	0.332	1.00	Yes	0.401	0.183	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_1 - L_2$	418.57	-77.62	15	-19	-96	-3	-14	-21	-424	-352	0.753	0.246	1.00	Yes	0.414	0.135	0.55	Yes	0.178	0.240	0.42	Yes	0.164	0.123	0.29	Yes	1.00	**4.00**
		$U_2 - L_3$	86.77	-289.43	57	-32	-185	-83	48	33	8	-109	0.156	0.269	0.43	Yes	0.086	0.148	0.24	Yes	0.666	0.326	1.00	Yes	0.612	0.237	0.85	Yes	1.00	**9.18**
		$U_3 - L_4$	135.33	-317.24	53	-7	-114	-129	115	119	-297	-260	0.243	0.250	0.50	Yes	0.134	0.138	0.28	Yes	0.725	0.267	1.00	Yes	0.671	0.164	0.84	Yes	1.00	**7.79**
		$U_4 - L_4$	528.68	-----	-10	56	-118	-2	31	-16	-380	-395	0.782	0.212	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		$U_4 - L_5$	661.64	-----	-29	152	-236	189	201	76	-440	-371	0.782	0.214	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		$U_5 - L_6$	639.61	-----	-80	120	-313	242	344	159	-296	-228	0.756	0.241	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		$U_6 - L_7$	638.59	-----	22	162	-105	302	374	176	-148	-147	0.755	0.240	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		$U_8 - L_8$	986.67	-----	110	221	-107	343	132	-13	344	436	0.789	0.208	1.00	Yes	0.489	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_9 - L_{10}$	968.53	-----	-76	87	-332	211	116	137	359	542	0.774	0.217	1.00	Yes	0.480	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{10} - L_{11}$	956.45	-----	-47	175	-299	150	157	200	171	391	0.808	0.189	1.00	Yes	0.500	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		$U_{11} - L_{12}$	836.75	-----	-70	52	-269	80	24	125	-22	271	0.828	0.165	1.00	Yes	0.455	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{12} - L_{13}$	638.21	-----	-74	41	-216	126	-155	-99	-38	156	0.778	0.219	1.00	Yes	0.490	0.123	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{13} - L_{14}$	458.67	-----	-17	-18	-95	29	-177	-184	-82	-14	0.825	0.174	1.00	Yes	0.454	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{15} - L_{14}$	145.37	-299.14	41	-106	-83	-38	-368	-129	-460	-326	0.261	0.268	0.53	Yes	0.144	0.148	0.30	Yes	0.701	0.294	1.00	Yes	0.633	0.135	0.77	Yes	1.00	**4.09**
		$U_{16} - L_{15}$	376.04	-82.07	-2	-36	-140	79	-317	-155	-499	-341	0.676	0.323	1.00	Yes	0.372	0.178	0.55	Yes	0.195	0.247	0.45	Yes	0.174	0.179	0.36	Yes	1.00	**4.13**
		$U_{17} - L_{16}$	504.08	-----	-34	14	-141	93	-110	-130	-476	-371	0.739	0.254	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.71**
		$U_{18} - L_{17}$	581.64	-----	-110	75	-333	230	-108	-115	-648	-534	0.688	0.306	1.00	Yes	0.378	0.168	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.12**
		$U_{19} - L_{18}$	661.64	-----	-132	87	-357	246	-65	-106	-571	-478	0.717	0.276	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_{20} - L_{19}$	656.00	-----	-90	95	-283	263	-148	-71	-823	-332	0.711	0.280	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
	Structure 2	$U_0 - L_1$	653.56	-----	-116	101	-430	360	-59	-47	-986	123	0.647	0.347	1.00	Yes	0.356	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_1 - L_2$	756.75	-----	-95	72	-393	298	-100	-29	-407	-282	0.749	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_2 - L_3$	646.97	-----	-86	66	-334	256	-25	88	-209	146	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_3 - L_4$	593.42	-----	-38	16	-191	121	105	61	-124	78	0.791	0.200	1.00	Yes	0.435	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		$U_4 - L_5$	425.76	-51.53	-2	-24	-134	98	-134	-141	-198	35	0.766	0.228	1.00	Yes	0.421	0.126	0.55	Yes	0.127	0.113	0.25	Yes	0.109	0.171	0.29	Yes	1.00	**3.86**
		$U_5 - L_6$	418.05	-205.80	59	-88	-121	52	-301	-192	-205	106	0.752	0.241	1.00	Yes	0.414	0.133	0.55	Yes	0.486	0.200	0.69	Yes	0.435	0.154	0.59	Yes	1.00	**4.92**
		$U_6 - L_7$	46.90	-380.75	54	-100	-62	-23	-86	-303	-144	-55	0.076	0.193	0.27	Yes	0.042	0.106	0.15	Yes	0.815	0.180	1.00	Yes	0.729	0.115	0.85	Yes	1.00	**3.56**
		$U_8 - L_7$	556.53	-----	-25	-29	-205	103	-272	-207	-393	-494	0.710	0.285	1.00	Yes	0.447	0.162	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_8 - L_8$	686.97	-----	-118	40	-326	223	-130	-160	-499	-425	0.744	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.62**
		$U_{10} - L_9$	757.94	-----	-93	125	-338	196	5	-60	-582	-546	0.750	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{11} - L_{10}$	840.81	-----	-100	146	-355	260	162	25	-588	-518	0.766	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		$U_{12} - L_{11}$	856.44	-----	-109	163	-373	345	290	121	-415	-399	0.780	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{13} - L_{12}$	737.93	-----	-150	153	-455	373	352	136	-348	-271	0.730	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_{14} - L_{13}$	768.70	-----	-1	186	-282	432	142	107	-211	-168	0.760	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{14} - L_{15}$	641.72	-----	64	125	-222	351	143	-64	100	208	0.759	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.82**
		$U_{15} - L_{16}$	619.87	-----	-64	71	-377	330	-38	18	-109	259	0.733	0.261	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_{16} - L_{17}$	698.00	-----	-57	99	-350	331	-171	117	-183	349	0.756	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{17} - L_{18}$	649.36	-----	-68	81	-291	266	-22	105	-84	338	0.768	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{18} - L_{19}$	655.17	-----	-50	69	-294	244	35	21	54	296	0.775	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_{19} - L_{20}$	587.73	-----	-16	23	-215	143	-35	-33	145	285	0.749	0.250	1.00	Yes	0.412	0.141	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_{20} - L_{21}$	440.55	-----	-6	-5	-124	101	-114	-77	-43	133	0.792	0.198	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_{21} - L_{22}$	425.43	-164.46	27	-61	-134	29	-169	-198	0	165	0.765	0.228	1.00	Yes	0.421	0.125	0.55	Yes	0.389	0.181	0.57	Yes	0.348	0.171	0.52	Yes	1.00	**5.16**
		$U_{23} - L_{22}$	370.02	-282.40	56	-97	-131	24	-195	-31	-435	-333	0.666	0.293	0.96	Yes	0.366	0.161	0.53	Yes	0.673	0.320	1.00	Yes	0.598	0.167	0.77	Yes	1.00	**5.79**
		$U_{24} - L_{23}$	413.37	-55.80	5	-24	-123	99	-240	-60	-327	-246	0.743	0.252	1.00	Yes	0.409	0.139	0.55	Yes	0.134	0.153	0.29	Yes	0.118	0.157	0.28	Yes	1.00	**3.80**
		$U_{25} - L_{24}$	579.14	-----	-15	29	-194	172	65	3	-391	-335	0.738	0.253	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{26} - L_{25}$	625.96	-----	-28	39	-299	244	116	44	-461	-396	0.740	0.253	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{27} - L_{26}$	644.46	-----	-46	58	-298	275	176	68	-349	-296	0.762	0.232	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{28} - L_{27}$	683.03	-----	-46	65	-369	338	206	115	-416	-369	0.740	0.257	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{29} - L_{28}$	617.71	-----	-72	83	-382	337	266	131	-271	-190	0.730	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{30} - L_{29}$	621.41	-----	37	107	-224	350	339	130	-196	-169	0.735	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{30} - L_{31}$	755.23	-----	70	149	-299	426	209	2	219	327	0.747	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.58**
		$U_{31} - L_{32}$	706.12	-----	-71	75	-439	360	-12	43	46	294	0.733	0.265	1.00	Yes	0.403	0.136	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{32} - L_{33}$	867.89	-----	-62	96	-361	325	-139	131	-348	359	0.791	0.202	1.00	Yes	0.435	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_{33} - L_{34}$	861.67	-----	-67	91	-359	253	25	201	0	452	0.785	0.214	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_{34} - L_{35}$	800.27	-----	-61	80	-341	209	78	93	137	310	0.792	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{35} - L_{36}$	735.08	-----	-87	83	-332	228	-15	-6	-30	159	0.796	0.196	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		$U_{36} - L_{37}$	598.62	-----	-27	-3	-214	119	-198	-222	-100	127	0.763	0.236	1.00	Yes	0.480	0.133	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_{38} - L_{37}$	-----	-375.89	67	-98	-42	-24	-183	-84	-259	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1.00	Yes	0.720	0.112	0.84	Yes	1.00	**3.27**
		$U_{39} - L_{38}$	367.09	-320.20	89	-125	-105	61	-301	-111	-301	-272	0.660	0.247	0.91	Yes	0.363	0.136	0.50	Yes	0.763	0.231	1.00	Yes	0.678	0.160	0.84	Yes	1.00	**5.33**
		$U_{40} - L_{39}$	403.92	-100.94	13	-37	-134	96	-224	-127	-339	-320	0.726	0.270	1.00	Yes	0.400	0.148	0.55	Yes	0.242	0.192	0.44	Yes	0.214	0.171	0.39	Yes	1.00	**4.32**
		$U_{41} - L_{40}$	538.99	-----	-18	2	-180	115	-94	-79	-537	-411	0.718	0.277	1.00	Yes	0.395	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{42} - L_{41}$	607.36	-----	-50	33	-324	258	-68	-65	-500	-446	0.718	0.274	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{43} - L_{42}$	711.76	-----	-64	43	-407	276	-3	-45	-673	-566	0.704	0.290	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{44} - L_{43}$	733.65	-----	-91	85	-318	328	-11	-12	-808	-432	0.726	0.273	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
	Structure 3	$U_0 - L_1$	623.50	-----	-113	95	-407	309	-63	-53	-668	-35	0.675	0.318	1.00	Yes	0.371	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_1 - L_2$	717.92	-----	-99	66	-357	245	-126	-45	-207	26	0.778	0.217	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		$U_2 - L_3$	638.72	-----	-94	60	-363	241	-49	80	-128	188	0.755	0.239	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_3 - L_4$	548.58	-----	-30	11	-152	96	74	49	-142	51	0.804	0.187	1.00	Yes	0.442	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_4 - L_5$	417.50	-87.45	-7	-29	-139	80	-111	-173	-221	71	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	0.207	0.129	0.34	Yes	0.185	0.178	0.37	Yes	1.00	**4.05**
		$U_5 - L_6$	325.12	-318.23	46	-113	-131	-31	-338	-351	-70	23	0.585	0.269	0.86	Yes	0.322	0.148	0.47	Yes	0.746	0.254	1.00	Yes	0.673	0.167	0.85	Yes	1.00	**6.02**
		$U_7 - L_6$	389.63	-92.64	4	-58	-119	-3	-321	-202	-488	-438	0.701	0.293	1.00	Yes	0.385	0.161	0.55	Yes	0.215	0.265	0.48	Yes	0.196	0.152	0.35	Yes	1.00	**4.79**
		$U_8 - L_7$	608.92	-----	-61	13	-197	143	-323	-215	-417	-418	0.742	0.254	1.00	Yes	0.467	0.144	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_8 - L_8$	777.32	-----	-62	80	-276	79	-97	-142	-689	-607	0.769	0.231	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{10} - L_9$	893.51	-----	-41	135	-297	117	111	6	-768	-725	0.755	0.238	1.00	Yes	0.467	0.135	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{11} - L_{10}$	944.83	-----	-74	126	-340	212	361	192	-719	-590	0.755	0.243	1.00	Yes	0.468	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{12} - L_{11}$	971.04	-----	88	178	-122	349	221	156	-471	-355	0.776	0.216	1.00	Yes	0.481	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		$U_{12} - L_{13}$	674.61	-----	63	141	-114	283	36	-89	127	221	0.798	0.201	1.00	Yes	0.439	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{13} - L_{14}$	651.78	-----	-26	57	-304	223	-71	39	-6	268	0.771	0.222	1.00	Yes	0.424	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{14} - L_{15}$	690.52	-----	1	136	-228	174	-19	111	-105	244	0.816	0.174	1.00	Yes	0.449	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_{15} - L_{16}$	542.11	-----	3	71	-136	4	135	203	134	251	0.795	0.196	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{17} - L_{16}$	43.55	-323.02	61	1	-106	-103	199	192	-333	-248	0.078	0.232	0.32	Yes	0.043	0.128	0.18	Yes	0.739	0.253	1.00	Yes	0.683	0.136	0.82	Yes	1.00	**7.81**
		$U_{18} - L_{17}$	368.10	-267.70	57	-30	-133	-20	268	178	-518	-362	0.662	0.321	0.99	Yes	0.364	0.176	0.55	Yes	0.616	0.376	1.00	Yes	0.566	0.171	0.74	Yes	1.00	**7.15**
		$U_{19} - L_{18}$	380.56	-130.81	26	-20	-114	-6	161	124	-582	-440	0.684	0.314	1.00	Yes	0.376	0.173	0.55	Yes	0.300	0.312	0.62	Yes	0.277	0.146	0.43	Yes	1.00	**4.01**
		$U_{20} - L_{19}$	280.43	-----	191	-16	-203	92	1363	57	-1552	-469	0.368	0.628	1.00	Yes	0.222	0.346	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.63**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield								
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																						
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-482.06	478	-486	-1178	-501	36	-199	365	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.340	1	Yes	0.650	0.280	0.94	Yes	1.00	**5.24**
		U_1 - U_2	-----	-548.51	-38	-75	-753	-468	168	25	-41	16	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.245	1	Yes	0.740	0.179	0.92	Yes	1.00	**4.76**
		U_2 - U_3	138.61	-592.60	-85	261	-841	-334	-5	-89	133	-86	0.159	0.223	0.39	Yes	0.107	0.145	0.26	Yes	0.806	0.187	1	Yes	0.799	0.200	1.00	Yes	1.00	**3.80**
		U_3 - U_4	334.29	-555.67	106	270	-1045	-156	-101	-83	43	-73	0.383	0.265	0.65	Yes	0.263	0.182	0.45	Yes	0.756	0.207	0.97	Yes	0.749	0.248	1.00	Yes	1.00	**4.94**
		U_4 - U_5	284.61	-545.54	92	230	-1081	-190	-162	-24	-157	-129	0.326	0.284	0.62	Yes	0.224	0.195	0.42	Yes	0.742	0.243	0.99	Yes	0.736	0.257	1.00	Yes	1.00	**4.04**
		U_5 - U_6	544.61	-480.32	215	357	-1117	2	-334	-27	-199	-284	0.624	0.322	0.95	Yes	0.421	0.210	0.64	Yes	0.654	0.346	1	Yes	0.648	0.265	0.92	Yes	1.00	**5.52**
		U_6 - U_7	764.30	-192.48	291	196	-954	-272	-315	96	-472	-163	0.731	0.268	1.00	Yes	0.511	0.184	0.70	Yes	0.219	0.294	0.52	Yes	0.217	0.203	0.42	Yes	1.00	**5.77**
		U_7 - U_8	885.88	-----	35	961	-2007	2230	-160	451	-201	146	0.614	0.384	1.00	Yes	0.428	0.262	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		U_8 - U_9	445.13	-----	3369	-2561	588	-59	27	536	-41	98	0.365	0.631	1.00	Yes	0.250	0.429	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.52**
		U_9 - U_{10}	-----	-583.37	468	-304	-914	-600	260	407	175	452	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.244	1	Yes	0.744	0.205	0.95	Yes	1.00	**11.90**
		U_{10} - U_{11}	-----	-649.49	340	-720	-297	-696	359	-32	316	152	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.141	0.98	Yes	0.829	0.161	1.00	Yes	1.00	**5.90**
		U_{11} - U_{12}	-----	-898.22	229	-399	-547	-664	260	-94	274	179	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.145	1	Yes	0.843	0.110	0.96	Yes	1.00	**5.07**
		U_{12} - U_{13}	-----	-1170.57	71	-227	-885	-700	249	-274	412	29	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.203	1	Yes	0.782	0.122	0.91	Yes	1.00	**4.42**
		U_{13} - U_{14}	-----	-1378.86	-97	-344	-1252	-1118	148	76	213	40	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.790	0.138	0.93	Yes	1.00	**4.61**
		U_{14} - U_{15}	-----	-1293.88	-252	-594	-1691	-851	147	-216	199	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.242	1	Yes	0.742	0.187	0.93	Yes	1.00	**3.63**
		U_{15} - U_{16}	-----	-1393.33	25	-1223	-1496	-918	-68	-351	106	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.183	1	Yes	0.799	0.165	0.97	Yes	1.00	**3.78**
		U_{16} - U_{17}	-----	-1307.96	-318	-185	-1766	-650	54	-176	-108	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.750	0.195	0.95	Yes	1.00	**3.71**
		U_{17} - U_{18}	-----	-980.44	-168	-102	-1137	-199	-157	-232	-138	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.220	1	Yes	0.767	0.185	0.96	Yes	1.00	**3.51**
		U_{18} - U_{19}	-----	-692.62	-197	-29	-959	-72	-194	-173	-38	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.779	0.193	0.98	Yes	1.00	**3.46**
		U_{19} - U_{20}	-----	-546.77	-34	-1305	-1657	-48	-129	-669	553	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.377	1	Yes	0.615	0.333	0.95	Yes	1.00	**7.94**
	Structure 2	U_0 - U_1	-----	-574.08	1266	-1299	-1878	-743	182	78	850	51	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.281	0.97	Yes	0.678	0.319	1.00	Yes	1.00	**9.35**
		U_1 - U_2	-----	-820.07	23	-466	-624	-782	193	305	478	288	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.199	1	Yes	0.791	0.119	0.92	Yes	1.00	**5.07**
		U_2 - U_3	-----	-1123.39	310	-610	-1002	-1309	676	-43	393	100	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.195	1	Yes	0.797	0.133	0.94	Yes	1.00	**5.21**
		U_3 - U_4	-----	-1322.72	-365	-293	-1787	-1426	121	-298	271	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.235	1	Yes	0.753	0.159	0.92	Yes	1.00	**4.16**
		U_4 - U_5	-----	-1411.15	-318	-753	-2055	-1474	-12	-560	192	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.263	1	Yes	0.725	0.170	0.90	Yes	1.00	**4.14**
		U_5 - U_6	-----	-1459.64	-381	0	-2504	-662	-112	-299	28	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.244	1	Yes	0.749	0.208	0.96	Yes	1.00	**4.36**
		U_6 - U_7	-----	-1343.58	-258	-69	-1857	-1446	-93	-268	-17	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.228	1	Yes	0.765	0.165	0.94	Yes	1.00	**4.16**
		U_7 - U_8	-----	-1250.98	-178	-227	-2350	-802	-168	-208	-170	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.274	1	Yes	0.712	0.209	0.93	Yes	1.00	**3.50**
		U_8 - U_9	-----	-1145.09	-305	77	-1717	-551	-209	-183	-93	-224	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.208	1	Yes	0.777	0.183	0.96	Yes	1.00	**3.88**
		U_9 - U_{10}	105.95	-894.66	-100	273	-1744	-400	-267	-126	-202	-163	0.078	0.241	0.32	Yes	0.053	0.163	0.22	Yes	0.777	0.218	1	Yes	0.772	0.212	0.99	Yes	1.00	**4.31**
		U_{10} - U_{11}	437.06	-753.02	69	333	-1752	-436	-132	-66	-163	-191	0.369	0.270	0.64	Yes	0.251	0.174	0.43	Yes	0.753	0.240	1	Yes	0.748	0.247	1.00	Yes	1.00	**5.78**
		U_{11} - U_{12}	768.33	-458.89	167	497	-2044	-22	-327	-156	-146	-453	0.649	0.344	1.00	Yes	0.436	0.230	0.67	Yes	0.459	0.227	0.69	Yes	0.456	0.288	0.75	Yes	1.00	**6.98**
		U_{12} - U_{13}	397.74	-406.85	644	-2263	-3249	-2266	-1145	323	-943	-596	0.269	0.518	0.79	Yes	0.191	0.352	0.55	Yes	0.326	0.665	1	Yes	0.323	0.409	0.74	Yes	1.00	**15.15**
		U_{13} - U_{14}	1146.98	-----	-74	1789	-3570	4269	-179	409	-530	-87	0.564	0.431	1.00	Yes	0.399	0.282	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.42**
		U_{14} - U_{15}	379.71	-----	8153	-6753	1142	-82	-16	734	-334	83	0.187	0.805	1.00	Yes	0.132	0.527	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.85**
		U_{15} - U_{16}	1022.31	-----	298	171	-2647	-1003	608	836	371	868	0.618	0.374	1.00	Yes	0.440	0.252	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.20**
		U_{16} - U_{17}	-----	-770.93	1872	-1286	-2277	-1906	724	244	920	364	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.318	1	Yes	0.668	0.286	0.96	Yes	1.00	**18.13**
		U_{17} - U_{18}	-----	-634.28	749	-562	-1434	-821	146	-194	161	234	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.234	0.99	Yes	0.749	0.243	1.00	Yes	1.00	**10.50**
		U_{18} - U_{19}	-----	-690.38	623	-636	-733	-1051	76	-216	202	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.134	0.96	Yes	0.815	0.178	1.00	Yes	1.00	**6.87**
		U_{19} - U_{20}	244.71	-661.67	286	150	-1076	-685	3	132	169	101	0.229	0.195	0.43	Yes	0.152	0.128	0.29	Yes	0.735	0.260	1	Yes	0.730	0.172	0.91	Yes	1.00	**5.12**
		U_{20} - U_{21}	-----	-825.55	189	-299	-1291	-626	114	-354	166	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1	Yes	0.753	0.187	0.95	Yes	1.00	**5.36**
		U_{21} - U_{22}	52.02	-799.89	-13	16	-1331	-932	-16	-52	71	-13	0.040	0.201	0.25	Yes	0.029	0.133	0.17	Yes	0.735	0.258	1	Yes	0.730	0.193	0.93	Yes	1.00	**4.57**
		U_{22} - U_{23}	-----	-761.71	77	-922	-1603	-674	-3	-207	39	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.295	1	Yes	0.695	0.232	0.93	Yes	1.00	**3.96**
		U_{23} - U_{24}	-----	-778.49	114	-970	-1415	-489	-201	-315	-37	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.280	1	Yes	0.710	0.205	0.92	Yes	1.00	**4.11**
		U_{24} - U_{25}	175.82	-673.06	96	215	-1378	-527	-221	-37	-153	-127	0.165	0.250	0.42	Yes	0.109	0.165	0.28	Yes	0.747	0.250	1	Yes	0.743	0.221	0.97	Yes	1.00	**4.28**
		U_{25} - U_{26}	349.17	-618.61	144	363	-1563	-61	-253	31	-158	-71	0.351	0.302	0.66	Yes	0.230	0.192	0.43	Yes	0.735	0.202	0.94	Yes	0.731	0.265	1.00	Yes	1.00	**5.13**
		U_{26} - U_{27}	622.31	-570.20	226	414	-1876	-132	-171	32	-171	-163	0.625	0.344	0.97	Yes	0.416	0.228	0.65	Yes	0.678	0.211	0.89	Yes	0.673	0.319	1.00	Yes	1.00	**7.06**
		U_{27} - U_{28}	886.13	-333.11	221	555	-2340	-92	-283	-2	-343	-444	0.653	0.341	1.00	Yes	0.434	0.224	0.66	Yes	0.291	0.306	0.6	Yes	0.289	0.294	0.59	Yes	1.00	**8.52**
		U_{28} - U_{29}	283.81	-357.39	720	-3581	-4696	-2100	-918	-156	-1124	-663	0.172	0.629	0.81	Yes	0.122	0.422	0.55	Yes	0.256	0.740	1	Yes	0.254	0.534	0.79	Yes	1.00	**16.76**
		U_{29} - U_{30}	1076.72	-----	30	1856	-3757	4492	35	657	-263	110	0.529	0.461	1.00	Yes	0.375	0.302	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.95**
		U_{30} - U_{31}	943.89	-----	5135	-2702	1342	77	184	745	-438	-175	0.464	0.526	1.00	Yes	0.329	0.345	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.28**
		U_{31} - U_{32}	969.38	-----	150	471	-2141	-401	-72	182	378	757	0.655	0.342	1.00	Yes	0.467	0.232	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.67**
		U_{32} - U_{33}	-----	-792.40	1106	-1448	-1315	-1504	757	-55	683	329	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.185	0.98	Yes	0.787	0.212	1.00	Yes	1.00	**14.61**
		U_{33} - U_{34}	646.88	-808.76	431	229	-994	-1111	122	198	245	142	0.546	0.187	0.74	Yes	0.372	0.121	0.50	Yes	0.809	0.182	1	Yes	0.804	0.157	0.97	Yes	1.00	**7.45**
		U_{34} - U_{35}	287.87	-970.01	402	17	-900	-1156	102	-5	270	-19	0.211	0.170	0.39	Yes	0.143	0.115	0.26	Yes	0.842	0.148	1	Yes	0.837	0.141	0.98	Yes	1.00	**5.87**
		U_{35} - U_{36}	39.50	-1192.68	184	-227	-1253	-987	95	104	244	51	0.023	0.153	0.18	Yes	0.016	0.100	0.12	Yes	0.815	0.179	1	Yes	0.809	0.133	0.95	Yes	1.00	**5.34**
		U_{36} - U_{37}	-----	-1336.55	-121	-55	-1448	-1699	135	-80	299	60	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.233	1	Yes	0.761	0.151	0.92	Yes	1.00	**4.53**
		U_{37} - U_{38}	-----	-1246.55	58	-1273	-2230	-1029	4	-108	157	6	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.283	1	Yes	0.710	0.199	0.91	Yes	1.00	**3.74**
		U_{38} - U_{39}	-----	-1555.57	208	-2157	-2023	-1745	-8	-444	214	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1	Yes	0.799	0.179	0.98	Yes	1.00	**4.56**
		U_{39} - U_{40}	-----	-1362.90	-338	-471	-2498	-1373	-117	-144	-160	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.291	1	Yes	0.700	0.207	0.91	Yes	1.00	**3.72**
		U_{40} - U_{41}	-----	-1260.02	-408	-433	-2222	-1171	-89	-138	-160	-262	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.275	1	Yes	0.717	0.198	0.92	Yes	1.00	**3.57**
		U_{41} - U_{42}	-----	-1087.02	-281	-175	-2009	-458	-99	26	-60	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.218	1	Yes	0.771	0.205	0.98	Yes	1.00	**3.81**
		U_{42} - U_{43}	-----	-776.93	-262	-286	-1513	-308	-18	-45	206	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1	Yes	0.750	0.230	0.98	Yes	1.00	**4.48**
		U_{43} - U_{44}	-----	-513.98	-41	-1031	-1798	-227	-161	-536	399	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.611	0.380	1	Yes	0.607	0.305	0.92	Yes	1.00	**7.35**
	Structure 3	U_0 - U_1	-----	-571.71	1291	-1345	-1748	-639	10	-310	846	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.269	0.92	Yes	0.643	0.352	1.00	Yes	1.00	**8.70**
		U_1 - U_2	-----	-721.91	51	-654	-362	-512	182	269	346	289	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1	Yes	0.812	0.132	0.95	Yes	1.00	**3.92**
		U_2 - U_3	-----	-1053.74	211	-814	-511	-676	602	-58	429	0	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.163	1	Yes	0.825	0.133	0.96	Yes	1.00	**4.41**
		U_3 - U_4	-----	-1350.26	-84	-416	-1244	-1038	196	-463	233	2	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1	Yes	0.774	0.137	0.92	Yes	1.00	**5.15**
		U_4 - U_5	-----	-1357.27	-264	-233	-1453	-641	37	-553	217	-265	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.211	1	Yes	0.778	0.160	0.94	Yes	1.00	**4.15**
		U_5 - U_6	-----	-1321.81	-147	-220	-1349	-1116	-52	-210	-46	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.231	1	Yes	0.758	0.149	0.91	Yes	1.00	**4.21**
		U_6 - U_7	-----	-1282.32	-197	-980	-1876	-537	-107	-390	-38	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.250	1	Yes	0.735	0.207	0.95	Yes	1.00	**3.74**
		U_7 - U_8	-----	-1125.62	-131	-52	-1297	-454	-203	-204	-162	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1	Yes	0.752	0.179	0.94	Yes	1.00	**3.75**
		U_8 - U_9	-----	-866.34	-115	146	-1037	-135	-183	-123	-118	-194	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1	Yes	0.813	0.172	0.99	Yes	1.00	**3.54**
		U_9 - U_{10}	95.69	-595.48	-92	184	-1027	10	-256	-130	-132	-198	0.104	0.271	0.38	Yes	0.069	0.174	0.25	Yes	0.767	0.223	0.99	Yes	0.760	0.230	1.00	Yes	1.00	**3.89**
		U_{10} - U_{11}	623.38	-486.39	231	218	-1146	-242	-315	-54	-391	-164	0.676	0.319	1.00	Yes	0.458	0.214	0.68	Yes	0.626	0.265	0.9	Yes	0.621	0.257	0.88	Yes	1.00	**7.63**
		U_{11} - U_{12}	764.30	-----	-76	886	-1916	1796	-222	184	-351	8	0.626	0.364	1.00	Yes	0.428	0.248	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		U_{12} - U_{13}	436.71	-14.11	4293	-4007	638	-29	-60	458	-138	58	0.303	0.697	1.00	Yes	0.211	0.475	0.69	Yes	0.012	0.450	0.47	Yes	0.012	0.651	0.67	Yes	1.00	**13.38**
		U_{13} - U_{14}	253.49	-470.47	372	-31	-1454	-576	254	458	263	538	0.242	0.383	0.63	Yes	0.169	0.263	0.44	Yes	0.535	0.457	1	Yes	0.529	0.309	0.84	Yes	1.00	**11.22**
		U_{14} - U_{15}	-----	-577.03	604	-248	-450	-645	362	-191	464	100	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.206	1	Yes	0.778	0.153	0.94	Yes	1.00	**7.62**
		U_{15} - U_{16}	352.78	-581.19	285	149	-654	-547	-14	150	136	190	0.404	0.188	0.60	Yes	0.278	0.129	0.41	Yes	0.791	0.203	1	Yes	0.784	0.156	0.94	Yes	1.00	**5.43**
		U_{16} - U_{17}	-----	-594.36	404	-538	-801	-544	28	-118	155	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.097	0.91	Yes	0.801	0.191	1.00	Yes	1.00	**4.48**
		U_{17} - U_{18}	102.44	-567.65	228	-130	-749	-479	-67	136	-16	-51	0.117	0.201	0.32	Yes	0.079	0.131	0.21	Yes	0.772	0.227	1	Yes	0.765	0.178	0.95	Yes	1.00	**3.24**
		U_{18} - U_{19}	-----	-547.63	66	-184	-909	-289	27	179	183	10	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.254	1	Yes	0.738	0.216	0.96	Yes	1.00	**3.11**
		U_{19} - U_{20}	-----	-485.32	110	-313	-927	-334	-65	18	324	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.330	1	Yes	0.654	0.220	0.88	Yes	1.00	**4.34**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	126.77	-32.65	959	-1500	-176	64	-440	-1618	23	84	0.194	0.798	1.00	Yes	0.114	0.478	0.60	Yes	0.059	0.544	0.61	Yes	0.059	0.450	0.51	Yes	1.00	**14.09**
		L_1 - L_2	460.10	-----	278	-734	-463	-635	11	-75	-349	33	0.704	0.295	1.00	Yes	0.430	0.196	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_2 - L_3	653.79	-56.41	-38	53	-850	-560	11	-6	9	-226	0.752	0.242	1.00	Yes	0.435	0.145	0.58	Yes	0.077	0.238	0.32	Yes	0.076	0.205	0.29	Yes	1.00	**4.11**
		L_3 - L_4	644.61	-----	86	-679	-943	-457	-137	22	-114	167	0.742	0.254	1.00	Yes	0.440	0.165	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		L_4 - L_5	228.37	-460.27	87	435	-1117	394	127	-124	-136	50	0.296	0.320	0.62	Yes	0.177	0.211	0.39	Yes	0.708	0.220	0.93	Yes	0.701	0.296	1.00	Yes	1.00	**4.58**
		L_5 - L_6	8.65	-714.49	133	548	-782	100	9	67	-48	115	0.008	0.188	0.20	Yes	0.005	0.114	0.12	Yes	0.833	0.157	1	Yes	0.824	0.173	1.00	Yes	1.00	**5.40**
		L_6 - L_7	-----	-1010.36	158	90	-1170	200	167	10	49	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.108	0.94	Yes	0.813	0.184	1.00	Yes	1.00	**6.61**
		L_7 - L_8	-----	-1078.00	95	1014	-1391	2363	-160	-76	206	113	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.278	0.97	Yes	0.683	0.313	1.00	Yes	1.00	**10.54**
		L_8 - L_9	-----	-1208.16	1724	-401	543	-21	-24	-58	62	7	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.207	0.99	Yes	0.765	0.228	1.00	Yes	1.00	**7.91**
		L_9 - L_{10}	-----	-861.19	1397	-1895	-1515	-693	46	-272	294	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.104	0.81	Yes	0.693	0.298	1.00	Yes	1.00	**18.18**
		L_{10} - L_{11}	384.94	-533.34	481	-20	-263	-691	73	10	-8	-3	0.499	0.196	0.70	Yes	0.290	0.119	0.41	Yes	0.820	0.112	0.94	Yes	0.813	0.183	1.00	Yes	1.00	**6.82**
		L_{11} - L_{12}	590.52	-----	435	-768	-122	-573	-108	-16	-61	148	0.765	0.229	1.00	Yes	0.459	0.151	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_{12} - L_{13}	1064.67	-----	98	-127	-601	-781	-151	-105	-48	19	0.840	0.156	1.00	Yes	0.537	0.093	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_{13} - L_{14}	1273.36	-----	660	-1593	-647	-900	-319	-40	-80	294	0.749	0.246	1.00	Yes	0.485	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_{14} - L_{15}	1496.06	-----	-347	-81	-2132	-378	-66	-50	-153	161	0.731	0.268	1.00	Yes	0.475	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		L_{15} - L_{16}	1582.51	-----	-192	-388	-1784	-1056	-76	13	-109	43	0.773	0.223	1.00	Yes	0.496	0.129	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		L_{16} - L_{17}	1183.55	-----	-400	39	-1555	55	-34	-64	-157	39	0.748	0.242	1.00	Yes	0.486	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{17} - L_{18}	901.45	-----	-175	-57	-1029	-58	-75	-13	-51	-50	0.785	0.208	1.00	Yes	0.502	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{18} - L_{19}	428.66	-----	-246	173	-1003	403	-4	-32	-171	105	0.656	0.337	1.00	Yes	0.444	0.210	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_{19} - L_{20}	79.30	-14.75	-101	22	-2078	941	-34	-8	1196	268	0.121	0.872	1.00	Yes	0.074	0.577	0.66	Yes	0.027	0.519	0.55	Yes	0.027	0.624	0.66	Yes	1.00	**15.61**
	Structure 2	L_0 - L_1	9.06	-86.27	931	-2560	-133	39	-494	-1717	12	42	0.014	0.982	1.00	Yes	0.008	0.485	0.50	Yes	0.154	0.724	0.88	Yes	0.153	0.617	0.78	Yes	1.00	**18.14**
		L_1 - L_2	547.67	-----	766	-1453	-185	-1049	52	124	-194	141	0.665	0.327	1.00	Yes	0.396	0.211	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.40**
		L_2 - L_3	1019.63	-----	402	-1019	-588	-853	4	109	447	17	0.804	0.195	1.00	Yes	0.527	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_3 - L_4	1345.31	-----	375	-1597	-862	-1585	-57	80	-49	281	0.790	0.209	1.00	Yes	0.532	0.130	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_4 - L_5	1686.63	-----	52	-1709	-2014	-1282	-142	-115	229	171	0.786	0.206	1.00	Yes	0.521	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_5 - L_6	1807.01	-----	-3	-1841	-1933	-2228	-363	-122	-153	161	0.775	0.220	1.00	Yes	0.520	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		L_6 - L_7	1785.98	-----	-392	-102	-2568	-1633	52	-12	20	247	0.756	0.241	1.00	Yes	0.502	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		L_7 - L_8	1263.51	-----	-196	214	-2349	-225	-70	78	-179	125	0.724	0.274	1.00	Yes	0.476	0.160	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_8 - L_9	1076.54	-247.15	-127	491	-1685	313	43	-123	-96	134	0.753	0.240	1.00	Yes	0.507	0.149	0.66	Yes	0.205	0.130	0.34	Yes	0.203	0.227	0.44	Yes	1.00	**6.26**
		L_9 - L_{10}	798.94	-567.25	-86	589	-1677	-37	-38	32	-86	39	0.713	0.279	1.00	Yes	0.415	0.174	0.59	Yes	0.600	0.166	0.77	Yes	0.596	0.268	0.87	Yes	1.00	**7.46**
		L_{10} - L_{11}	176.35	-649.77	-5	551	-1320	509	118	-57	-63	-33	0.176	0.247	0.43	Yes	0.103	0.156	0.26	Yes	0.768	0.074	0.85	Yes	0.763	0.231	1.00	Yes	1.00	**5.74**
		L_{11} - L_{12}	-----	-972.39	-7	921	-1431	634	12	54	82	83	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.132	0.94	Yes	0.797	0.195	1.00	Yes	1.00	**6.96**
		L_{12} - L_{13}	-----	-1210.28	140	-254	-2086	-1197	92	41	-100	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.266	1	Yes	0.724	0.207	0.94	Yes	1.00	**8.60**
		L_{13} - L_{14}	-----	-1124.75	-234	1409	-3929	4893	-529	-500	85	34	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.289	0.87	Yes	0.566	0.427	1.00	Yes	1.00	**12.14**
		L_{14} - L_{15}	-----	-1211.49	4455	-2762	1215	-549	-269	-142	-275	-185	-----	-----	-----	-----	-----	-----	-----	-----	0.615	0.251	0.87	Yes	0.610	0.389	1.00	Yes	1.00	**9.62**
		L_{15} - L_{16}	-----	-1218.19	-144	202	-2655	-662	185	175	-20	33	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.257	1	Yes	0.729	0.264	1.00	Yes	1.00	**9.31**
		L_{16} - L_{17}	139.92	-847.40	3025	-2765	-977	-1520	-574	-303	426	208	0.087	0.421	0.51	Yes	0.058	0.250	0.31	Yes	0.622	0.291	0.92	Yes	0.617	0.373	1.00	Yes	1.00	**19.98**
		L_{17} - L_{18}	591.53	-189.79	2065	-2643	-1411	-997	-338	-223	106	397	0.528	0.471	1.00	Yes	0.307	0.293	0.61	Yes	0.201	0.269	0.47	Yes	0.199	0.423	0.63	Yes	1.00	**18.27**
		L_{18} - L_{19}	672.41	-----	1011	-1034	-919	-1055	-184	-135	182	118	0.762	0.232	1.00	Yes	0.439	0.138	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.66**
		L_{19} - L_{20}	670.25	-----	690	-1025	-622	-827	-222	-23	-62	236	0.759	0.234	1.00	Yes	0.449	0.149	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.56**
		L_{20} - L_{21}	964.31	-----	415	-1189	-1189	-1416	-196	-69	32	68	0.769	0.228	1.00	Yes	0.504	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		L_{21} - L_{22}	935.61	-----	245	-1416	-1297	-1520	-216	-9	37	232	0.746	0.247	1.00	Yes	0.499	0.155	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		L_{22} - L_{23}	837.59	-42.45	-89	46	-2214	-415	-2	-45	-73	68	0.668	0.331	1.00	Yes	0.447	0.206	0.66	Yes	0.040	0.270	0.32	Yes	0.040	0.323	0.37	Yes	1.00	**5.44**
		L_{23} - L_{24}	879.40	-323.22	-5	308	-1940	-368	-5	68	68	122	0.701	0.296	1.00	Yes	0.460	0.175	0.64	Yes	0.305	0.247	0.56	Yes	0.303	0.283	0.59	Yes	1.00	**6.83**
		L_{24} - L_{25}	603.55	-448.10	100	449	-1556	45	95	-90	-56	24	0.684	0.315	1.00	Yes	0.404	0.202	0.61	Yes	0.601	0.132	0.74	Yes	0.597	0.300	0.90	Yes	1.00	**6.53**
		L_{25} - L_{26}	220.08	-578.78	57	549	-1164	220	9	77	-18	89	0.249	0.238	0.49	Yes	0.144	0.142	0.29	Yes	0.776	0.155	0.94	Yes	0.771	0.225	1.00	Yes	1.00	**6.16**
		L_{26} - L_{27}	-----	-739.39	130	484	-1385	543	127	-22	-69	38	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.085	0.87	Yes	0.776	0.222	1.00	Yes	1.00	**6.25**
		L_{27} - L_{28}	-----	-1068.36	69	1021	-1789	709	78	144	-47	2	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.179	0.97	Yes	0.778	0.221	1.00	Yes	1.00	**8.70**
		L_{28} - L_{29}	-----	-1197.99	184	-494	-2113	-1454	202	171	-188	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.269	1	Yes	0.717	0.210	0.93	Yes	1.00	**9.15**
		L_{29} - L_{30}	-----	-1124.63	-203	1188	-3982	4942	-374	-464	145	185	-----	-----	-----	-----	-----	-----	-----	-----	0.571	0.281	0.86	Yes	0.566	0.432	1.00	Yes	1.00	**12.14**
		L_{30} - L_{31}	-----	-1213.17	4426	-2415	1137	-264	170	145	-362	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.616	0.266	0.89	Yes	0.610	0.386	1.00	Yes	1.00	**10.07**
		L_{31} - L_{32}	-----	-1145.51	-71	-311	-2687	-754	88	-2	206	146	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.299	1	Yes	0.685	0.267	0.96	Yes	1.00	**10.30**
		L_{32} - L_{33}	319.55	-637.84	2878	-3452	-1420	-1614	-343	58	598	555	0.223	0.526	0.75	Yes	0.148	0.313	0.47	Yes	0.527	0.327	0.86	Yes	0.523	0.470	1.00	Yes	1.00	**25.74**
		L_{33} - L_{34}	521.24	-----	1319	-2404	-691	-680	-157	-10	168	377	0.520	0.471	1.00	Yes	0.305	0.297	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.33**
		L_{34} - L_{35}	807.37	-----	771	-1541	-659	-876	-111	-72	205	132	0.721	0.271	1.00	Yes	0.420	0.169	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.64**
		L_{35} - L_{36}	1129.30	-----	850	-1277	-723	-950	-332	-84	-80	306	0.790	0.204	1.00	Yes	0.532	0.127	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.93**
		L_{36} - L_{37}	1390.23	-----	404	-1288	-1125	-1562	-128	18	143	250	0.797	0.193	1.00	Yes	0.524	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		L_{37} - L_{38}	1755.31	-----	121	-1497	-2636	-1750	-397	-208	-162	185	0.743	0.256	1.00	Yes	0.494	0.150	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		L_{38} - L_{39}	1726.07	-----	-370	-71	-2706	-889	-2	-56	-13	201	0.741	0.252	1.00	Yes	0.497	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		L_{39} - L_{40}	1646.25	-----	-250	-383	-2303	-1101	-63	2	-87	24	0.767	0.223	1.00	Yes	0.508	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_{40} - L_{41}	1275.51	-----	-420	25	-1959	-210	-8	-15	-148	100	0.749	0.241	1.00	Yes	0.505	0.149	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		L_{41} - L_{42}	984.80	-----	-187	-95	-1421	-57	11	63	143	110	0.776	0.221	1.00	Yes	0.509	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{42} - L_{43}	540.87	-----	-305	173	-1449	416	48	10	-82	250	0.657	0.336	1.00	Yes	0.391	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{43} - L_{44}	27.98	-3.37	-53	-65	-3480	800	-49	-14	1543	450	0.034	0.962	1.00	Yes	0.020	0.611	0.64	Yes	0.005	0.663	0.67	Yes	0.005	0.708	0.72	Yes	1.00	**20.87**
	Structure 3	L_0 - L_1	36.92	-159.10	1146	-2229	-48	-18	-285	-1293	0	0	0.056	0.937	1.00	Yes	0.034	0.620	0.66	Yes	0.289	0.575	0.87	Yes	0.286	0.669	0.96	Yes	1.00	**17.31**
		L_1 - L_2	429.81	-----	508	-893	43	-338	22	328	-229	221	0.658	0.336	1.00	Yes	0.445	0.211	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		L_2 - L_3	876.58	-----	337	-771	-361	-469	11	45	631	252	0.763	0.229	1.00	Yes	0.489	0.140	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		L_3 - L_4	1224.58	-----	489	-1301	-692	-1011	-97	68	-10	302	0.774	0.218	1.00	Yes	0.502	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.15**
		L_4 - L_5	1609.40	-----	-226	-265	-1609	-1171	-155	-126	138	236	0.786	0.210	1.00	Yes	0.505	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_5 - L_6	1542.72	-----	184	-1790	-1145	-1618	-248	118	-115	305	0.754	0.237	1.00	Yes	0.490	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		L_6 - L_7	1240.12	-----	-348	200	-1846	165	0	-29	-42	176	0.729	0.269	1.00	Yes	0.472	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		L_7 - L_8	1003.53	-----	-91	49	-1033	-331	-23	67	-32	154	0.792	0.201	1.00	Yes	0.507	0.120	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_8 - L_9	578.55	-88.41	-191	307	-849	182	52	-105	-45	33	0.749	0.243	1.00	Yes	0.450	0.160	0.61	Yes	0.136	0.122	0.26	Yes	0.135	0.225	0.36	Yes	1.00	**4.32**
		L_9 - L_{10}	251.70	-490.05	-40	452	-938	101	-24	24	126	147	0.326	0.274	0.60	Yes	0.190	0.166	0.36	Yes	0.753	0.149	0.91	Yes	0.747	0.248	1.00	Yes	1.00	**6.48**
		L_{10} - L_{11}	-----	-939.73	78	199	-1454	214	89	-124	85	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.122	0.9	Yes	0.761	0.230	1.00	Yes	1.00	**8.95**
		L_{11} - L_{12}	-----	-1196.79	78	1062	-1093	1803	58	104	132	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.206	0.98	Yes	0.758	0.239	1.00	Yes	1.00	**9.77**
		L_{12} - L_{13}	-----	-1098.30	2260	-942	553	-26	-186	-141	-124	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.274	0.98	Yes	0.696	0.299	1.00	Yes	1.00	**9.29**
		L_{13} - L_{14}	-----	-925.04	1122	-1144	-1598	-633	-41	-184	-76	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.132	0.89	Yes	0.745	0.251	1.00	Yes	1.00	**15.15**
		L_{14} - L_{15}	663.65	-373.68	1078	-797	-830	-1395	-275	-20	0	92	0.651	0.345	1.00	Yes	0.421	0.209	0.64	Yes	0.436	0.250	0.69	Yes	0.431	0.309	0.74	Yes	1.00	**13.31**
		L_{15} - L_{16}	508.58	-----	791	-1065	-313	-882	-197	20	-59	334	0.659	0.341	1.00	Yes	0.395	0.223	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		L_{16} - L_{17}	634.61	-173.88	277	13	-1006	-357	33	-78	-25	127	0.730	0.263	1.00	Yes	0.434	0.171	0.61	Yes	0.238	0.266	0.51	Yes	0.235	0.243	0.48	Yes	1.00	**5.27**
		L_{17} - L_{18}	643.00	-32.66	39	-72	-962	-560	12	103	86	172	0.740	0.260	1.00	Yes	0.428	0.156	0.59	Yes	0.045	0.286	0.34	Yes	0.044	0.232	0.28	Yes	1.00	**4.36**
		L_{18} - L_{19}	442.92	-----	-31	31	-932	24	50	-76	29	196	0.678	0.322	1.00	Yes	0.414	0.216	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		L_{19} - L_{20}	10.07	-0.34	53	-146	-2468	1059	-138	-38	1133	308	0.015	0.984	1.00	Yes	0.009	0.597	0.61	Yes	0.001	0.644	0.65	Yes	0.001	0.741	0.75	Yes	1.00	**17.36**

Moment (Start) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-299.09	-21	44	-172	194	-96	-31	-893	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.330	1	Yes	0.633	0.247	0.89	Yes	1.00	**1.92**
		$U_1 - L_1$	24.70	-312.29	24	-18	-262	246	43	17	156	120	0.044	0.380	0.43	Yes	0.024	0.209	0.24	Yes	0.682	0.132	0.82	Yes	0.661	0.335	1.00	Yes	1.00	**4.42**
		$U_2 - L_2$	-----	-280.95	108	-84	-278	314	-233	-66	-36	70	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.169	0.79	Yes	0.594	0.402	1.00	Yes	1.00	**5.95**
		$U_3 - L_3$	213.89	-273.21	323	-302	-308	326	145	125	210	287	0.385	0.500	0.89	Yes	0.212	0.275	0.49	Yes	0.599	0.151	0.75	Yes	0.578	0.417	1.00	Yes	1.00	**8.24**
		$U_4 - L_4$	13.80	-247.35	371	-350	-117	93	-104	-87	-51	24	0.025	0.505	0.53	Yes	0.014	0.278	0.30	Yes	0.544	0.140	0.69	Yes	0.523	0.475	1.00	Yes	1.00	**7.90**
		$U_5 - L_5$	-----	-427.73	228	-251	20	-39	-123	-95	-108	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.103	0.88	Yes	0.738	0.255	1.00	Yes	1.00	**3.61**
		$U_6 - L_6$	-----	-519.29	268	-288	46	-59	78	67	-158	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.100	0.89	Yes	0.745	0.252	1.00	Yes	1.00	**3.69**
		$U_7 - L_7$	-----	-444.31	297	-318	118	-131	-121	58	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.122	0.87	Yes	0.685	0.313	1.00	Yes	1.00	**2.51**
		$U_8 - L_8$	-----	-1290.96	445	-527	-420	500	-261	-93	-189	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.054	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.52**
		$U_9 - L_9$	-----	-663.05	-165	189	-395	446	-224	-158	-245	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.128	0.92	Yes	0.749	0.248	1.00	Yes	1.00	**3.25**
		$U_{10} - L_{10}$	-----	-790.94	-94	139	-405	414	-189	-144	-215	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.099	0.92	Yes	0.780	0.214	1.00	Yes	1.00	**5.66**
		$U_{11} - L_{11}$	-----	-664.68	-64	178	-389	482	-181	-28	-101	24	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.098	0.9	Yes	0.774	0.224	1.00	Yes	1.00	**4.91**
		$U_{12} - L_{12}$	-----	-515.54	-38	57	-336	333	-172	17	26	144	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.103	0.85	Yes	0.707	0.287	1.00	Yes	1.00	**4.42**
		$U_{13} - L_{13}$	-----	-359.63	2	17	-247	264	-95	79	-56	118	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.106	0.84	Yes	0.689	0.302	1.00	Yes	1.00	**3.64**
		$U_{14} - L_{14}$	2.05	-237.15	170	-161	-366	385	-128	-46	-11	81	0.004	0.529	0.54	Yes	0.002	0.291	0.30	Yes	0.529	0.168	0.7	Yes	0.502	0.492	1.00	Yes	1.00	**8.28**
		$U_{15} - L_{15}$	225.15	-318.04	241	-255	-174	170	46	-156	-115	-131	0.405	0.371	0.78	Yes	0.223	0.204	0.43	Yes	0.713	0.156	0.87	Yes	0.673	0.326	1.00	Yes	1.00	**5.33**
		$U_{16} - L_{16}$	97.02	-321.07	238	-245	-53	35	-20	-152	-82	-118	0.174	0.357	0.54	Yes	0.096	0.196	0.30	Yes	0.724	0.141	0.87	Yes	0.679	0.313	1.00	Yes	1.00	**4.31**
		$U_{17} - L_{17}$	-----	-441.67	212	-230	32	-58	-129	-125	-69	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.119	0.95	Yes	0.762	0.233	1.00	Yes	1.00	**3.37**
		$U_{18} - L_{18}$	-----	-536.53	432	-443	124	-129	147	-48	-163	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.094	0.88	Yes	0.746	0.251	1.00	Yes	1.00	**3.70**
		$U_{19} - L_{19}$	-----	-649.96	497	-510	135	-186	235	-33	80	296	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.101	0.92	Yes	0.756	0.237	1.00	Yes	1.00	**4.19**
		$U_{20} - L_{20}$	-----	-586.69	402	-482	157	-223	711	93	184	24	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.222	1	Yes	0.683	0.224	0.91	Yes	1.00	**2.84**
	Structure 2	$U_0 - L_0$	-----	-604.51	-112	179	-436	521	-264	-45	-1201	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.269	1	Yes	0.648	0.221	0.87	Yes	1.00	**3.46**
		$U_1 - L_1$	-----	-707.26	-109	116	-551	545	42	-66	77	17	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.073	0.89	Yes	0.758	0.234	1.00	Yes	1.00	**5.18**
		$U_2 - L_2$	-----	-581.56	-84	94	-503	498	93	42	-92	57	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.083	0.87	Yes	0.741	0.257	1.00	Yes	1.00	**4.63**
		$U_3 - L_3$	-----	-486.95	-47	53	-240	249	14	125	-40	113	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.094	0.93	Yes	0.764	0.227	1.00	Yes	1.00	**3.92**
		$U_4 - L_4$	50.56	-338.55	19	-3	-218	217	-104	61	8	148	0.091	0.322	0.42	Yes	0.050	0.177	0.23	Yes	0.768	0.103	0.88	Yes	0.716	0.279	1.00	Yes	1.00	**3.98**
		$U_5 - L_5$	191.72	-320.15	131	-123	-234	249	-116	98	-112	125	0.345	0.355	0.70	Yes	0.190	0.195	0.39	Yes	0.723	0.118	0.85	Yes	0.677	0.319	1.00	Yes	1.00	**5.51**
		$U_6 - L_6$	366.92	-216.30	218	-228	-233	233	-135	84	-32	137	0.660	0.338	1.00	Yes	0.363	0.186	0.55	Yes	0.487	0.095	0.59	Yes	0.458	0.298	0.76	Yes	1.00	**6.40**
		$U_7 - L_7$	9.19	-237.25	347	-383	-146	154	-115	-73	-124	2	0.017	0.526	0.55	Yes	0.009	0.289	0.30	Yes	0.536	0.175	0.72	Yes	0.502	0.490	1.00	Yes	1.00	**10.28**
		$U_8 - L_8$	-----	-464.91	366	-372	16	-35	-177	-167	-134	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.121	0.8	Yes	0.670	0.325	1.00	Yes	1.00	**4.18**
		$U_9 - L_9$	-----	-695.23	566	-585	89	-137	-185	-176	-84	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.087	0.87	Yes	0.745	0.248	1.00	Yes	1.00	**5.08**
		$U_{10} - L_{10}$	-----	-797.78	538	-563	105	-139	41	-46	-66	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.080	0.87	Yes	0.746	0.248	1.00	Yes	1.00	**5.38**
		$U_{11} - L_{11}$	-----	-821.12	508	-517	158	-189	2	-2	-36	27	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.068	0.9	Yes	0.768	0.228	1.00	Yes	1.00	**4.99**
		$U_{12} - L_{12}$	-----	-885.23	520	-530	147	-160	27	67	21	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.075	0.93	Yes	0.767	0.227	1.00	Yes	1.00	**4.90**
		$U_{13} - L_{13}$	-----	-744.94	572	-560	244	-243	70	78	-83	44	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.110	0.95	Yes	0.718	0.274	1.00	Yes	1.00	**3.67**
		$U_{14} - L_{14}$	-----	-1301.08	661	-632	-612	568	-61	11	-106	137	-----	-----	-----	-----	-----	-----	-----	-----	0.951	0.044	1	Yes	0.863	0.117	0.98	Yes	1.00	**6.57**
		$U_{15} - L_{15}$	-----	-716.63	-165	167	-634	614	-81	-45	-145	-96	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.142	0.95	Yes	0.691	0.303	1.00	Yes	1.00	**4.84**
		$U_{16} - L_{16}$	-----	-714.12	-114	103	-543	524	-156	-91	-163	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.097	0.93	Yes	0.765	0.230	1.00	Yes	1.00	**4.92**
		$U_{17} - L_{17}$	-----	-635.26	-129	126	-556	545	-99	-34	-129	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.087	0.88	Yes	0.739	0.258	1.00	Yes	1.00	**4.79**
		$U_{18} - L_{18}$	-----	-579.28	-90	107	-497	510	-180	-50	-117	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.092	0.87	Yes	0.738	0.261	1.00	Yes	1.00	**4.44**
		$U_{19} - L_{19}$	-----	-477.41	-32	40	-296	288	-160	-11	-42	52	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.094	0.82	Yes	0.713	0.285	1.00	Yes	1.00	**4.05**
		$U_{20} - L_{20}$	27.37	-372.62	10	-4	-243	245	-157	16	-122	39	0.045	0.321	0.37	Yes	0.025	0.176	0.21	Yes	0.764	0.111	0.88	Yes	0.714	0.280	1.00	Yes	1.00	**4.17**
		$U_{21} - L_{21}$	75.56	-319.26	53	-47	-239	248	-142	26	-123	55	0.136	0.358	0.50	Yes	0.075	0.197	0.28	Yes	0.721	0.122	0.85	Yes	0.676	0.317	1.00	Yes	1.00	**4.32**
		$U_{22} - L_{22}$	70.55	-224.43	330	-343	-384	405	-175	-72	-61	15	0.127	0.568	0.70	Yes	0.070	0.312	0.39	Yes	0.505	0.184	0.69	Yes	0.475	0.517	1.00	Yes	1.00	**12.81**
		$U_{23} - L_{23}$	148.12	-321.30	238	-246	-103	96	-108	-108	-96	-46	0.266	0.346	0.62	Yes	0.147	0.190	0.34	Yes	0.726	0.124	0.86	Yes	0.680	0.314	1.00	Yes	1.00	**4.75**
		$U_{24} - L_{24}$	34.98	-378.85	226	-235	-33	19	-103	-89	-48	-25	0.057	0.295	0.36	Yes	0.031	0.162	0.20	Yes	0.777	0.105	0.89	Yes	0.726	0.268	1.00	Yes	1.00	**4.06**
		$U_{25} - L_{25}$	-----	-476.51	299	-297	22	-35	10	-31	-82	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.081	0.8	Yes	0.712	0.288	1.00	Yes	1.00	**3.96**
		$U_{26} - L_{26}$	-----	-569.34	502	-529	73	-114	-26	-8	-71	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.080	0.84	Yes	0.725	0.271	1.00	Yes	1.00	**4.43**
		$U_{27} - L_{27}$	-----	-635.15	544	-552	141	-157	-106	4	-64	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.077	0.87	Yes	0.739	0.256	1.00	Yes	1.00	**4.23**
		$U_{28} - L_{28}$	-----	-711.37	552	-552	127	-141	128	88	-35	70	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.073	0.9	Yes	0.762	0.234	1.00	Yes	1.00	**4.33**
		$U_{29} - L_{29}$	-----	-716.56	639	-627	206	-212	-68	49	-114	26	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.121	0.92	Yes	0.691	0.306	1.00	Yes	1.00	**4.55**
		$U_{30} - L_{30}$	-----	-1292.74	580	-573	-574	512	-122	-104	-148	71	-----	-----	-----	-----	-----	-----	-----	-----	0.945	0.051	1	Yes	0.857	0.103	0.96	Yes	1.00	**6.09**
		$U_{31} - L_{31}$	-----	-761.31	-183	179	-549	538	-119	-60	-174	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.139	0.99	Yes	0.734	0.263	1.00	Yes	1.00	**4.28**
		$U_{32} - L_{32}$	-----	-890.16	-118	110	-532	516	-242	-118	-263	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.128	0.99	Yes	0.772	0.228	1.00	Yes	1.00	**5.82**
		$U_{33} - L_{33}$	-----	-830.61	-143	146	-500	499	-165	-42	-120	3	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.086	0.93	Yes	0.777	0.221	1.00	Yes	1.00	**5.37**
		$U_{34} - L_{34}$	-----	-799.29	-91	114	-571	570	-214	-26	-85	81	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.091	0.89	Yes	0.747	0.252	1.00	Yes	1.00	**6.52**
		$U_{35} - L_{35}$	-----	-693.74	-84	109	-588	587	-187	57	-100	115	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.074	0.85	Yes	0.743	0.249	1.00	Yes	1.00	**5.70**
		$U_{36} - L_{36}$	-----	-471.16	-35	53	-360	365	-142	70	-76	108	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.095	0.78	Yes	0.679	0.320	1.00	Yes	1.00	**4.14**
		$U_{37} - L_{37}$	-----	-219.76	109	-109	-368	412	-138	-21	-93	51	-----	-----	-----	-----	-----	-----	-----	-----	0.496	0.189	0.69	Yes	0.465	0.527	1.00	Yes	1.00	**9.80**
		$U_{38} - L_{38}$	356.01	-141.85	138	-134	-232	240	-132	-157	-100	-104	0.640	0.352	1.00	Yes	0.352	0.193	0.55	Yes	0.319	0.127	0.45	Yes	0.300	0.306	0.61	Yes	1.00	**4.96**
		$U_{39} - L_{39}$	209.97	-331.79	210	-231	-183	163	-106	-150	-79	-55	0.378	0.339	0.72	Yes	0.208	0.186	0.40	Yes	0.750	0.155	0.91	Yes	0.702	0.295	1.00	Yes	1.00	**5.46**
		$U_{40} - L_{40}$	96.75	-339.45	216	-218	-51	30	-8	-87	-92	-74	0.174	0.305	0.48	Yes	0.096	0.168	0.27	Yes	0.770	0.113	0.89	Yes	0.718	0.278	1.00	Yes	1.00	**4.18**
		$U_{41} - L_{41}$	-----	-483.91	240	-254	34	-57	-79	-70	-30	8	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.094	0.92	Yes	0.759	0.231	1.00	Yes	1.00	**4.05**
		$U_{42} - L_{42}$	-----	-582.39	479	-488	108	-117	50	-61	-86	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.079	0.86	Yes	0.742	0.249	1.00	Yes	1.00	**4.21**
		$U_{43} - L_{43}$	-----	-706.38	534	-553	141	-159	506	44	-36	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.135	0.95	Yes	0.757	0.235	1.00	Yes	1.00	**4.31**
		$U_{44} - L_{44}$	-----	-631.39	466	-553	195	-242	988	168	-25	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.238	1	Yes	0.677	0.234	0.92	Yes	1.00	**3.20**
	Structure 3	$U_0 - L_0$	-----	-558.37	-107	171	-339	419	-250	-33	-972	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.258	1	Yes	0.650	0.194	0.85	Yes	1.00	**2.56**
		$U_1 - L_1$	-----	-659.26	-112	120	-492	497	0	-75	-165	11	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.091	0.92	Yes	0.767	0.231	1.00	Yes	1.00	**4.52**
		$U_2 - L_2$	-----	-529.70	-90	95	-450	449	83	32	-67	62	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.079	0.86	Yes	0.737	0.255	1.00	Yes	1.00	**4.61**
		$U_3 - L_3$	-----	-438.42	-30	48	-223	234	-101	68	-44	140	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.105	0.93	Yes	0.756	0.237	1.00	Yes	1.00	**3.86**
		$U_4 - L_4$	74.05	-319.43	34	-23	-250	252	-173	78	-56	187	0.133	0.376	0.51	Yes	0.073	0.207	0.29	Yes	0.720	0.109	0.83	Yes	0.676	0.322	1.00	Yes	1.00	**4.48**
		$U_5 - L_5$	198.19	-314.85	131	-130	-246	261	-157	66	-30	148	0.356	0.379	0.74	Yes	0.196	0.208	0.41	Yes	0.706	0.129	0.84	Yes	0.666	0.333	1.00	Yes	1.00	**5.23**
		$U_6 - L_6$	100.80	-84.48	529	-572	-419	431	-281	-103	-109	111	0.181	0.812	1.00	Yes	0.100	0.447	0.55	Yes	0.189	0.252	0.45	Yes	0.179	0.731	0.91	Yes	1.00	**14.73**
		$U_7 - L_7$	-----	-367.21	237	-255	-26	9	-197	-175	-155	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.149	0.9	Yes	0.703	0.291	1.00	Yes	1.00	**3.55**
		$U_8 - L_8$	-----	-515.17	335	-337	16	-19	-59	-123	-155	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.112	0.86	Yes	0.707	0.288	1.00	Yes	1.00	**4.47**
		$U_9 - L_9$	-----	-661.40	382	-489	49	-121	-174	-117	-111	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.102	0.9	Yes	0.770	0.227	1.00	Yes	1.00	**4.92**
		$U_{10} - L_{10}$	-----	-788.64	388	-425	85	-99	-54	39	-20	4	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.070	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.18**
		$U_{11} - L_{11}$	-----	-644.99	419	-473	182	-211	67	120	-50	62	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.101	0.87	Yes	0.729	0.263	1.00	Yes	1.00	**3.13**
		$U_{12} - L_{12}$	-----	-1287.02	426	-559	-481	521	32	31	-48	41	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.042	0.98	Yes	0.892	0.104	1.00	Yes	1.00	**5.70**
		$U_{13} - L_{13}$	-----	-451.21	-105	116	-287	303	-141	-95	-148	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.138	0.9	Yes	0.696	0.299	1.00	Yes	1.00	**2.76**
		$U_{14} - L_{14}$	-----	-526.17	-47	80	-266	276	-154	-106	-148	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.104	0.91	Yes	0.755	0.241	1.00	Yes	1.00	**4.14**
		$U_{15} - L_{15}$	-----	-425.14	-25	32	-242	254	-171	-59	-149	5	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.112	0.89	Yes	0.733	0.258	1.00	Yes	1.00	**4.25**
		$U_{16} - L_{16}$	-----	-217.54	98	-67	-420	406	-277	-166	-55	87	-----	-----	-----	-----	-----	-----	-----	-----	0.478	0.202	0.68	Yes	0.460	0.537	1.00	Yes	1.00	**8.13**
		$U_{17} - L_{17}$	264.84	-253.10	229	-251	-356	354	-70	-178	-38	-13	0.476	0.507	0.99	Yes	0.262	0.279	0.55	Yes	0.555	0.155	0.71	Yes	0.536	0.456	1.00	Yes	1.00	**7.24**
		$U_{18} - L_{18}$	97.89	-292.86	252	-291	-129	132	-78	-117	-31	-20	0.176	0.406	0.59	Yes	0.097	0.223	0.33	Yes	0.640	0.143	0.79	Yes	0.620	0.372	1.00	Yes	1.00	**5.73**
		$U_{19} - L_{19}$	14.12	-324.84	240	-239	-29	17	-67	-97	-166	-87	0.025	0.355	0.39	Yes	0.014	0.195	0.21	Yes	0.710	0.131	0.85	Yes	0.687	0.307	1.00	Yes	1.00	**3.97**
		$U_{20} - L_{20}$	-----	-331.08	174	-227	46	-73	216	69	-105	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.162	0.91	Yes	0.701	0.290	1.00	Yes	1.00	**1.96**

Moment (Start) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
Center Truss - Diagonals	Structure 1	$U_0 - L_1$	461.58	-22.94	6	-8	-201	82	-47	-16	-602	-209	0.606	0.387	1.00	Yes	0.366	0.213	0.58	Yes	0.039	0.263	0.31	Yes	0.035	0.235	0.28	Yes	1.00	**4.85**
		$U_1 - L_2$	356.30	-116.42	20	-15	-151	-15	35	29	-571	-301	0.641	0.358	1.00	Yes	0.352	0.197	0.55	Yes	0.267	0.346	0.62	Yes	0.246	0.193	0.44	Yes	1.00	**7.13**
		$U_2 - L_3$	422.40	-173.29	32	-19	-110	-35	42	16	-277	-324	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	0.399	0.271	0.68	Yes	0.367	0.141	0.51	Yes	1.00	**7.00**
		$U_3 - L_4$	18.22	-346.93	42	-57	-75	-76	-216	-124	-341	-294	0.033	0.195	0.23	Yes	0.018	0.107	0.13	Yes	0.793	0.203	1	Yes	0.734	0.097	0.84	Yes	1.00	**6.05**
		$U_4 - L_4$	563.67	-----	0	3	-128	3	125	40	-94	-169	0.827	0.169	1.00	Yes	0.455	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_4 - L_5$	667.24	-----	3	51	-242	162	358	171	4	-107	0.789	0.203	1.00	Yes	0.434	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_5 - L_6$	622.02	-----	-72	99	-345	214	328	206	348	158	0.735	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		$U_6 - L_7$	650.98	-----	29	169	-112	303	266	224	291	174	0.770	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_8 - L_9$	1004.12	-----	83	215	-122	346	315	253	236	185	0.803	0.194	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_9 - L_{10}$	995.98	-----	-71	107	-384	211	94	114	208	145	0.796	0.198	1.00	Yes	0.493	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		$U_{10} - L_{11}$	1010.41	-----	-49	113	-269	150	5	-4	-82	-141	0.853	0.143	1.00	Yes	0.528	0.080	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{11} - L_{12}$	827.17	-----	-64	59	-284	63	-132	-99	-286	-293	0.818	0.176	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{12} - L_{13}$	616.32	-----	-47	10	-202	112	-308	-249	-359	-265	0.751	0.247	1.00	Yes	0.473	0.140	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{13} - L_{14}$	437.80	-----	-5	-20	-93	28	-260	-275	-284	-311	0.787	0.210	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{15} - L_{16}$	122.04	-330.91	57	-101	-76	-30	-225	-299	-289	-335	0.219	0.226	0.45	Yes	0.121	0.124	0.25	Yes	0.775	0.216	1	Yes	0.700	0.129	0.83	Yes	1.00	**4.30**
		$U_{16} - L_{15}$	400.86	-216.19	39	-76	-146	77	-186	-185	-287	-305	0.721	0.275	1.00	Yes	0.397	0.151	0.55	Yes	0.512	0.223	0.74	Yes	0.457	0.187	0.65	Yes	1.00	**5.73**
		$U_{17} - L_{18}$	523.62	-----	-7	-31	-171	83	-146	-138	-179	-213	0.768	0.223	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{18} - L_{17}$	618.19	-----	-97	59	-372	230	6	-45	-286	-210	0.731	0.263	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{19} - L_{18}$	702.83	-----	-93	65	-376	251	-154	-15	-276	-192	0.761	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{20} - L_{19}$	627.27	-----	-117	114	-409	318	-60	175	-648	-181	0.679	0.316	1.00	Yes	0.374	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
	Structure 2	$U_0 - L_1$	684.60	-----	-67	76	-424	351	-122	52	-834	-281	0.677	0.322	1.00	Yes	0.373	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_1 - L_2$	791.67	-----	-89	60	-406	305	40	10	-61	-158	0.783	0.212	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_2 - L_3$	643.98	-----	-69	52	-333	244	-78	-177	-221	-229	0.761	0.230	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_3 - L_4$	565.64	-----	-31	14	-193	114	-237	-216	-330	-276	0.754	0.245	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_4 - L_5$	418.05	-126.68	15	-44	-125	84	-275	-202	-301	-260	0.752	0.247	1.00	Yes	0.414	0.136	0.55	Yes	0.313	0.186	0.5	Yes	0.268	0.160	0.43	Yes	1.00	**4.21**
		$U_5 - L_6$	401.86	-296.27	72	-103	-112	57	-349	-233	-431	-247	0.723	0.268	1.00	Yes	0.398	0.148	0.55	Yes	0.700	0.258	0.96	Yes	0.627	0.143	0.78	Yes	1.00	**5.37**
		$U_6 - L_7$	17.66	-372.44	55	-94	-50	-23	-287	-252	-315	-256	0.029	0.189	0.22	Yes	0.016	0.104	0.12	Yes	0.797	0.195	1	Yes	0.713	0.107	0.83	Yes	1.00	**3.21**
		$U_8 - L_7$	553.70	-118.48	20	-67	-259	79	-181	-278	-189	-299	0.706	0.293	1.00	Yes	0.444	0.164	0.61	Yes	0.197	0.158	0.36	Yes	0.178	0.232	0.41	Yes	1.00	**7.10**
		$U_9 - L_8$	708.30	-----	-69	-14	-383	208	-168	-170	-177	-210	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		$U_{10} - L_9$	802.18	-----	-78	33	-365	208	-20	-60	-106	-199	0.794	0.199	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		$U_{11} - L_{10}$	896.37	-----	-105	77	-390	283	87	32	16	-72	0.817	0.177	1.00	Yes	0.449	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{12} - L_{11}$	849.58	-----	-99	128	-400	325	354	204	133	57	0.774	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{13} - L_{12}$	742.16	-----	-179	173	-470	378	266	149	220	99	0.734	0.258	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_{14} - L_{13}$	757.98	-----	-7	223	-274	433	277	185	289	136	0.750	0.244	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{14} - L_{15}$	641.90	-----	23	157	-224	361	175	118	151	81	0.759	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{15} - L_{16}$	630.53	-----	-99	104	-397	334	50	67	114	83	0.745	0.245	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{16} - L_{17}$	748.83	-----	-75	99	-350	348	10	6	13	-6	0.811	0.181	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{17} - L_{18}$	679.22	-----	-66	83	-312	273	-56	-31	-80	-72	0.803	0.192	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{18} - L_{19}$	665.86	-----	-42	50	-310	236	-110	-82	-163	-153	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{19} - L_{20}$	608.24	-----	-11	5	-196	163	-196	-123	-212	-179	0.776	0.219	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_{20} - L_{21}$	433.05	-17.57	4	-11	-121	92	-182	-131	-212	-169	0.779	0.216	1.00	Yes	0.428	0.119	0.55	Yes	0.042	0.109	0.16	Yes	0.037	0.155	0.20	Yes	1.00	**3.94**
		$U_{21} - L_{22}$	402.25	-243.43	41	-70	-140	30	-279	-241	-305	-252	0.723	0.267	1.00	Yes	0.398	0.147	0.55	Yes	0.575	0.233	0.81	Yes	0.515	0.179	0.70	Yes	1.00	**6.09**
		$U_{23} - L_{22}$	228.23	-329.85	71	-96	-131	3	-101	-208	-141	-206	0.410	0.227	0.64	Yes	0.226	0.125	0.36	Yes	0.786	0.206	1	Yes	0.698	0.167	0.87	Yes	1.00	**6.42**
		$U_{24} - L_{23}$	448.89	-111.37	27	-41	-122	105	-80	-83	-61	-120	0.807	0.190	1.00	Yes	0.444	0.105	0.55	Yes	0.266	0.060	0.33	Yes	0.236	0.156	0.40	Yes	1.00	**4.68**
		$U_{25} - L_{24}$	602.71	-18.14	13	-27	-226	163	-8	-52	-17	-106	0.769	0.224	1.00	Yes	0.423	0.125	0.55	Yes	0.030	0.069	0.1	Yes	0.027	0.202	0.23	Yes	1.00	**5.71**
		$U_{26} - L_{25}$	675.44	-----	-19	11	-325	257	53	15	32	-63	0.799	0.195	1.00	Yes	0.439	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		$U_{27} - L_{26}$	645.45	-----	-55	72	-341	269	204	102	123	22	0.763	0.230	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{28} - L_{27}$	688.41	-----	-68	105	-372	336	340	160	119	38	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{29} - L_{28}$	623.96	-----	-125	119	-386	337	217	111	215	99	0.738	0.258	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{30} - L_{29}$	634.69	-----	11	164	-220	364	188	146	208	91	0.750	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{31} - L_{30}$	768.10	-----	22	199	-296	446	189	131	114	59	0.760	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{31} - L_{32}$	756.23	-----	-125	128	-509	398	37	48	49	34	0.748	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		$U_{32} - L_{33}$	892.83	-----	-89	133	-376	327	-24	-1	-133	-106	0.813	0.178	1.00	Yes	0.447	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{33} - L_{34}$	875.32	-----	-84	128	-376	250	-74	-38	-265	-222	0.797	0.196	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		$U_{34} - L_{35}$	805.47	-----	-79	48	-329	204	-259	-213	-284	-234	0.797	0.195	1.00	Yes	0.438	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{35} - L_{36}$	705.82	-----	-83	33	-325	216	-339	-248	-376	-294	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		$U_{36} - L_{37}$	576.43	-----	-20	-13	-213	106	-331	-312	-321	-340	0.735	0.260	1.00	Yes	0.463	0.147	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		$U_{38} - L_{37}$	-----	-390.20	79	-103	-40	-38	-129	-219	-157	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.148	1	Yes	0.748	0.117	0.87	Yes	1.00	**3.47**
		$U_{39} - L_{38}$	323.78	-343.97	100	-125	-94	50	-170	-187	-194	-233	0.582	0.227	0.81	Yes	0.320	0.125	0.45	Yes	0.820	0.179	1	Yes	0.728	0.160	0.89	Yes	1.00	**5.36**
		$U_{40} - L_{39}$	432.43	-151.07	39	-61	-127	93	-74	-102	-124	-184	0.778	0.215	1.00	Yes	0.428	0.118	0.55	Yes	0.362	0.134	0.5	Yes	0.320	0.162	0.49	Yes	1.00	**4.90**
		$U_{41} - L_{40}$	582.32	-----	-16	-23	-201	126	-80	-61	-144	-160	0.776	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		$U_{42} - L_{41}$	636.42	-----	-70	46	-377	248	-3	-3	-161	-92	0.752	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		$U_{43} - L_{42}$	747.95	-----	-95	65	-419	277	-5	-29	-435	-212	0.740	0.260	1.00	Yes	0.407	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_{44} - L_{43}$	685.29	-----	-138	121	-441	371	35	5	-783	-124	0.678	0.322	1.00	Yes	0.373	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
	Structure 3	$U_0 - L_1$	489.57	-----	-65	69	-489	327	-132	51	-1309	-140	0.530	0.465	1.00	Yes	0.292	0.256	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		$U_1 - L_2$	698.01	-----	-91	56	-383	243	38	13	-236	-184	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		$U_2 - L_3$	644.92	-----	-80	50	-324	235	-72	-167	-232	-260	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_3 - L_4$	524.61	-----	-20	-12	-149	87	-256	-218	-324	-293	0.769	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_4 - L_5$	399.17	-188.00	13	-53	-126	73	-343	-236	-395	-250	0.718	0.276	1.00	Yes	0.395	0.152	0.55	Yes	0.446	0.226	0.68	Yes	0.398	0.161	0.56	Yes	1.00	**4.41**
		$U_5 - L_6$	274.40	-308.73	60	-101	-108	-22	-378	-330	-430	-328	0.494	0.263	0.76	Yes	0.271	0.144	0.42	Yes	0.723	0.275	1	Yes	0.653	0.138	0.80	Yes	1.00	**5.73**
		$U_7 - L_6$	422.01	-127.30	19	-52	-116	16	-151	-283	-143	-291	0.759	0.233	1.00	Yes	0.417	0.128	0.55	Yes	0.296	0.166	0.47	Yes	0.269	0.149	0.42	Yes	1.00	**5.05**
		$U_8 - L_7$	612.19	-----	-23	-19	-218	105	-136	-163	-230	-294	0.746	0.248	1.00	Yes	0.470	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_8 - L_9$	803.42	-----	-53	64	-343	29	274	153	-73	-199	0.795	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.77**
		$U_{10} - L_9$	955.25	-----	-40	47	-305	129	364	198	86	-34	0.807	0.189	1.00	Yes	0.499	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.31**
		$U_{11} - L_{10}$	981.48	-----	-89	112	-371	216	324	216	322	169	0.785	0.207	1.00	Yes	0.486	0.116	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{12} - L_{11}$	985.72	-----	97	208	-119	362	373	314	347	225	0.788	0.209	1.00	Yes	0.488	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		$U_{12} - L_{13}$	670.52	-----	32	164	-116	287	201	168	185	113	0.793	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{13} - L_{14}$	657.81	-----	-58	94	-331	223	124	156	147	101	0.778	0.217	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{14} - L_{15}$	691.03	-----	-12	61	-266	166	69	43	-134	-157	0.817	0.180	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		$U_{15} - L_{16}$	470.49	-13.36	2	-15	-208	-18	-115	-85	-391	-329	0.690	0.302	1.00	Yes	0.379	0.166	0.55	Yes	0.025	0.179	0.21	Yes	0.023	0.211	0.24	Yes	1.00	**8.92**
		$U_{17} - L_{16}$	21.50	-394.95	56	-63	-63	-61	-50	-107	-201	-256	0.039	0.155	0.20	Yes	0.021	0.085	0.11	Yes	0.903	0.093	1	Yes	0.836	0.081	0.92	Yes	1.00	**5.41**
		$U_{18} - L_{17}$	377.18	-243.75	46	-30	-167	-87	103	175	-368	-325	0.678	0.319	1.00	Yes	0.373	0.176	0.55	Yes	0.561	0.348	0.91	Yes	0.516	0.213	0.73	Yes	1.00	**10.60**
		$U_{19} - L_{18}$	439.11	-24.68	27	-40	-115	-9	99	-54	-197	-199	0.790	0.205	1.00	Yes	0.434	0.113	0.55	Yes	0.057	0.153	0.21	Yes	0.052	0.147	0.20	Yes	1.00	**5.55**
		$U_{20} - L_{19}$	292.69	-----	25	0	-268	143	-59	69	-1182	-50	0.384	0.611	1.00	Yes	0.232	0.337	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**

Moment (Start) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 (Vehicle) 1.300 (Pedestrian)
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-533.47	864	-810	-1167	-440	521	-684	977	-907	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.159	0.89	Yes	0.719	0.278	1.00	Yes	1.00	**9.52**
		$U_1 - U_2$	-----	-545.17	-72	-107	-519	-606	-52	16	386	-514	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.254	1	Yes	0.735	0.144	0.88	Yes	1.00	**4.32**
		$U_2 - U_3$	176.23	-566.68	-89	302	-799	-239	-120	131	357	-564	0.202	0.285	0.49	Yes	0.136	0.187	0.33	Yes	0.771	0.228	1	Yes	0.764	0.190	0.96	Yes	1.00	**4.66**
		$U_3 - U_4$	501.91	-578.82	152	419	-812	-291	-222	-6	468	-370	0.575	0.272	0.85	Yes	0.395	0.186	0.59	Yes	0.788	0.210	1	Yes	0.781	0.193	0.98	Yes	1.00	**6.78**
		$U_4 - U_5$	473.64	-578.24	193	383	-922	-237	-99	-25	-328	36	0.543	0.275	0.82	Yes	0.373	0.188	0.57	Yes	0.787	0.212	1	Yes	0.780	0.219	1.00	Yes	1.00	**6.44**
		$U_5 - U_6$	673.26	-185.67	270	487	-671	227	97	130	-374	-305	0.772	0.223	1.00	Yes	0.521	0.146	0.67	Yes	0.253	0.210	0.47	Yes	0.250	0.160	0.41	Yes	1.00	**6.25**
		$U_6 - U_7$	894.93	-----	417	223	-276	-9	319	285	-335	96	0.856	0.135	1.00	Yes	0.598	0.093	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_7 - U_8$	829.00	-----	222	745	-1200	1934	1250	992	-555	364	0.574	0.420	1.00	Yes	0.401	0.288	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.72**
		$U_8 - U_9$	676.99	-----	2108	-1004	700	-243	739	58	420	598	0.555	0.444	1.00	Yes	0.379	0.302	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		$U_9 - U_{10}$	-----	-486.45	460	-530	-348	-755	405	-311	2021	-1169	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.373	1	Yes	0.621	0.169	0.79	Yes	1.00	**14.85**
		$U_{10} - U_{11}$	141.77	-635.69	285	-139	-36	-767	38	127	627	-550	0.154	0.273	0.43	Yes	0.102	0.177	0.28	Yes	0.819	0.176	1	Yes	0.811	0.172	0.99	Yes	1.00	**5.52**
		$U_{11} - U_{12}$	-----	-891.14	166	-199	-201	-680	11	107	666	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.154	1	Yes	0.836	0.113	0.95	Yes	1.00	**3.57**
		$U_{12} - U_{13}$	-----	-1256.29	-35	-263	-599	-676	81	11	653	-446	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.145	1	Yes	0.839	0.093	0.94	Yes	1.00	**4.17**
		$U_{13} - U_{14}$	-----	-1402.70	-191	-501	-733	-1257	-43	-7	310	-232	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.178	1	Yes	0.804	0.139	0.95	Yes	1.00	**3.71**
		$U_{14} - U_{15}$	-----	-1356.05	-408	-293	-1412	-686	41	-277	-109	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.208	1	Yes	0.777	0.156	0.94	Yes	1.00	**3.37**
		$U_{15} - U_{16}$	-----	-1428.71	-199	-467	-929	-846	-112	-428	-379	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.168	1	Yes	0.819	0.103	0.93	Yes	1.00	**3.93**
		$U_{16} - U_{17}$	-----	-1379.10	-381	-198	-1361	-596	-85	-268	-284	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.200	1	Yes	0.791	0.150	0.95	Yes	1.00	**4.67**
		$U_{17} - U_{18}$	-----	-995.21	-263	-54	-861	-43	-125	72	-233	40	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.209	1	Yes	0.779	0.140	0.92	Yes	1.00	**3.48**
		$U_{18} - U_{19}$	-----	-668.06	-253	18	-686	77	369	-142	279	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.752	0.138	0.89	Yes	1.00	**3.42**
		$U_{19} - U_{20}$	-----	-594.52	-213	-76	-1117	275	-50	-114	-133	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.317	1	Yes	0.669	0.225	0.90	Yes	1.00	**9.49**
	Structure 2	$U_0 - U_1$	-----	-555.22	1976	-1670	-1478	-1020	947	-310	1833	-937	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.291	0.96	Yes	0.656	0.335	1.00	Yes	1.00	**13.18**
		$U_1 - U_2$	-----	-825.95	-70	-432	-416	-1070	86	39	476	-395	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.195	1	Yes	0.797	0.162	0.96	Yes	1.00	**4.89**
		$U_2 - U_3$	-----	-1163.98	10	-926	-547	-1269	-40	-533	554	-668	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1	Yes	0.826	0.129	0.96	Yes	1.00	**4.68**
		$U_3 - U_4$	-----	-1384.71	-528	-531	-1370	-1443	-119	-37	424	-453	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.204	1	Yes	0.788	0.129	0.92	Yes	1.00	**4.07**
		$U_4 - U_5$	-----	-1488.73	-580	-549	-1598	-1424	-124	-83	222	-623	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.223	1	Yes	0.764	0.132	0.90	Yes	1.00	**4.03**
		$U_5 - U_6$	-----	-1533.11	-579	-20	-1762	-917	-195	-52	122	-551	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.202	1	Yes	0.787	0.146	0.94	Yes	1.00	**4.00**
		$U_6 - U_7$	-----	-1391.64	-313	-203	-1544	-1026	-172	-93	268	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.201	1	Yes	0.792	0.138	0.93	Yes	1.00	**4.30**
		$U_7 - U_8$	-----	-1363.09	-351	-209	-1575	-913	-83	-185	-317	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.208	1	Yes	0.776	0.140	0.92	Yes	1.00	**4.06**
		$U_8 - U_9$	-----	-1136.73	-361	200	-1570	-486	-22	-200	-623	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.220	1	Yes	0.771	0.167	0.94	Yes	1.00	**4.62**
		$U_9 - U_{10}$	286.39	-888.41	-88	529	-1594	-169	-124	-241	-719	-500	0.210	0.272	0.49	Yes	0.142	0.184	0.33	Yes	0.771	0.225	1	Yes	0.767	0.194	0.97	Yes	1.00	**5.98**
		$U_{10} - U_{11}$	776.48	-595.80	309	578	-1424	-213	-198	-113	-1131	-293	0.656	0.339	1.00	Yes	0.446	0.223	0.67	Yes	0.596	0.280	0.88	Yes	0.592	0.201	0.80	Yes	1.00	**8.25**
		$U_{11} - U_{12}$	907.54	-----	187	639	-1045	291	25	19	-642	-405	0.767	0.226	1.00	Yes	0.515	0.150	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		$U_{12} - U_{13}$	1211.35	-----	433	52	-658	-444	276	396	-936	70	0.818	0.172	1.00	Yes	0.583	0.119	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		$U_{13} - U_{14}$	1044.18	-----	164	1752	-2161	3898	1568	1781	-303	839	0.513	0.482	1.00	Yes	0.364	0.318	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.49**
		$U_{14} - U_{15}$	1055.15	-----	4163	-1230	1637	-115	798	151	778	1300	0.519	0.474	1.00	Yes	0.367	0.312	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		$U_{15} - U_{16}$	1234.23	-----	253	34	-1299	-795	473	200	1232	-317	0.746	0.252	1.00	Yes	0.531	0.172	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.48**
		$U_{16} - U_{17}$	740.53	-527.45	1862	-1299	-891	-1652	162	-558	2095	-1881	0.546	0.454	1.00	Yes	0.363	0.298	0.67	Yes	0.460	0.345	0.81	Yes	0.457	0.234	0.70	Yes	1.00	**20.91**
		$U_{17} - U_{18}$	757.29	-286.68	490	263	-191	-831	-60	288	669	-456	0.760	0.239	1.00	Yes	0.506	0.158	0.67	Yes	0.341	0.180	0.53	Yes	0.339	0.141	0.48	Yes	1.00	**6.73**
		$U_{18} - U_{19}$	591.77	-690.02	600	169	-467	-851	3	162	941	-720	0.594	0.282	0.88	Yes	0.390	0.182	0.58	Yes	0.820	0.177	1	Yes	0.815	0.145	0.96	Yes	1.00	**7.55**
		$U_{19} - U_{20}$	263.05	-743.12	289	121	-635	-858	-55	139	554	-356	0.247	0.212	0.46	Yes	0.164	0.139	0.31	Yes	0.825	0.167	1	Yes	0.820	0.137	0.96	Yes	1.00	**5.54**
		$U_{20} - U_{21}$	187.67	-856.70	156	-94	-848	-636	3	24	429	-550	0.146	0.183	0.33	Yes	0.102	0.120	0.23	Yes	0.788	0.210	1	Yes	0.782	0.123	0.91	Yes	1.00	**4.99**
		$U_{21} - U_{22}$	88.37	-821.32	-70	-23	-935	-889	-186	-98	354	-191	0.069	0.174	0.25	Yes	0.049	0.117	0.17	Yes	0.755	0.235	1	Yes	0.750	0.135	0.89	Yes	1.00	**4.59**
		$U_{22} - U_{23}$	60.79	-815.49	-34	-93	-1214	-678	-43	-158	-185	-132	0.047	0.196	0.25	Yes	0.033	0.131	0.17	Yes	0.750	0.249	1	Yes	0.744	0.176	0.93	Yes	1.00	**4.32**
		$U_{23} - U_{24}$	88.26	-810.15	43	-56	-1052	-554	2	-83	-594	-152	0.068	0.217	0.29	Yes	0.048	0.142	0.20	Yes	0.745	0.247	1	Yes	0.739	0.152	0.90	Yes	1.00	**5.17**
		$U_{24} - U_{25}$	286.17	-685.03	170	310	-1158	-304	-11	-85	-560	-126	0.268	0.261	0.53	Yes	0.178	0.171	0.35	Yes	0.761	0.235	1	Yes	0.756	0.185	0.95	Yes	1.00	**5.64**
		$U_{25} - U_{26}$	627.55	-597.78	191	622	-1263	96	13	-57	-819	-281	0.630	0.334	0.97	Yes	0.413	0.214	0.63	Yes	0.710	0.285	1	Yes	0.706	0.214	0.93	Yes	1.00	**8.17**
		$U_{26} - U_{27}$	728.06	-96.98	273	458	-888	108	-52	3	-781	-71	0.731	0.265	1.00	Yes	0.487	0.175	0.67	Yes	0.115	0.244	0.36	Yes	0.115	0.151	0.27	Yes	1.00	**6.52**
		$U_{27} - U_{28}$	1048.87	-----	206	685	-1202	455	227	240	-672	-393	0.773	0.222	1.00	Yes	0.514	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.50**
		$U_{28} - U_{29}$	1103.68	-----	1065	303	-1736	-847	483	1450	-1537	304	0.667	0.327	1.00	Yes	0.475	0.223	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.10**
		$U_{29} - U_{30}$	925.08	-----	554	1020	-2534	4012	2080	2482	-512	920	0.455	0.541	1.00	Yes	0.322	0.357	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.95**
		$U_{30} - U_{31}$	963.34	-----	4655	-2084	1719	-467	870	-271	964	1263	0.474	0.517	1.00	Yes	0.335	0.340	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.30**
		$U_{31} - U_{32}$	1195.85	-----	104	357	-870	-523	185	376	861	-371	0.808	0.192	1.00	Yes	0.576	0.132	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		$U_{32} - U_{33}$	-----	-760.72	965	-1049	-448	-1710	290	-657	1637	-1862	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.223	0.99	Yes	0.756	0.241	1.00	Yes	1.00	**15.75**
		$U_{33} - U_{34}$	636.34	-780.37	491	176	-475	-1086	-28	221	1091	-440	0.538	0.286	0.83	Yes	0.366	0.189	0.56	Yes	0.780	0.212	1	Yes	0.775	0.153	0.93	Yes	1.00	**7.71**
		$U_{34} - U_{35}$	141.97	-992.86	418	-166	-421	-1103	42	53	701	-542	0.104	0.210	0.32	Yes	0.071	0.142	0.22	Yes	0.862	0.135	1	Yes	0.857	0.134	1.00	Yes	1.00	**5.49**
		$U_{35} - U_{36}$	-----	-1224.30	96	-465	-590	-1216	-18	88	568	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.158	1	Yes	0.830	0.129	0.96	Yes	1.00	**4.04**
		$U_{36} - U_{37}$	-----	-1424.71	-288	-311	-1206	-1187	-22	-120	586	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.811	0.107	0.92	Yes	1.00	**3.95**
		$U_{37} - U_{38}$	-----	-1411.08	-210	-434	-1368	-1202	-95	-200	-219	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.189	1	Yes	0.803	0.122	0.93	Yes	1.00	**3.67**
		$U_{38} - U_{39}$	-----	-1553.63	-171	-635	-1375	-1501	7	-212	-542	-278	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.195	1	Yes	0.798	0.124	0.93	Yes	1.00	**3.90**
		$U_{39} - U_{40}$	-----	-1491.61	-614	-566	-1919	-1137	12	-89	-352	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.225	1	Yes	0.766	0.159	0.93	Yes	1.00	**3.88**
		$U_{40} - U_{41}$	-----	-1380.03	-520	-495	-1649	-1013	77	-168	16	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.207	1	Yes	0.786	0.147	0.94	Yes	1.00	**4.22**
		$U_{41} - U_{42}$	-----	-1128.71	-409	-134	-1682	-373	68	-32	-393	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1	Yes	0.801	0.171	0.98	Yes	1.00	**5.97**
		$U_{42} - U_{43}$	-----	-778.85	-299	-27	-1156	-44	215	-195	77	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.239	1	Yes	0.752	0.175	0.93	Yes	1.00	**5.05**
		$U_{43} - U_{44}$	-----	-643.55	-172	-225	-1391	431	-124	-129	-97	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.217	0.99	Yes	0.760	0.236	1.00	Yes	1.00	**13.00**
	Structure 3	$U_0 - U_1$	-----	-574.34	1754	-1476	-1499	-943	901	-629	1873	-1209	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.328	0.98	Yes	0.646	0.353	1.00	Yes	1.00	**13.39**
		$U_1 - U_2$	-----	-724.11	9	-668	-263	-658	71	-279	715	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.171	1	Yes	0.815	0.134	0.95	Yes	1.00	**5.19**
		$U_2 - U_3$	-----	-1071.04	123	-576	-282	-696	-19	-645	683	-663	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.148	1	Yes	0.838	0.113	0.96	Yes	1.00	**5.18**
		$U_3 - U_4$	-----	-1401.91	-208	-388	-768	-1182	-168	-160	426	-514	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1	Yes	0.804	0.130	0.94	Yes	1.00	**4.62**
		$U_4 - U_5$	-----	-1400.87	-432	-166	-1173	-525	-102	-61	419	-611	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1	Yes	0.803	0.129	0.94	Yes	1.00	**4.04**
		$U_5 - U_6$	-----	-1369.04	-253	-374	-866	-1273	-186	-148	116	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.206	1	Yes	0.785	0.140	0.93	Yes	1.00	**3.92**
		$U_6 - U_7$	-----	-1343.48	-494	-156	-1563	-570	-122	-302	-244	-251	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.216	1	Yes	0.770	0.172	0.95	Yes	1.00	**3.94**
		$U_7 - U_8$	-----	-1184.21	-236	32	-952	-305	-109	-317	-589	-438	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.195	1	Yes	0.791	0.131	0.93	Yes	1.00	**4.32**
		$U_8 - U_9$	-----	-860.11	-131	256	-844	0	-215	-188	-542	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.178	1	Yes	0.807	0.140	0.95	Yes	1.00	**4.41**
		$U_9 - U_{10}$	283.11	-604.13	-64	371	-1001	230	4	-5	-246	-388	0.307	0.287	0.60	Yes	0.205	0.184	0.39	Yes	0.778	0.189	0.97	Yes	0.771	0.224	1.00	Yes	1.00	**6.73**
		$U_{10} - U_{11}$	696.73	-142.58	320	244	-556	60	96	167	-688	-10	0.756	0.235	1.00	Yes	0.512	0.158	0.67	Yes	0.184	0.247	0.44	Yes	0.182	0.125	0.31	Yes	1.00	**8.64**
		$U_{11} - U_{12}$	681.04	-----	128	762	-1267	1604	1358	1100	-843	166	0.558	0.436	1.00	Yes	0.382	0.296	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.76**
		$U_{12} - U_{13}$	713.95	-----	2872	-1325	794	-138	267	-585	529	623	0.495	0.498	1.00	Yes	0.345	0.340	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.42**
		$U_{13} - U_{14}$	817.96	-----	217	351	-345	-251	-105	369	993	-378	0.782	0.211	1.00	Yes	0.547	0.146	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{14} - U_{15}$	633.11	-410.74	457	225	-88	-531	-62	259	866	-795	0.726	0.273	1.00	Yes	0.489	0.181	0.68	Yes	0.559	0.184	0.75	Yes	0.554	0.126	0.69	Yes	1.00	**7.11**
		$U_{15} - U_{16}$	302.47	-596.53	269	120	-378	-648	-77	192	662	70	0.347	0.266	0.62	Yes	0.238	0.182	0.42	Yes	0.812	0.182	1	Yes	0.804	0.154	0.96	Yes	1.00	**5.30**
		$U_{16} - U_{17}$	289.61	-602.97	313	31	-639	-502	168	-74	242	92	0.332	0.193	0.53	Yes	0.228	0.132	0.36	Yes	0.820	0.178	1	Yes	0.813	0.152	0.97	Yes	1.00	**5.17**
		$U_{17} - U_{18}$	75.06	-611.76	211	-176	-539	-527	67	36	-123	-145	0.086	0.153	0.24	Yes	0.058	0.100	0.16	Yes	0.832	0.164	1	Yes	0.825	0.128	0.96	Yes	1.00	**4.36**
		$U_{18} - U_{19}$	-----	-558.18	21	-70	-833	-197	209	-196	-264	128	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.231	1	Yes	0.753	0.198	0.96	Yes	1.00	**5.13**
		$U_{19} - U_{20}$	12.03	-600.69	93	-295	-614	-113	-147	-110	76	-14	0.014	0.171	0.19	Yes	0.009	0.117	0.13	Yes	0.817	0.174	1	Yes	0.810	0.146	0.96	Yes	1.00	**9.20**

Moment (Start) Al Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1	18.13	-34.13	650	-1048	-168	31	-831	-3054	55	200	0.028	0.970	1.00	Yes	0.016	0.573	0.59	Yes	0.062	0.721	0.79	Yes	0.061	0.315	0.38	Yes	1.00	**12.98**
		L_1 - L_2	352.26	-----	158	-648	-266	-501	-194	415	-1207	292	0.539	0.454	1.00	Yes	0.329	0.291	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_2 - L_3	625.04	-76.31	-52	40	-747	-543	-185	125	40	-574	0.719	0.273	1.00	Yes	0.416	0.162	0.58	Yes	0.104	0.242	0.35	Yes	0.103	0.180	0.29	Yes	1.00	**4.29**
		L_3 - L_4	581.69	-197.92	-10	256	-627	-365	279	-231	-1110	-66	0.669	0.330	1.00	Yes	0.397	0.205	0.61	Yes	0.270	0.181	0.46	Yes	0.268	0.151	0.42	Yes	1.00	**4.29**
		L_4 - L_5	80.40	-550.24	98	462	-607	324	-72	200	124	-149	0.104	0.196	0.31	Yes	0.062	0.128	0.20	Yes	0.846	0.133	0.98	Yes	0.838	0.161	1.00	Yes	1.00	**3.94**
		L_5 - L_6	-----	-748.96	125	591	-278	345	161	-240	-209	21	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.121	1	Yes	0.864	0.131	1.00	Yes	1.00	**3.91**
		L_6 - L_7	-----	-1162.03	293	-63	-404	157	-245	399	214	38	-----	-----	-----	-----	-----	-----	-----	-----	0.946	0.044	1	Yes	0.935	0.064	1.00	Yes	1.00	**6.02**
		L_7 - L_8	-----	-1171.66	17	574	-430	1580	642	253	-504	131	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.246	1	Yes	0.742	0.209	0.96	Yes	1.00	**6.51**
		L_8 - L_9	-----	-1274.38	1135	-102	649	-34	441	366	184	385	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.807	0.150	0.96	Yes	1.00	**3.98**
		L_9 - L_{10}	-----	-1062.22	849	-890	-139	-194	658	870	-219	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.102	0.97	Yes	0.855	0.140	1.00	Yes	1.00	**9.86**
		L_{10} - L_{11}	211.84	-546.83	499	-52	-49	-605	-285	44	74	-696	0.274	0.282	0.56	Yes	0.160	0.167	0.33	Yes	0.841	0.127	0.97	Yes	0.833	0.160	1.00	Yes	1.00	**7.48**
		L_{11} - L_{12}	503.73	-----	381	-770	64	-586	-165	450	-802	288	0.652	0.344	1.00	Yes	0.391	0.220	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_{12} - L_{13}	1040.87	-----	59	-155	-479	-614	-160	120	-11	-535	0.821	0.171	1.00	Yes	0.525	0.104	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_{13} - L_{14}	1268.67	-----	251	-1242	-277	-1219	42	411	-916	188	0.746	0.247	1.00	Yes	0.483	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{14} - L_{15}	1520.04	-----	-501	-170	-1807	-412	-182	93	-166	-456	0.743	0.250	1.00	Yes	0.483	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_{15} - L_{16}	1594.65	-----	-283	-439	-1223	-1046	-3	-186	-933	7	0.779	0.213	1.00	Yes	0.500	0.127	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		L_{16} - L_{17}	1220.79	-----	-421	55	-1367	20	-127	169	213	-302	0.772	0.228	1.00	Yes	0.501	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_{17} - L_{18}	805.19	-----	-222	-19	-900	67	83	-114	-930	-42	0.701	0.293	1.00	Yes	0.449	0.179	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.01**
		L_{18} - L_{19}	390.96	-----	-244	229	-984	483	-160	111	493	-49	0.598	0.398	1.00	Yes	0.405	0.252	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.99**
		L_{19} - L_{20}	37.64	-291.18	-185	69	-1060	622	144	32	134	30	0.064	0.379	0.45	Yes	0.039	0.227	0.27	Yes	0.584	0.415	1	Yes	0.579	0.346	0.93	Yes	1.00	**11.18**
	Structure 2	L_0 - L_1	47.26	-153.45	643	-2186	-75	-102	-864	-3001	38	132	0.057	0.938	1.00	Yes	0.034	0.582	0.62	Yes	0.221	0.684	0.91	Yes	0.219	0.445	0.67	Yes	1.00	**17.78**
		L_1 - L_2	475.10	-----	605	-1429	-4	-734	-185	799	-751	356	0.577	0.422	1.00	Yes	0.343	0.267	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		L_2 - L_3	1027.79	-----	189	-755	-405	-937	-37	161	505	-361	0.810	0.189	1.00	Yes	0.531	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.19**
		L_3 - L_4	1275.20	-----	151	-1417	-386	-1389	47	699	-945	424	0.749	0.241	1.00	Yes	0.505	0.152	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_4 - L_5	1743.61	-----	-432	-433	-1583	-1435	-56	176	423	-514	0.813	0.184	1.00	Yes	0.538	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_5 - L_6	1789.89	-----	-221	-503	-1204	-1841	192	-91	-1044	54	0.768	0.228	1.00	Yes	0.515	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		L_6 - L_7	1786.41	-----	-585	-226	-2196	-1329	-160	218	-45	-801	0.756	0.242	1.00	Yes	0.503	0.144	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_7 - L_8	1299.34	-----	-308	371	-1602	-346	214	-143	-880	165	0.745	0.249	1.00	Yes	0.489	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_8 - L_9	1034.32	-360.08	-106	583	-1362	285	-89	183	109	-924	0.723	0.271	1.00	Yes	0.487	0.172	0.66	Yes	0.299	0.117	0.42	Yes	0.296	0.184	0.49	Yes	1.00	**6.45**
		L_9 - L_{10}	601.82	-760.70	-125	834	-1252	195	145	-154	-1233	1	0.537	0.349	0.89	Yes	0.313	0.212	0.53	Yes	0.804	0.166	0.97	Yes	0.799	0.200	1.00	Yes	1.00	**7.58**
		L_{10} - L_{11}	-----	-730.69	10	561	-764	562	-83	84	242	0	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.059	0.93	Yes	0.858	0.134	1.00	Yes	1.00	**4.53**
		L_{11} - L_{12}	-----	-1030.97	-72	1100	-656	796	66	-364	-222	34	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.119	0.98	Yes	0.845	0.150	1.00	Yes	1.00	**5.01**
		L_{12} - L_{13}	-----	-1483.59	241	-811	-810	-576	-404	143	279	47	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.089	1	Yes	0.895	0.082	0.98	Yes	1.00	**7.20**
		L_{13} - L_{14}	-----	-1404.21	-387	1267	-1777	3293	884	722	-918	-444	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.253	0.97	Yes	0.707	0.288	1.00	Yes	1.00	**7.61**
		L_{14} - L_{15}	-----	-1487.03	2788	-988	1473	-435	245	106	421	397	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.188	0.95	Yes	0.748	0.243	1.00	Yes	1.00	**5.16**
		L_{15} - L_{16}	-----	-1270.79	-14	-57	-1692	-506	563	-348	-567	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.230	1	Yes	0.760	0.168	0.93	Yes	1.00	**10.64**
		L_{16} - L_{17}	-----	-1168.70	1164	-329	508	-404	-344	-65	330	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.131	0.99	Yes	0.851	0.144	1.00	Yes	1.00	**5.78**
		L_{17} - L_{18}	120.48	-710.96	1203	-1480	-49	-893	-34	1361	-1628	441	0.108	0.432	0.55	Yes	0.063	0.262	0.33	Yes	0.752	0.247	1	Yes	0.747	0.237	0.99	Yes	1.00	**12.97**
		L_{18} - L_{19}	235.02	-644.51	721	36	-156	-554	-212	60	596	-131	0.266	0.230	0.50	Yes	0.154	0.135	0.29	Yes	0.864	0.122	0.99	Yes	0.859	0.139	1.00	Yes	1.00	**6.40**
		L_{19} - L_{20}	602.26	-473.87	513	131	-183	-831	150	-176	-1016	491	0.682	0.316	1.00	Yes	0.404	0.195	0.60	Yes	0.635	0.138	0.78	Yes	0.632	0.160	0.80	Yes	1.00	**7.26**
		L_{20} - L_{21}	988.70	-282.89	400	-80	-1018	-1059	-185	70	450	-466	0.788	0.205	1.00	Yes	0.517	0.124	0.65	Yes	0.267	0.169	0.44	Yes	0.265	0.155	0.42	Yes	1.00	**7.32**
		L_{21} - L_{22}	853.41	-35.28	100	-298	-756	-1381	136	-102	-1008	98	0.681	0.310	1.00	Yes	0.455	0.198	0.66	Yes	0.033	0.227	0.27	Yes	0.033	0.202	0.24	Yes	1.00	**5.16**
		L_{22} - L_{23}	842.83	-7.35	-217	-41	-2049	-430	-116	160	50	-237	0.672	0.325	1.00	Yes	0.450	0.203	0.66	Yes	0.007	0.350	0.36	Yes	0.007	0.299	0.31	Yes	1.00	**5.74**
		L_{23} - L_{24}	862.57	-324.72	-63	450	-1391	-552	162	-139	-961	202	0.688	0.306	1.00	Yes	0.451	0.187	0.64	Yes	0.307	0.186	0.5	Yes	0.305	0.203	0.51	Yes	1.00	**7.71**
		L_{24} - L_{25}	562.13	-552.66	200	526	-1341	282	-105	150	484	-642	0.637	0.357	1.00	Yes	0.377	0.225	0.61	Yes	0.741	0.190	0.94	Yes	0.737	0.259	1.00	Yes	1.00	**8.38**
		L_{25} - L_{26}	19.66	-642.28	29	729	-726	345	102	-167	-585	-12	0.022	0.230	0.26	Yes	0.013	0.135	0.15	Yes	0.861	0.133	1	Yes	0.856	0.141	1.00	Yes	1.00	**6.30**
		L_{26} - L_{27}	-----	-826.93	188	494	-800	541	-51	222	322	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.088	0.97	Yes	0.868	0.128	1.00	Yes	1.00	**6.12**
		L_{27} - L_{28}	-----	-1140.40	84	1360	-859	1084	240	-8	-546	271	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.146	0.99	Yes	0.831	0.168	1.00	Yes	1.00	**8.24**
		L_{28} - L_{29}	-----	-1450.64	395	-690	-742	-1101	-92	784	-3	-148	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.120	1	Yes	0.868	0.109	0.98	Yes	1.00	**8.13**
		L_{29} - L_{30}	-----	-1419.49	-535	1342	-1882	3245	838	848	-662	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.236	0.96	Yes	0.714	0.283	1.00	Yes	1.00	**7.09**
		L_{30} - L_{31}	-----	-1527.59	2563	-786	1691	-503	266	279	565	474	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.190	0.97	Yes	0.769	0.224	1.00	Yes	1.00	**3.61**
		L_{31} - L_{32}	-----	-1289.91	37	-366	-1499	-633	701	-350	-283	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.215	1	Yes	0.772	0.149	0.93	Yes	1.00	**10.25**
		L_{32} - L_{33}	-----	-1044.33	982	-430	509	-557	-115	58	175	-342	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.110	0.98	Yes	0.856	0.134	1.00	Yes	1.00	**4.60**
		L_{33} - L_{34}	346.92	-186.18	1266	-2012	37	-1289	45	2217	-2031	949	0.346	0.650	1.00	Yes	0.203	0.398	0.61	Yes	0.220	0.441	0.67	Yes	0.219	0.352	0.58	Yes	1.00	**15.87**
		L_{34} - L_{35}	706.08	-795.68	868	-83	-335	-990	-225	92	1262	-17	0.630	0.310	0.95	Yes	0.367	0.187	0.56	Yes	0.841	0.132	0.98	Yes	0.836	0.158	1.00	Yes	1.00	**9.82**
		L_{35} - L_{36}	1021.04	-348.95	605	-128	-189	-1103	170	-134	-1412	372	0.714	0.282	1.00	Yes	0.481	0.181	0.67	Yes	0.289	0.147	0.44	Yes	0.287	0.149	0.44	Yes	1.00	**8.02**
		L_{36} - L_{37}	1361.66	-----	305	-256	-915	-1347	-205	151	841	32	0.781	0.218	1.00	Yes	0.513	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		L_{37} - L_{38}	1746.73	-----	-166	-653	-1874	-1976	66	-192	-1338	323	0.739	0.256	1.00	Yes	0.491	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		L_{38} - L_{39}	1753.95	-----	-585	-232	-2336	-926	-117	181	139	-525	0.753	0.240	1.00	Yes	0.505	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{39} - L_{40}	1661.08	-----	-409	-427	-1804	-1040	115	-164	-769	379	0.774	0.222	1.00	Yes	0.513	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_{40} - L_{41}	1279.85	-----	-471	33	-1663	-190	-51	265	185	-512	0.759	0.239	1.00	Yes	0.512	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.76**
		L_{41} - L_{42}	929.47	-----	-258	-51	-1160	-37	139	-75	-752	51	0.742	0.252	1.00	Yes	0.488	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.52**
		L_{42} - L_{43}	493.16	-----	-273	214	-1369	472	129	347	737	90	0.599	0.399	1.00	Yes	0.356	0.253	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.20**
		L_{43} - L_{44}	-----	-301.87	-203	18	-1795	721	463	135	869	254	-----	-----	-----	-----	-----	-----	-----	-----	0.434	0.558	1	Yes	0.431	0.365	0.80	Yes	1.00	**17.62**
	Structure 3	L_0 - L_1	9.48	-323.65	524	-1117	24	-154	-214	-970	26	118	0.015	0.536	0.56	Yes	0.009	0.352	0.37	Yes	0.588	0.407	1	Yes	0.583	0.335	0.92	Yes	1.00	**8.95**
		L_1 - L_2	304.15	-----	664	-1102	117	-612	52	976	-866	480	0.465	0.533	1.00	Yes	0.315	0.342	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.94**
		L_2 - L_3	849.93	-----	242	-595	-254	-574	121	-33	1078	272	0.740	0.253	1.00	Yes	0.474	0.156	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.11**
		L_3 - L_4	1167.80	-----	233	-1079	-273	-1165	41	787	-929	456	0.738	0.254	1.00	Yes	0.479	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		L_4 - L_5	1581.04	-----	-376	-263	-1351	-1037	-30	230	90	-791	0.772	0.218	1.00	Yes	0.496	0.130	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		L_5 - L_6	1488.03	-----	-139	-493	-735	-1513	252	-56	-1162	86	0.727	0.264	1.00	Yes	0.472	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		L_6 - L_7	1225.57	-----	-499	240	-1583	75	-54	253	-129	-679	0.721	0.275	1.00	Yes	0.467	0.169	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_7 - L_8	967.60	-7.60	-106	156	-753	-236	137	-170	-874	-78	0.764	0.235	1.00	Yes	0.488	0.144	0.64	Yes	0.007	0.169	0.18	Yes	0.007	0.134	0.15	Yes	1.00	**6.05**
		L_8 - L_9	533.87	-294.28	-169	430	-850	362	-108	167	445	50	0.691	0.303	1.00	Yes	0.415	0.196	0.62	Yes	0.452	0.124	0.58	Yes	0.448	0.225	0.68	Yes	1.00	**6.42**
		L_9 - L_{10}	-----	-557.65	-66	514	-551	231	146	-153	-291	45	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.080	0.94	Yes	0.850	0.146	1.00	Yes	1.00	**5.84**
		L_{10} - L_{11}	-----	-1090.97	192	-38	-741	393	-333	-95	748	124	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.080	0.97	Yes	0.878	0.116	1.00	Yes	1.00	**9.46**
		L_{11} - L_{12}	-----	-1161.98	38	736	-485	1504	780	159	-1127	-294	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.249	1	Yes	0.736	0.199	0.94	Yes	1.00	**8.89**
		L_{12} - L_{13}	-----	-1249.03	1393	-153	683	-12	204	-88	-34	292	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.192	1	Yes	0.791	0.185	0.98	Yes	1.00	**4.94**
		L_{13} - L_{14}	-----	-1031.26	732	-1077	-367	-225	276	870	-898	16	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.126	0.97	Yes	0.830	0.169	1.00	Yes	1.00	**10.21**
		L_{14} - L_{15}	-----	-716.45	562	104	43	-377	-259	86	-25	-698	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.147	1	Yes	0.840	0.127	0.97	Yes	1.00	**5.01**
		L_{15} - L_{16}	290.09	-551.61	478	135	8	-501	264	-218	-1009	435	0.376	0.312	0.69	Yes	0.225	0.196	0.43	Yes	0.848	0.148	1	Yes	0.840	0.133	0.98	Yes	1.00	**5.82**
		L_{16} - L_{17}	678.97	-132.17	256	-68	-725	-439	-173	190	263	-25	0.781	0.217	1.00	Yes	0.464	0.140	0.61	Yes	0.181	0.219	0.4	Yes	0.179	0.175	0.36	Yes	1.00	**5.10**
		L_{17} - L_{18}	634.26	-19.33	-1	-115	-744	-511	113	-113	-537	170	0.730	0.266	1.00	Yes	0.422	0.158	0.58	Yes	0.026	0.240	0.27	Yes	0.026	0.180	0.21	Yes	1.00	**5.32**
		L_{18} - L_{19}	413.26	-5.74	-68	-11	-829	45	-108	216	251	515	0.632	0.359	1.00	Yes	0.386	0.237	0.63	Yes	0.010	0.302	0.32	Yes	0.010	0.249	0.26	Yes	1.00	**5.36**
		L_{19} - L_{20}	-----	-72.06	182	-290	-1690	1170	248	68	-2121	-576	-----	-----	-----	-----	-----	-----	-----	-----	0.131	0.862	1	Yes	0.130	0.507	0.64	Yes	1.00	**27.70**

Moment (Start) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Verticals	Structure 1	$U_0 - L_0$			-----	-281.55	-8	55	-109	168	172	55	-974	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.366	1	Yes	0.596	0.215	0.82	Yes	1.00	**1.88**
		$U_1 - L_1$			18.95	-322.71	27	-20	-242	233	572	208	-693	-224	0.034	0.510	0.55	Yes	0.019	0.281	0.30	Yes	0.705	0.263	0.97	Yes	0.683	0.310	1.00	Yes	1.00	**4.82**
		$U_2 - L_2$			86.60	-216.36	81	-89	-134	175	754	233	-1654	-530	0.156	0.702	0.86	Yes	0.086	0.386	0.48	Yes	0.473	0.526	1	Yes	0.458	0.223	0.69	Yes	1.00	**5.82**
		$U_3 - L_3$			159.93	-108.30	208	-201	-108	123	-1535	-730	-302	-18	0.288	0.710	1.00	Yes	0.158	0.390	0.55	Yes	0.237	0.454	0.7	Yes	0.229	0.266	0.50	Yes	1.00	**9.22**
		$U_4 - L_4$			-----	-190.23	261	-256	31	-44	-1834	-815	-22	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.418	0.579	1	Yes	0.403	0.334	0.74	Yes	1.00	**7.83**
		$U_5 - L_5$			-----	-383.57	196	-220	72	-85	221	276	936	343	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.298	1	Yes	0.662	0.223	0.89	Yes	1.00	**4.10**
		$U_6 - L_6$			-----	-414.80	208	-216	77	-66	893	469	1482	738	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.362	1	Yes	0.595	0.189	0.79	Yes	1.00	**4.01**
		$U_7 - L_7$			-----	-381.34	257	-277	105	-118	269	137	1274	307	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.362	1	Yes	0.588	0.273	0.87	Yes	1.00	**3.50**
		$U_8 - L_8$			-----	-1210.30	332	-405	-415	494	743	110	-1087	-544	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.118	1	Yes	0.842	0.092	0.94	Yes	1.00	**7.55**
		$U_9 - L_9$			-----	-656.80	-228	259	-414	455	625	238	-294	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.183	0.97	Yes	0.742	0.253	1.00	Yes	1.00	**3.59**
		$U_{10} - L_{10}$			-----	-764.77	-158	155	-354	384	626	289	-820	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.201	1	Yes	0.755	0.199	0.96	Yes	1.00	**5.19**
		$U_{11} - L_{11}$			-----	-659.52	-165	240	-378	485	218	147	-150	180	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.111	0.91	Yes	0.768	0.225	1.00	Yes	1.00	**5.38**
		$U_{12} - L_{12}$			-----	-523.29	-124	133	-317	326	327	272	-409	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.166	0.93	Yes	0.718	0.278	1.00	Yes	1.00	**5.30**
		$U_{13} - L_{13}$			-----	-369.12	-63	85	-224	250	9	40	-366	96	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.195	0.95	Yes	0.707	0.285	1.00	Yes	1.00	**4.51**
		$U_{14} - L_{14}$			-----	-193.10	123	-122	-266	291	-1847	-724	-292	-524	-----	-----	-----	-----	-----	-----	-----	-----	0.431	0.566	1	Yes	0.409	0.371	0.78	Yes	1.00	**12.57**
		$U_{15} - L_{15}$			67.74	-313.60	238	-262	-68	55	-580	-120	115	-479	0.122	0.503	0.63	Yes	0.067	0.277	0.35	Yes	0.703	0.247	0.95	Yes	0.664	0.335	1.00	Yes	1.00	**7.91**
		$U_{16} - L_{16}$			-----	-320.96	236	-246	45	-50	-479	-93	474	107	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.219	0.95	Yes	0.679	0.314	1.00	Yes	1.00	**5.22**
		$U_{17} - L_{17}$			-----	-417.22	203	-221	80	-93	40	83	505	200	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.212	1	Yes	0.720	0.224	0.95	Yes	1.00	**3.59**
		$U_{18} - L_{18}$			-----	-533.30	435	-447	173	-179	205	46	679	172	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.183	0.97	Yes	0.742	0.253	1.00	Yes	1.00	**5.04**
		$U_{19} - L_{19}$			-----	-644.36	415	-432	182	-195	346	71	598	122	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.192	1	Yes	0.750	0.200	0.96	Yes	1.00	**4.58**
		$U_{20} - L_{20}$			-----	-518.79	342	-408	232	-279	271	36	440	58	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.239	1	Yes	0.664	0.216	0.88	Yes	1.00	**2.60**
	Structure 2	$U_0 - L_0$			-----	-622.28	-155	273	-323	468	-12	-2	-1033	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.250	1	Yes	0.667	0.198	0.87	Yes	1.00	**2.69**
		$U_1 - L_1$			-----	-708.49	-209	216	-544	546	629	162	-340	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.147	0.96	Yes	0.759	0.232	1.00	Yes	1.00	**4.61**
		$U_2 - L_2$			-----	-591.62	-156	171	-442	462	623	286	-493	110	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.177	0.97	Yes	0.754	0.236	1.00	Yes	1.00	**4.18**
		$U_3 - L_3$			-----	-456.94	-75	86	-217	233	545	265	101	236	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.213	1	Yes	0.717	0.212	0.93	Yes	1.00	**3.64**
		$U_4 - L_4$			-----	-322.21	-20	30	-197	205	561	235	-236	102	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.262	1	Yes	0.682	0.262	0.95	Yes	1.00	**4.67**
		$U_5 - L_5$			67.21	-272.33	76	-57	-163	189	-126	-108	-978	1	0.121	0.525	0.65	Yes	0.066	0.289	0.36	Yes	0.615	0.384	1	Yes	0.576	0.242	0.82	Yes	1.00	**6.76**
		$U_6 - L_6$			349.31	-91.41	198	-204	-118	127	-382	-301	-365	-22	0.628	0.371	1.00	Yes	0.346	0.204	0.55	Yes	0.206	0.162	0.37	Yes	0.193	0.260	0.46	Yes	1.00	**9.05**
		$U_7 - L_7$			-----	-203.07	335	-382	-3	-6	-1072	-481	-709	-705	-----	-----	-----	-----	-----	-----	-----	-----	0.459	0.536	1	Yes	0.430	0.489	0.92	Yes	1.00	**13.04**
		$U_8 - L_8$			-----	-472.78	335	-358	151	-170	-430	-99	420	45	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.156	0.85	Yes	0.681	0.313	1.00	Yes	1.00	**4.38**
		$U_9 - L_9$			-----	-692.29	577	-592	265	-288	-409	6	608	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.139	0.91	Yes	0.742	0.251	1.00	Yes	1.00	**5.63**
		$U_{10} - L_{10}$			-----	-747.37	508	-530	233	-234	82	263	1172	687	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.699	0.234	0.94	Yes	1.00	**5.68**
		$U_{11} - L_{11}$			-----	-733.76	458	-462	226	-219	639	522	1186	667	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1	Yes	0.686	0.204	0.89	Yes	1.00	**4.80**
		$U_{12} - L_{12}$			-----	-724.03	417	-412	187	-169	773	451	1480	647	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.303	1	Yes	0.628	0.179	0.81	Yes	1.00	**4.64**
		$U_{13} - L_{13}$			-----	-625.65	496	-484	224	-223	581	205	1161	311	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.299	1	Yes	0.603	0.237	0.85	Yes	1.00	**4.88**
		$U_{14} - L_{14}$			-----	-1231.77	448	-430	-584	544	629	-67	-712	-321	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.094	1	Yes	0.817	0.103	0.93	Yes	1.00	**9.31**
		$U_{15} - L_{15}$			-----	-679.41	-258	256	-605	582	747	59	-163	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.238	1	Yes	0.655	0.290	0.95	Yes	1.00	**5.33**
		$U_{16} - L_{16}$			-----	-718.75	-187	175	-524	511	671	192	-330	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.161	1	Yes	0.770	0.222	1.00	Yes	1.00	**5.06**
		$U_{17} - L_{17}$			-----	-641.70	-198	198	-524	529	595	194	-619	61	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.160	0.96	Yes	0.747	0.245	1.00	Yes	1.00	**4.73**
		$U_{18} - L_{18}$			-----	-579.56	-158	164	-478	502	622	214	-78	97	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.95	Yes	0.739	0.257	1.00	Yes	1.00	**4.84**
		$U_{19} - L_{19}$			-----	-478.42	-88	90	-289	288	516	194	-320	91	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.168	0.89	Yes	0.714	0.279	1.00	Yes	1.00	**4.49**
		$U_{20} - L_{20}$			-----	-367.07	-41	46	-203	216	517	182	-596	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.239	1	Yes	0.703	0.246	0.95	Yes	1.00	**4.72**
	Structure 3	$U_{21} - L_{21}$			39.33	-319.04	29	-20	-230	249	8	-107	-202	79	0.071	0.376	0.45	Yes	0.039	0.207	0.25	Yes	0.721	0.155	0.88	Yes	0.675	0.318	1.00	Yes	1.00	**6.94**
		$U_{22} - L_{22}$			-----	-248.95	337	-370	-265	280	-277	-390	-314	-829	-----	-----	-----	-----	-----	-----	-----	-----	0.560	0.358	0.92	Yes	0.527	0.473	1.00	Yes	1.00	**18.12**
		$U_{23} - L_{23}$			-----	-320.88	226	-244	15	-18	-502	-30	526	166	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.246	0.98	Yes	0.679	0.312	1.00	Yes	1.00	**5.37**
		$U_{24} - L_{24}$			-----	-369.87	223	-232	54	-59	-76	43	585	205	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.709	0.265	0.98	Yes	1.00	**4.33**
		$U_{25} - L_{25}$			-----	-474.69	299	-297	100	-101	107	167	589	224	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.183	0.9	Yes	0.709	0.288	1.00	Yes	1.00	**4.44**
		$U_{26} - L_{26}$			-----	-573.20	489	-517	170	-178	-265	160	709	302	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.189	0.96	Yes	0.730	0.264	1.00	Yes	1.00	**4.94**
		$U_{27} - L_{27}$			-----	-632.53	551	-557	202	-205	218	389	772	315	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.194	0.98	Yes	0.736	0.259	1.00	Yes	1.00	**5.42**
		$U_{28} - L_{28}$			-----	-614.71	466	-449	157	-130	969	425	1637	552	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.288	1	Yes	0.659	0.198	0.86	Yes	1.00	**5.15**
		$U_{29} - L_{29}$			-----	-621.79	571	-562	156	-161	-154	109	1178	200	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.302	1	Yes	0.599	0.273	0.88	Yes	1.00	**6.90**
		$U_{30} - L_{30}$			-----	-1186.01	278	-290	-567	503	303	-188	-588	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.095	1	Yes	0.816	0.105	0.93	Yes	1.00	**7.82**
		$U_{31} - L_{31}$			-----	-715.68	-305	299	-547	527	520	97	-243	20	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.200	1	Yes	0.690	0.262	0.96	Yes	1.00	**4.07**
		$U_{32} - L_{32}$			-----	-848.30	-219	193	-464	462	617	193	-653	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.179	1	Yes	0.735	0.199	0.94	Yes	1.00	**4.75**
		$U_{33} - L_{33}$			-----	-827.49	-247	234	-506	505	443	203	-254	136	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.140	0.98	Yes	0.774	0.223	1.00	Yes	1.00	**5.34**
		$U_{34} - L_{34}$			-----	-802.71	-237	251	-525	547	552	336	-732	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.188	0.99	Yes	0.751	0.241	1.00	Yes	1.00	**5.90**
		$U_{35} - L_{35}$			-----	-695.46	-255	269	-555	579	630	376	-1134	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.745	0.246	1.00	Yes	1.00	**5.61**
		$U_{36} - L_{36}$			-----	-477.38	-132	156	-327	353	159	126	-94	106	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.113	0.81	Yes	0.688	0.308	1.00	Yes	1.00	**4.92**
		$U_{37} - L_{37}$			-----	-160.67	-3	11	-271	308	-762	-293	-87	-333	-----	-----	-----	-----	-----	-----	-----	-----	0.363	0.628	1	Yes	0.340	0.393	0.74	Yes	1.00	**9.13**
		$U_{38} - L_{38}$			222.64	-133.70	134	-140	-156	152	-1373	-337	-994	-727	0.400	0.596	1.00	Yes	0.220	0.328	0.55	Yes	0.301	0.342	0.65	Yes	0.283	0.199	0.49	Yes	1.00	**8.00**
		$U_{39} - L_{39}$			59.44	-315.99	212	-235	-62	46	-662	-66	318	-290	0.107	0.492	0.60	Yes	0.059	0.271	0.33	Yes	0.714	0.277	1	Yes	0.669	0.300	0.97	Yes	1.00	**7.07**
		$U_{40} - L_{40}$			-----	-324.06	215	-218	37	-45	75	45	595	172	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.255	1	Yes	0.686	0.279	0.97	Yes	1.00	**4.65**
		$U_{41} - L_{41}$			-----	-460.25	230	-244	88	-97	-81	55	578	193	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.722	0.222	0.95	Yes	1.00	**3.90**
		$U_{42} - L_{42}$			-----	-582.23	494	-502	170	-180	61	61	669	172	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.173	0.96	Yes	0.742	0.257	1.00	Yes	1.00	**5.25**
		$U_{43} - L_{43}$			-----	-709.40	545	-561	186	-205	719	274	619	186	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.169	0.99	Yes	0.760	0.238	1.00	Yes	1.00	**6.59**
		$U_{44} - L_{44}$			-----	-652.70	464	-589	248	-316	501	85	727	123	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1	Yes	0.699	0.250	0.95	Yes	1.00	**5.05**
	Structure 4	$U_0 - L_0$			-----	-509.75	-134	232	-263	361	105	14	-863	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.270	1	Yes	0.639	0.186	0.83	Yes	1.00	**1.98**
		$U_1 - L_1$			-----	-648.06	-206	206	-516	508	621	143	-91	88	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.163	0.98	Yes	0.754	0.239	1.00	Yes	1.00	**4.56**
		$U_2 - L_2$			-----	-547.09	-157	168	-404	422	661	306	-256	149	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.196	1	Yes	0.761	0.239	1.00	Yes	1.00	**4.06**
		$U_3 - L_3$			-----	-406.69	-69	85	-183	204	563	271	-295	173	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1	Yes	0.702	0.207	0.91	Yes	1.00	**3.05**
		$U_4 - L_4$			-----	-320.98	-30	36	-226	237	615	223	-245	117	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.276	1	Yes	0.679	0.303	0.99	Yes	1.00	**5.43**
		$U_5 - L_5$			69.24	-287.48	68	-54	-226	247	-540	-279	-850	-12	0.125	0.562	0.69	Yes	0.068	0.309	0.38	Yes	0.644	0.356	1	Yes	0.608	0.316	0.93	Yes	1.00	**7.84**
		$U_6 - L_6$			-----	-189.77	262	-277	-66	72	-1882	-729	-165	-292	-----	-----	-----	-----	-----	-----	-----	-----	0.423	0.575	1	Yes	0.402	0.353	0.76	Yes	1.00	**10.48**
		$U_7 - L_7$			-----	-364.47	231	-256	74	-92	-146	-9	437	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.196	0.94	Yes	0.698	0.292	1.00	Yes	1.00	**4.07**
		$U_8 - L_8$			-----	-517.29	333	-335	131	-137	-14	72	540	174	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.188	0.94	Yes	0.710	0.287	1.00	Yes	1.00	**5.35**
		$U_9 - L_9$			-----	-623.66	381	-478	163	-218	607	485	1107	470	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.726	0.222	0.95	Yes	1.00	**5.56**
		$U_{10} - L_{10}$			-----	-693.68	306	-316	151	-152	1313	756	1235	484	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.277	1	Yes	0.684	0.164	0.85	Yes	1.00	**4.46**
		$U_{11} - L_{11}$			-----	-554.69	327	-371	204	-237	806	434	1369	605	-----	-----	-----	-----	-----	-----	-----	-----	0.661	0.338	1	Yes	0.627	0.206	0.84	Yes	1.00	**2.69**
		$U_{12} - L_{12}$			-----	-1097.42	312	-421	-314	329	1245	381	-1889	-605	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1	Yes	0.761	0.078	0.84	Yes	1.00	**6.21**
		$U_{13} - L_{13}$			-----	-448.92	-154	168	-279	297	658	119	-689	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.246	1	Yes	0.693	0.292	0.99	Yes	1.00	**2.67**
		$U_{14} - L_{14}$			-----	-517.01	-96	90	-246	261	730	234	-478	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1	Yes	0.741	0.228	0.97	Yes	1.00	**4.33**
		$U_{15} - L_{15}$			-----	-428.43	-79	88	-205	232	525	242	-583	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.216	1	Yes	0.739	0.235	0.98	Yes	1.00	**4.56**
		$U_{16} - L_{16}$			-----	-205.35	-29	42	-227	227	-881	-421	-1756	-756	-----	-----	-----	-----	-----	-----	-----	-----	0.452	0.546	1	Yes	0.435	0.291	0.73	Yes	1.00	**7.40**
		$U_{17} - L_{17}$			164.17	-178.38	130	-152	-203	202	-1528	-561	428	-213	0.295	0.701	1.00	Yes	0.162	0.386	0.55	Yes	0.391	0.438	0.83	Yes	0.377	0.259	0.64	Yes	1.00	**9.42**
		$U_{18} - L_{18}$			93.36	-296.58	242	-285	-99	107	-830	-444	481	153	0.168	0.605	0.78	Yes	0.092	0.333	0.43	Yes	0.648	0.334	0.99	Yes	0.628	0.365	1.00	Yes	1.00	**8.59**
		$U_{19} - L_{19}$			-----	-328.32	227	-236	-24	8	77	52	431	221	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.213	0.94	Yes	0.695	0.302	1.00	Yes	1.00	**6.00**
		$U_{20} - L_{20}$			-----	-322.64	199	-241	79	-91	157	50	604	194	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.272	1	Yes	0.683	0.308	1.00	Yes	1.00	**3.59**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension							Compression										Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield							
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass						
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																				
South Truss - Diagonals	Structure 1	$U_0 - L_1$	438.05	-----	34	-10	-131	60	-229	-80	-1079	-350	0.575	0.425	1.00	Yes	0.347	0.234	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.64**
		$U_1 - L_2$	380.88	-101.61	12	-16	-94	-3	371	199	-661	-611	0.685	0.312	1.00	Yes	0.377	0.172	0.55	Yes	0.233	0.261	0.5	Yes	0.215	0.121	0.34	Yes					1.00	**5.24**
		$U_2 - L_3$	139.23	-244.92	48	-29	-99	-44	501	265	-983	-737	0.250	0.411	0.67	Yes	0.138	0.226	0.37	Yes	0.564	0.431	1	Yes	0.518	0.127	0.65	Yes					1.00	**8.55**
		$U_3 - L_4$	-----	-259.49	48	-11	-37	-70	477	279	-1073	-438	-----	-----	-----	-----	-----	-----	-----	-----	0.593	0.403	1	Yes	0.549	0.089	0.64	Yes					1.00	**6.10**
		$U_4 - L_4$	558.94	-----	-7	70	-117	34	-148	102	-233	54	0.820	0.173	1.00	Yes	0.451	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.69**
		$U_5 - L_5$	647.15	-----	-15	138	-214	229	-248	59	-522	236	0.765	0.225	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.85**
		$U_7 - L_6$	567.41	-----	-36	83	-278	223	-923	-87	82	286	0.671	0.326	1.00	Yes	0.369	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.95**
		$U_8 - L_7$	642.29	-----	61	183	-94	305	330	-81	-129	149	0.759	0.234	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.14**
		$U_9 - L_9$	958.05	-----	42	210	-95	355	426	234	-110	-571	0.766	0.231	1.00	Yes	0.474	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.87**
		$U_9 - L_{10}$	963.75	-----	-110	141	-306	223	647	295	-467	-729	0.770	0.229	1.00	Yes	0.477	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.39**
		$U_{10} - L_{11}$	875.65	-----	-69	131	-278	162	308	42	-414	-948	0.740	0.253	1.00	Yes	0.458	0.144	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.42**
		$U_{11} - L_{12}$	714.10	-----	-89	80	-295	62	212	-16	-1014	-980	0.706	0.289	1.00	Yes	0.389	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.11**
		$U_{12} - L_{13}$	553.50	-----	-85	62	-193	117	101	-36	-317	-790	0.675	0.323	1.00	Yes	0.425	0.185	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.64**
		$U_{13} - L_{14}$	377.38	-----	-30	-14	-92	10	-180	-190	-392	-674	0.679	0.313	1.00	Yes	0.373	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.67**
		$U_{15} - L_{14}$	407.16	-325.76	46	-130	-132	-17	131	-202	16	-19	0.732	0.228	0.96	Yes	0.403	0.125	0.53	Yes	0.763	0.232	1	Yes	0.689	0.169	0.86	Yes					1.00	**11.49**
		$U_{16} - L_{15}$	404.74	-----	-18	-2	-142	91	-288	-128	-286	84	0.728	0.266	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.66**
		$U_{17} - L_{16}$	526.00	-----	-45	22	-152	92	-307	-106	-164	72	0.771	0.226	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.71**
		$U_{18} - L_{17}$	617.80	-----	-130	89	-334	250	-401	-113	-361	101	0.730	0.262	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.21**
		$U_{19} - L_{18}$	688.91	-----	-131	95	-333	250	-458	-204	-367	-63	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.57**
		$U_{20} - L_{19}$	715.28	-----	-177	141	-351	292	-275	-138	-191	5	0.775	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.93**
	Structure 2	$U_0 - L_1$	616.77	-----	-90	133	-304	306	-288	-72	-1598	-300	0.610	0.381	1.00	Yes	0.336	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.05**
		$U_1 - L_2$	714.47	-----	-165	118	-384	278	140	-34	-457	-766	0.707	0.293	1.00	Yes	0.389	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.97**
		$U_2 - L_3$	570.04	-----	-117	88	-315	234	127	-26	-525	-795	0.674	0.322	1.00	Yes	0.371	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.93**
		$U_3 - L_4$	540.60	-----	-53	26	-172	111	167	7	-315	-576	0.721	0.278	1.00	Yes	0.396	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.05**
		$U_4 - L_5$	338.99	-33.94	0	-15	-127	70	228	31	-287	-783	0.610	0.390	1.00	Yes	0.335	0.214	0.55	Yes	0.084	0.217	0.31	Yes	0.072	0.163	0.24	Yes					1.00	**5.70**
		$U_5 - L_6$	363.16	-266.30	64	-117	-110	36	-662	-167	-522	-601	0.653	0.342	1.00	Yes	0.359	0.188	0.55	Yes	0.629	0.160	0.79	Yes	0.563	0.150	0.72	Yes					1.00	**9.50**
		$U_6 - L_7$	-----	-393.76	53	-108	-23	-47	-248	-78	39	-481	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.151	1	Yes	0.754	0.123	0.88	Yes					1.00	**4.72**
		$U_8 - L_7$	574.39	-----	-80	35	-213	124	-67	-148	101	370	0.732	0.266	1.00	Yes	0.461	0.150	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.25**
		$U_8 - L_8$	717.81	-----	-162	153	-330	247	-303	-93	-196	-2	0.777	0.219	1.00	Yes	0.428	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.42**
		$U_{10} - L_9$	809.07	-----	-125	154	-349	262	-186	22	-185	248	0.800	0.199	1.00	Yes	0.440	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.10**
		$U_{11} - L_{10}$	895.31	-----	-129	193	-350	304	-253	59	-202	250	0.816	0.183	1.00	Yes	0.449	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.37**
		$U_{12} - L_{11}$	844.31	-----	-133	176	-334	342	-576	59	-560	262	0.769	0.224	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.89**
		$U_{13} - L_{12}$	728.23	-----	-157	161	-423	377	-542	2	-269	208	0.720	0.277	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.46**
		$U_{14} - L_{13}$	743.08	-----	32	213	-253	430	379	-68	-139	32	0.735	0.256	1.00	Yes	0.404	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.80**
		$U_{14} - L_{15}$	583.39	-----	-20	170	-215	375	505	228	102	-211	0.690	0.304	1.00	Yes	0.379	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.53**
		$U_{15} - L_{16}$	588.35	-----	-171	168	-347	315	586	177	200	-276	0.696	0.303	1.00	Yes	0.383	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.38**
		$U_{16} - L_{17}$	670.18	-----	-128	155	-329	334	373	109	7	-584	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.34**
		$U_{17} - L_{18}$	614.14	-----	-111	127	-287	259	358	88	-331	-563	0.726	0.264	1.00	Yes	0.399	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.13**
		$U_{18} - L_{19}$	617.88	-----	-83	97	-277	242	289	75	-86	-616	0.730	0.269	1.00	Yes	0.402	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.65**
		$U_{19} - L_{20}$	542.32	-----	-43	48	-187	137	289	79	-350	-666	0.692	0.304	1.00	Yes	0.380	0.174	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.90**
		$U_{20} - L_{21}$	398.52	-----	-15	13	-122	99	236	67	-142	-423	0.717	0.279	1.00	Yes	0.394	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.47**
		$U_{21} - L_{22}$	361.67	-183.21	19	-73	-112	20	-308	-39	-211	-701	0.650	0.346	1.00	Yes	0.358	0.190	0.55	Yes	0.433	0.238	0.68	Yes	0.388	0.143	0.54	Yes					1.00	**7.92**
		$U_{23} - L_{22}$	387.26	-95.29	14	-20	-143	29	-293	-105	405	370	0.697	0.299	1.00	Yes	0.383	0.165	0.55	Yes	0.227	0.214	0.45	Yes	0.202	0.182	0.39	Yes					1.00	**8.85**
		$U_{24} - L_{23}$	424.29	-----	-20	19	-123	104	-255	-63	-166	192	0.763	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.91**
		$U_{25} - L_{24}$	592.23	-----	-41	50	-198	168	-300	-81	4	186	0.755	0.239	1.00	Yes	0.415	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.36**
		$U_{26} - L_{25}$	663.17	-----	-80	98	-286	271	-252	-56	-59	271	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.32**
		$U_{27} - L_{26}$	638.48	-----	-101	143	-293	281	-396	115	-70	359	0.755	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.84**
		$U_{28} - L_{27}$	678.31	-----	-94	147	-314	342	-545	41	-402	334	0.735	0.265	1.00	Yes	0.404	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.22**
		$U_{29} - L_{28}$	594.83	-----	-93	106	-347	329	-543	-42	-338	118	0.703	0.295	1.00	Yes	0.387	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.55**
		$U_{30} - L_{29}$	613.71	-----	48	164	-191	358	342	-103	-134	156	0.726	0.264	1.00	Yes	0.399	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.79**
		$U_{30} - L_{31}$	722.98	-----	-59	233	-258	429	469	201	56	-514	0.715	0.276	1.00	Yes	0.393	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.76**
		$U_{31} - L_{32}$	730.99	-----	-232	218	-425	366	503	140	-58	-460	0.723	0.273	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.51**
		$U_{32} - L_{33}$	811.58	-----	-157	205	-345	320	476	140	-483	-813	0.739	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.35**
		$U_{33} - L_{34}$	842.89	-----	-145	176	-326	265	340	75	-383	-679	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.38**
		$U_{34} - L_{35}$	739.63	-----	-134	138	-317	225	129	-21	-274	-761	0.732	0.261	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.22**
		$U_{35} - L_{36}$	648.27	-----	-158	134	-313	196	150	13	-676	-800	0.702	0.292	1.00	Yes	0.386	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.26**
		$U_{36} - L_{37}$	524.85	-----	-76	29	-181	116	-325	-224	-122	-817	0.669	0.329	1.00	Yes	0.421	0.189	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.94**
		$U_{38} - L_{37}$	-----	-373.12	45	-99	-33	-46	275	-260	-17	49	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.185	1	Yes	0.715	0.113	0.83	Yes					1.00	**4.73**
		$U_{39} - L_{38}$	433.71	-217.40	58	-103	-132	61	-94	-79	-169	19	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	0.518	0.182	0.71	Yes	0.460	0.169	0.63	Yes					1.00	**9.67**
		$U_{40} - L_{39}$	394.35	-9.16	-6	-9	-138	89	-379	-102	-198	199	0.709	0.286	1.00	Yes	0.390	0.157	0.55	Yes	0.022	0.166	0.19	Yes	0.019	0.176	0.20	Yes					1.00	**6.17**
		$U_{41} - L_{40}$	559.73	-----	-57	31	-177	124	-411	-178	-321	-42	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.50**
		$U_{42} - L_{41}$	622.98	-----	-122	92	-322	261	-402	-168	-433	1	0.737	0.261	1.00	Yes	0.405	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.60**
		$U_{43} - L_{42}$	770.07	-----	-136	103	-378	308	-375	-193	-391	-71	0.762	0.234	1.00	Yes	0.419	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.87**
		$U_{44} - L_{43}$	800.52	-----	-161	154	-381	376	-172	9	-92	61	0.792	0.203	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.69**
	Structure 3	$U_0 - L_1$	564.18	-----	-74	107	-298	264	-216	-48	-1395	-298	0.611	0.382	1.00	Yes	0.336	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.43**
		$U_1 - L_2$	656.14	-----	-159	108	-342	239	162	-42	-327	-642	0.711	0.280	1.00	Yes	0.391	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
		$U_2 - L_3$	565.85	-----	-125	86	-310	226	129	-30	-424	-817	0.669	0.323	1.00	Yes	0.368	0.178	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.96**
		$U_3 - L_4$	475.57	-----	-41	19	-140	78	157	-23	-653	-688	0.697	0.303	1.00	Yes	0.384	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.97**
		$U_4 - L_5$	349.66	-8.85	-15	-4	-126	74	190	5	-267	-717	0.629	0.369	1.00	Yes	0.346	0.203	0.55	Yes	0.021	0.207	0.23	Yes	0.019	0.162	0.19	Yes					1.00	**5.78**
		$U_5 - L_6$	275.52	-281.37	33	-117	-101	-42	-697	-253	-727	-1000	0.496	0.440	0.94	Yes	0.273	0.242	0.52	Yes	0.659	0.332	1	Yes	0.595	0.150	0.75	Yes					1.00	**9.19**
		$U_7 - L_6$	457.16	-----	-26	-18	-105	27	-116	-127	-7	50	0.822	0.171	1.00	Yes	0.452	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.54**
		$U_8 - L_7$	620.41	-----	-83	72	-207	149	-303	-108	-115	177	0.756	0.240	1.00	Yes	0.476	0.135	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.38**
		$U_8 - L_8$	812.26	-----	-72	96	-326	100	-216	8	-120	285	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**6.59**
		$U_{10} - L_9$	948.77	-----	-48	157	-292	197	-103	84	-451	388	0.801	0.194	1.00	Yes	0.496	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.31**
		$U_{11} - L_{10}$	909.71	-----	-66	102	-287	241	-1063	-204	-66	255	0.727	0.263	1.00	Yes	0.450	0.150	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.18**
		$U_{12} - L_{11}$	1012.36	-----	117	241	-71	323	233	-10	46	321	0.809	0.185	1.00	Yes	0.501	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**7.15**
		$U_{12} - L_{13}$	602.14	-----	14	165	-87	288	637	318	64	-279	0.712	0.280	1.00	Yes	0.392	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.98**
		$U_{13} - L_{14}$	577.37	-----	-97	131	-292	216	714	294	-789	-449	0.683	0.309	1.00	Yes	0.375	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.01**
		$U_{14} - L_{15}$	635.05	-----	-33	143	-227	200	543	229	-73	-619	0.751	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.02**
		$U_{15} - L_{16}$	467.92	-----	-14	61	-112	8	417	191	-848	-687	0.686	0.311	1.00	Yes	0.377	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.15**
		$U_{17} - L_{16}$	-----	-332.06	53	-9	-86	-109	-232	4	402	337	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1	Yes	0.703	0.139	0.85	Yes					1.00	**10.65**
		$U_{18} - L_{17}$	356.21	-300.92	56	-38	-154	-36	-188	-67	-466	-7	0.641	0.331	0.98	Yes	0.352	0.182	0.54	Yes	0.693	0.298	1	Yes	0.637	0.197	0.84	Yes					1.00	**12.81**
		$U_{19} - L_{18}$	453.76	-102.54	18	-21	-94	4	-206	-118	-200	-167	0.816	0.180	1.00	Yes	0.449	0.099	0.55	Yes	0.235	0.160	0.4	Yes	0.217	0.121	0.34	Yes					1.00	**7.44**
		$U_{20} - L_{19}$	574.30	-----	-19	4	-133	80	202	56	-339	-74	0.753	0.241	1.00	Yes	0.455	0.133	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**5.96**

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi
Condition: As-Inspected Fu = 60.0 ksi
E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Axial Force Rating

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_1 - U_1	-71.60	14.84	-69.83			0.90	1.24	16.52	-77.74	0.00	0.00	Vehicle	Vehicle	-----	-194.15	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	6.35	6.35
	U_1 - U_2	-90.76	29.89	-130.16			0.90	1.24	33.27	-144.90	0.00	0.00	Vehicle	Vehicle	-----	-306.36	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.28	3.28
	U_1 - U_3	-61.05	44.37	-147.69			0.90	1.24	49.39	-164.43	0.00	0.00	Vehicle	Vehicle	-----	-293.11	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	3.07	3.07
	U_1 - U_4	10.82	58.26	-137.25			0.90	1.24	64.86	-152.80	0.00	0.00	Vehicle	Vehicle	98.38	-184.58	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.18	10.18	3.77	3.77
	U_1 - U_5	12.98	58.41	-114.78			0.90	1.24	65.03	-127.78	0.00	0.00	Vehicle	Vehicle	101.41	-149.24	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	10.12	10.12	4.53	4.53
	U_1 - U_6	121.44	-63.90	-62.64			0.90	1.24	-69.74	-71.14	0.00	0.00	Vehicle	Vehicle	67.22	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
	U_1 - U_7	249.52	74.60	-36.13			0.90	1.24	83.05	-40.22	0.00	0.00	Vehicle	Vehicle	432.35	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	6.68	6.68	-----	-----
	U_1 - U_8	376.85	7.12	3.74			0.90	1.24	7.92	4.16	0.00	0.00	Vehicle	Vehicle	500.20	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	92.55	92.55	-----	-----
	U_1 - U_9	319.70	2.66	-19.70			0.90	1.20	2.86	-21.24	0.00	0.00	Vehicle	Vehicle	419.33	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	216.12	216.12	-----	-----
	U_{10} - U_{10}	128.80	76.33	-60.65			0.90	1.20	82.30	-65.39	0.00	0.00	Vehicle	Vehicle	274.43	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	7.05	7.05	-----	-----
	U_{10} - U_{11}	-70.81	66.66	-97.50			0.90	1.20	71.87	-105.13	0.00	0.00	Vehicle	Vehicle	1.37	-228.72	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	10.85	10.85	5.01	5.01
	U_{11} - U_{12}	-252.85	59.66	-143.68			0.90	1.20	64.33	-154.91	0.00	0.00	Vehicle	Vehicle	-----	-530.08	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.61	3.61
	U_{12} - U_{13}	-391.81	51.59	-178.99			0.90	1.20	55.62	-192.98	0.00	0.00	Vehicle	Vehicle	-----	-760.22	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	3.86	3.86
	U_{13} - U_{14}	-482.83	43.38	-197.46			0.90	1.20	46.77	-212.90	0.00	0.00	Vehicle	Vehicle	-----	-904.45	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	3.97	3.97
	U_{14} - U_{15}	-484.28	43.22	-164.17			0.90	1.20	46.60	-177.01	0.00	0.00	Vehicle	Vehicle	-----	-859.68	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.76	4.76
	U_{15} - U_{16}	-501.86	19.20	-168.32			0.90	1.20	20.70	-181.49	0.00	0.00	Vehicle	Vehicle	-----	-888.35	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.55	4.55
	U_{16} - U_{17}	-467.82	-56.79	-156.29			0.90	1.20	-61.23	-168.52	0.00	0.00	Vehicle	Vehicle	-----	-827.24	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.10	5.10
	U_{17} - U_{18}	-368.70	-120.56	-85.90			0.90	1.20	-92.62	-129.99	0.00	0.00	Vehicle	Vehicle	-----	-648.30	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	4.63	4.63
	U_{18} - U_{19}	-251.42	-78.43	-50.91			0.90	1.20	-54.89	-84.56	0.00	0.00	Vehicle	Vehicle	-----	-436.78	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	5.04	5.04
	U_{19} - U_{20}	-117.77	-40.91	-12.40			0.90	1.20	-13.36	-44.10	0.00	0.00	Vehicle	Vehicle	-----	-210.43	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	12.69	12.69
Structure 2	U_1 - U_1	-118.16	5.78	-42.21			0.90	1.18	6.15	-44.94	0.00	0.00	Vehicle	Vehicle	-----	-212.03	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	11.78	11.78
	U_1 - U_2	-239.45	13.13	-93.43			0.90	1.18	13.98	-99.48	0.00	0.00	Vehicle	Vehicle	-----	-440.60	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.55	5.55
	U_1 - U_3	-350.29	22.08	-137.16			0.90	1.18	23.51	-146.03	0.00	0.00	Vehicle	Vehicle	-----	-645.22	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.69	4.00	0.69	16.00	99.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.98	4.98
	U_1 - U_4	-448.96	20.16	-180.67			0.90	1.18	21.47	-192.36	0.00	0.00	Vehicle	Vehicle	-----	-833.71	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.64	4.64
	U_1 - U_5	-483.05	41.89	-198.98			0.90	1.18	46.72	-216.11	0.00	0.00	Vehicle	Vehicle	-----	-908.91	15.10	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.65	4.65
	U_1 - U_6	-485.65	55.52	-207.26			0.90	1.18	59.11	-220.67	0.00	0.00	Vehicle	Vehicle	-----	-918.21	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	4.54	4.54
	U_1 - U_7	-428.66	65.79	-200.64			0.90	1.18	70.05	-213.62	0.00	0.00	Vehicle	Vehicle	-----	-834.96	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.27	4.27
	U_1 - U_8	-428.18	65.95	-175.35			0.90	1.18	70.22	-186.69	0.00	0.00	Vehicle	Vehicle	-----	-799.33	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	4.89	4.89
	U_1 - U_9	-335.25	75.64	-165.72			0.90	1.18	80.53	-176.44	0.00	0.00	Vehicle	Vehicle	-----	-665.19	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	4.48	4.48
	U_9 - U_{10}	-200.15	81.85	-113.51			0.90	1.18	87.15	-120.86	0.00	0.00	Vehicle	Vehicle	-----	-417.31	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	5.68	5.68
	U_{10} - U_{11}	-52.03	86.90	-90.25			0.90	1.18	92.52	-96.09	0.00	0.00	Vehicle	Vehicle	52.63	-192.55	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	10.41	10.41	7.47	7.47
	U_{11} - U_{12}	107.09	-39.57	-63.20			0.90	1.18	-42.13	-67.28	0.00	0.00	Vehicle	Vehicle	84.44	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{12} - U_{13}	259.37	83.19	-19.09			0.90	1.18	88.57	-20.33	0.00	0.00	Vehicle	Vehicle	452.32	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.93	9.93	-----	-----
	U_{13} - U_{14}	391.99	3.07	-16.32			0.90	1.18	3.26	-17.38	0.00	0.00	Vehicle	Vehicle	513.83	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	359.13	359.13	-----	-----
	U_{14} - U_{15}	439.40	11.58	-5.82			0.90	1.17	12.18	-6.13	0.00	0.00	Vehicle	Vehicle	587.06	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	92.33	92.33	-----	-----
	U_{15} - U_{16}	369.68	79.56	-29.92			0.90	1.17	83.71	-31.48	0.00	0.00	Vehicle	Vehicle	589.40	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	10.78	10.78	-----	-----
	U_{16} - U_{17}	271.42	77.07	-56.96			0.90	1.17	81.08	-59.93	0.00	0.00	Vehicle	Vehicle	458.25	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	9.53	9.53	-----	-----
	U_{17} - U_{18}	171.80	72.45	-79.00			0.90	1.17	76.22	-83.11	0.00	0.00	Vehicle	Vehicle	322.42	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	7.80	7.80	-----	-----
	U_{18} - U_{19}	72.84	66.91	-112.80			0.90	1.17	70.40	-118.67	0.00	0.00	Vehicle	Vehicle	186.21	-59.59	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	9.85	9.85	6.07	6.07
	U_{19} - U_{20}	-8.04	59.15	-141.91			0.90	1.17	62.23	-149.30	0.00	0.00	Vehicle	Vehicle	70.45	-204.55	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	13.31	13.31	4.59	4.59
	U_{20} - U_{21}	-60.07	27.79	-154.29			0.90	1.17	29.24	-162.33	0.00	0.00	Vehicle	Vehicle	-----	-289.12	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.78	4.78
	U_{21} - U_{22}	-82.15	38.69	-166.02			0.90	1.17	40.70	-174.67	0.00	0.00	Vehicle	Vehicle	-----	-333.87	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.32	4.32
	U_{22} - U_{23}	-82.37	39.89	-144.44			0.90	1.17	41.96	-151.97	0.00	0.00	Vehicle	Vehicle	-----	-304.64	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	4.96	4.96
	U_{23} - U_{24}	-65.94	49.39	-121.49			0.90	1.17	51.96	-127.82	0.00	0.00	Vehicle	Vehicle	-----	-251.89	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.03	6.03
	U_{24} - U_{25}	-11.08	58.90	-115.08			0.90	1.17	61.97	-121.08	0.00	0.00	Vehicle	Vehicle	57.18	-180.78	5.50	32.31	26.8125	1066.31	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	13.53	13.53	5.57	5.57
	U_{25} - U_{26}	54.95	-62.84	-101.20			0.90	1.17	-66.11	-106.47	0.00	0.00	Vehicle	Vehicle	-----	-66.98	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	6.60	6.60	-----	-----
	U_{26} - U_{27}	135.89	-48.45	-61.56			0.90	1.17	-50.97	-64.77	0.00	0.00	Vehicle	Vehicle	110.39	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{27} - U_{28}	216.69	-13.15	-42.24			0.90	1.17	-13.83	-44.44	0.00	0.00	Vehicle	Vehicle	263.72	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
	U_{28} - U_{29}	293.53	45.75	-22.80			0.90	1.17	48.13	-23.98	0.00	0.00	Vehicle	Vehicle	444.17	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	20.34	20.34	-----	-----
	U_{29} - U_{30}	357.86	12.50	-19.42			0.90	1.17	13.16	-20.43	0.00	0.00	Vehicle	Vehicle	482.32	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	91.71	91.71	-----	-----
	U_{30} - U_{31}	339.12	17.30	-8.95			0.90	1.18	18.42	-9.53	0.00	0.00	Vehicle	Vehicle	464.80	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	66.53	66.53	-----	-----
	U_{31} - U_{32}	251.34	86.84	-33.66			0.90	1.18	92.46	-35.84	0.00	0.00	Vehicle	Vehicle	446.93	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	9.60	9.60	-----	----

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Lower Chord	Structure 1																																														
	L_0 - L_1	4.73	-1.91	-2.88			0.90	1.24	-2.13	-3.20	0.00	0.00	Vehicle	Vehicle	3.37	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
	L_1 - L_2	74.19	-17.02	72.09			0.90	1.24	80.26	-18.95	0.00	0.00	Vehicle	Vehicle	200.78	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**5.34**	**5.34**	-----	-----
	L_2 - L_3	97.64	-32.15	100.15			0.90	1.24	111.49	-35.79	0.00	0.00	Vehicle	Vehicle	271.87	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**5.12**	**5.12**	-----	-----
	L_3 - L_4	66.79	-46.00	115.70			0.90	1.24	128.81	-51.21	0.00	0.00	Vehicle	254.27	-----	-----	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	**4.67**	**4.67**	-----	-----
	L_4 - L_5	-108.59	35.99	90.54			0.90	1.24	100.80	40.07	0.00	0.00	Vehicle	Vehicle	-----	-89.07	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	-----	-----
	L_5 - L_6	-237.42	-76.79	59.42			0.90	1.24	66.15	-85.48	0.00	0.00	Vehicle	Vehicle	-----	-419.78	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**4.94**	**4.94**
	L_6 - L_7	-362.38	-31.65	2.40			0.90	1.24	2.67	-35.23	0.00	0.00	Vehicle	Vehicle	-----	-516.89	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**16.54**	**16.54**
	L_7 - L_8	478.62	-73.73	0.41			0.90	1.24	0.45	-82.09	0.00	0.00	Vehicle	Vehicle	-----	-728.92	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.78**	**8.78**
	L_8 - L_9	-476.97	-75.12	-25.35			0.90	1.20	-27.33	-80.99	0.00	0.00	Vehicle	Vehicle	-----	-725.35	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**8.92**	**8.92**
	L_9 - L_{10}	-301.47	-76.05	-8.01			0.90	1.20	-8.63	-82.00	0.00	0.00	Vehicle	Vehicle	-----	-498.51	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**7.85**	**7.85**
	L_{10} - L_{11}	-104.56	-67.23	31.97			0.90	1.20	34.47	-72.48	0.00	0.00	Vehicle	Vehicle	-----	-230.15	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**5.46**	**5.46**
	L_{11} - L_{12}	96.98	-59.30	60.28			0.90	1.20	64.99	-63.94	0.00	0.00	Vehicle	210.56	-----	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	**7.65**	**7.65**	-----	-----
	L_{12} - L_{13}	268.60	-51.51	101.90			0.90	1.20	109.86	-55.54	0.00	0.00	Vehicle	492.00	-----	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.43**	**6.43**	-----	-----
	L_{13} - L_{14}	405.49	-43.47	139.96			0.90	1.20	150.90	-46.87	0.00	0.00	Vehicle	723.32	-----	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	**5.98**	**5.98**	-----	-----
	L_{14} - L_{15}	502.59	82.50	163.03			0.90	1.20	175.77	88.95	0.00	0.00	Vehicle	881.88	-----	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.10**	**6.10**	-----	-----
	L_{15} - L_{16}	469.06	-19.73	150.40			0.90	1.20	162.16	-21.27	0.00	0.00	Vehicle	820.59	-----	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	**6.82**	**6.82**	-----	-----
	L_{16} - L_{17}	365.26	61.92	96.46			0.90	1.20	104.00	66.76	0.00	0.00	Vehicle	610.04	-----	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	**8.19**	**8.19**	-----	-----
	L_{17} - L_{18}	248.52	26.12	64.43			0.90	1.20	69.47	28.16	0.00	0.00	Vehicle	413.39	-----	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	**9.14**	**9.14**	-----	-----
	L_{18} - L_{19}	112.87	-4.96	14.53			0.90	1.20	15.67	-5.35	0.00	0.00	Vehicle	167.09	-----	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	**24.88**	**24.88**	-----	-----
	L_{19} - L_{20}	-14.36	-33.32	14.63			0.90	1.20	15.77	-35.92	0.00	0.00	Vehicle	Vehicle	1.83	-65.37	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	**32.78**	**32.78**	**11.39**	**11.39**
	L_0 - L_1	15.25	0.71	-3.73			0.90	1.18	0.75	-3.97	0.00	0.00	Vehicle	Vehicle	20.80	-----	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**821.13**	**821.13**	-----	-----
	L_1 - L_2	136.09	-5.52	38.88			0.90	1.18	41.40	-5.88	0.00	0.00	Vehicle	230.73	-----	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	**12.01**	**12.01**	-----	-----
	L_2 - L_3	262.77	-11.32	83.08			0.90	1.18	88.45	-12.06	0.00	0.00	Vehicle	456.59	-----	-----	6.20	37.95	31.7500	1252.35	131.71	10.7370	6.1375	15.74	32.76	-1056.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	**7.92**	**7.92**	-----	-----
	L_3 - L_4	373.14	-14.96	128.75			0.90	1.18	137.08	-15.93	0.00	0.00	Vehicle	663.29	-----	-----	9.45	51.08	41.6250	1685.48	131.71	10.7370	5.7282	16.87	32.73	-1420.90	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	**6.74**	**6.74**	-----	-----
	L_4 - L_5	456.37	-30.59	149.80			0.90	1.18	159.49	-32.57	0.00	0.00	Vehicle	800.88	-----	-----	11.08	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.93	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	**7.48**	**7.48**	-----	-----
	L_5 - L_6	489.37	-41.58	175.41			0.90	1.18	186.76	-44.27	0.00	0.00	Vehicle	878.97	-----	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.98**	**6.98**	-----	-----
	L_6 - L_7	479.01	-52.79	162.79			0.90	1.18	173.32	-56.21	0.00	0.00	Vehicle	848.02	-----	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	**7.72**	**7.72**	-----	-----
	L_7 - L_8	330.07	-72.49	171.20			0.90	1.18	182.28	-77.18	0.00	0.00	Vehicle	666.06	-----	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	**5.55**	**5.55**	-----	-----
	L_8 - L_9	188.98	85.60	127.89			0.90	1.18	136.17	91.14	0.00	0.00	Vehicle	422.69	-----	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	**6.69**	**6.69**	-----	-----
	L_9 - L_{10}	39.77	-83.55	100.52			0.90	1.18	107.02	-88.95	0.00	0.00	Vehicle	190.83	-63.93	-----	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	**7.68**	**7.68**	**8.63**	**8.63**
	L_{10} - L_{11}	-127.39	21.14	64.87			0.90	1.18	69.06	22.51	0.00	0.00	Vehicle	-----	-136.34	-----	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.76	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----
	L_{11} - L_{12}	-282.64	-40.25	32.15			0.90	1.18	34.23	-42.85	0.00	0.00	Vehicle	Vehicle	-----	-423.14	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.12**	**15.12**
	L_{12} - L_{13}	-426.73	-77.17	6.64			0.90	1.18	7.07	-82.17	0.00	0.00	Vehicle	Vehicle	-----	-661.57	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**10.33**	**10.33**
	L_{13} - L_{14}	-536.42	-59.13	10.29			0.90	1.18	10.95	-62.95	0.00	0.00	Vehicle	Vehicle	-----	-779.19	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**15.55**	**15.55**
	L_{14} - L_{15}	-537.75	-72.10	-23.19			0.90	1.17	-24.40	-75.86	0.00	0.00	Vehicle	Vehicle	-----	-797.69	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.89**	**12.89**
	L_{15} - L_{16}	-475.65	-84.64	0.10			0.90	1.17	0.11	-89.05	0.00	0.00	Vehicle	Vehicle	-----	-734.11	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**8.98**	**8.98**
	L_{16} - L_{17}	-384.35	-79.44	0.22			0.90	1.17	0.23	-83.58	0.00	0.00	Vehicle	Vehicle	-----	-608.31	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**7.93**	**7.93**
	L_{17} - L_{18}	-281.86	-76.28	30.82			0.90	1.17	32.42	-80.25	0.00	0.00	Vehicle	Vehicle	-----	-470.74	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**5.55**	**5.55**
	L_{18} - L_{19}	-175.17	-69.57	62.44			0.90	1.17	65.69	-73.20	0.00	0.00	Vehicle	Vehicle	-----	-322.87	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**5.44**	**5.44**
	L_{19} - L_{20}	-76.53	-62.99	74.77			0.90	1.17	78.66	-66.27	0.00	0.00	Vehicle	2.77	-185.65	-----	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.61**	**9.61**	**7.50**	**7.50**
	L_{20} - L_{21}	4.38	-53.45	102.74			0.90	1.17	108.09	-56.23	0.00	0.00	Vehicle	146.21	-67.41	-----	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.77**	**8.77**	**14.37**	**14.37**
	L_{21} - L_{22}	55.94	-10.64	100.36			0.90	1.17	105.59	-11.19	0.00	0.00	Vehicle	209.99	-----	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.49**	**8.49**	-----	-----
	L_{22} - L_{23}	62.99	-28.45	128.50			0.90	1.17	135.19	-29.93	0.00	0.00	Vehicle	257.64	-----	-----	6.75	37.50	30.7500	1237.50	131.71	10.6224	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	**6.58**	**6.58**	-----	-----
	L_{23} - L_{24}	15.54	-37.93	105.88			0.90	1.17	111.40	-39.91	0.00	0.00	Vehicle	165.02	-31.68	6.13	37.50	31.3700	1237.50	131.71	10.6250	6.1479	15.55	32.77	-1044.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.41**	**8.41**	**20.52**	**20.52**
	L_{24} - L_{25}	-56.00	22.12	82.18			0.90	1.17	86.46	-23.27	0.00	0.00	Vehicle	39.59	-42.56	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.50**	**8.50**	-----	-----
	L_{25} - L_{26}	-136.37	-22.92	60.97			0.90	1.17	64.14	-24.11	0.00	0.00	Vehicle	Vehicle	-208.63	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	**18.13**	**18.13**
	L_{26} - L_{27}	-217.73	-36.58	34.66			0.90	1.17	36.46	-38.48	0.00	0.00	Vehicle	Vehicle	-333.07	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**13.25**	**13.25**
	L_{27} - L_{28}	-296.25	-83.01	18.58			0.90	1.17	19.55	-87.33	0.00	0.00	Vehicle	Vehicle	-498.66	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	**8.60**	**8.60**
	L_{28} - L_{29}	-364.18	-127.85	0.35			0.90	1.17	0.37	-134.51	0.00	0.00	Vehicle	Vehicle	-648.31	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**6.77**	**6.77**
	L_{29} - L_{30}	-418.23	-86.38	37.10			0.90	1.17	39.04	-90.88	0.00	0.00	Vehicle	Vehicle	-661.84	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**12.07**	**12.07**
	L_{30} - L_{31}	-350.38	-67.48	-15.79			0.90	1.18	-16.81	-71.85	0.00	0.00	Vehicle	Vehicle	-548.89	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**16.21**	**16.21**
	L_{31} - L_{32}	-275.46	-38.66	-23.75			0.90	1.18	-25.29	-41.16	0.00	0.00	Vehicle	Vehicle	-411.60	9.73	59.10	49.3700	1950.30	131.71	11.1432	5.8186	17.24	32.72	-1643.56	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**24.02**	**24.02**
	L_{32} - L_{33}	-179.08	-69.04	3.21			0.90	1.18	3.41	-73.50	0.

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Verticals	Structure 1	U_1 - L_0	-77.19	-85.67	13.26			0.90	1.24	14.76	-95.37	0.00	0.00	Vehicle	Vehicle	------	-224.33	1.63	15.26	13.6300	503.58	131.71	9.3438	1.9120	43.98	31.16	-404.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	2.45	2.45
		U_1 - L_1	-33.88	-58.73	11.96			0.90	1.24	13.31	-65.39	0.00	0.00	Vehicle	Vehicle	------	-129.04	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.87	4.87
		U_2 - L_2	10.43	-38.83	11.27			0.90	1.24	12.55	-43.23	0.00	0.00	Vehicle	Vehicle	29.87	-42.64	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	33.26	33.26	8.38	8.38
		U_2 - L_3	44.39	-29.67	11.85			0.90	1.24	13.20	-33.03	0.00	0.00	Vehicle	Vehicle	74.86	------	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	------	------	------	------	------	29.04	29.04	------	------
		U_3 - L_4	-16.67	0.03	-16.11			0.90	1.24	0.03	-17.93	0.00	0.00	Vehicle	Vehicle	------	-44.97	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	18.58	18.58
		U_4 - L_5	-109.51	2.76	-69.81			0.90	1.24	3.08	-77.72	0.00	0.00	Vehicle	Vehicle	------	-243.39	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	4.06	4.06
		U_5 - L_6	-143.60	-0.96	-85.10			0.90	1.24	-1.07	-94.74	0.00	0.00	Vehicle	Vehicle	------	-309.85	3.13	23.61	20.4794	779.11	131.71	9.9479	2.0237	44.24	31.14	-624.88	16.00	0.44	10.00	0.56	------	------	16.00	------	------	36.57	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	3.56	3.56
		U_6 - L_7	-142.61	2.38	-87.27			0.90	1.24	2.64	-97.15	0.00	0.00	Vehicle	Vehicle	------	-311.70	2.88	21.86	18.9794	721.36	131.71	11.7292	1.9657	53.70	30.26	-562.19	16.25	0.44	10.00	0.50	------	------	16.25	------	------	37.14	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	2.98	2.98
		U_7 - L_8	-391.97	-84.12	-93.49			0.90	1.24	-93.65	-104.09	0.00	0.00	Vehicle	Vehicle	------	-644.87	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	------	------	15.25	------	------	18.60	45.00	Pass	5.96	12.00	Pass	------	------	------	------	------	6.47	6.47
		U_8 - L_9	-223.13	-79.03	8.43			0.90	1.20	9.09	-85.21	0.00	0.00	Vehicle	Vehicle	------	-400.85	3.50	30.81	27.3125	1016.81	131.71	12.1563	2.5246	43.34	31.21	-817.50	16.25	0.50	12.00	0.63	------	------	16.25	------	------	32.50	45.00	Pass	9.60	12.00	Pass	------	------	------	------	------	4.76	4.76
		U_9 - L_{10}	-225.77	-79.69	-1.88			0.90	1.20	-2.02	-85.92	0.00	0.00	Vehicle	Vehicle	------	-405.20	2.76	34.69	31.9300	1144.77	131.71	10.7083	2.3304	41.36	31.37	-925.09	16.16	0.83	11.50	0.80	------	------	16.16	------	------	19.50	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	5.65	5.65
		U_{10} - L_{11}	-198.79	-71.11	5.89			0.90	1.20	6.35	-76.67	0.00	0.00	Vehicle	Vehicle	------	-358.09	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.77	5.77
		U_{11} - L_{12}	-154.77	-65.30	8.48			0.90	1.20	9.15	-70.41	0.00	0.00	Vehicle	Vehicle	------	-292.73	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	------	------	16.25	------	------	32.50	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	5.36	5.36
		U_{12} - L_{13}	-109.04	-52.17	16.68			0.90	1.20	17.98	-56.25	0.00	0.00	Vehicle	Vehicle	------	-214.87	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.83	4.83
		U_{13} - L_{14}	-12.30	4.93	-10.17			0.90	1.20	-5.32	-10.96	0.00	0.00	Vehicle	Vehicle	------	-30.24	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	30.33	30.33
		U_{14} - L_{15}	-5.62	24.26	-48.46			0.90	1.20	26.16	-52.25	0.00	0.00	Vehicle	Vehicle	26.70	-75.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	16.56	16.56	6.46	6.46
		U_{15} - L_{16}	-51.74	16.79	-56.85			0.90	1.20	18.10	-61.30	0.00	0.00	Vehicle	Vehicle	------	-146.94	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.72	4.72
		U_{17} - L_{17}	-127.31	9.95	-77.12			0.90	1.20	10.73	-83.15	0.00	0.00	Vehicle	Vehicle	------	-273.59	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	------	------	16.16	------	------	33.25	45.00	Pass	5.37	12.00	Pass	------	------	------	------	------	3.42	3.42
		U_{18} - L_{18}	-159.89	9.18	-88.06			0.90	1.20	9.90	-94.94	0.00	0.00	Vehicle	Vehicle	------	-331.28	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	------	------	16.16	------	------	32.06	45.00	Pass	7.23	12.00	Pass	------	------	------	------	------	3.85	3.85
		U_{19} - L_{19}	-191.17	7.78	-90.52			0.90	1.20	8.39	-97.60	0.00	0.00	Vehicle	Vehicle	------	-375.39	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	4.36	4.36
		U_{20} - L_{20}	-211.94	7.78	-90.61			0.90	1.20	8.38	-97.69	0.00	0.00	Vehicle	Vehicle	------	-402.52	0.00	29.13	29.1305	961.31	131.71	20.3229	2.8884	63.32	29.19	-722.67	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	3.52	3.52
	Structure 2	U_1 - L_0	-206.53	-93.62	9.82			0.90	1.18	10.45	-99.68	0.00	0.00	Vehicle	Vehicle	------	-398.07	0.00	31.81	31.8100	1049.73	131.71	19.1510	2.8323	60.85	29.48	-797.03	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	4.08	4.08
		U_1 - L_1	-188.72	-79.14	10.08			0.90	1.18	10.74	-84.26	0.00	0.00	Vehicle	Vehicle	------	-354.87	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.74	5.74
		U_2 - L_2	-155.84	-70.09	10.64			0.90	1.18	11.33	-74.62	0.00	0.00	Vehicle	Vehicle	------	-299.61	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.61	5.61
		U_3 - L_3	-134.53	-68.78	12.06			0.90	1.18	12.84	-73.23	0.00	0.00	Vehicle	Vehicle	------	-270.08	0.00	22.75	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	------	------	16.32	------	------	30.85	45.00	Pass	4.91	12.00	Pass	------	------	------	------	------	4.33	4.33
		U_4 - L_4	-64.47	57.02	11.52			0.90	1.18	12.27	-60.71	0.00	0.00	Vehicle	Vehicle	------	-162.73	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	4.52	4.52
		U_5 - L_5	-19.94	-46.24	23.90			0.90	1.18	25.45	-49.23	0.00	0.00	Vehicle	Vehicle	7.16	-89.92	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	17.59	17.59	6.51	6.51
		U_6 - L_6	40.07	-33.54	34.02			0.90	1.18	36.22	-35.71	0.00	0.00	Vehicle	Vehicle	99.18	------	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	------	------	6.56	------	------	------	------	------	10.70	10.70	------	------
		U_7 - L_7	-26.03	-0.95	-5.05			0.90	1.18	-1.02	-5.38	0.00	0.00	Vehicle	Vehicle	------	-40.84	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	58.48	58.48
		U_8 - L_8	-125.22	18.13	-61.25			0.90	1.18	19.31	-65.22	0.00	0.00	Vehicle	Vehicle	------	-247.57	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	------	------	15.75	------	------	36.00	45.00	Pass	8.89	12.00	Pass	------	------	------	------	------	6.22	6.22
		U_9 - L_9	-174.50	6.71	-76.67			0.90	1.18	7.15	-81.63	0.00	0.00	Vehicle	Vehicle	------	-332.96	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.33	6.33
		U_{10} - L_{10}	-202.62	-0.51	-86.67			0.90	1.18	-0.54	-92.28	0.00	0.00	Vehicle	Vehicle	------	-383.37	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.24	6.24
		U_{11} - L_{11}	-229.48	2.35	-92.90			0.90	1.18	2.51	-98.91	0.00	0.00	Vehicle	Vehicle	------	-426.91	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	------	------	16.48	------	------	20.31	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.41	5.41
		U_{12} - L_{12}	-250.80	1.68	-96.73			0.90	1.18	1.79	-102.99	0.00	0.00	Vehicle	Vehicle	------	-459.92	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.35	5.35
		U_{13} - L_{13}	-223.27	9.58	-95.69			0.90	1.18	10.19	-101.88	0.00	0.00	Vehicle	Vehicle	------	-422.70	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	4.58	4.58
		U_{14} - L_{14}	-343.24	-68.94	-83.71			0.90	1.18	-73.40	-89.13	0.00	0.00	Vehicle	Vehicle	------	-562.08	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0516	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	7.95	7.95
		U_{15} - L_{15}	-123.12	-72.24	9.76			0.90	1.17	10.27	-76.00	0.00	0.00	Vehicle	Vehicle	------	-258.85	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	7.46	7.46
		U_{16} - L_{16}	-156.68	-79.03	7.27			0.90	1.17	7.65	-83.15	0.00	0.00	Vehicle	Vehicle	------	-311.77	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	6.13	6.13
		U_{17} - L_{17}	-147.89	-73.35	7.34			0.90	1.17	7.72	-77.17	0.00	0.00	Vehicle	Vehicle	------	-292.58	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	6.16	6.16
		U_{18} - L_{18}	-142.21	-72.53	9.19			0.90	1.17	9.67	-76.31	0.00	0.00	Vehicle	Vehicle	------	-284.08	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.70	5.70
		U_{19} - L_{19}	-111.47	-71.73	10.27			0.90	1.17	10.81	-75.46	0.00	0.00	Vehicle	Vehicle	------	-243.02	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.30	5.30
		U_{20} - L_{20}	-76.56	-56.04	17.33			0.90	1.17	18.23	-58.96	0.00	0.00	Vehicle	Vehicle	------	-176.18	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	5.06	5.06
		U_{21} - L_{21}	-44.33	-49.40	21.25			0.90	1.17	22.36	-51.97	0.00	0.00	Vehicle	Vehicle	------	-125.19	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.70	5.70
		U_{22} - L_{22}	-21.25	0.17	-4.06			0.90	1.17	0.17	-4.27	0.00	0.00	Vehicle	Vehicle	------	-33.18	0.00	16.85	16.8486	556.00	131.71	9.3583	1.9682	47.53	31.03	-444.36	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	75.03	75.03
		U_{23} - L_{23}	-39.04	26.35	-48.66			0.90	1.17	27.72	-51.19	0.00	0.00	Vehicle	Vehicle	------	-117.30	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	------	------	15.86	------	------	38.97	45.00	Pass	6.56	12.00	Pass	------	------	------	------	------	5.89	5.89
		U_{24} - L_{24}	-74.80	16.37	-57.38			0.90	1.17	17.23	-60.37	0.00	0.00	Vehicle	Vehicle	------	-175.72	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	------	------	16.00	------	------	36.12	45.00	Pass	5.94	12.00	Pass	------	------	------	------	------	4.98	4.98
		U_{25} - L_{25}	-103.21	12.59	-75.63			0.90	1.17	13.24	-79.57	0.00	0.00	Vehicle	Vehicle	------	-237.62	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	------	------	15.75	------	------	31.50	45.00	Pass	10.00	12.00	Pass	------	------	------	------	------	5.13	5.13
		U_{26} - L_{26}	-120.15	11.87	-80.33			0.90	1.17	12.49	-84.52	0.00	0.00	Vehicle	Vehicle	------	-266.06	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	5.41	5.41
		U_{27} - L_{27}	-123.87	9.81	-87.21			0.90	1.17	10.32	-91.75	0.00	0.00	Vehicle	Vehicle	------	-280.30	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	------	------	16.48	------	------	28.22	45.00	Pass	6.06	12.00	Pass	------	------	------	------	------	5.44	5.44
		U_{28} - L_{28}	-135.49	8.92	-94.35			0.90	1.17	9.38	-99.27	0.00	0.00	Vehicle	Vehicle	------	-305.18	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	------	------	16.64	------	------	26.37	45.00	Pass	5.62	12.00	Pass	------	------	------	------	------	5.34	5.34
		U_{29} - L_{29}	-116.90	5.22	-87.99			0.90	1.17	5.49	-92.58	0.00	0.00	Vehicle	Vehicle	------	-272.31	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	------	------	16.32	------	------	30.50	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.19	6.19
		U_{30} - L_{30}	-261.40	-76.99	-74.57			0.90	1.18	-79.39	-81.97	0.00	0.00	Vehicle	Vehicle	------	-446.38	11.02	52.76	41.7400	1741.08	131.71	25.6094	4.0676	56.66	29.95	-1342.96	15.38	0.84	15.66	1.38	------	------	15.38	------	------	18.31	45.00	Pass	5.68	12.00	Pass	------	------	------	------	------	9.41	9.41
		U_{31} - L_{31}	-156.06	-77.92	12.29			0.90	1.18	13.09	-82.96	0.00	0.00	Vehicle	Vehicle	------	-310.72	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	------	------	16.32	------	------	20.13	45.00	Pass	6.59	12.00	Pass	------	------	------	------	------	6.44	6.44
		U_{32} - L_{32}	-185.16	-86.57	8.54			0.90	1.18	9.09	-92.17	0.00	0.00	Vehicle	Vehicle	------	-360.53	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	------	------	16.48	------	------	18.26	45.00	Pass	6.06	12.00	P

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capacity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
North Truss - Diagonals	Structure 1	U$_1$ - L$_1$	87.39	64.61	-18.67			0.90	1.24	71.93	-20.78	0.00	0.00	Vehicle	Vehicle	207.11	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**6.94**	**6.94**	-----	-----
		U$_1$ - L$_2$	23.29	65.15	1.65			0.90	1.24	72.53	1.84	0.00	0.00	Vehicle	Vehicle	124.57	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.58**	**5.58**	-----	-----
		U$_2$ - L$_3$	-37.87	36.40	-19.69			0.90	1.24	40.53	-21.92	0.00	0.00	Vehicle	Vehicle	3.45	-77.72	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**11.49**	**11.49**	**13.52**	**13.52**
		U$_3$ - L$_4$	-92.23	-17.57	-52.72			0.90	1.24	-19.56	-58.69	0.00	0.00	Vehicle	Vehicle	-----	-196.20	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**-----**	**-----**	**4.16**	**4.16**
		U$_3$ - L$_4$	143.29	12.20	12.83			0.90	1.24	14.29	13.58	0.00	0.00	Vehicle	Vehicle	204.85	-----	0.00	20.48	20.4800	675.84	131.71	11.6953	2.0102	52.36	30.39	-529.06	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**26.36**	**26.36**	-----	-----
		U$_4$ - L$_5$	177.89	93.91	3.23			0.90	1.24	104.55	-3.59	0.00	0.00	Vehicle	Vehicle	367.17	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.52**	**4.52**	-----	-----
		U$_4$ - L$_6$	184.40	105.20	0.17			0.90	1.24	117.12	0.19	0.00	0.00	Vehicle	Vehicle	391.98	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**3.98**	**3.98**	-----	-----
		U$_5$ - L$_7$	179.98	97.30	-1.15			0.90	1.24	108.33	-1.28	0.00	0.00	Vehicle	Vehicle	374.80	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.34**	**4.34**	-----	-----
		U$_6$ - L$_8$	268.90	87.48	-9.74			0.90	1.20	94.32	-10.50	0.00	0.00	Vehicle	Vehicle	472.19	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.35**	**7.35**	-----	-----
		U$_8$ - L$_{10}$	278.76	83.51	-8.86			0.90	1.20	90.04	-9.55	0.00	0.00	Vehicle	Vehicle	479.44	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U$_{10}$ - L$_{11}$	284.98	90.77	2.27			0.90	1.20	97.86	2.45	0.00	0.00	Vehicle	Vehicle	497.69	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**6.39**	**6.39**	-----	-----
		U$_{12}$ - L$_{12}$	250.55	89.77	-9.58			0.90	1.20	96.79	-10.33	0.00	0.00	Vehicle	Vehicle	451.54	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.44**	**5.44**	-----	-----
		U$_{13}$ - L$_{13}$	189.62	74.26	-22.95			0.90	1.20	80.06	-24.75	0.00	0.00	Vehicle	Vehicle	350.59	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**5.51**	**5.51**	-----	-----
		U$_{14}$ - L$_{14}$	123.30	53.44	-30.55			0.90	1.20	57.62	-32.94	0.00	0.00	Vehicle	Vehicle	235.19	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
		U$_{15}$ - L$_{14}$	-24.40	36.17	-46.63			0.90	1.20	39.00	-50.28	0.00	0.00	Vehicle	Vehicle	18.98	-97.08	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**11.59**	**11.59**	**6.05**	**6.05**
		U$_{15}$ - L$_{15}$	48.54	66.48	-25.09			0.90	1.20	71.68	-27.06	0.00	0.00	Vehicle	Vehicle	156.28	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
		U$_{16}$ - L$_{16}$	146.57	84.42	-7.68			0.90	1.20	91.02	-8.28	0.00	0.00	Vehicle	Vehicle	308.87	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**4.15**	**4.15**	-----	-----
		U$_{16}$ - L$_{17}$	182.43	92.09	-11.72			0.90	1.20	99.29	-12.64	0.00	0.00	Vehicle	Vehicle	366.24	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
		U$_{18}$ - L$_{18}$	223.79	100.62	-9.82			0.90	1.20	108.49	-10.59	0.00	0.00	Vehicle	Vehicle	431.97	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.48**	**4.48**	-----	-----
		U$_{20}$ - L$_{19}$	232.63	90.69	-8.22			0.90	1.20	97.78	-8.86	0.00	0.00	Vehicle	Vehicle	429.54	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**4.88**	**4.88**	-----	-----
	Structure 2	U$_1$ - L$_1$	213.47	64.76	-10.48			0.90	1.18	68.94	-11.16	0.00	0.00	Vehicle	Vehicle	367.13	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
		U$_1$ - L$_2$	200.39	89.45	-12.31			0.90	1.18	95.24	-13.10	0.00	0.00	Vehicle	Vehicle	384.32	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U$_3$ - L$_3$	172.76	80.21	-13.78			0.90	1.18	85.40	-14.67	0.00	0.00	Vehicle	Vehicle	335.61	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.60**	**5.60**	-----	-----
		U$_3$ - L$_4$	147.11	81.10	-11.01			0.90	1.18	86.35	-11.73	0.00	0.00	Vehicle	Vehicle	303.50	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**4.98**	**4.98**	-----	-----
		U$_5$ - L$_5$	49.01	61.28	-28.82			0.90	1.18	65.24	-30.68	0.00	0.00	Vehicle	Vehicle	148.61	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.41	28.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.80**	**5.80**	-----	-----
		U$_6$ - L$_6$	2.97	56.16	-37.63			0.90	1.18	59.80	-40.06	0.00	0.00	Vehicle	Vehicle	81.59	-48.22	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.10**	**7.10**	**8.20**	**8.20**
		U$_8$ - L$_7$	-85.72	34.06	-58.15			0.90	1.18	36.27	-61.91	0.00	0.00	Vehicle	Vehicle	-----	-191.91	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	**-----**	**-----**	**4.42**	**4.42**
		U$_8$ - L$_7$	140.27	65.52	-26.76			0.90	1.18	69.76	-28.49	0.00	0.00	Vehicle	Vehicle	273.03	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.64**	**6.64**	-----	-----
		U$_8$ - L$_8$	204.17	87.58	-12.87			0.90	1.18	93.25	-13.70	0.00	0.00	Vehicle	Vehicle	386.64	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
		U$_{10}$ - L$_9$	234.82	93.88	-7.65			0.90	1.18	99.95	-8.14	0.00	0.00	Vehicle	Vehicle	435.21	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.43**	**5.43**	-----	-----
		U$_{11}$ - L$_{10}$	263.04	105.94	1.27			0.90	1.18	112.79	1.35	0.00	0.00	Vehicle	Vehicle	488.58	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.15**	**5.15**	-----	-----
		U$_{11}$ - L$_{11}$	273.97	101.73	1.86			0.90	1.18	108.31	1.98	0.00	0.00	Vehicle	Vehicle	496.96	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**5.27**	**5.27**	-----	-----
		U$_{13}$ - L$_{12}$	254.88	100.13	-10.53			0.90	1.18	106.61	-11.21	0.00	0.00	Vehicle	Vehicle	469.93	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**4.90**	**4.90**	-----	-----
		U$_{13}$ - L$_{13}$	217.66	90.53	-11.06			0.90	1.18	96.39	-11.77	0.00	0.00	Vehicle	Vehicle	408.26	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.81**	**5.81**	-----	-----
		U$_{15}$ - L$_{15}$	110.03	75.65	-10.27			0.90	1.17	79.59	-10.81	0.00	0.00	Vehicle	Vehicle	246.50	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
		U$_{15}$ - L$_{16}$	132.26	77.47	-10.95			0.90	1.17	81.50	-11.52	0.00	0.00	Vehicle	Vehicle	277.89	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.36**	**6.36**	-----	-----
		U$_{17}$ - L$_{17}$	172.87	87.70	-7.70			0.90	1.17	92.27	-8.10	0.00	0.00	Vehicle	Vehicle	344.68	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
		U$_{17}$ - L$_{18}$	160.16	81.91	-9.17			0.90	1.17	86.18	-9.64	0.00	0.00	Vehicle	Vehicle	320.25	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.69**	**5.69**	-----	-----
		U$_{19}$ - L$_{19}$	152.33	85.31	-10.18			0.90	1.17	89.75	-10.71	0.00	0.00	Vehicle	Vehicle	314.71	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.55**	**5.55**	-----	-----
		U$_{20}$ - L$_{20}$	120.67	74.83	-18.14			0.90	1.17	78.73	-19.08	0.00	0.00	Vehicle	Vehicle	259.22	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.13**	**6.13**	-----	-----
		U$_{20}$ - L$_{21}$	76.10	66.29	-26.18			0.90	1.17	69.74	-27.54	0.00	0.00	Vehicle	Vehicle	189.59	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.04**	**5.04**	-----	-----
		U$_{21}$ - L$_{22}$	31.50	50.23	-37.10			0.90	1.17	52.85	-39.03	0.00	0.00	Vehicle	Vehicle	109.64	-9.79	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.50**	**7.50**	**9.15**	**9.15**
		U$_{23}$ - L$_{22}$	24.27	48.73	-39.62			0.90	1.17	51.27	-41.68	0.00	0.00	Vehicle	Vehicle	98.20	-22.64	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.87**	**7.87**	**8.33**	**8.33**
		U$_{23}$ - L$_{23}$	72.21	65.96	-28.83			0.90	1.17	69.40	-30.33	0.00	0.00	Vehicle	Vehicle	184.10	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.35	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.12**	**5.12**	-----	-----
		U$_{24}$ - L$_{24}$	112.05	77.92	-18.28			0.90	1.17	81.98	-19.23	0.00	0.00	Vehicle	Vehicle	252.24	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
		U$_{25}$ - L$_{25}$	127.76	92.32	-9.08			0.90	1.17	97.13	-9.56	0.00	0.00	Vehicle	Vehicle	292.36	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
		U$_{26}$ - L$_{26}$	132.58	92.55	-12.27			0.90	1.17	97.38	-12.91	0.00	0.00	Vehicle	Vehicle	298.94	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.32**	**5.32**	-----	-----
		U$_{26}$ - L$_{27}$	137.86	95.49	-10.57			0.90	1.17	100.46	-11.12	0.00	0.00	Vehicle	Vehicle	309.81	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
		U$_{28}$ - L$_{29}$	102.60	82.63	-4.88			0.90	1.17	86.93	-5.13	0.00	0.00	Vehicle	Vehicle	246.39	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
		U$_{30}$ - L$_{31}$	139.84	72.44	-12.68			0.90	1.18	77.13	-13.50	0.00	0.00	Vehicle	Vehicle	282.05	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**8.27**	**8.27**	-----	-----
		U$_{31}$ - L$_{32}$	166.63	82.19	-13.96			0.90	1.18	87.51	-14.86	0.00	0.00	Vehicle	Vehicle	330.38	-----	0.00	29.18	29.1800	962.94	131.71	17.8750	2.8156	57.14	29.89	-741.48	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U$_{32}$ - L$_{33}$	202.12	88.14	-8.22			0.90	1.18	93.84	-8.75	0.00	0.00	Vehicle	Vehicle	384.75	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.84**	**6.84**	-----	-----
		U$_{33}$ - L$_{34}$	201.72	93.55	-5.09			0.90	1.18	99.61	-5.42	0.00	0.00	Vehicle	Vehicle	391.72	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.45**	**6.45**	-----	-----
		U$_{35}$ - L$_{35}$	180.72	86.55	-9.38			0.90	1.18	92.15	-9.99	0.00	0.00	Vehicle	Vehicle	354.72	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19	-812.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
		U$_{36}$ - L$_{36}$	162.90	86.85	-12.43			0.90	1.18	92.47	-13.23	0.00	0.00	Vehicle	Vehicle	331.98	-----	0.00	27.98	27.9777	923.26	131.71	13.

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors DL Factor: 1.30 Pedestrian Load Factors DL Factor: 1.30

Condition: As-Inspected Fu = 60.0 ksi LL Factor: 1.30 LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	-52.70	11.12	-75.69			0.75	1.24	10.31	-70.22	0.00	0.00	Vehicle	Vehicle	-----	-159.80	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	7.30	7.30
		U_1 - U_2	-61.66	27.96	-127.87			0.75	1.24	25.94	-118.63	0.00	0.00	Vehicle	Vehicle	-----	-234.37	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	4.25	4.25
		U_2 - U_3	-27.05	38.64	-139.63			0.75	1.24	35.85	-129.54	0.00	0.00	Vehicle	11.44	-203.57		4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	19.48	19.48	4.16	4.16
		U_3 - U_4	32.90	-46.50	-121.60			0.75	1.24	-43.14	-112.81	0.00	0.00	Vehicle	Vehicle	-----	-103.88	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.30	5.30
		U_4 - U_5	34.76	47.04	-70.67			0.75	1.24	43.64	-65.57	0.00	0.00	Vehicle	Vehicle	101.92	-40.05	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	14.58	14.58	9.15	9.15
		U_5 - U_6	124.19	-70.37	-63.03			0.75	1.24	-58.48	-65.29	0.00	0.00	Vehicle	Vehicle	85.42	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_6 - U_7	223.31	-2.45	-36.63			0.75	1.24	-2.27	-33.98	0.00	0.00	Vehicle	Vehicle	287.35	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	-----	-----	-----	-----
		U_7 - U_8	331.92	-11.90	1.42			0.75	1.24	1.31	-11.04	0.00	0.00	Vehicle	Vehicle	433.20	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	592.84	592.84	-----	-----
		U_8 - U_9	267.71	36.79	-26.83			0.75	1.20	33.06	-24.11	0.00	0.00	Vehicle	Vehicle	391.00	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	20.30	20.30	-----	-----
		U_9 - U_{10}	89.12	50.99	-66.02			0.75	1.20	45.81	-59.32	0.00	0.00	Vehicle	Vehicle	175.41	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.54	13.54	-----	-----
		U_{10} - U_{11}	-76.89	45.63	-103.45			0.75	1.20	41.00	-92.95	0.00	0.00	Vehicle	Vehicle	-----	-220.79	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.60	5.60
		U_{11} - U_{12}	-230.86	39.68	-141.46			0.75	1.20	35.66	-127.10	0.00	0.00	Vehicle	Vehicle	-----	-465.36	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.58	4.58
		U_{12} - U_{13}	-342.15	36.72	-165.07			0.75	1.20	32.99	-148.31	0.00	0.00	Vehicle	Vehicle	-----	-637.60	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.36	5.36
		U_{13} - U_{14}	-421.98	-83.35	-175.02			0.75	1.20	-74.89	-157.26	0.00	0.00	Vehicle	Vehicle	-----	-753.01	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.76	5.76
		U_{14} - U_{15}	-422.87	30.51	-145.22			0.75	1.20	27.41	-130.48	0.00	0.00	Vehicle	Vehicle	-----	-719.36	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.93	6.93
		U_{15} - U_{16}	-440.39	-105.97	-149.06			0.75	1.20	-95.22	-133.93	0.00	0.00	Vehicle	Vehicle	-----	-746.62	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.62	6.62
		U_{16} - U_{17}	-422.93	-96.22	-145.05			0.75	1.20	-86.46	-130.32	0.00	0.00	Vehicle	Vehicle	-----	-719.24	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.94	6.94
		U_{17} - U_{18}	-341.45	-128.08	-88.69			0.75	1.20	-79.69	-115.08	0.00	0.00	Vehicle	Vehicle	-----	-593.48	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	5.47	5.47
		U_{18} - U_{19}	-247.63	-4.27	-46.58			0.75	1.20	-3.83	-41.78	0.00	0.00	Vehicle	Vehicle	-----	-376.23	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	10.29	10.29
		U_{19} - U_{20}	-132.06	-31.73	-16.37			0.75	1.20	-14.70	-28.51	0.00	0.00	Vehicle	Vehicle	-----	-208.73	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	19.13	19.13
	Structure 2	U_0 - U_1	-131.63	8.00	-46.60			0.75	1.18	7.09	-41.34	0.00	0.00	Vehicle	Vehicle	-----	-224.87	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	12.47	12.47
		U_1 - U_2	-247.12	17.11	-97.47			0.75	1.18	15.18	-86.48	0.00	0.00	Vehicle	Vehicle	-----	-433.67	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.29	6.29
		U_2 - U_3	-347.28	26.52	-145.12			0.75	1.18	23.53	-128.75	0.00	0.00	Vehicle	Vehicle	-----	-618.84	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.67	5.67
		U_3 - U_4	-437.20	-128.60	-175.23			0.75	1.18	-114.10	-155.48	0.00	0.00	Vehicle	Vehicle	-----	-770.48	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.82	5.82
		U_4 - U_5	-468.83	45.48	-185.20			0.75	1.18	40.35	-164.31	0.00	0.00	Vehicle	Vehicle	-----	-823.09	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.20	6.20
		U_5 - U_6	-471.14	-106.95	-185.45			0.75	1.18	-94.89	-164.54	0.00	0.00	Vehicle	Vehicle	-----	-826.38	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.17	6.17
		U_6 - U_7	-414.50	59.99	-177.24			0.75	1.18	53.23	-157.25	0.00	0.00	Vehicle	Vehicle	-----	-743.28	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.89	5.89
		U_7 - U_8	-413.54	60.07	-142.48			0.75	1.18	53.30	-126.42	0.00	0.00	Vehicle	Vehicle	-----	-701.95	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	7.34	7.34
		U_8 - U_9	-322.06	62.53	-112.72			0.75	1.18	55.48	-100.01	0.00	0.00	Vehicle	Vehicle	-----	-548.69	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.04	8.04
		U_9 - U_{10}	-182.16	67.52	-101.20			0.75	1.18	59.90	-89.79	0.00	0.00	Vehicle	Vehicle	-----	-353.54	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	7.84	7.84
		U_{10} - U_{11}	-32.61	73.29	-78.66			0.75	1.18	65.03	-69.79	0.00	0.00	Vehicle	42.14	-133.13		6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	14.51	14.51	10.56	10.56
		U_{11} - U_{12}	133.57	-23.20	-42.34			0.75	1.18	-20.59	-37.57	0.00	0.00	Vehicle	Vehicle	146.88	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	289.98	26.95	-24.31			0.75	1.18	23.91	-21.57	0.00	0.00	Vehicle	Vehicle	408.06	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	35.52	35.52	-----	-----
		U_{13} - U_{14}	434.77	-2.64	-20.24			0.75	1.18	-2.34	-17.96	0.00	0.00	Vehicle	Vehicle	562.16	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{14} - U_{15}	474.48	45.65	-12.35			0.75	1.17	40.02	-10.83	0.00	0.00	Vehicle	Vehicle	668.85	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	27.23	27.23	-----	-----
		U_{15} - U_{16}	383.31	50.74	-40.53			0.75	1.17	44.49	-35.54	0.00	0.00	Vehicle	Vehicle	556.14	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	19.99	19.99	-----	-----
		U_{16} - U_{17}	279.61	54.56	-63.14			0.75	1.17	47.83	-55.36	0.00	0.00	Vehicle	Vehicle	425.67	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	15.98	15.98	-----	-----
		U_{17} - U_{18}	172.67	52.77	-83.29			0.75	1.17	46.26	-73.02	0.00	0.00	Vehicle	Vehicle	284.61	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	12.83	12.83	-----	-----
		U_{18} - U_{19}	74.40	50.88	-111.86			0.75	1.17	44.61	-98.07	0.00	0.00	Vehicle	Vehicle	154.70	-30.78	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	15.51	15.51	7.36	7.36
		U_{19} - U_{20}	-9.98	44.21	-127.60			0.75	1.17	38.76	-111.88	0.00	0.00	Vehicle	Vehicle	37.41	-158.41	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.42	21.42	6.10	6.10
	Structure 3	U_0 - U_1	-62.02	23.48	-138.60			0.75	1.17	20.58	-121.52	0.00	0.00	Vehicle	Vehicle	-----	-238.60	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.38	6.38
		U_1 - U_2	-88.69	32.14	-143.17			0.75	1.17	28.18	-125.52	0.00	0.00	Vehicle	Vehicle	-----	-278.47	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.96	5.96
		U_2 - U_3	-88.87	32.28	-114.02			0.75	1.17	28.30	-99.97	0.00	0.00	Vehicle	Vehicle	-----	-245.48	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.48	7.48
		U_3 - U_4	-76.60	-96.18	-101.42			0.75	1.17	-84.32	-88.92	0.00	0.00	Vehicle	Vehicle	-----	-215.17	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.55	8.55
		U_4 - U_5	-37.55	46.01	-99.10			0.75	1.17	40.34	-86.89	0.00	0.00	Vehicle	3.63	-161.77		5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	21.26	21.26	7.54	7.54
		U_5 - U_6	37.36	-80.96	-86.96			0.75	1.17	-70.98	-76.24	0.00	0.00	Vehicle	Vehicle	-----	-50.55	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.98	8.98
		U_6 - U_7	128.18	-57.22	-57.37			0.75	1.17	-50.17	-50.30	0.00	0.00	Vehicle	Vehicle	101.41	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_7 - U_8	233.91	-42.98	-44.94			0.75	1.17	-37.68	-39.40	0.00	0.00	Vehicle	Vehicle	255.10	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_8 - U_9	337.95	38.59	-22.82			0.75	1.17	33.83	-20.01	0.00	0.00	Vehicle	Vehicle	483.31	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	27.62	27.62	-----	-----
		U_9 - U_{10}	437.48	10.83	-15.14			0.75	1.17	9.50	-13.28	0.00	0.00	Vehicle	Vehicle	581.07	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	118.68	118.68	-----	-----
		U_{10} - U_{11}	420.86	52.04	-17.80			0.75	1.18	46.18	-15.79	0.00	0.00	Vehicle	Vehicle	607.15	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	24.76	24.76	-----	-----
		U_{11} - U_{12}	300.88	64.62	-45.25			0.75	1.18	57.33	-40.15	0.00	0.00	Vehicle	Vehicle	465.67	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	14.62	14.62	-----	-----
		U_{12} - U_{13}	161.69	65.38	-74.74			0.75	1.18	58.01	-66.31	0.00	0.00	Vehicle	Vehicle	285.61	-----	6.50

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL$_{max}$ (kips)	LL$_{min}$ (kips)	Pedestrian Load$_{MAX}$	Pedestrian Load$_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL$_{MAX}$	Lane Reduction and Impact LL$_{MIN}$	Impact & Pedestrian Load$_{MAX}$	Impact & Pedestrian Load$_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A$_{deduct}$ (in^2) **	A$_{gross}$ (in^2)	A$_{net}$ (in^2)	C$_{Nominal}$ (kips)	Member Capicity in Compression: C$_c$	L (feet)	r$_{min}$ (in)	KL/r$_{min}$ ***	F$_{crit}$ **** (ksi)	C$_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	-2.88	-5.84			0.75	1.24	-2.67	-5.42	0.00	0.00	Vehicle	Vehicle	7.55	-----	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	50.83	-16.27	59.01			0.75	1.24	54.75	-15.09	0.00	0.00	Vehicle	Vehicle	137.26	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	8.25	8.25	-----	-----
		L$_2$ - L$_3$	61.27	-27.74	83.33			0.75	1.24	77.31	-25.74	0.00	0.00	Vehicle	Vehicle	180.15	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	7.86	7.86	-----	-----
		L$_3$ - L$_4$	25.72	-37.67	85.04			0.75	1.24	78.90	-34.95	0.00	0.00	Vehicle	Vehicle	136.00	-12.00	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	8.15	8.15	16.84	16.84
		L$_4$ - L$_5$	-118.55	15.28	86.04			0.75	1.24	79.82	14.17	0.00	0.00	Vehicle	Vehicle	-----	-135.69	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	-----	-----
		L$_5$ - L$_6$	-217.97	-5.78	59.91			0.75	1.24	55.58	-5.37	0.00	0.00	Vehicle	Vehicle	-----	-290.33	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	82.29	82.29
		L$_6$ - L$_7$	-320.57	-27.90	11.82			0.75	1.24	10.96	-25.88	0.00	0.00	Vehicle	Vehicle	-----	-450.39	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	24.12	24.12
		L$_7$ - L$_8$	-417.42	-57.45	-0.45			0.75	1.24	-0.42	-53.30	0.00	0.00	Vehicle	Vehicle	-----	-611.92	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	14.67	14.67
		L$_8$ - L$_9$	-411.08	-45.23	-51.36			0.75	1.20	-40.64	-46.15	0.00	0.00	Vehicle	Vehicle	-----	-594.40	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	17.08	17.08
		L$_9$ - L$_{10}$	-247.97	-53.43	-0.16			0.75	1.20	-0.14	-48.01	0.00	0.00	Vehicle	Vehicle	-----	-384.77	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	14.53	14.53
		L$_{10}$ - L$_{11}$	-65.37	-52.16	33.29			0.75	1.20	29.91	-46.87	0.00	0.00	Vehicle	Vehicle	-----	-145.91	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	9.28	9.28
		L$_{11}$ - L$_{12}$	101.81	-46.61	66.84			0.75	1.20	60.05	-41.88	0.00	0.00	Vehicle	Vehicle	210.42	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	8.20	8.20	-----	-----
		L$_{12}$ - L$_{13}$	264.06	-40.50	107.03			0.75	1.20	96.16	-36.39	0.00	0.00	Vehicle	Vehicle	468.29	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	7.39	7.39	-----	-----
		L$_{13}$ - L$_{14}$	373.80	-34.62	131.47			0.75	1.20	118.12	-31.11	0.00	0.00	Vehicle	Vehicle	639.50	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	7.91	7.91	-----	-----
		L$_{14}$ - L$_{15}$	476.54	96.18	168.48			0.75	1.20	151.38	86.42	0.00	0.00	Vehicle	Vehicle	816.30	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	7.25	7.25	-----	-----
		L$_{15}$ - L$_{16}$	460.23	60.09	157.07			0.75	1.20	141.12	53.99	0.00	0.00	Vehicle	Vehicle	781.76	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	7.90	7.90	-----	-----
		L$_{16}$ - L$_{17}$	381.61	73.92	111.70			0.75	1.20	100.36	66.41	0.00	0.00	Vehicle	Vehicle	626.57	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	8.32	8.32	-----	-----
		L$_{17}$ - L$_{18}$	289.18	49.94	76.21			0.75	1.20	68.47	44.87	0.00	0.00	Vehicle	Vehicle	464.95	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	8.68	8.68	-----	-----
		L$_{18}$ - L$_{19}$	176.31	21.11	20.50			0.75	1.20	18.97	18.42	0.00	0.00	Vehicle	Vehicle	253.86	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	17.20	17.20	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-10.46	12.50			0.75	1.20	11.23	-9.40	0.00	0.00	Vehicle	Vehicle	105.24	-----	1.95	19.80	17.8500	653.40	131.71	10.8073	5.6265	17.41	32.71	-550.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	38.54	38.54	-----	-----
		L$_0$ - L$_1$	24.42	-1.18	-3.48			0.75	1.18	-1.05	-3.09	0.00	0.00	Vehicle	Vehicle	30.38	-----	1.88	20.08	18.2000	662.64	131.71	10.8828	6.9064	14.18	32.81	-559.98	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	-----	-----	-----	-----
		L$_1$ - L$_2$	138.42	-8.87	49.58			0.75	1.18	43.99	-7.87	0.00	0.00	Vehicle	Vehicle	237.14	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	11.25	11.25	-----	-----
		L$_2$ - L$_3$	252.76	-18.54	93.99			0.75	1.18	83.39	-16.45	0.00	0.00	Vehicle	Vehicle	437.00	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	8.67	8.67	-----	-----
		L$_3$ - L$_4$	352.26	-27.97	133.93			0.75	1.18	118.83	-24.81	0.00	0.00	Vehicle	Vehicle	612.42	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	8.05	8.05	-----	-----
		L$_4$ - L$_5$	447.15	-38.67	144.53			0.75	1.18	128.24	-34.31	0.00	0.00	Vehicle	Vehicle	748.01	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	9.38	9.38	-----	-----
		L$_5$ - L$_6$	477.91	-47.00	167.35			0.75	1.18	148.48	-41.70	0.00	0.00	Vehicle	Vehicle	814.31	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	8.86	8.86	-----	-----
		L$_6$ - L$_7$	482.67	-55.06	143.78			0.75	1.18	127.57	-48.85	0.00	0.00	Vehicle	Vehicle	793.30	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	10.46	10.46	-----	-----
		L$_7$ - L$_8$	336.57	91.10	137.41			0.75	1.18	121.91	80.83	0.00	0.00	Vehicle	Vehicle	596.03	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	8.24	8.24	-----	-----
		L$_8$ - L$_9$	196.00	68.19	119.88			0.75	1.18	106.36	60.50	0.00	0.00	Vehicle	Vehicle	393.07	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	8.50	8.50	-----	-----
		L$_9$ - L$_{10}$	45.53	47.34	94.23			0.75	1.18	83.61	42.00	0.00	0.00	Vehicle	Vehicle	167.88	-----	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	-----	-----	6.72	-----	-----	6.72	-----	-----	9.76	9.76	-----	-----
		L$_{10}$ - L$_{11}$	-126.32	21.26	58.30			0.75	1.18	51.72	18.86	0.00	0.00	Vehicle	Vehicle	-----	-139.70	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	9.61	9.61
		L$_{11}$ - L$_{12}$	-284.95	-18.63	37.49			0.75	1.18	33.26	-16.53	0.00	0.00	Vehicle	Vehicle	-----	-391.92	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	39.07	39.07
		L$_{12}$ - L$_{13}$	-433.89	-34.27	11.54			0.75	1.18	10.24	-30.40	0.00	0.00	Vehicle	Vehicle	-----	-603.58	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	27.68	27.68
		L$_{13}$ - L$_{14}$	-552.76	-51.50	21.23			0.75	1.18	18.84	-45.70	0.00	0.00	Vehicle	Vehicle	-----	-777.99	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	21.06	21.06
		L$_{14}$ - L$_{15}$	-573.53	-42.03	-23.36			0.75	1.17	-20.48	-36.85	0.00	0.00	Vehicle	Vehicle	-----	-793.49	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	25.56	25.56
		L$_{15}$ - L$_{16}$	-493.00	-47.48	6.30			0.75	1.17	5.52	-41.62	0.00	0.00	Vehicle	Vehicle	-----	-695.01	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	18.80	18.80
		L$_{16}$ - L$_{17}$	-395.34	-58.55	10.60			0.75	1.17	9.29	-51.34	0.00	0.00	Vehicle	Vehicle	-----	-580.68	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	12.70	12.70
		L$_{17}$ - L$_{18}$	-288.08	-57.88	33.30			0.75	1.17	29.20	-50.75	0.00	0.00	Vehicle	Vehicle	-----	-440.48	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	8.66	8.66
		L$_{18}$ - L$_{19}$	-175.85	-55.59	46.91			0.75	1.17	41.13	-48.74	0.00	0.00	Vehicle	Vehicle	-----	-291.96	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	8.16	8.16
		L$_{19}$ - L$_{20}$	-78.08	-51.15	82.92			0.75	1.17	72.70	-44.85	0.00	0.00	Vehicle	Vehicle	-----	-159.80	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	11.05	11.05
	Structure 2	L$_0$ - L$_{21}$	7.59	-45.07	113.55			0.75	1.17	99.56	-39.52	0.00	0.00	Vehicle	Vehicle	139.29	-41.50	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	9.61	9.61	20.80	20.80
		L$_{21}$ - L$_{22}$	59.10	-24.57	104.67			0.75	1.17	91.77	-21.55	0.00	0.00	Vehicle	Vehicle	196.13	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.87	9.87	-----	-----
		L$_{22}$ - L$_{23}$	72.03	73.96	136.16			0.75	1.17	119.38	64.85	0.00	0.00	Vehicle	Vehicle	248.83	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	7.48	7.48	-----	-----
		L$_{23}$ - L$_{24}$	33.57	50.82	116.24			0.75	1.17	101.91	44.55	0.00	0.00	Vehicle	Vehicle	176.13	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.14	9.14	-----	-----
		L$_{24}$ - L$_{25}$	-45.06	50.35	95.96			0.75	1.17	84.13	44.14	0.00	0.00	Vehicle	Vehicle	50.80	-1.19	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	8.61	8.61	-----	-----
		L$_{25}$ - L$_{26}$	-134.95	22.17	66.98			0.75	1.17	58.73	19.44	0.00	0.00	Vehicle	Vehicle	-----	-150.16	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	-----	-----
		L$_{26}$ - L$_{27}$	-245.92	-8.52	48.98			0.75	1.17	42.94	-7.47	0.00	0.00	Vehicle	Vehicle	-----	-329.41	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	64.48	64.48
		L$_{27}$ - L$_{28}$	-351.86	-29.36	29.58			0.75	1.17	25.94	-25.74	0.00	0.00	Vehicle	Vehicle	-----	-490.88	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	27.03	27.03
		L$_{28}$ - L$_{29}$	-458.41	-37.00	3.61			0.75	1.17	3.16	-32.44	0.00	0.00	Vehicle	Vehicle	-----	-638.10	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	25.19	25.19
		L$_{29}$ - L$_{30}$	-542.36	-50.26	17.05			0.75	1.17	14.95	-44.06	0.00	0.00	Vehicle	Vehicle	-----	-762.35	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	22.08	22.08
		L$_{30}$ - L$_{31}$	-514.21	-51.82	-20.72			0.75	1.18	-18.38	-45.98	0.00	0.00	Vehicle	Vehicle	-----	-728.25	11.98	70.85	58.8700	2338.05	131.71	11.1432	5.6285	17.82	32.70	-1969.16	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	21.76	21.76
		L$_{31}$ - L$_{32}$	-411.27	-64.51	-11.66			0.75	1.18	-10.34	-57.24	0.00	0.00	Vehicle	Vehicle	-----	-609.06	9.73	59.60	49.8700	1966.80	131.71	11.1432	5.8413	17.17	32.72	-1657.58	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	15.09	15.09

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Center Truss - Verticals

Location	Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capacity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Structure 1	U_0 - L_0	-67.68	-115.60	10.89			0.75	1.24	10.10	-107.25	0.00	0.00	Vehicle	Vehicle	-----	-227.41	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	2.58	2.58
	U_1 - L_1	-24.09	-52.71	10.63			0.75	1.24	9.86	-48.90	0.00	0.00	Vehicle	Vehicle	-----	-94.88	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.71	6.71
	U_2 - L_2	12.87	-41.51	-3.76			0.75	1.24	-3.49	-38.51	0.00	0.00	Vehicle	Vehicle	12.20	-33.33	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	9.47	9.47
	U_3 - L_3	37.37	-32.39	20.53			0.75	1.24	19.05	-30.05	0.00	0.00	Vehicle	Vehicle	73.35	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	20.49	20.49	-----	-----
	U_4 - L_4	-15.55	3.57	-13.76			0.75	1.24	3.31	-12.77	0.00	0.00	Vehicle	Vehicle	-----	-36.81	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	26.18	26.18
	U_5 - L_5	-92.59	13.06	-70.50			0.75	1.24	12.11	-65.41	0.00	0.00	Vehicle	Vehicle	-----	-205.40	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.08	5.08
	U_6 - L_6	-117.07	3.54	-82.38			0.75	1.24	3.28	-76.43	0.00	0.00	Vehicle	Vehicle	-----	-251.55	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	5.11	5.11
	U_7 - L_7	-127.52	0.32	-91.84			0.75	1.24	0.29	-85.20	0.00	0.00	Vehicle	Vehicle	-----	-276.53	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	3.90	3.90
	U_8 - L_8	-368.71	-119.98	-121.96			0.75	1.24	-111.31	-113.14	0.00	0.00	Vehicle	Vehicle	-----	-626.41	3.28	51.42	48.1423	1696.94	131.71	16.6563	4.0363	37.14	31.69	-1385.05	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	6.16	6.16
	U_9 - L_9	-214.56	-101.25	5.21			0.75	1.20	4.68	-90.97	0.00	0.00	Vehicle	Vehicle	-----	-397.19	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	4.73	4.73
	U_{10} - L_{10}	-198.68	-80.54	-3.82			0.75	1.20	-3.43	-72.37	0.00	0.00	Vehicle	Vehicle	-----	-352.36	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.52	7.52
	U_{11} - L_{11}	-171.40	-77.00	10.34			0.75	1.20	9.29	-69.18	0.00	0.00	Vehicle	Vehicle	-----	-312.76	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.79	6.79
	U_{12} - L_{12}	-128.37	-67.59	19.87			0.75	1.20	17.85	-60.73	0.00	0.00	Vehicle	Vehicle	-----	-245.83	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	6.65	6.65
	U_{13} - L_{13}	-96.65	-55.08	24.93			0.75	1.20	22.40	-49.49	0.00	0.00	Vehicle	Vehicle	-----	-189.97	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.74	5.74
	U_{14} - L_{14}	-11.04	1.70	-0.80			0.75	1.20	1.52	-0.71	0.00	0.00	Vehicle	Vehicle	-----	-15.29	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	467.18	467.18
	U_{15} - L_{15}	-2.47	36.65	-50.53			0.75	1.20	32.93	-45.40	0.00	0.00	Vehicle	Vehicle	39.60	-62.23	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	13.06	13.06	7.51	7.51
	U_{16} - L_{16}	-31.27	27.34	-56.49			0.75	1.20	24.56	-50.76	0.00	0.00	Vehicle	Vehicle	-----	-106.64	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.11	6.11
	U_{17} - L_{17}	-105.05	10.98	-77.58			0.75	1.20	9.87	-69.70	0.00	0.00	Vehicle	Vehicle	-----	-227.18	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	4.39	4.39
	U_{18} - L_{18}	-126.74	5.13	-85.91			0.75	1.20	4.61	-77.19	0.00	0.00	Vehicle	Vehicle	-----	-265.12	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	5.16	5.16
	U_{19} - L_{19}	-166.77	4.80	-88.57			0.75	1.20	4.31	-79.58	0.00	0.00	Vehicle	Vehicle	-----	-320.25	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.65	5.65
	U_{20} - L_{20}	-184.59	4.46	-104.57			0.75	1.20	4.01	-93.96	0.00	0.00	Vehicle	Vehicle	-----	-362.11	0.00	30.63	30.6305	1010.81	131.71	20.3229	2.8427	64.34	29.06	-756.66	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.23	4.23
Structure 2	U_0 - L_0	-203.59	-95.48	11.96			0.75	1.18	10.61	-84.72	0.00	0.00	Vehicle	Vehicle	-----	-374.80	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.18	5.18
	U_1 - L_1	-176.11	-91.58	12.91			0.75	1.18	11.46	-81.25	0.00	0.00	Vehicle	Vehicle	-----	-334.57	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.11	6.11
	U_2 - L_2	-137.55	-75.48	12.22			0.75	1.18	10.84	-66.97	0.00	0.00	Vehicle	Vehicle	-----	-265.88	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.52	6.52
	U_3 - L_3	-117.62	-73.97	12.68			0.75	1.18	11.25	-65.63	0.00	0.00	Vehicle	Vehicle	-----	-238.22	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.09	5.09
	U_4 - L_4	-50.97	-59.32	25.45			0.75	1.18	22.58	-52.63	0.00	0.00	Vehicle	Vehicle	-----	-134.69	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	5.48	5.48
	U_5 - L_5	-13.78	-47.59	33.01			0.75	1.18	29.29	-42.22	0.00	0.00	Vehicle	Vehicle	20.16	-72.80	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	15.07	15.07	7.74	7.74
	U_6 - L_6	45.47	-37.31	41.70			0.75	1.18	36.99	-33.10	0.00	0.00	Vehicle	Vehicle	107.21	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.33	10.33	-----	-----
	U_7 - L_7	-22.33	3.23	3.96			0.75	1.18	3.51	2.86	0.00	0.00	Vehicle	Vehicle	-----	-25.31	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----	-----	-----
	U_8 - L_8	-120.08	29.85	-64.13			0.75	1.18	26.48	-56.90	0.00	0.00	Vehicle	Vehicle	-----	-230.07	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	7.21	7.21
	U_9 - L_9	-177.03	19.81	-79.43			0.75	1.18	17.58	-70.48	0.00	0.00	Vehicle	Vehicle	-----	-321.75	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
	U_{10} - L_{10}	-205.88	17.73	-85.36			0.75	1.18	15.73	-75.74	0.00	0.00	Vehicle	Vehicle	-----	-366.10	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.56	7.56
	U_{11} - L_{11}	-239.23	9.57	-89.41			0.75	1.18	8.49	-79.33	0.00	0.00	Vehicle	Vehicle	-----	-414.13	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.63	6.63
	U_{12} - L_{12}	-257.95	2.07	-97.20			0.75	1.18	1.83	-86.24	0.00	0.00	Vehicle	Vehicle	-----	-447.45	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.31	6.31
	U_{13} - L_{13}	-243.82	6.14	-100.98			0.75	1.18	5.44	-89.60	0.00	0.00	Vehicle	Vehicle	-----	-433.45	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	4.98	4.98
	U_{14} - L_{14}	-420.85	-99.57	-91.85			0.75	1.18	-81.50	-88.34	0.00	0.00	Vehicle	Vehicle	-----	-661.95	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	7.14	7.14
	U_{15} - L_{15}	-158.83	-92.57	9.99			0.75	1.17	8.76	-81.16	0.00	0.00	Vehicle	Vehicle	-----	-311.99	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.55	6.55
	U_{16} - L_{16}	-174.02	-95.35	3.19			0.75	1.17	2.80	-83.59	0.00	0.00	Vehicle	Vehicle	-----	-334.90	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.89	5.89
	U_{17} - L_{17}	-156.46	-79.04	9.02			0.75	1.17	7.91	-69.30	0.00	0.00	Vehicle	Vehicle	-----	-293.49	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
	U_{18} - L_{18}	-142.21	-77.85	14.30			0.75	1.17	12.53	-68.26	0.00	0.00	Vehicle	Vehicle	-----	-273.60	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
	U_{19} - L_{19}	-113.66	-71.35	20.78			0.75	1.17	18.22	-62.55	0.00	0.00	Vehicle	Vehicle	-----	-229.08	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.36	6.36
	U_{20} - L_{20}	-76.51	-57.51	26.70			0.75	1.17	23.41	-50.42	0.00	0.00	Vehicle	Vehicle	-----	-165.01	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.92	5.92
	U_{21} - L_{21}	-45.77	-52.78	27.45			0.75	1.17	24.06	-46.28	0.00	0.00	Vehicle	Vehicle	-----	-119.67	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.37	6.37
	U_{22} - L_{22}	-17.72	6.41	7.31			0.75	1.17	6.41	5.62	0.00	0.00	Vehicle	Vehicle	-----	-15.73	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	-----	-----
	U_{23} - L_{23}	-30.69	34.73	-51.98			0.75	1.17	30.45	-45.58	0.00	0.00	Vehicle	Vehicle	-----	-99.14	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	6.80	6.80
	U_{24} - L_{24}	-62.06	25.01	-64.48			0.75	1.17	21.93	-56.53	0.00	0.00	Vehicle	Vehicle	-----	-154.18	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.54	5.54
	U_{25} - L_{25}	-103.15	22.25	-75.86			0.75	1.17	19.50	-66.51	0.00	0.00	Vehicle	Vehicle	-----	-220.56	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	6.14	6.14
	U_{26} - L_{26}	-134.38	16.16	-79.14			0.75	1.17	14.17	-69.38	0.00	0.00	Vehicle	Vehicle	-----	-264.89	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.38	6.38
	U_{27} - L_{27}	-156.03	7.86	-89.59			0.75	1.17	6.89	-78.55	0.00	0.00	Vehicle	Vehicle	-----	-304.95	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	5.95	5.95
	U_{28} - L_{28}	-179.40	1.88	-96.97			0.75	1.17	1.65	-85.02	0.00	0.00	Vehicle	Vehicle	-----	-343.75	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.72	5.72
	U_{29} - L_{29}	-171.60	4.69	-95.14			0.75	1.17	4.11	-83.41	0.00	0.00	Vehicle	Vehicle	-----	-331.52	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.22	6.22
	U_{30} - L_{30}	-393.29	-107.54	-99.28			0.75	1.18	-88.09	-95.41	0.00	0.00	Vehicle	Vehicle	-----	-635.31	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	6.90	6.90
	U_{31} - L_{31}	-203.49	-100.71	10.15			0.75	1.18	9.01	-89.35	0.00	0.00	Vehicle	Vehicle	-----	-380.69	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	5.45	5.45
	U_{32} - L_{32}	-222.61	-89.47	3.55			0.75	1.18	3.15	-79.38	0.00	0.00	Vehicle	Vehicle	-----	-392.59	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.30	7.30
	U_{33} - L_{33}	-211.72	-89.59	2.58			0.75	1.18	2.29	-79.49	0.00	0.00	Vehicle	Vehicle	-----	-378.57	2.42	38

Maximum Axial with Moment Interaction Check

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Artic
(Case I considered in Max. Tension/Compression Load)

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 Fy = 33.0 ksi Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30 Pedestrian Load Factors: DL Factor: 1.30

Condition: As-Inspected Fu = 60.0 ksi

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capicity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.29	43.94	-16.45			0.75	1.24	40.76	-15.26	0.00	0.00	Vehicle	Vehicle	122.27	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	**13.08**	**13.08**	-----	-----
		U_1 - L_2	10.80	56.49	4.66			0.75	1.24	52.41	4.32	0.00	0.00	Vehicle	Vehicle	82.17	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**7.95**	**7.95**	-----	-----
		U_2 - L_3	-44.05	41.24	-33.53			0.75	1.24	38.26	-31.10	0.00	0.00	Vehicle	Vehicle	-----	-97.70	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**9.33**	**9.33**
		U_3 - L_4	-76.77	21.48	-65.30			0.75	1.24	19.93	-60.58	0.00	0.00	Vehicle	Vehicle	-----	-178.56	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**4.29**	**4.29**
		U_4 - L_4	118.48	49.27	16.45			0.75	1.24	45.71	15.26	0.00	0.00	Vehicle	Vehicle	213.45	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**8.88**	**8.88**	-----	-----
		U_5 - L_5	137.62	94.36	-12.92			0.75	1.24	87.55	-11.99	0.00	0.00	Vehicle	Vehicle	292.71	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
		U_6 - L_6	157.39	97.53	-0.09			0.75	1.24	90.48	-0.09	0.00	0.00	Vehicle	Vehicle	322.23	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.45**	**5.45**	-----	-----
		U_7 - L_7	149.33	101.83	-0.35			0.75	1.24	94.47	-0.33	0.00	0.00	Vehicle	Vehicle	316.94	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.31**	**5.31**	-----	-----
		U_8 - L_8	249.21	111.10	-4.88			0.75	1.20	99.82	-4.38	0.00	0.00	Vehicle	Vehicle	453.74	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_9 - L_{10}	260.39	93.40	-0.95			0.75	1.20	83.92	-0.85	0.00	0.00	Vehicle	Vehicle	447.60	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	**8.36**	**8.36**	-----	-----
		U_{10} - L_{11}	236.43	98.23	-7.62			0.75	1.20	88.26	-6.84	0.00	0.00	Vehicle	Vehicle	422.09	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	**7.64**	**7.64**	-----	-----
		U_{11} - L_{12}	212.05	88.46	-26.74			0.75	1.20	79.48	-24.02	0.00	0.00	Vehicle	Vehicle	379.00	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.11**	**7.11**	-----	-----
		U_{12} - L_{13}	151.78	78.75	-34.56			0.75	1.20	70.75	-31.05	0.00	0.00	Vehicle	Vehicle	289.30	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	**6.77**	**6.77**	-----	-----
		U_{13} - L_{14}	108.73	68.26	-42.32			0.75	1.20	61.33	-38.02	0.00	0.00	Vehicle	Vehicle	221.08	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.20**	**5.20**	-----	-----
		U_{14} - L_{14}	-24.56	47.31	-59.47			0.75	1.20	42.50	-53.43	0.00	0.00	Vehicle	Vehicle	23.33	-101.39	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**10.64**	**10.64**	**5.68**	**5.68**
		U_{15} - L_{15}	23.90	67.08	-36.95			0.75	1.20	60.27	-33.20	0.00	0.00	Vehicle	Vehicle	109.43	-12.09	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**6.70**	**6.70**	**10.49**	**10.49**
		U_{17} - L_{16}	120.04	80.87	-23.20			0.75	1.20	72.67	-20.84	0.00	0.00	Vehicle	Vehicle	250.51	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	**5.57**	**5.57**	-----	-----
		U_{18} - L_{17}	144.84	90.15	-7.60			0.75	1.20	81.00	-6.83	0.00	0.00	Vehicle	Vehicle	293.60	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.24**	**6.24**	-----	-----
		U_{19} - L_{18}	193.27	94.31	0.91			0.75	1.20	84.74	0.81	0.00	0.00	Vehicle	Vehicle	361.42	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.10**	**6.10**	-----	-----
		U_{20} - L_{19}	193.75	90.62	-5.07			0.75	1.20	81.42	-4.55	0.00	0.00	Vehicle	Vehicle	357.72	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.34**	**6.34**	-----	-----
		U_0 - L_1	202.60	87.34	-13.47			0.75	1.18	77.49	-11.95	0.00	0.00	Vehicle	Vehicle	364.11	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.42**	**7.42**	-----	-----
		U_1 - L_2	190.84	98.94	-15.07			0.75	1.18	87.78	-13.37	0.00	0.00	Vehicle	Vehicle	362.21	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.68**	**6.68**	-----	-----
		U_2 - L_3	155.90	86.16	-14.64			0.75	1.18	76.45	-12.99	0.00	0.00	Vehicle	Vehicle	302.05	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.47**	**6.47**	-----	-----
		U_3 - L_4	134.06	80.17	-26.99			0.75	1.18	71.13	-23.94	0.00	0.00	Vehicle	Vehicle	266.75	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	**6.23**	**6.23**	-----	-----
		U_4 - L_5	46.01	70.64	-40.53			0.75	1.18	62.68	-35.96	0.00	0.00	Vehicle	Vehicle	141.29	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_5 - L_6	3.43	55.81	-51.56			0.75	1.18	49.52	-45.75	0.00	0.00	Vehicle	Vehicle	68.83	-55.02	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.57**	**8.57**	**7.20**	**7.20**
		U_6 - L_7	-84.31	39.48	-71.06			0.75	1.18	35.03	-63.05	0.00	0.00	Vehicle	Vehicle	-----	-191.57	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	**4.36**	**4.36**
		U_7 - L_7	137.33	67.22	-36.28			0.75	1.18	59.64	-32.19	0.00	0.00	Vehicle	Vehicle	256.06	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.81**	**7.81**	-----	-----
		U_8 - L_8	210.92	83.67	-30.54			0.75	1.18	74.24	-27.10	0.00	0.00	Vehicle	Vehicle	370.70	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.73**	**6.73**	-----	-----
		U_{10} - L_9	236.39	96.65	-20.72			0.75	1.18	85.76	-18.38	0.00	0.00	Vehicle	Vehicle	418.79	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.31**	**6.31**	-----	-----
		U_{11} - L_{10}	274.65	99.14	-13.50			0.75	1.18	87.97	-11.97	0.00	0.00	Vehicle	Vehicle	471.40	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
		U_{12} - L_{11}	281.09	97.83	-7.84			0.75	1.18	86.80	-6.95	0.00	0.00	Vehicle	Vehicle	478.26	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
		U_{13} - L_{12}	278.14	96.50	-1.40			0.75	1.18	85.62	-1.25	0.00	0.00	Vehicle	Vehicle	472.89	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_{14} - L_{13}	235.47	94.92	-6.20			0.75	1.18	84.22	-5.50	0.00	0.00	Vehicle	Vehicle	415.60	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{14} - L_{15}	143.01	93.71	-9.91			0.75	1.17	82.16	-8.68	0.00	0.00	Vehicle	Vehicle	292.73	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	7.23	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{15} - L_{16}	171.90	91.77	-6.71			0.75	1.17	80.46	-5.88	0.00	0.00	Vehicle	Vehicle	328.06	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.95**	**5.95**	-----	-----
		U_{16} - L_{17}	181.04	100.44	-9.55			0.75	1.17	88.06	-8.37	0.00	0.00	Vehicle	Vehicle	349.83	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{17} - L_{18}	171.16	84.72	-16.46			0.75	1.17	74.28	-14.43	0.00	0.00	Vehicle	Vehicle	319.07	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.46**	**6.46**	-----	-----
		U_{18} - L_{19}	150.64	90.78	-23.91			0.75	1.17	79.59	-20.96	0.00	0.00	Vehicle	Vehicle	299.31	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	72.94	-33.70			0.75	1.17	63.95	-29.54	0.00	0.00	Vehicle	Vehicle	246.75	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**7.47**	**7.47**	-----	-----
		U_{20} - L_{21}	76.04	70.27	-34.78			0.75	1.17	61.61	-30.50	0.00	0.00	Vehicle	Vehicle	178.94	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.71**	**5.71**	-----	-----
		U_{21} - L_{22}	38.33	52.80	-54.52			0.75	1.17	46.29	-47.80	0.00	0.00	Vehicle	Vehicle	110.01	-12.30	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**8.41**	**8.41**	**7.61**	**7.61**
		U_{23} - L_{22}	18.05	47.58	-48.29			0.75	1.17	41.72	-42.34	0.00	0.00	Vehicle	Vehicle	77.70	-31.57	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	**9.82**	**9.82**	**8.06**	**8.06**
		U_{24} - L_{23}	58.57	67.80	-38.23			0.75	1.17	59.44	-33.52	0.00	0.00	Vehicle	Vehicle	153.42	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**6.21**	**6.21**	-----	-----
		U_{25} - L_{24}	114.98	83.10	-31.49			0.75	1.17	72.85	-27.61	0.00	0.00	Vehicle	Vehicle	244.18	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	**6.70**	**6.70**	-----	-----
		U_{26} - L_{25}	143.00	92.34	-19.21			0.75	1.17	80.95	-16.84	0.00	0.00	Vehicle	Vehicle	291.13	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.27**	**6.27**	-----	-----
		U_{27} - L_{26}	173.82	88.46	-15.60			0.75	1.17	77.55	-13.68	0.00	0.00	Vehicle	Vehicle	326.78	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_{28} - L_{27}	186.60	96.02	-8.56			0.75	1.17	84.19	-7.51	0.00	0.00	Vehicle	Vehicle	352.01	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	**6.22**	**6.22**	-----	-----
		U_{29} - L_{28}	190.75	95.72	-5.77			0.75	1.17	83.92	-5.06	0.00	0.00	Vehicle	Vehicle	357.07	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U_{30} - L_{29}	161.86	87.66	-4.56			0.75	1.17	76.86	-3.99	0.00	0.00	Vehicle	Vehicle	310.34	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**6.36**	**6.36**	-----	-----
		U_{30} - L_{31}	191.72	92.47	-9.75			0.75	1.18	82.04	-8.65	0.00	0.00	Vehicle	Vehicle	355.89	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**7.14**	**7.14**	-----	-----
		U_{31} - L_{32}	226.45	100.51	-10.95			0.75	1.18	89.18	-9.71	0.00	0.00	Vehicle	Vehicle	410.31	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	**6.18**	**6.18**	-----	-----
		U_{32} - L_{33}	243.42	95.64	-7.28			0.75	1.18	84.85	-6.46	0.00	0.00	Vehicle	Vehicle	426.76	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.08**	**7.08**	-----	-----
		U_{33} - L_{34}	239.13	90.46	-15.73			0.75	1.18	80.26	-13.95	0.00	0.00	Vehicle	Vehicle	415.20	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.00	-876.43	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	**7.54**	**7.54**	-----	-----
		U_{34} - L_{35}	222.16	85.35	-21.94			0.75	1.18	75.73	-19.47	0.00	0.00	Vehicle	Vehicle	387.25	-----	0.00	30.63

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	10.11	-49.76	2.21	-8.83	0.90	1.24	11.25	-55.39	2.21	-8.83	Vehicle	Vehicle	-----	-158.73	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	9.00	9.00
		U_1 - U_2	-86.55	24.12	-79.94	6.01	-16.34	0.90	1.24	26.85	-89.00	6.01	-16.34	Vehicle	Vehicle	-----	-228.21	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.38	5.38
		U_2 - U_3	-48.14	35.89	-81.83	9.46	-19.05	0.90	1.24	39.95	-91.10	9.46	-19.05	Vehicle	Vehicle	-----	-181.01	4.88	26.44	21.5575	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	-----	-----	5.68	5.68
		U_3 - U_4	36.58	46.30	-62.45	12.74	-17.47	0.90	1.24	51.55	-69.52	12.74	-17.47	Vehicle	Vehicle	114.57	-42.82	5.25	26.44	21.1875	872.44	131.71	10.6328	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.31	12.31	8.66	8.66
		U_4 - U_5	38.93	46.45	-42.98	12.80	-17.38	0.90	1.24	51.72	-47.85	12.80	-17.38	Vehicle	Pedestrian	117.84	-34.18	5.25	26.44	21.1875	872.44	131.71	10.6302	5.4277	17.63	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	12.22	12.22	9.26	9.26
		U_5 - U_6	154.60	52.18	-28.04	3.13	0.00	0.90	1.24	58.10	-31.22	3.13	0.00	Vehicle	Vehicle	276.50	-----	4.88	26.44	21.5575	872.44	131.71	10.6276	5.4277	17.62	32.70	-734.93	14.00	0.38	16.00	0.38	3.50	0.38	16.00	136.00	224.00	37.33	-----	-----	42.67	-----	-----	9.33	-----	-----	8.89	8.89	-----	-----
		U_6 - U_7	288.38	56.36	0.44	17.14	-4.31	0.90	1.24	62.75	0.49	17.14	-4.31	Vehicle	Pedestrian	456.46	-----	6.75	31.69	24.9375	1045.69	131.71	10.6276	5.0620	18.90	32.66	-879.69	14.00	0.75	16.00	0.38	3.50	0.38	16.00	98.67	224.00	18.67	-----	-----	42.67	-----	-----	9.33	-----	-----	8.22	8.22	-----	-----
		U_7 - U_8	410.94	4.34	6.94	22.63	0.00	0.90	1.24	7.72	4.83	22.63	0.00	Pedestrian	Vehicle	573.67	-----	9.25	43.73	34.4844	1443.24	131.71	10.6328	5.1288	18.66	32.67	-1214.44	14.00	1.00	16.00	0.50	4.00	0.56	16.00	74.22	224.00	14.00	-----	-----	32.00	-----	-----	7.11	-----	-----	23.04	23.04	-----	-----
		U_8 - U_9	311.57	41.98	-2.86	12.90	6.19	0.90	1.20	45.26	-3.08	12.90	6.19	Vehicle	Vehicle	463.89	-----	7.25	36.98	29.7344	1220.49	131.71	10.6328	5.4935	17.42	32.71	-1028.34	14.00	0.44	16.00	0.50	4.00	0.56	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	13.86	13.86	-----	-----
		U_9 - U_{10}	78.52	44.67	-38.87	12.28	-6.79	0.90	1.20	48.16	-41.91	12.28	-6.79	Vehicle	Vehicle	164.68	-----	5.25	27.94	22.6875	921.94	131.71	10.6302	5.4354	17.60	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.10	13.10	-----	-----
		U_{10} - U_{11}	-141.43	42.12	-72.58	11.10	-18.41	0.90	1.20	45.42	-78.26	11.10	-18.41	Vehicle	Vehicle	-----	-285.59	4.88	27.94	23.0575	921.94	131.71	10.6328	5.4354	17.61	32.71	-776.65	14.00	0.38	16.00	0.38	4.00	0.38	16.00	138.67	224.00	37.33	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	5.83	5.83
		U_{11} - U_{12}	-338.03	38.82	-102.78	9.77	-27.93	0.90	1.20	41.85	-110.81	9.77	-27.93	Vehicle	Vehicle	-----	-583.50	7.13	38.00	30.8700	1254.00	131.71	10.6328	5.4357	17.60	32.71	-1056.38	14.00	0.50	16.00	0.56	4.00	0.50	16.00	100.44	224.00	28.00	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	4.28	4.28
		U_{12} - U_{13}	-480.08	33.99	-119.99	8.23	-34.32	0.90	1.20	36.65	-129.37	8.23	-34.32	Vehicle	Vehicle	-----	-792.29	10.88	53.38	42.4950	1761.38	131.71	10.6328	4.6393	20.63	32.60	-1478.81	14.00	1.33	16.00	0.56	4.00	0.50	16.00	65.42	224.00	10.49	45.00	Pass	28.44	50.00	Pass	8.00	12.00	Pass	-----	-----	5.08	5.08
		U_{13} - U_{14}	-570.65	28.87	-129.91	6.68	-37.21	0.90	1.20	31.13	-140.07	6.68	-37.21	Vehicle	Vehicle	-----	-923.94	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	5.40	5.40
		U_{14} - U_{15}	-571.07	28.73	-114.99	6.65	-37.22	0.90	1.20	30.98	-123.98	6.65	-37.22	Vehicle	Vehicle	-----	-903.56	13.13	62.19	49.0575	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.10	6.10
		U_{15} - U_{16}	-581.88	10.91	-98.96	0.00	-31.14	0.90	1.20	11.76	-106.70	0.00	-31.14	Vehicle	Vehicle	-----	-895.15	12.50	62.19	49.6875	2052.19	131.71	10.6354	4.9784	19.23	32.65	-1725.77	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.99	6.99
		U_{16} - U_{17}	-539.46	9.79	-69.01	0.00	-28.33	0.90	1.20	10.56	-74.40	0.00	-28.33	Vehicle	Pedestrian	-----	-834.85	13.13	62.19	49.0575	2052.19	131.71	10.6328	4.9784	19.22	32.65	-1725.78	14.00	1.56	16.00	0.63	4.00	0.63	16.00	56.32	224.00	8.96	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	7.67	7.67
		U_{17} - U_{18}	-422.33	-78.12	-45.51	-25.05	2.26	0.90	1.20	-49.07	-84.23	2.26	-25.05	Vehicle	Vehicle	-----	-658.52	9.25	45.56	36.3125	1503.56	131.71	10.6354	4.6005	20.81	32.59	-1262.08	14.00	1.15	16.00	0.50	4.00	0.38	16.00	77.74	224.00	12.20	45.00	Pass	32.00	50.00	Pass	8.00	12.00	Pass	-----	-----	6.51	6.51
		U_{18} - U_{19}	-286.19	-47.91	-12.90	-16.96	1.28	0.90	1.20	-13.91	-51.66	1.28	-16.96	Vehicle	Vehicle	-----	-439.20	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	7.58	7.58
		U_{19} - U_{20}	-140.84	-19.94	-6.79	0.00	-8.13	0.90	1.20	-7.32	-21.50	0.00	-8.13	Vehicle	Pedestrian	-----	-221.60	5.75	31.69	25.9375	1045.69	131.71	10.6328	5.4029	17.71	32.70	-880.80	14.00	0.44	16.00	0.50	4.00	0.38	16.00	117.33	224.00	32.00	45.00	Pass	32.00	50.00	Pass	10.67	12.00	Pass	-----	-----	18.12	18.12
	Structure 2	U_0 - U_1	-147.44	3.24	-33.77	0.36	-4.88	0.90	1.18	3.45	-35.95	0.36	-4.88	Vehicle	Vehicle	-----	-238.41	4.88	30.19	25.3075	996.19	131.71	10.6328	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	13.91	13.91
		U_1 - U_2	-319.06	10.92	-68.47	1.96	-13.36	0.90	1.18	11.62	-72.90	1.96	-13.36	Vehicle	Vehicle	-----	-509.54	7.88	36.94	29.0575	1218.94	131.71	10.6328	6.0885	15.72	32.77	-1028.72	17.00	0.75	16.00	0.38	4.00	0.38	16.00	109.33	272.00	22.67	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.48	6.48
		U_2 - U_3	-460.91	19.58	-97.92	3.77	-20.95	0.90	1.18	20.85	-104.26	3.77	-20.95	Vehicle	Vehicle	-----	-734.72	11.38	50.23	38.8544	1657.74	131.71	10.6328	6.6459	14.40	32.80	-1400.65	17.00	0.56	16.00	0.50	4.00	0.50	16.00	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.91	5.91
		U_3 - U_4	-580.03	29.79	-123.88	5.92	-27.68	0.90	1.18	31.72	-131.90	5.92	-27.68	Vehicle	Vehicle	-----	-925.51	13.44	62.61	49.1694	2066.11	131.71	10.6328	6.1128	15.65	32.77	-1743.79	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	5.77	5.77
		U_4 - U_5	-616.49	38.67	-134.14	7.86	-31.35	0.90	1.18	41.17	-142.82	7.86	-31.35	Vehicle	Vehicle	-----	-987.10	15.14	69.44	54.2975	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.10	6.10
		U_5 - U_6	-604.71	47.61	-137.44	9.87	-32.88	0.90	1.18	50.69	-146.33	9.87	-32.88	Vehicle	Vehicle	-----	-976.35	15.13	69.44	54.3075	2291.44	131.71	10.6328	5.9512	16.08	32.75	-1933.21	17.00	1.50	16.00	0.63	4.00	0.63	16.00	61.07	272.00	11.33	45.00	Pass	25.60	50.00	Pass	6.40	12.00	Pass	-----	-----	6.03	6.03
		U_6 - U_7	-514.78	54.44	-124.17	11.56	-31.23	0.90	1.18	57.96	-132.20	11.56	-31.23	Vehicle	Vehicle	-----	-841.08	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	6.25	6.25
		U_7 - U_8	-512.83	54.44	-96.82	11.57	-31.18	0.90	1.18	57.97	-103.09	11.57	-31.18	Vehicle	Vehicle	-----	-800.69	14.13	62.61	48.4794	2066.11	131.71	10.6354	6.1128	15.66	32.77	-1743.78	17.00	1.25	16.00	0.69	4.00	0.69	16.00	62.11	272.00	13.60	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	8.04	8.04
		U_8 - U_9	-373.51	60.48	-84.01	13.16	-27.41	0.90	1.18	64.39	-89.44	13.16	-27.41	Vehicle	Vehicle	-----	-601.84	11.38	52.56	41.1825	1734.56	131.71	10.6328	6.0992	15.69	32.77	-1463.92	17.00	1.06	16.00	0.50	4.00	0.63	16.00	76.80	272.00	16.00	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	8.41	8.41
		U_9 - U_{10}	-181.05	63.46	-64.71	14.25	-21.42	0.90	1.18	67.57	-68.90	14.25	-21.42	Vehicle	Vehicle	-----	-324.93	7.75	41.31	33.5625	1363.31	131.71	10.6328	6.6991	14.28	32.81	-1152.00	17.00	0.44	16.00	0.50	4.00	0.63	16.00	122.51	272.00	38.86	45.00	Pass	32.00	50.00	Pass	6.40	12.00	Pass	-----	-----	10.23	10.23
		U_{10} - U_{11}	26.18	65.78	-38.90	15.21	-14.40	0.90	1.18	70.03	-41.42	15.21	-14.40	Vehicle	Pedestrian	125.08	-38.53	6.88	35.88	28.9950	1183.88	131.71	10.6302	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	45.00	Pass	42.67	50.00	Pass	8.00	12.00	Pass	12.63	12.63	14.25	14.25
		U_{11} - U_{12}	237.39	-10.16	-16.64	10.86	0.00	0.90	1.18	-10.81	-17.71	10.86	0.00	Vehicle	Vehicle	294.55	-----	6.50	35.88	29.3750	1183.88	131.71	10.6328	6.5957	14.51	32.80	-1000.19	17.00	0.44	16.00	0.38	4.00	0.50	16.00	136.38	272.00	38.86	-----	-----	42.67	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{12} - U_{13}	435.89	10.78	-6.56	15.82	0.56	0.90	1.18	11.48	-6.98	15.82	0.56	Pedestrian	Vehicle	602.15	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94	16.00	0.38	4.00	0.50	16.00	94.93	272.00	18.13	-----	-----	42.67	-----	-----	8.00	-----	-----	25.76	25.76	-----	-----
		U_{13} - U_{14}	595.84	13.15	5.72	24.32	0.00	0.90	1.18	14.00	6.09	24.32	0.00	Pedestrian	Vehicle	824.40	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	25.27	25.27	-----	-----
		U_{14} - U_{15}	615.53	53.43	-3.09	13.42	8.77	0.90	1.17	56.21	-3.25	13.42	8.77	Vehicle	Pedestrian	873.27	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	16.88	16.88	-----	-----
		U_{15} - U_{16}	486.15	56.66	-21.51	14.17	3.08	0.90	1.17	59.61	-22.63	14.17	3.08	Vehicle	Vehicle	709.49	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.19	13.19	-----	-----
		U_{16} - U_{17}	339.27	56.35	-38.15	14.66	-2.95	0.90	1.17	59.29	-40.14	14.66	-2.95	Vehicle	Vehicle	518.13	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	11.89	11.89	-----	-----
		U_{17} - U_{18}	192.13	55.12	-61.92	15.12	-9.49	0.90	1.17	57.99	-65.15	15.12	-9.49	Vehicle	Vehicle	325.16	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	9.90	9.90	-----	-----
		U_{18} - U_{19}	53.83	50.51	-80.65	15.12	-15.34	0.90	1.17	53.14	-84.85	15.12	-15.34	Vehicle	Vehicle	139.06	-40.33	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	13.41	13.41	8.26	8.26
		U_{19} - U_{20}	-58.94	44.80	-97.00	15.07	-19.84	0.90	1.17	47.13	-102.05	15.07	-19.84	Vehicle	Vehicle	-----	-209.30	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.21	6.21
	Structure 3	U_0 - U_{21}	-125.32	22.91	-105.07	14.77	-22.39	0.90	1.17	24.10	-110.55	14.77	-22.39	Pedestrian	Vehicle	-----	-306.62	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.44	6.44
		U_{21} - U_{22}	-146.72	30.82	-105.83	14.37	-22.74	0.90	1.17	32.43	-111.35	14.37	-22.74	Pedestrian	Vehicle	-----	-335.48	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	6.20	6.20
		U_{22} - U_{23}	-146.49	28.83	-83.47	14.36	-22.72	0.90	1.17	30.34	-87.82	14.36	-22.72	Pedestrian	Vehicle	-----	-304.60	8.75	39.06	30.3125	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	7.86	7.86
		U_{23} - U_{24}	-112.53	37.54	-79.12	13.88	-16.65	0.90	1.17	39.49	-83.24	13.88	-16.65	Pedestrian	Vehicle	-----	-254.50	8.38	39.06	30.6875	1289.06	131.71	10.6328	6.0387	15.85	32.76	-1087.77	17.00	0.81	16.00	0.38	4.00	0.38	16.00	105.85	272.00	20.92	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	-----	-----	8.70	8.70
		U_{24} - U_{25}	-36.03	43.18	-70.37	13.40	-15.01	0.90	1.17	45.43	-74.04	13.40	-15.01	Vehicle	Vehicle	12.22	-143.09	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.44	16.00	0.38	4.00	0.38	16.00	141.71	272.00	38.86	45.00	Pass	42.67	50.00	Pass	10.67	12.00	Pass	18.85	18.85	8.87	8.87
		U_{25} - U_{26}	80.94	47.36	-41.96	0.38	0.00	0.90	1.17	49.83	-44.15	0.38	0.00	Vehicle	Vehicle	170.00	-----	4.88	30.19	25.3075	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	13.75	13.75	-----	-----
		U_{26} - U_{27}	220.82	-15.54	-29.79	7.92	0.00	0.90	1.17	-16.34	-31.34	7.92	0.00	Vehicle	Vehicle	265.81	-----	5.25	30.19	24.9375	996.19	131.71	10.6302	6.5806	14.54	32.80	-841.60	17.00	0.38	16.00	0.38	4.00	0.38	16.00	154.67	272.00	45.33	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	363.48	-1.51	-18.30	14.90	0.00	0.90	1.17	-1.59	-19.26	14.90	0.00	Pedestrian	Vehicle	489.84	-----	7.13	41.13	33.9950	1357.13	131.71	10.6276	6.4812	14.76	32.79	-1146.31	17.00	0.56	16.00	0.44	4.00	0.50	16.00	113.02	272.00	30.22	-----	-----	36.57	-----	-----	8.00	-----	-----	-----	-----	-----	-----
		U_{28} - U_{29}	503.92	34.35	-1.00	21.74	3.11	0.90	1.17	36.14	-1.05	21.74	3.11	Pedestrian	Pedestrian	730.34	-----	11.38	50.13	38.7500	1654.13	131.71	10.6276	6.0000	15.94	32.76	-1395.71	17.00	1.06	16.00	0.44	4.00	0.50	16.00	84.57	272.00	16.00	-----	-----	36.57	-----	-----	8.00	-----	-----	13.28	13.28	-----	-----
		U_{29} - U_{30}	616.62	9.11	-3.05	27.08	0.00	0.90	1.17	9.59	-3.21	27.08	0.00	Pedestrian	Vehicle	849.27	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.31	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	25.85	25.85	-----	-----
		U_{30} - U_{31}	559.73	58.22	-3.70	15.74	6.15	0.90	1.18	61.99	-3.94	15.74	6.15	Vehic

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 **Condition:** As-Inspected

Fy = 33.0 ksi Fu = 60.0 ksi E = 29000.0 ksi

Vehicle Load Factors: DL Factor: 1.30 LL Factor: 1.30

Pedestrian Load Factors: DL Factor: 1.30 LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL_{max} (kips)	LL_{min} (kips)	Pedestrian $Load_{MAX}$	Pedestrian $Load_{MIN}$	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL_{MAX}	Lane Reduction and Impact LL_{MIN}	Impact & Pedestrian $Load_{MAX}$	Impact & Pedestrian $Load_{MIN}$	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capacity in Tension: A_{deduct} (in^2) **	A_{gross} (in^2)	A_{net} (in^2)	$C_{Nominal}$ (kips)	Member Capacity in Compression: C_c	L (feet)	r_{min} (in)	KL/r_{min} ***	F_{crit} **** (ksi)	$C_{nominal}$ (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Lower Chord	Structure 1	L_0- L_1	-1.94	1.10	0.17	0.37	-2.06	0.90	1.24	1.22	0.19	0.37	-2.06	Vehicle	Pedestrian	-----	-4.96	1.30	19.80	18.5000	653.40	131.71	10.6302	5.6265	17.00	32.72	-550.76	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	67.93	-13.27	41.38	-3.35	9.23	0.90	1.24	46.06	-14.77	9.23	-3.35	Vehicle	Vehicle	148.19	-----	1.95	19.80	17.8500	653.40	131.71	10.6302	5.6265	17.03	32.72	-550.75	15.00	0.40	3.40	0.65	3.40	0.65	16.00	95.92	240.00	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	9.44	9.44	-----	-----
		L_2 - L_3	78.83	-28.78	72.73	-7.39	15.48	0.90	1.24	80.97	-32.05	15.48	-7.39	Vehicle	Vehicle	207.73	-----	1.30	26.34	25.0400	869.22	131.71	10.6458	5.3341	17.96	32.69	-731.97	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	-----	-----	5.57	-----	-----	5.57	-----	-----	7.28	7.28	-----	-----
		L_3 - L_4	39.11	-40.43	65.02	-10.83	18.09	0.90	1.24	72.39	-45.01	18.09	-10.83	Vehicle	Vehicle	144.94	-7.68	1.95	26.34	24.3900	869.22	131.71	10.6458	5.3341	18.08	32.69	-731.87	15.00	0.62	3.62	0.65	3.62	0.65	16.00	70.81	240.00	24.27	45.00	Pass	5.57	12.00	Pass	5.57	12.00	Pass	8.70	8.70	13.38	13.38
		L_4 - L_5	-166.44	-57.79	46.05	-16.91	10.96	0.90	1.24	51.27	-64.33	10.96	-16.91	Vehicle	Vehicle	-----	-300.00	1.95	23.40	21.4500	772.20	131.71	10.7161	5.4472	17.71	32.70	-650.44	15.00	0.52	3.52	0.65	3.52	0.65	16.25	79.35	243.75	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	5.19	5.19
		L_5 - L_6	-301.30	-63.20	22.27	-15.71	0.00	0.90	1.24	24.79	-70.36	0.00	-15.71	Vehicle	Vehicle	-----	-483.15	4.63	30.90	26.2700	1019.70	131.71	10.7188	5.0381	19.40	32.64	-857.34	15.00	0.77	3.52	0.65	3.52	0.65	16.25	60.62	243.75	19.48	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	5.09	5.09
		L_6 - L_7	-439.01	-11.62	-1.52	-4.99	-21.52	0.90	1.24	-1.69	-12.94	-4.99	-21.52	Pedestrian	Pedestrian	-----	-615.51	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	14.68	14.68
		L_7 - L_8	-551.71	-57.04	2.03	-35.56	0.00	0.90	1.24	2.25	-63.50	0.00	-35.56	Vehicle	Pedestrian	-----	-846.00	8.81	56.29	47.4804	1857.58	131.71	10.8594	4.6752	20.77	32.59	-1559.31	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	6.54	6.54
		L_8 - L_9	-570.55	-32.53	-31.03	-11.71	-25.77	0.90	1.20	-33.45	-35.07	-11.71	-25.77	Pedestrian	Pedestrian	-----	-820.81	8.16	56.29	48.1304	1857.58	131.71	10.7891	4.6752	20.76	32.59	-1559.32	15.00	1.62	3.72	0.65	3.72	0.65	15.50	41.46	232.50	9.28	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	10.34	10.34
		L_9 - L_{10}	-355.55	-36.28	-5.12	-11.67	-13.03	0.90	1.20	-5.52	-39.12	-11.67	-13.03	Pedestrian	Vehicle	-----	-513.06	6.81	44.29	37.4804	1461.58	131.71	10.7865	4.9526	19.38	32.64	-1228.89	15.00	1.22	3.72	0.65	3.72	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	15.08	15.08
		L_{10} - L_{11}	-118.56	-37.46	20.52	-10.69	-1.73	0.90	1.20	22.12	-40.39	-1.73	-10.69	Vehicle	Vehicle	-----	-206.63	1.30	23.40	22.1000	772.20	131.71	10.6667	5.4472	17.62	32.70	-650.50	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	45.00	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	9.45	9.45
		L_{11} - L_{12}	103.33	-34.80	54.99	-9.47	9.97	0.90	1.20	59.29	-37.52	9.97	-9.47	Vehicle	Vehicle	211.41	-----	1.95	23.40	21.4500	772.20	131.71	10.6641	5.4472	17.57	32.71	-650.53	15.00	0.52	3.52	0.65	3.52	0.65	16.50	79.35	247.50	28.85	-----	-----	5.42	-----	-----	5.42	-----	-----	8.28	8.28	-----	-----
		L_{12} - L_{13}	300.47	-32.31	93.04	-8.15	17.86	0.90	1.20	100.32	-34.83	17.86	-8.15	Vehicle	Vehicle	521.02	-----	5.38	38.40	33.0200	1267.20	131.71	10.6354	5.0404	18.99	32.66	-1065.92	15.00	1.02	3.52	0.65	3.52	0.65	14.38	51.07	215.63	14.71	-----	-----	5.42	-----	-----	5.42	-----	-----	6.72	6.72	-----	-----
		L_{13} - L_{14}	441.01	-27.53	96.25	-6.62	24.18	0.90	1.20	103.78	-29.68	24.18	-6.62	Vehicle	Vehicle	708.23	-----	7.78	51.53	43.7450	1700.33	131.71	10.6354	4.8693	19.63	32.63	-1429.22	15.00	1.46	3.52	0.65	3.52	0.65	14.38	42.24	215.63	10.29	-----	-----	5.42	-----	-----	5.42	-----	-----	8.35	8.35	-----	-----
		L_{14} - L_{15}	546.80	-17.66	115.22	0.00	21.12	0.90	1.20	124.23	-19.05	21.12	0.00	Vehicle	Vehicle	872.34	-----	9.53	62.03	52.4950	2046.83	131.71	10.6224	4.6613	20.51	32.60	-1718.71	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	8.27	8.27	-----	-----
		L_{15} - L_{16}	505.90	-16.59	95.53	0.00	18.34	0.90	1.20	103.00	-17.89	18.34	0.00	Vehicle	Vehicle	791.57	-----	8.88	62.03	53.1450	2046.83	131.71	10.6224	4.6613	20.63	32.60	-1718.46	15.00	1.81	3.52	0.65	3.52	0.65	14.38	38.26	215.63	8.30	-----	-----	5.42	-----	-----	5.42	-----	-----	10.37	10.37	-----	-----
		L_{16} - L_{17}	398.64	66.79	58.00	0.00	11.94	0.90	1.20	72.01	62.54	11.94	0.00	Vehicle	Vehicle	611.85	-----	7.30	47.93	40.6250	1581.53	131.71	10.6849	4.9074	19.60	32.63	-1329.42	15.00	1.34	3.40	0.65	3.40	0.65	14.38	43.35	215.63	11.21	-----	-----	5.23	-----	-----	5.23	-----	-----	11.36	11.36	-----	-----
		L_{17} - L_{18}	263.76	42.66	24.94	4.73	0.15	0.90	1.20	46.00	26.89	4.73	0.15	Vehicle	Vehicle	402.68	-----	4.90	34.80	29.9000	1148.40	131.71	10.6849	5.1082	19.04	32.66	-965.94	15.00	0.90	3.40	0.65	3.40	0.65	14.38	54.26	215.63	16.67	-----	-----	5.23	-----	-----	5.23	-----	-----	13.47	13.47	-----	-----
		L_{18} - L_{19}	118.86	18.84	3.39	-3.28	0.70	0.90	1.20	20.32	3.65	0.70	-3.28	Vehicle	Vehicle	180.93	-----	3.70	19.80	16.1000	653.40	131.71	10.8047	5.6265	17.29	32.72	-550.61	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	-----	-----	5.23	-----	-----	5.23	-----	-----	18.89	18.89	-----	-----
		L_{19} - L_{20}	-23.25	-5.52	3.16	-12.00	1.27	0.90	1.20	3.40	-5.95	1.27	-12.00	Pedestrian	Pedestrian	-----	-53.56	1.95	17.93	15.9750	591.53	131.71	10.8073	5.7170	17.13	32.72	-498.54	15.00	0.40	3.40	0.65	3.40	0.65	16.50	95.92	247.50	37.50	45.00	Pass	5.23	12.00	Pass	5.23	12.00	Pass	-----	-----	20.07	20.07
		L_0- L_1	-35.95	3.82	0.48	1.19	-5.13	0.90	1.18	4.07	0.51	1.19	-5.13	Vehicle	Pedestrian	-----	-52.74	1.88	24.95	23.0700	823.35	131.71	10.8828	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	45.00	Pass	6.32	12.00	Pass	6.32	12.00	Pass	-----	-----	-----	-----
		L_1 - L_2	132.83	-2.26	27.20	-0.07	2.94	0.90	1.18	28.96	-2.41	2.94	-0.07	Vehicle	Vehicle	210.32	-----	1.88	24.95	23.0700	823.35	131.71	10.8802	6.6341	14.76	32.79	-695.45	18.00	0.45	3.95	0.63	3.95	0.63	16.63	105.28	299.25	40.00	-----	-----	6.32	-----	-----	6.32	-----	-----	17.28	17.28	-----	-----
		L_2 - L_3	304.11	-10.99	63.86	-1.80	10.53	0.90	1.18	67.99	-11.71	10.53	-1.80	Vehicle	Vehicle	483.73	-----	6.20	38.45	32.2500	1268.85	131.71	10.7370	6.1675	15.67	32.77	-1070.89	18.00	0.83	3.95	0.63	3.95	0.63	15.88	68.92	285.75	21.82	-----	-----	6.32	-----	-----	6.32	-----	-----	9.88	9.88	-----	-----
		L_3 - L_4	445.92	-19.75	91.93	-3.63	18.16	0.90	1.18	97.88	-21.03	18.16	-3.63	Vehicle	Vehicle	706.93	-----	9.45	51.58	42.1250	1701.98	131.71	10.7370	5.7558	16.79	32.73	-1434.93	18.00	1.19	3.95	0.63	3.95	0.63	15.88	55.54	285.75	15.13	-----	-----	6.32	-----	-----	6.32	-----	-----	8.82	8.82	-----	-----
		L_4 - L_5	567.84	-31.67	123.16	-6.10	24.82	0.90	1.18	131.12	-33.71	24.82	-6.10	Vehicle	Vehicle	908.65	-----	11.00	65.00	54.0000	2145.00	131.71	10.6406	5.6658	16.90	32.73	-1808.24	18.00	1.56	4.00	0.63	4.00	0.63	14.50	48.64	261.00	11.52	-----	-----	6.40	-----	-----	6.40	-----	-----	8.25	8.25	-----	-----
		L_5 - L_6	603.64	-40.59	133.61	-8.06	28.47	0.90	1.18	142.25	-43.22	28.47	-8.06	Vehicle	Vehicle	969.65	-----	12.75	70.63	57.8750	2330.63	131.71	10.6406	5.5712	17.19	32.72	-1964.16	18.00	1.72	4.00	0.63	4.00	0.63	14.50	46.55	261.00	10.47	-----	-----	6.40	-----	-----	6.40	-----	-----	8.36	8.36	-----	-----
		L_6 - L_7	599.48	-51.19	128.58	-10.41	30.26	0.90	1.18	136.90	-54.50	30.26	-10.41	Vehicle	Vehicle	957.30	-----	12.35	71.60	59.2500	2362.80	131.71	10.6224	5.5468	17.24	32.72	-1991.18	18.00	1.75	4.10	0.63	4.10	0.63	14.75	46.86	265.50	10.31	-----	-----	6.56	-----	-----	6.56	-----	-----	8.90	8.90	-----	-----
		L_7 - L_8	373.94	-64.12	103.85	-13.66	24.93	0.90	1.18	110.57	-68.27	24.93	-13.66	Vehicle	Vehicle	629.86	-----	8.60	52.85	44.2500	1744.05	131.71	10.6224	5.9187	16.15	32.75	-1471.29	18.00	1.23	4.10	0.63	4.10	0.63	14.75	55.63	265.50	14.69	-----	-----	6.56	-----	-----	6.56	-----	-----	8.75	8.75	-----	-----
		L_8 - L_9	195.71	-69.01	84.38	-15.12	19.52	0.90	1.18	89.84	-73.47	19.52	-15.12	Vehicle	Vehicle	371.22	-----	7.95	43.33	35.3750	1429.73	131.71	10.6354	5.9170	16.18	32.75	-1206.10	18.00	0.96	4.20	0.63	4.20	0.63	16.63	64.36	299.25	18.74	-----	-----	6.72	-----	-----	6.72	-----	-----	10.06	10.06	-----	-----
		L_9 - L_{10}	-13.21	-71.45	47.56	-7.60	12.45	0.90	1.18	50.64	-76.07	12.45	-7.60	Vehicle	Vehicle	48.65	-116.07	1.88	33.95	32.0700	1120.35	131.71	10.6380	6.2850	15.23	32.78	-945.93	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	17.28	17.28	9.39	9.39
		L_{10} - L_{11}	-217.32	19.99	28.97	-15.65	0.00	0.90	1.18	30.85	21.29	0.00	-15.65	Vehicle	Vehicle	-----	-254.84	1.88	30.35	28.4700	1001.55	131.71	10.7318	6.4019	15.09	32.78	-845.73	18.00	0.60	4.10	0.63	4.10	0.63	16.63	86.24	299.25	30.00	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	10.54	10.54	-----	-----
		L_{11} - L_{12}	-419.93	-70.37	12.46	-23.34	0.00	0.90	1.18	13.27	-74.93	0.00	-23.34	Vehicle	Vehicle	-----	-643.31	7.48	43.48	35.9950	1434.68	131.71	10.7318	5.8542	16.50	32.74	-1209.91	18.00	0.96	4.10	0.63	4.10	0.63	16.63	63.56	299.25	18.66	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	6.82	6.82
		L_{12} - L_{13}	-591.41	-28.47	-4.46	-7.09	-18.75	0.90	1.18	-4.74	-30.31	-7.09	-18.75	Pedestrian	Pedestrian	-----	-832.59	9.73	59.10	49.3700	1950.30	131.71	10.9531	5.8186	16.94	32.73	-1644.04	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.73	13.73
		L_{13} - L_{14}	-724.23	-25.51	-0.03	-35.12	0.00	0.90	1.18	-0.03	-27.16	0.00	-35.12	Vehicle	Pedestrian	-----	-1022.46	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.70	12.70
		L_{14} - L_{15}	-747.05	13.47	-25.01	0.00	-36.29	0.90	1.17	14.17	-26.31	0.00	-36.29	Vehicle	Pedestrian	-----	-1052.54	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.27	12.27
		L_{15} - L_{16}	-632.15	-43.89	-12.89	-9.38	-12.11	0.90	1.17	-13.56	-46.17	-9.38	-12.11	Pedestrian	Vehicle	-----	-881.82	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	13.93	13.93
		L_{16} - L_{17}	-488.62	-47.50	10.86	-9.25	-11.44	0.90	1.17	11.43	-49.98	-9.25	-11.44	Vehicle	Vehicle	-----	-700.18	8.45	48.95	40.5000	1615.35	131.71	10.8490	5.7569	16.96	32.73	-1361.66	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	11.18	11.18
		L_{17} - L_{18}	-336.98	-47.11	15.49	-9.73	-4.53	0.90	1.17	16.29	-49.56	-4.53	-9.73	Vehicle	Vehicle	-----	-502.50	1.88	33.95	32.0700	1120.35	131.71	10.8490	6.2850	15.54	32.77	-945.67	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	7.88	7.88
		L_{18} - L_{19}	-183.61	-46.38	44.00	-9.59	1.37	0.90	1.17	46.30	-48.80	1.37	-9.59	Vehicle	Vehicle	-----	-302.13	1.25	26.75	25.5000	882.75	131.71	10.6406	5.6472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	7.99	7.99
		L_{19} - L_{20}	-45.77	-41.72	65.14	-9.58	7.21	0.90	1.17	68.54	-43.90	7.21	-9.58	Vehicle	Vehicle	29.60	-116.56	1.88	26.75	24.8700	882.75	131.71	10.6380	5.6472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	10.58	10.58	12.03	12.03
	Structure 2	L_{20} - L_{21}	68.00	-37.08	80.82	-9.12	11.07	0.90	1.17	85.03	-39.02	11.07	-9.12	Vehicle	Vehicle	198.93	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	10.54	10.54	-----	-----
		L_{21} - L_{22}	133.90	-15.89	85.15	-8.82	13.61	0.90	1.17	89.59	-16.72	13.61	-8.82	Vehicle	Pedestrian	290.54	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.27	9.27	-----	-----
		L_{22} - L_{23}	122.50	-30.83	87.90	-7.58	8.54	0.90	1.17	92.48	-32.43	8.54	-7.58	Vehicle	Vehicle	279.47	-----	6.75	38.00	31.2500	1254.00	131.71	10.6224	6.1781	15.47	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	9.11	9.11	-----	-----
		L_{23} - L_{24}	46.70	-36.53	75.58	-7.09	6.92	0.90	1.17	79.51	-38.44	6.92	-7.09	Vehicle	Vehicle	164.07	-----	6.13	38.00	31.8700	1254.00	131.71	10.6250	6.1781	15.48	32.77	-1058.54	18.00	0.81	4.00	0.63	4.00	0.63	16.00	69.91	288.00	22.15	-----	-----	6.40	-----	-----	6.40	-----	-----	11.54	11.54	-----	-----
		L_{24} - L_{25}	-66.76	-39.75	50.40	-4.28	3.32	0.90	1.17	53.03	-41.83	3.32	-4.28	Vehicle	Vehicle	-----	-141.15	1.88	26.75	24.8700	882.75	131.71	10.6380	6.5472	14.62	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	12.12	12.12
		L_{25} - L_{26}	-205.83	-43.50	34.46	-11.78	0.00	0.90	1.17	36.25	-45.76	0.00	-11.78	Vehicle	Vehicle	-----	-327.07	1.25	26.75	25.5000	882.75	131.71	10.6406	6.5472	14.63	32.80	-745.71	18.00	0.50	4.00	0.63	4.00	0.63	16.63	97.60	299.25	36.00	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	-----	-----	8.04	8.04
		L_{26} - L_{27}	-350.61	0.68	19.17	-18.88	0.00	0.90	1.17	20.17	0.72	0.00	-18.88	Vehicle	Pedestrian	-----	-479.40	1.88	33.95	32.0700	1120.35	131.71	10.7318	6.2850	15.37	32.78	-945.81	18.00	0.70	4.20	0.63	4.20	0.63	16.63	78.31	299.25	25.71	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	-----	-----
		L_{27} - L_{28}	-494.76	-26.46	1.77	-25.89	0.00	0.90	1.17	1.86	-27.84	0.00	-25.89	Vehicle	Pedestrian	-----	-713.05	8.45	48.95	40.5000	1615.35	131.71	10.7318	5.7569	16.78	32.73	-1361.91	18.00	1.12	4.20	0.63	4.20	0.63	16.63	59.12	299.25	16.12	45.00	Pass	6.72	12.00	Pass	6.72	12.00	Pass	-----	-----	10.29	10.29
		L_{28} - L_{29}	-620.88	-49.55	-6.29	-21.97	-5.04	0.90	1.17	-6.62	-52.13	-5.04	-21.97	Pedestrian	Pedestrian	-----	-903.47	9.73	59.60	49.8700	1966.80	131.71	10.9531	5.8413	16.88	32.73	-1658.06	18.00	1.41	4.10	0.63	4.10	0.63	15.00	51.73	270.00	12.74	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	8.83	8.83
		L_{29} - L_{30}	-716.82	-25.49	-19.37	-36.30	0.00	0.90	1.17	-20.38	-26.82	0.00	-36.30	Vehicle	Pedestrian	-----	-1013.91	11.98	70.85	58.8700	2338.05	131.71	10.9531	5.6285	17.51	32.71	-1969.77	18.00	1.73	4.10	0.63	4.10	0.63	15.00	47.11	270.00	10.43	45.00	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	12.65	12.65
		L_{30} - L_{31}	-850.86

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Verticals	Structure 1	U_0 - L_0	-93.63	-58.69	13.18	-12.32	3.44	0.90	1.24	14.68	-65.34	3.44	-12.32	Vehicle	Vehicle	-----	-206.66	1.63	16.85	15.2186	556.00	131.71	9.3438	1.9682	42.73	31.26	-447.73	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	3.84	3.84
		U_1 - L_1	-46.50	-37.57	11.37	-9.05	2.93	0.90	1.24	12.66	-41.82	2.93	-9.05	Vehicle	Vehicle	-----	-114.82	0.00	16.85	16.8486	556.00	131.71	7.2395	1.9682	33.10	31.96	-457.67	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.31	7.31
		U_2 - L_2	-0.07	-25.68	10.30	-5.68	2.84	0.90	1.24	11.46	-28.59	2.84	-5.68	Vehicle	Vehicle	14.81	-37.26	0.00	16.85	16.8486	556.00	131.71	7.2605	1.9682	33.20	31.95	-457.59	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	37.32	37.32	12.31	12.31
		U_3 - L_3	39.61	-11.97	8.12	-2.12	2.70	0.90	1.24	9.04	-13.33	2.70	-2.12	Vehicle	Vehicle	63.25	-----	0.00	16.85	16.8486	556.00	131.71	7.5521	1.9682	34.53	31.87	-456.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	-----	-----	42.91	42.91	-----	-----
		U_4 - L_4	-30.21	0.52	-11.06	0.00	-3.47	0.90	1.24	0.58	-12.32	0.00	-3.47	Vehicle	Vehicle	-----	-55.28	0.00	16.85	16.8486	556.00	131.71	7.9063	1.9682	36.15	31.76	-454.80	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	25.95	25.95
		U_5 - L_5	-130.50	2.21	-36.02	0.00	-10.24	0.90	1.24	2.46	-40.10	0.00	-10.24	Vehicle	Vehicle	-----	-221.79	3.18	20.66	17.4844	681.93	131.71	8.9270	2.0011	40.15	31.47	-552.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	7.35	7.35
		U_6 - L_6	-158.19	5.90	-36.61	0.00	-13.06	0.90	1.24	6.57	-40.75	0.00	-13.06	Vehicle	Vehicle	-----	-258.62	3.13	24.86	21.7294	820.36	131.71	9.9479	2.0895	42.85	31.25	-660.40	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.58	8.58
		U_7 - L_7	-152.33	11.52	-36.15	0.00	-13.25	0.90	1.24	12.82	-40.25	0.00	-13.25	Vehicle	Vehicle	-----	-250.35	2.88	23.11	20.2294	762.61	131.71	11.7292	2.0414	51.71	30.46	-598.26	16.25	0.44	10.00	0.50	-----	-----	16.25	-----	-----	37.14	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.65	7.65
		U_8 - L_8	-455.44	-56.59	-32.92	-18.98	-12.74	0.90	1.24	-36.65	-63.00	-12.74	-18.98	Pedestrian	Vehicle	-----	-673.97	3.28	51.23	47.9548	1690.75	131.71	16.6563	4.0434	37.07	31.69	-1380.20	15.25	0.82	15.64	1.31	-----	-----	15.25	-----	-----	18.60	45.00	Pass	5.96	12.00	Pass	-----	-----	-----	-----	-----	9.62	9.62
		U_9 - L_9	-287.50	-56.32	0.24	-18.21	0.00	0.90	1.20	0.26	-60.73	0.00	-18.21	Vehicle	Vehicle	-----	-452.70	3.50	31.56	28.0625	1041.56	131.71	12.1563	2.5582	42.77	31.26	-838.65	16.25	0.50	12.00	0.63	-----	-----	16.25	-----	-----	32.50	45.00	Pass	9.60	12.00	Pass	-----	-----	-----	-----	-----	5.89	5.89
		U_{10} - L_{10}	-276.27	-55.74	-2.11	-16.18	-1.37	0.90	1.20	-2.27	-60.09	-1.37	-16.18	Pedestrian	Vehicle	-----	-437.27	2.76	36.13	33.3715	1192.34	131.71	10.7083	2.3777	40.53	31.44	-965.49	16.16	0.83	11.50	0.80	-----	-----	16.16	-----	-----	19.50	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.76	7.76
		U_{11} - L_{11}	-232.54	-51.12	1.52	-14.42	0.00	0.90	1.20	1.63	-55.12	0.00	-14.42	Vehicle	Vehicle	-----	-373.96	0.00	30.63	30.6305	1010.81	131.71	10.1145	2.8427	32.02	32.02	-833.79	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.42	7.42
		U_{12} - L_{12}	-178.38	-39.24	1.04	-11.20	0.00	0.90	1.20	1.13	-42.30	0.00	-11.20	Vehicle	Vehicle	-----	-286.89	1.00	25.98	24.9844	857.49	131.71	9.5729	2.0643	41.74	31.34	-692.27	16.25	0.50	10.00	0.56	-----	-----	16.25	-----	-----	32.50	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.37	8.37
		U_{13} - L_{13}	-127.70	-32.14	4.49	-7.88	0.00	0.90	1.20	4.84	-34.66	0.00	-7.88	Vehicle	Vehicle	-----	-211.06	0.00	18.61	18.6095	614.11	131.71	9.4062	1.9845	42.66	31.27	-494.62	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.29	7.29
		U_{14} - L_{14}	-30.38	-2.00	-2.96	-3.03	0.00	0.90	1.20	-2.16	-3.19	0.00	-3.03	Vehicle	Pedestrian	-----	-47.58	0.00	16.85	16.8486	556.00	131.71	9.2605	1.9682	42.35	31.29	-448.18	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	50.51	50.51
		U_{15} - L_{15}	-28.93	9.50	-24.90	1.55	-4.53	0.90	1.20	10.25	-26.84	1.55	-4.53	Vehicle	Vehicle	-----	-72.50	0.00	16.85	16.8486	556.00	131.71	9.6355	1.9682	44.06	31.15	-446.16	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.71	11.71
		U_{16} - L_{16}	-75.99	5.79	-30.36	1.39	-7.07	0.90	1.20	6.24	-32.73	1.39	-7.07	Vehicle	Vehicle	-----	-141.34	0.00	16.85	16.8486	556.00	131.71	10.0651	1.9682	46.02	30.99	-443.75	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.11	8.11
		U_{17} - L_{17}	-161.81	6.22	-41.15	1.30	-10.66	0.90	1.20	6.71	-44.36	1.30	-10.66	Vehicle	Vehicle	-----	-268.02	0.00	20.66	20.6644	681.93	131.71	11.5312	2.0011	51.86	30.44	-534.70	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	45.00	Pass	5.37	12.00	Pass	-----	-----	-----	-----	-----	5.62	5.62
		U_{18} - L_{18}	-190.09	5.33	-40.55	1.12	-12.69	0.90	1.20	5.75	-43.72	1.12	-12.69	Vehicle	Vehicle	-----	-303.96	0.00	25.63	25.6315	845.84	131.71	13.0000	2.8057	41.70	31.35	-682.93	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	45.00	Pass	7.23	12.00	Pass	-----	-----	-----	-----	-----	7.67	7.67
		U_{19} - L_{19}	-228.09	4.57	-40.34	0.97	-14.99	0.90	1.20	4.93	-43.49	0.97	-14.99	Vehicle	Pedestrian	-----	-372.54	0.00	30.63	30.6305	1010.81	131.71	15.2813	2.8427	48.38	30.77	-801.22	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	6.64	6.64
		U_{20} - L_{20}	-242.54	4.14	-41.31	0.95	-15.62	0.90	1.20	4.46	-44.54	0.95	-15.62	Vehicle	Pedestrian	-----	-393.50	0.00	27.86	27.8600	919.38	131.71	20.3229	2.7881	65.60	28.91	-684.53	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	4.72	4.72
		U_0 - L_0	-302.99	-61.26	10.08	-15.08	2.22	0.90	1.18	10.74	-65.23	2.22	-15.08	Vehicle	Vehicle	-----	-478.69	0.00	33.27	33.2657	1097.77	131.71	19.1510	2.8573	60.32	29.54	-835.23	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	5.20	5.20
		U_1 - L_1	-268.80	-56.26	10.26	-13.67	2.12	0.90	1.18	10.92	-59.90	2.12	-13.67	Vehicle	Vehicle	-----	-427.31	0.00	33.27	33.2657	1097.77	131.71	14.8594	2.8573	46.80	30.92	-874.18	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U_2 - L_2	-220.88	-52.59	11.04	-12.32	2.34	0.90	1.18	11.75	-55.99	2.34	-12.32	Vehicle	Vehicle	-----	-359.93	0.00	27.98	27.9777	923.26	131.71	12.9010	2.8289	41.04	31.40	-746.67	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	6.31	6.31
		U_3 - L_3	-175.24	-45.44	11.83	-10.35	2.49	0.90	1.18	12.59	-48.38	2.49	-10.35	Vehicle	Vehicle	-----	-290.71	0.00	22.73	22.7330	750.19	131.71	11.7109	2.0170	52.26	30.40	-587.47	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	45.00	Pass	4.91	12.00	Pass	-----	-----	-----	-----	-----	5.72	5.72
		U_4 - L_4	-82.09	-33.34	10.26	-6.62	2.21	0.90	1.18	10.92	-35.49	2.21	-6.62	Vehicle	Vehicle	-----	-152.85	0.00	16.85	16.8486	556.00	131.71	10.5443	1.9682	48.22	30.79	-440.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.24	7.24
		U_5 - L_5	-19.91	-26.36	9.96	-4.16	2.23	0.90	1.18	10.60	-28.06	2.23	-4.16	Vehicle	Vehicle	-----	-62.36	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	11.42	11.42
		U_6 - L_6	60.32	-13.56	21.63	-0.47	1.75	0.90	1.18	23.03	-14.43	1.75	-0.47	Vehicle	Vehicle	108.35	-----	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	-----	-----	15.96	15.96	-----	-----
		U_7 - L_7	-41.78	-1.21	-5.90	0.00	-2.49	0.90	1.18	-1.28	-6.28	0.00	-2.49	Vehicle	Pedestrian	-----	-65.71	0.00	16.85	16.8486	556.00	131.71	10.2500	1.9682	46.87	30.91	-442.68	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	34.06	34.06
		U_8 - L_8	-189.01	4.82	-37.43	0.00	-8.38	0.90	1.18	5.14	-39.85	0.00	-8.38	Vehicle	Vehicle	-----	-297.51	3.13	24.75	21.6200	816.75	131.71	10.8151	6.4745	15.03	32.79	-689.71	15.75	0.44	10.00	0.56	-----	-----	15.75	-----	-----	36.00	45.00	Pass	8.89	12.00	Pass	-----	-----	-----	-----	-----	8.57	8.57
		U_9 - L_9	-254.00	1.94	-46.43	0.00	-10.55	0.90	1.18	2.07	-49.44	0.00	-10.55	Vehicle	Vehicle	-----	-394.46	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35.84	31.78	-898.56	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	8.84	8.84
		U_{10} - L_{10}	-290.02	3.54	-47.12	0.00	-12.18	0.90	1.18	3.77	-50.17	0.00	-12.18	Vehicle	Vehicle	-----	-442.24	2.42	38.13	35.7105	1258.31	131.71	12.2526	2.5559	43.14	31.23	-1012.17	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.74	9.74
		U_{11} - L_{11}	-312.19	7.62	-51.05	0.00	-12.59	0.90	1.18	8.11	-54.36	0.00	-12.59	Vehicle	Vehicle	-----	-476.51	2.42	38.13	35.7105	1258.31	131.71	14.0365	2.5559	49.43	30.68	-994.25	16.48	0.81	11.58	0.96	-----	-----	16.48	-----	-----	20.31	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.33	8.33
		U_{12} - L_{12}	-327.27	10.97	-46.54	-0.93	-13.01	0.90	1.18	11.68	-49.55	-0.93	-13.01	Vehicle	Vehicle	-----	-489.86	2.92	41.13	38.2105	1357.31	131.71	15.8698	2.4676	57.88	29.81	-1042.30	16.48	0.90	11.58	0.96	-----	-----	16.48	-----	-----	18.26	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	9.58	9.58
		U_{13} - L_{13}	-277.23	14.62	-39.30	0.00	-11.39	0.90	1.18	15.57	-41.84	0.00	-11.39	Vehicle	Vehicle	-----	-414.80	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.81	11.53	0.88	-----	-----	16.32	-----	-----	20.13	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	9.87	9.87
		U_{14} - L_{14}	-505.47	-44.60	-30.72	-11.35	-9.95	0.90	1.18	-32.71	-47.49	-9.95	-11.35	Vehicle	Vehicle	-----	-718.85	11.02	53.76	42.7431	1774.18	131.71	25.6094	4.0518	56.88	29.92	-1367.40	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	11.51	11.51
		U_{15} - L_{15}	-232.92	-54.65	3.13	-11.17	0.00	0.90	1.17	3.30	-57.50	0.00	-11.17	Vehicle	Vehicle	-----	-377.55	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.95	7.95
		U_{16} - L_{16}	-260.09	-54.95	0.41	-12.63	0.83	0.90	1.17	0.44	-57.81	0.83	-12.63	Pedestrian	Vehicle	-----	-413.27	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	7.02	7.02
		U_{17} - L_{17}	-228.20	-53.32	6.81	-11.76	0.66	0.90	1.17	7.16	-56.10	0.66	-11.76	Vehicle	Vehicle	-----	-369.59	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	7.04	7.04
		U_{18} - L_{18}	-209.23	-46.46	8.18	-11.28	-0.02	0.90	1.17	8.61	-48.88	-0.02	-11.28	Vehicle	Vehicle	-----	-335.55	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.53	7.53
		U_{19} - L_{19}	-166.51	-42.64	8.76	-9.53	-0.07	0.90	1.17	9.22	-44.86	-0.07	-9.53	Vehicle	Vehicle	-----	-274.78	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.69	7.69
	Structure 2	U_{20} - L_{20}	-113.91	-33.90	8.75	-7.50	-0.43	0.90	1.17	9.21	-35.67	-0.43	-7.50	Vehicle	Vehicle	-----	-194.44	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	7.33	7.33
		U_{21} - L_{21}	-62.73	-25.01	12.73	-5.22	-0.44	0.90	1.17	13.39	-26.32	-0.44	-5.22	Vehicle	Vehicle	-----	-115.76	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	10.56	10.56
		U_{22} - L_{22}	-38.93	-5.39	-5.96	-2.15	-2.04	0.90	1.17	-5.67	-6.27	-2.04	-2.15	Pedestrian	Pedestrian	-----	-61.56	0.00	16.85	16.8486	556.00	131.71	9.9583	1.9682	45.54	31.03	-444.36	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	35.98	35.98
		U_{23} - L_{23}	-74.45	9.31	-30.54	0.48	-6.10	0.90	1.17	9.79	-32.13	0.48	-6.10	Vehicle	Vehicle	-----	-138.55	0.00	16.85	16.8486	556.00	131.71	10.2526	1.9682	46.88	30.91	-442.66	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	8.28	8.28
		U_{24} - L_{24}	-121.37	9.12	-35.78	0.37	-8.17	0.90	1.17	9.60	-37.65	0.37	-8.17	Vehicle	Vehicle	-----	-206.72	0.00	18.61	18.6095	614.11	131.71	10.5234	1.9845	47.73	30.83	-487.73	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	6.74	6.74
		U_{25} - L_{25}	-169.10	8.78	-41.94	0.43	-9.94	0.90	1.17	9.23	-44.13	0.43	-9.94	Vehicle	Vehicle	-----	-277.20	3.00	23.88	20.8750	787.88	131.71	11.3776	6.3740	16.07	32.75	-664.71	15.75	0.50	10.00	0.50	-----	-----	15.75	-----	-----	31.50	45.00	Pass	10.00	12.00	Pass	-----	-----	-----	-----	-----	7.75	7.75
		U_{26} - L_{26}	-207.93	7.94	-44.81	0.14	-11.42	0.90	1.17	8.35	-47.14	0.14	-11.42	Vehicle	Vehicle	-----	-331.59	0.00	27.98	27.9777	923.26	131.71	12.2552	2.8289	38.99	31.55	-750.39	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	7.83	7.83
		U_{27} - L_{27}	-219.90	6.53	-46.73	0.16	-11.49	0.90	1.17	6.87	-49.16	0.16	-11.49	Vehicle	Vehicle	-----	-349.77	1.17	30.63	29.4605	1010.81	131.71	14.0365	2.8427	44.44	31.12	-810.28	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	45.00	Pass	6.06	12.00	Pass	-----	-----	-----	-----	-----	8.21	8.21
		U_{28} - L_{28}	-240.66	9.41	-42.88	-0.25	-11.17	0.90	1.17	9.90	-45.11	-0.25	-11.17	Vehicle	Vehicle	-----	-371.50	0.00	33.27	33.2657	1097.77	131.71	15.8698	2.8573	49.99	30.62	-865.90	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	45.00	Pass	5.62	12.00	Pass	-----	-----	-----	-----	-----	9.43	9.43
		U_{29} - L_{29}	-202.76	14.24	-37.94	0.00	-10.35	0.90	1.17	14.98	-39.92	0.00	-10.35	Vehicle	Vehicle	-----	-315.47	2.57	36.98	34.4077	1220.26	131.71	18.7969	2.4715	68.45	28.54	-897.15	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	45.00	Pass	6.59	12.00	Pass	-----	-----	-----	-----	-----	12.21	12.21
		U_{30} - L_{30}	-516.45	-47.57	-31.08	-13.75	-8.21	0.90	1.18	-33.10	-50.65	-8.21	-13.75	Vehicle	Vehicle	-----	-737.23	11.02	51.81	40.7900	1709.73	131.71	25.6094	4.0330	57.15	29.89	-1316.46	15.38	0.84	15.66	1.38	-----	-----	15.38	-----	-----	18.31	45.00	Pass	5.68	12.00	Pass	-----	-----	-----	-----	-----	9.80	9.80
		U_{31} - L_{31}	-318.62	-53.56	6.57	-12.96	0.00	0.90	1.18	7.00	-57.03	0.00

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans

Loading: 4F1 — Fy = 33.0 ksi — Vehicle Load Factors — DL Factor: 1.30 — Pedestrian Load Factors — DL Factor: 1.30

Condition: As-Inspected — Fu = 60.0 ksi — LL Factor: 1.30 — LL Factor: 1.30

E = 29000.0 ksi

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculation
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Articl
(Case I considered in Max. Tension/Compression Load)

Location		Member	Member Forces from STAAD: D (kips)	LL max (kips)	LL min (kips)	Pedestrian Load MAX	Pedestrian Load MIN	Multiple Lane Reduction	Impact Multiplier (1+I)	Lane Reduction and Impact LL MAX	Lane Reduction and Impact LL MIN	Impact & Pedestrian Load MAX	Impact & Pedestrian Load MIN	Controlling Load Case for Tension	Controlling Load Case for Compression	Max. Tension (kips)&	Max. Comp. (kips)&	Member Capicity in Tension: A deduct (in²) **	A gross (in²)	A net (in²)	C Nominal (kips)	Member Capicity in Compression: C c	L (feet)	r min (in)	KL/r min ***	F crit **** (ksi)	C nominal (kips)	Plate Thickness/Ratios: Web Depth (in)	Web Thickness (in)	Top Flange Component Length (in)	Top Flange Component Thickness (in)	Bot. Flange Component Length (in)	Bot. Flange Component Thickness (in)	Overall Width (in)	Σ(s/t)	Area Enclosed (in^2)	Web Members b/t	Web Members Max. b/t	Web Members Pass	Top Flange Component b/t	Top Flange Component Max. b/t	Top Flange Component Pass	Bot. Flange Component b/t	Bot. Flange Component Max. b/t	Bot. Flange Component Pass	Axial Force Rating: Tension Member Inventory RF	Tension Member Operating RF	Comp. Member Inventory RF	Comp. Member Operating RF
South Truss - Diagonals	Structure 1	U_0 - L_1	87.61	27.10	-14.50	14.00	-4.60	0.90	1.24	30.17	-16.14	14.00	-4.60	Pedestrian	Vehicle	171.31	-----	2.06	23.10	21.0386	762.25	131.71	10.8646	1.6920	57.79	29.82	-585.54	10.00	0.31	8.46	0.65	-----	-----	10.00	-----	-----	32.00	-----	-----	6.56	-----	-----	-----	-----	-----	11.29	11.29	-----	-----
		U_1 - L_2	23.84	34.90	3.16	9.20	-4.72	0.90	1.24	38.86	3.52	9.20	-4.72	Vehicle	Vehicle	81.51	-----	0.00	16.85	16.8486	556.00	131.71	11.3438	1.9682	51.87	30.44	-435.95	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.39	10.39	-----	-----
		U_2 - L_3	-49.05	20.08	-12.77	0.00	-1.00	0.90	1.24	22.35	-14.21	0.00	-1.00	Vehicle	Vehicle	-----	-82.24	0.00	16.85	16.8486	556.00	131.71	11.5729	1.9682	52.92	30.34	-434.45	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	20.06	20.06
		U_3 - L_4	-108.90	-3.88	-29.02	-4.21	-2.10	0.90	1.24	-4.32	-32.30	-2.10	-4.21	Pedestrian	Vehicle	-----	-183.56	0.00	16.85	16.8486	556.00	131.71	11.1302	1.9682	50.90	30.54	-437.32	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	7.04	7.04
		U_4 - L_4	153.14	7.63	26.66	3.12	7.00	0.90	1.24	29.68	8.49	7.00	3.12	Vehicle	Pedestrian	237.67	-----	0.00	20.66	20.6644	681.93	131.71	11.6953	2.0011	52.60	30.37	-533.41	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	12.52	12.52	-----	-----
		U_5 - L_5	186.37	48.38	-4.79	13.44	0.00	0.90	1.24	53.86	-5.33	13.44	0.00	Vehicle	Vehicle	312.30	-----	0.00	25.63	25.6315	845.84	131.71	12.6380	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	8.62	8.62	-----	-----
		U_6 - L_6	177.53	44.69	-10.59	14.14	0.00	0.90	1.24	49.76	-11.79	14.14	0.00	Vehicle	Vehicle	295.47	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	42.03	31.32	-682.36	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	9.51	9.51	-----	-----
		U_7 - L_7	173.15	40.35	-12.75	13.87	0.00	0.90	1.24	44.93	-14.20	13.87	0.00	Vehicle	Vehicle	283.50	-----	0.00	25.63	25.6315	845.84	131.71	14.4349	2.8057	46.30	30.96	-674.53	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	10.63	10.63	-----	-----
		U_8 - L_8	328.03	62.31	0.32	19.31	0.00	0.90	1.20	67.18	0.34	19.31	0.00	Vehicle	Vehicle	513.76	-----	4.25	37.91	33.6563	1250.91	131.71	15.1354	2.6033	52.33	30.40	-979.36	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	9.44	9.44	-----	-----
		U_9 - L_{10}	339.64	67.94	-2.38	19.75	0.00	0.90	1.20	73.25	-2.57	19.75	0.00	Vehicle	Vehicle	536.75	-----	4.25	37.91	33.6563	1250.91	131.71	13.2031	2.6033	45.65	31.02	-999.42	16.25	0.63	12.00	0.75	-----	-----	16.25	-----	-----	26.00	-----	-----	8.00	-----	-----	-----	-----	-----	8.50	8.50	-----	-----
		U_{10} - L_{11}	313.15	60.45	4.49	18.15	0.00	0.90	1.20	65.18	4.84	18.15	0.00	Vehicle	Vehicle	491.83	-----	4.00	35.88	31.8750	1183.88	131.71	13.5833	2.6322	46.44	30.95	-943.73	16.25	0.50	12.00	0.75	-----	-----	16.25	-----	-----	32.50	-----	-----	8.00	-----	-----	-----	-----	-----	9.17	9.17	-----	-----
		U_{11} - L_{12}	270.62	56.00	7.19	14.84	0.00	0.90	1.20	60.38	7.76	14.84	0.00	Vehicle	Vehicle	430.30	-----	0.00	30.63	30.6305	1010.81	131.71	12.9375	2.8427	40.96	31.40	-817.64	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	8.40	8.40	-----	-----
		U_{12} - L_{13}	194.11	45.40	-6.24	10.79	0.00	0.90	1.20	48.95	-6.73	10.79	0.00	Vehicle	Vehicle	315.98	-----	3.13	24.86	21.7294	820.36	131.71	13.0625	2.0895	56.26	29.99	-633.68	16.00	0.44	10.00	0.56	-----	-----	16.00	-----	-----	36.57	-----	-----	8.89	-----	-----	-----	-----	-----	8.93	8.93	-----	-----
		U_{13} - L_{14}	123.52	31.62	-12.62	2.11	3.86	0.90	1.20	34.09	-13.61	3.86	2.11	Vehicle	Vehicle	204.89	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.68	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	8.92	8.92	-----	-----
		U_{14} - L_{14}	-16.31	24.39	-18.14	0.00	-0.88	0.90	1.20	26.30	-19.56	0.00	-0.88	Vehicle	Vehicle	12.98	-46.63	0.00	16.85	16.8486	556.00	131.71	12.6771	1.9682	57.97	29.80	-426.83	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	16.88	16.88	15.95	15.95
		U_{15} - L_{15}	59.11	34.38	-12.44	6.08	-2.09	0.90	1.20	37.07	-13.42	6.08	-2.09	Vehicle	Vehicle	125.03	-----	0.00	16.85	16.8486	556.00	131.71	13.3438	1.9682	61.02	29.46	-421.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	9.94	9.94	-----	-----
		U_{17} - L_{16}	172.05	49.41	-5.46	9.93	-1.86	0.90	1.20	53.28	-5.89	9.93	-1.86	Vehicle	Vehicle	292.93	-----	0.00	20.66	20.6644	681.93	131.71	13.5156	2.0011	60.79	29.49	-517.90	16.16	0.49	8.54	0.80	-----	-----	16.16	-----	-----	33.25	-----	-----	5.37	-----	-----	-----	-----	-----	6.62	6.62	-----	-----
		U_{18} - L_{17}	210.69	49.17	-7.36	12.50	-1.53	0.90	1.20	53.01	-7.93	12.50	-1.53	Vehicle	Vehicle	342.82	-----	0.00	25.63	25.6315	845.84	131.71	14.3359	2.8057	45.99	30.99	-675.14	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	8.30	8.30	-----	-----
		U_{19} - L_{18}	242.30	48.21	-5.87	13.72	-1.21	0.90	1.20	51.98	-6.33	13.72	-1.21	Vehicle	Vehicle	382.57	-----	0.00	27.98	27.9777	923.26	131.71	15.4219	2.8289	49.06	30.71	-730.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	9.00	9.00	-----	-----
		U_{20} - L_{19}	257.77	40.44	-4.82	15.71	-1.03	0.90	1.20	43.60	-5.20	15.71	-1.03	Pedestrian	Vehicle	412.20	-----	0.00	27.98	27.9777	923.26	131.71	17.4063	2.8289	55.38	30.08	-715.41	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	7.63	7.63	-----	-----
		U_0 - L_1	299.01	50.48	-10.70	14.21	-2.21	0.90	1.18	53.75	-11.39	14.21	-2.21	Vehicle	Vehicle	458.58	-----	0.00	30.63	30.6305	1010.81	131.71	16.5521	2.8427	52.40	30.39	-791.18	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	8.90	8.90	-----	-----
		U_1 - L_2	284.23	62.55	-12.74	14.05	-2.66	0.90	1.18	66.59	-13.56	14.05	-2.66	Vehicle	Vehicle	456.06	-----	0.00	30.63	30.6305	1010.81	131.71	15.1979	2.8427	48.12	30.80	-801.85	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	7.41	7.41	-----	-----
		U_2 - L_3	221.45	56.49	-13.57	11.83	-2.85	0.90	1.18	60.14	-14.45	11.83	-2.85	Vehicle	Vehicle	366.06	-----	0.00	25.63	25.6315	845.84	131.71	14.0000	2.8057	44.91	31.08	-677.17	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	7.14	7.14	-----	-----
		U_3 - L_4	178.33	51.97	-15.33	10.08	-3.23	0.90	1.18	55.33	-16.32	10.08	-3.23	Vehicle	Vehicle	303.75	-----	0.00	22.73	22.7330	750.19	131.71	13.6146	2.0170	60.75	29.49	-569.83	16.32	0.53	8.59	0.88	-----	-----	16.32	-----	-----	30.85	-----	-----	4.91	-----	-----	-----	-----	-----	7.21	7.21	-----	-----
		U_4 - L_5	53.52	35.11	-12.10	5.38	-2.87	0.90	1.18	37.38	-12.89	5.38	-2.87	Vehicle	Vehicle	118.16	-----	0.00	16.85	16.8486	556.00	131.71	15.3958	1.9682	70.40	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	10.01	10.01	-----	-----
		U_5 - L_6	-16.50	26.72	-20.59	2.23	-1.22	0.90	1.18	28.45	-21.92	2.23	-1.22	Vehicle	Vehicle	15.54	-49.95	0.00	16.85	16.8486	556.00	131.71	13.1354	1.9682	60.06	29.57	-423.46	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	15.61	15.61	14.11	14.11
		U_6 - L_7	-133.20	12.41	-37.01	0.00	-5.36	0.90	1.18	13.21	-39.40	0.00	-5.36	Vehicle	Vehicle	-----	-224.38	0.00	18.61	18.6095	614.11	131.71	13.3229	1.9845	60.42	29.53	-467.07	16.00	0.44	8.50	0.72	-----	-----	16.00	-----	-----	36.12	45.00	Pass	5.94	12.00	Pass	-----	-----	-----	-----	-----	5.74	5.74
		U_7 - L_7	208.77	43.69	-10.11	8.33	0.00	0.90	1.18	46.52	-10.76	8.33	0.00	Vehicle	Vehicle	331.87	-----	3.00	23.77	20.7656	784.26	131.71	13.7500	2.1158	58.49	29.75	-600.89	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	8.48	8.48	-----	-----
		U_8 - L_8	289.58	55.78	-2.11	10.70	0.00	0.90	1.18	59.39	-2.24	10.70	0.00	Vehicle	Vehicle	453.66	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.8289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	7.08	7.08	-----	-----
		U_{10} - L_9	327.97	56.85	-1.77	12.66	0.00	0.90	1.18	60.53	-1.89	12.66	0.00	Vehicle	Vehicle	505.05	-----	0.00	30.63	30.6305	1010.81	131.71	14.2292	2.8427	45.05	31.07	-808.93	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	7.43	7.43	-----	-----
		U_{11} - L_{10}	349.27	59.14	-1.75	12.70	0.00	0.90	1.18	62.96	-1.86	12.70	0.00	Vehicle	Vehicle	535.90	-----	0.00	33.27	33.2657	1097.77	131.71	15.0833	2.8573	47.51	30.85	-872.39	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	7.86	7.86	-----	-----
		U_{12} - L_{11}	358.20	56.00	-8.44	13.52	0.00	0.90	1.18	59.62	-8.98	13.52	0.00	Vehicle	Vehicle	543.16	-----	0.00	33.27	33.2657	1097.77	131.71	16.7604	2.8573	52.79	30.35	-858.14	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	8.16	8.16	-----	-----
		U_{13} - L_{12}	307.76	46.34	-16.16	12.26	-0.24	0.90	1.18	49.34	-17.21	12.26	-0.24	Vehicle	Vehicle	464.23	-----	0.00	30.63	30.6305	1010.81	131.71	18.4063	2.8427	58.27	29.77	-775.09	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	9.52	9.52	-----	-----
		U_{14} - L_{13}	260.25	37.50	-13.67	9.65	0.00	0.90	1.18	39.93	-14.56	9.65	0.00	Vehicle	Vehicle	390.23	-----	0.00	30.63	30.6305	1010.81	131.71	20.6563	2.8427	65.40	28.93	-753.27	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	12.96	12.96	-----	-----
		U_{15} - L_{15}	208.41	50.47	-1.47	11.04	-2.52	0.90	1.17	53.10	-1.55	11.04	-2.52	Vehicle	Pedestrian	339.97	-----	0.00	25.63	25.6315	845.84	131.71	20.0729	2.8057	64.39	29.06	-633.05	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	8.33	8.33	-----	-----
		U_{16} - L_{16}	243.53	58.73	-4.37	11.54	-1.48	0.90	1.17	61.79	-4.60	11.54	-1.48	Vehicle	Vehicle	396.92	-----	0.00	25.63	25.6315	845.84	131.71	17.8750	2.8057	57.34	29.87	-650.83	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	6.59	6.59	-----	-----
		U_{17} - L_{17}	255.83	57.14	-7.17	12.23	0.00	0.90	1.17	60.11	-7.54	12.23	0.00	Vehicle	Vehicle	410.72	-----	0.00	27.98	27.9777	923.26	131.71	16.2500	2.8289	51.70	30.46	-724.32	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	7.56	7.56	-----	-----
		U_{18} - L_{18}	235.25	58.51	-8.40	11.35	0.00	0.90	1.17	61.56	-8.84	11.35	0.00	Vehicle	Vehicle	385.85	-----	0.00	25.63	25.6315	845.84	131.71	14.5729	2.8057	46.75	30.92	-673.68	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	6.75	6.75	-----	-----
		U_{19} - L_{19}	212.06	50.96	-10.25	11.09	0.00	0.90	1.17	53.62	-10.79	11.09	0.00	Vehicle	Vehicle	345.38	-----	0.00	25.63	25.6315	845.84	131.71	13.7500	2.8057	44.11	31.15	-678.65	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	8.18	8.18	-----	-----
	Structure 2	U_0 - L_{20}	168.18	48.00	-6.32	9.14	0.00	0.90	1.17	50.51	-6.65	9.14	0.00	Vehicle	Vehicle	284.30	-----	0.00	23.77	23.7656	784.26	131.71	13.4792	2.1158	57.34	29.87	-603.46	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	8.61	8.61	-----	-----
		U_{20} - L_{21}	97.21	33.64	-15.57	6.66	0.00	0.90	1.17	35.39	-16.38	6.66	0.00	Vehicle	Vehicle	172.38	-----	0.00	16.85	16.8486	556.00	131.71	13.3958	1.9682	61.26	29.43	-421.49	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	9.34	9.34	-----	-----
		U_{21} - L_{22}	30.55	12.12	-23.44	0.58	-2.18	0.90	1.17	12.75	-24.66	0.58	-2.18	Vehicle	Vehicle	56.30	-----	0.00	16.85	16.8486	556.00	131.71	13.1563	1.9682	60.16	29.56	-423.30	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	31.14	31.14	-----	-----
		U_{23} - L_{22}	49.81	30.24	-17.74	5.11	-0.95	0.90	1.17	31.81	-18.66	5.11	-0.95	Vehicle	Vehicle	106.11	-----	0.00	16.85	16.8486	556.00	131.71	13.6042	1.9682	62.21	29.32	-419.89	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	11.88	11.88	-----	-----
		U_{24} - L_{23}	115.09	41.35	-10.29	8.00	-0.72	0.90	1.17	43.50	-10.83	8.00	-0.72	Vehicle	Vehicle	206.18	-----	0.00	16.85	16.8486	556.00	131.71	13.8542	1.9682	63.35	29.18	-417.93	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	7.19	7.19	-----	-----
		U_{25} - L_{24}	179.20	50.90	-12.03	10.10	0.00	0.90	1.17	53.55	-12.66	10.10	0.00	Vehicle	Vehicle	302.58	-----	0.00	23.77	23.7656	784.26	131.71	13.8958	2.1158	59.11	29.68	-599.49	15.75	0.38	10.00	0.56	-----	-----	15.75	-----	-----	42.00	-----	-----	8.89	-----	-----	-----	-----	-----	7.92	7.92	-----	-----
		U_{26} - L_{25}	220.95	51.10	-10.55	11.89	0.00	0.90	1.17	53.76	-11.10	11.89	0.00	Vehicle	Vehicle	357.12	-----	0.00	25.63	25.6315	845.84	131.71	14.2292	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	7.99	7.99	-----	-----
		U_{27} - L_{26}	234.79	54.08	-8.40	11.44	0.00	0.90	1.17	56.90	-8.83	11.44	0.00	Vehicle	Vehicle	379.19	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	48.15	30.79	-670.92	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	7.31	7.31	-----	-----
		U_{28} - L_{27}	253.01	51.28	-7.57	12.25	0.00	0.90	1.17	53.95	-7.96	12.25	0.00	Vehicle	Vehicle	399.05	-----	0.00	27.98	27.9777	923.26	131.71	16.7708	2.8289	53.36	30.29	-720.38	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	8.47	8.47	-----	-----
		U_{29} - L_{28}	215.83	41.43	-16.12	10.20	0.61	0.90	1.17	43.59	-16.95	10.20	0.61	Vehicle	Vehicle	337.24	-----	0.00	25.63	25.6315	845.84	131.71	18.3958	2.8057	59.01	29.69	-646.80	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	9.98	9.98	-----	-----
		U_{30} - L_{29}	179.92	35.66	-13.67	8.46	0.00	0.90	1.17	37.51	-14.38	8.46	0.00	Vehicle	Vehicle	282.66	-----	0.00	25.63	25.6315	845.84	131.71	20.6354	2.8057	66.19	28.83	-628.16	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	12.55	12.55	-----	-----
		U_{31} - L_{31}	294.37	49.97	-7.68	12.88	0.00	0.90	1.18	53.21	-8.18	12.88	0.00	Vehicle	Vehicle	451.84	-----	0.00	30.63	30.6305	1010.81	131.71	20.0729	2.8427	63.55	29.16	-759.17	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	9.08	9.08	-----	-----
		U_{32} - L_{32}	342.78	58.31	-7.23	13.71	-0.55	0.90	1.18	62.08	-7.70	13.71	-0.55	Vehicle	Vehicle	526.33	-----	0.00	30.63	30.6305	1010.81	131.71	17.8750	2.8427	56.59	29.95	-779.87	16.48	0.58	11.58	0.96	-----	-----	16.48	-----	-----	28.22	-----	-----	6.06	-----	-----	-----	-----	-----	7.00	7.00	-----	-----
		U_{33} - L_{33}	363.31	61.11	-3.65	14.15	0.00	0.90	1.18	65.07	-3.89	14.15	0.00	Vehicle	Vehicle	556.89	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.63	11.63	1.04	-----	-----	16.64	-----	-----	26.37	-----	-----	5.62	-----	-----	-----	-----	-----	7.39	7.39	-----	-----
		U_{34} -

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-131.25	-22.60	-0.20	1.35	-2.46	-12.27	-2.61	18.04	-32.82	-163.98
	L_1-U_1	-54.49	-51.15	0.21	2.32	-1.33	-16.47	2.80	31.03	-17.74	-220.02
	U_1-L_2	-139.47	-64.72	0.99	3.60	-4.36	-16.12	13.35	45.40	-57.95	-215.33
	L_2-U_2	-52.26	-61.06	2.10	3.38	-5.78	-16.23	28.06	45.09	-77.15	-216.83
	U_2-L_3	-28.29	-50.99	2.25	3.40	-5.40	-17.07	30.11	45.38	-72.07	-227.98
	L_3-U_3	-2.12	-145.13	-6.94	3.13	-2.77	-4.92	-92.23	41.79	-36.97	-65.72
	U_3-L_4	34.63	-69.27	2.94	1.91	-1.75	-7.36	-39.21	25.46	-23.42	-107.60
	L_4-U_4	-69.92	-603.38	-10.78	17.69	0.27	-0.11	-143.95	235.02	3.50	-1.43
	U_4-L_5	-531.73	-129.19	-0.24	0.88	9.77	-12.61	-83.17	11.89	131.39	126.38
	L_5-U_5	68.54	-61.95	11.63	1.76	-2.26	-9.46	23.85	39.01	-3.09	-122.45
	U_5-L_6	100.48	-176.70	2.90	2.40	1.70	-12.70	37.56	31.03	22.03	-164.28
	L_6-U_6	25.29	-160.13	2.34	2.03	-0.34	-13.62	43.25	27.53	-6.53	-166.45
	U_6-L_7	-56.66	-218.08	2.64	0.95	-1.23	-16.74	34.09	12.33	-22.36	-216.58
	L_7-U_7	-173.90	-244.73	1.35	1.65	-7.62	-25.17	22.60	18.92	-87.36	-326.67
	U_7-L_8	-287.80	-237.44	1.31	1.33	-4.75	-15.83	29.91	17.22	-41.47	-204.80
	L_8-U_8	-196.20	-237.71	1.19	0.54	-3.08	-18.83	15.37	7.03	-39.80	-243.60
	U_8-L_9	-299.63	-164.75	1.12	1.33	-5.03	-16.23	22.69	18.56	-38.07	-199.64
	L_9-U_9	-189.93	-29.96	-7.28	4.09	-2.55	-6.39	-94.22	52.94	-33.04	-82.55
	U_9-L_{10}	-179.63	-29.55	-7.39	3.20	-2.50	-6.08	-95.06	51.17	-34.45	-78.61
	L_{10}-U_{10}	-249.78	-258.69	-10.54	12.15	-0.73	-6.91	-136.31	157.16	-9.46	-89.35
	U_0-L_1	-28.62	-172.11	-0.46	1.09	2.53	-13.16	-5.92	13.98	32.34	-168.12
	L_1-U_1	-24.91	-199.34	-0.21	1.06	1.52	-16.54	-5.38	16.18	29.39	-182.53
	U_1-L_2	-53.03	-283.30	-0.50	1.49	-5.19	-22.22	-6.36	19.08	68.34	-283.88
	L_2-U_2	-30.68	-289.43	-0.53	1.38	-4.75	-21.74	6.81	18.73	49.70	-282.33
	U_2-L_3	-360.46	-389.97	0.14	2.48	-9.29	-34.21	1.73	31.71	-118.69	-437.09
	L_3-U_3	-403.42	-397.71	-1.85	4.76	-8.16	-28.15	5.03	43.61	-86.18	-298.15
	U_3-L_4	-349.63	-208.07	3.45	3.41	-8.98	-34.81	44.12	43.57	-114.69	-444.76
	L_4-U_4	-253.78	-280.71	2.68	3.71	-14.14	-19.51	34.25	47.36	-180.71	-249.20
	U_4-L_5	-330.32	-83.64	2.89	2.76	-12.23	-13.87	36.27	57.24	-181.82	-181.82
	L_5-U_5	-237.02	-39.91	3.86	4.88	-6.07	-11.52	49.29	62.32	-77.60	-147.13
	U_5-L_6	-220.36	-29.53	3.86	4.88	-6.07	-11.52	49.29	62.32	-77.60	-147.13
	L_6-U_6	-116.69	-170.79	-7.53	3.75	-8.91	-5.88	-101.30	47.87	-113.89	-75.08
	U_6-L_7	-59.44	-59.51	1.83	2.69	-5.34	-12.92	18.31	25.63	-79.37	-330.81
	L_7-U_7	-211.04	-1121.68	-14.93	25.14	-0.45	-2.48	-190.78	321.24	-5.74	-6.17
	U_7-L_8	-1028.71	-26.69	0.44	1.46	22.50	-19.91	5.93	18.47	284.12	-251.37
	L_8-U_8	-1152.72	-806.57	0.49	1.85	2.84	-2.36	28.23	14.22	-229.96	-229.96
	U_8-L_9	-271.39	-21.19	2.83	2.65	1.35	-17.16	35.67	33.48	-177.16	-216.61
	L_9-U_9	-253.74	-24.51	2.28	2.65	1.35	-17.16	41.45	33.48	-177.16	-216.61
	U_9-L_{10}	-156.55	-8.67	3.88	2.96	1.29	-17.96	49.00	37.41	-165.25	-226.74
	L_{10}-U_{10}	-48.55	-11.41	3.83	3.11	4.70	-19.52	48.29	39.25	-99.36	-250.21
	U_0-L_1	-92.57	-65.85	1.45	2.03	-6.29	-26.20	18.31	25.63	-79.37	-330.81
	L_1-U_1	-59.44	-59.51	1.83	2.69	-5.34	-12.92	-101.30	47.87	-113.89	-75.08
	U_1-L_2	-48.31	-31.52	0.12	3.15	0.53	-15.59	14.46	39.78	6.64	-196.84
	L_2-U_2	-48.31	-31.52	0.12	3.15	0.53	-15.59	14.46	39.78	6.64	-196.84
	U_2-L_3	10.77	-137.63	-5.07	4.34	-6.42	-10.00	-63.97	54.76	-83.52	-126.21
	L_3-U_3	57.22	-122.85	-6.45	4.57	-1.55	-7.92	81.46	72.71	-95.66	-89.97
	U_3-L_4	85.41	-4.86	-0.76	2.94	-3.56	-15.13	-9.56	37.05	-45.00	-191.01
	L_4-U_4	-1152.72	-806.57	0.49	1.85	2.84	-2.36	-151.68	14.22	-229.96	-229.96
	U_4-L_5	821.42	-89.58	0.12	2.10	20.09	-20.75	1.49	26.83	266.69	-265.06
	L_5-U_5	25.52	87.40	2.76	1.91	-1.75	-7.36	9.72	15.76	-39.21	-171.10
	U_5-L_6	145.61	-52.49	2.80	3.46	2.88	-15.32	35.77	44.17	36.77	-195.76
	L_6-U_6	17.52	-88.46	3.67	3.88	-1.59	-16.31	46.90	49.62	-20.28	-208.39
	U_6-L_7	-25.52	87.40	2.76	1.91	-1.75	-7.36	9.72	15.76	-39.21	-171.10
	L_7-U_7	-75.13	-230.47	3.87	2.42	-5.28	-18.40	49.50	30.91	-3.51	-235.14
	U_7-L_8	-206.03	-237.44	1.31	1.33	-4.75	-15.83	29.91	17.22	-41.47	-204.80
	L_8-U_8	-84.17	-278.54	3.82	3.34	-8.42	-23.03	48.77	42.61	-107.62	-294.19
	U_8-L_9	-189.93	-29.96	-7.28	4.09	-2.55	-6.39	-94.22	52.94	-33.04	-82.55
	L_9-U_9	-274.89	-274.55	1.74	0.76	-7.65	-26.83	22.21	9.67	-97.74	-342.75
	U_9-L_{10}	-256.96	-269.01	1.35	0.51	-13.87	-21.59	17.25	6.57	-117.22	-275.78
	L_{10}-U_{10}	-249.78	-258.69	-10.54	12.15	-0.73	-6.91	-136.31	157.16	-9.46	-89.35
	U_0-L_1	-154.33	-34.80	-1.69	0.77	-2.28	-8.00	-21.64	9.80	-30.40	-102.25
	L_1-U_1	-73.96	-73.96	-1.51	0.51	-2.03	-7.11	-20.56	7.13	-28.96	-89.49
	U_1-L_2	40.05	-167.61	0.45	0.46	0.49	-10.70	-5.78	5.90	5.43	-138.49
	L_2-U_2	-10.43	-132.23	-0.34	0.56	-1.52	-12.91	-4.35	7.19	19.64	-167.06
	U_2-L_3	-73.96	-73.96	-1.51	0.51	-2.03	-7.11	-20.56	7.13	-28.96	-89.49
	L_3-U_3	-140.08	-260.72	0.26	0.77	-2.08	-19.48	3.33	9.94	-26.87	-252.04
	U_3-L_4	-73.96	-73.96	-1.51	0.51	-2.03	-7.11	-20.56	7.13	-28.96	-89.49
	L_4-U_4	-187.91	-275.87	1.25	1.74	-8.60	-27.76	16.20	22.53	-111.32	-369.14
	U_4-L_5	-182.97	-104.84	0.93	2.76	-3.78	-12.40	12.05	35.75	-48.95	-160.42
	L_5-U_5	-147.74	-26.71	2.07	3.30	-7.64	-8.01	26.77	42.64	-98.86	-103.64
	U_5-L_6	-153.72	-61.91	2.39	3.30	-7.64	-8.01	26.77	42.64	-98.86	-103.64
	L_6-U_6	-126.56	-126.56	-1.66	0.56	-7.65	-26.83	22.21	9.67	-97.74	-342.75
	U_6-L_7	-182.97	-104.84	0.93	2.76	-3.78	-12.40	12.05	35.75	-48.95	-160.42
	L_7-U_7	-147.74	-26.71	2.07	3.30	-7.64	-8.01	26.77	42.64	-98.86	-103.64
	U_7-L_8	-153.72	-61.91	2.39	3.30	-7.64	-8.01	26.77	42.64	-98.86	-103.64
	L_8-U_8	-126.56	-126.56	-1.66	0.56	-7.65	-26.83	22.21	9.67	-97.74	-342.75
	U_8-L_9	10.81	46.01	-3.92	2.54	-1.17	-4.38	-50.69	32.82	-15.16	-56.63
	L_9-U_9	-10.43	-132.23	-0.34	0.56	-1.52	-12.91	-4.35	7.19	19.64	-167.06
	U_9-L_{10}	40.05	-167.61	0.45	0.46	0.49	-10.70	-5.78	5.90	5.43	-138.49
	L_{10}-U_{10}	-73.96	-73.96	-1.51	0.51	-2.03	-7.11	-20.56	7.13	-28.96	-89.49
Structure 2	U_0-L_1	126.56	58.05	3.27	2.85	0.63	-12.41	43.66	38.01	8.35	-165.75
	L_1-U_1	70.11	43.65	3.51	2.55	-1.67	-14.44	46.89	34.01	-22.34	-192.90
	U_1-L_2	13.72	-13.63	3.29	2.39	-3.04	-16.47	47.89	29.91	-37.34	-219.04
	L_2-U_2	83.40	-95.48	3.68	0.99	-4.67	-13.04	49.16	13.23	-62.34	-174.21
	U_2-L_3	-52.69	-52.69	-1.60	0.70	-2.19	-8.13	-21.26	9.27	-30.14	-104.00
	L_3-U_3	-8.37	-30.47	0.55	10.88	0.61	-7.11	-127.56	145.30	10.81	-95.03
	U_3-L_4	-52.69	-52.69	-1.60	0.70	-2.19	-8.13	-21.26	9.27	-30.14	-104.00
	L_4-U_4	83.40	-95.48	3.68	0.99	-4.67	-13.04	49.16	13.23	-62.34	-174.21
	U_4-L_5	13.72	-13.63	3.29	2.39	-3.04	-16.47	47.89	29.91	-37.34	-219.04
	L_5-U_5	70.11	43.65	3.51	2.55	-1.67	-14.44	46.89	34.01	-22.34	-192.90
	U_5-L_6	126.56	58.05	3.27	2.85	0.63	-12.41	43.66	38.01	8.35	-165.75

ZZ Axis Moment Properties

Location	Member	Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula (.8 Term * F'c*S_{top})	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor b	Equivalent Mom. Factor Cb
Structure 1	U_0-L_1	-174.01	-5.94	-213.29	-242.05	90.2	90.24	72.24	127.46	2147	1328.6	f: 1.41	4206	0.99880041	2974.3	0.879	0.95	0.95
	L_1-U_1	-64.14	-26.15	-93.90	-352.92	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.266	0.71	0.71
	L_1-U_2	-164.17	-117.26	-358.65	-221.79	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.663	0.89	0.89
	L_2-U_2	-31.47	-137.99	-168.24	-202.50	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.831	0.93	0.93
	L_2-U_3	-4.09	-2.48	-2.48	-79.29	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.976	0.99	0.99
	L_3-U_3	-117.78	-292.99	-45.39	103.23	90.2	90.24	75.71	127.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.485	0.41	0.41
	L_3-U_4	-374.25	-97.11	-97.11	-78.18	142.56	2586	1649.1	1.47	4704	3.99947397	3201.5	0.548	0.52	0.52	1.00
	L_4-U_4	-278.03	1089.93	-86.27	782.54	138.2	138.17	111.77	198.97	3942	2197.7	1.45	6999	0.998945	4564.8	-0.255	0.50	0.50
	L_4-U_5	-687.18	-153.15	855.55	-379.36	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99880041	4252.8	-0.444	0.42	0.42
	L_5-U_5	120.10	103.95	80.08	-102.04	95.6	96.61	79.12	139.29	2172	1367.8	1.40	4465	0.99873139	3184.1	-0.660	0.35	0.35
	L_5-U_6	179.45	-189.37	158.27	-443.27	96.6	96.61	83.55	139.29	2174	1387.9	1.40	4465	0.99873139	3184.1	-0.309	0.46	0.46
	L_6-U_6	153.06	-174.12	142.10	-400.96	96.6	96.61	83.55	139.29	2174	1387.9	1.40	4465	0.99873139	3184.1	-0.339	0.46	0.46
	L_6-U_7	-81.34	-267.47	-154.53	-65.11	157.76	130.94	219.77	4535	2532.6	1.45	7252	0.99950052	5003.4	0.274	0.71	0.71
	L_7-U_7	-22.69	-118.82	-67.36	-326.67	157.76	130.94	219.77	4535	2532.6	1.45	7252	0.99950052	5003.4	0.424	0.76	0.76
	L_7-U_8	-423.85	-154.47	-423.85	-154.47	157.76	130.94	219.77	4535	2532.6	1.45	7252	0.99950052	5003.4	0.424	0.76	0.76
	L_8-U_8	-335.25	-286.28	-454.05	-574.91	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.790	0.92	0.92
	L_8-U_9	-239.08	-429.89	-398.80	-755.71	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.406	0.76	0.76
	L_9-U_9	-413.42	-191.99	-418.80	-697.98	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.696	0.89	0.89
	L_9-U_{10}	-369.39	29.87	-289.87	-146.26	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99907191	4197.7	-0.081	0.57	0.57
	L_{10}-U_{10}	-257.73	-21.29	-287.40	-15.01	104.5	104.75	86.43	150.53	2599	1554.3	1.44	4971	0.99880042	3452.8	0.089	0.23	0.23
	L_{10}-U_{11}	-501.91	540.01	-337.09	225.14	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.8	0.928	0.23	0.23
	U_0-L_1	-44.89	-205.58	4.84	-442.31	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.011	0.60	0.60
	L_1-U_1	-38.88	-237.08	-32.79	-512.76	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.077	0.58	0.58
	L_1-U_2	-77.21	-343.49	-155.17	-737.33	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9620	0.99857	7005.5	0.210	0.68	0.68
	L_2-U_2	-60.33	-459.39	-153.52	-1025.3	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9620	0.99857	7005.5	0.032	0.68	0.68
	L_2-U_3	-466.32	-465.73	-622.90	-1075.18	251.7	251.73	211.49	360.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.579	0.83	0.83
	L_3-U_3	-453.72	-178.58	-604.96	-238.11	251.7	251.73	211.49	360.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.256	0.66	0.66
	L_3-U_4	-1223.3	1009.5	-1630.9	1346.0	251.7	251.73	211.49	360.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.604	0.84	0.84
	L_4-U_4	-214.64	453.02	-849.46	1792.22	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885303	7670.6	0.711	0.88	0.88
	L_4-U_5	-285.39	-303.35	-564.84	-688.86	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885303	7670.6	0.820	0.93	0.93
	L_5-U_5	-381.67	-52.26	-592.98	-108.83	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885303	7670.6	0.953	0.98	0.98
	L_5-U_6	-244.02	132.38	-408.98	-139.91	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7089	0.99864752	5992.8	0.342	0.74	0.74
	L_6-U_6	-24.68	37.20	-24.68	-37.20	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7089	0.99864752	5992.8	0.342	0.74	0.74
	L_6-U_7	-283.40	284.21	-299.64	124.40	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.9	-0.415	0.43	0.43
	L_7-U_7	-388.90	388.90	-388.90	-388.90	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.9	-0.415	0.43	0.43
	L_7-U_8	-1926.78	321.24	-5.74	-6.17	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.9	-0.415	0.43	0.43
	L_8-U_8	5.93	18.47	284.12	-251.37	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99895350	7310.6	-0.212	0.52	0.52
	L_8-U_9	28.23	-229.96	-5.49	-229.96	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99895350	7310.6	-0.212	0.52	0.52
	L_9-U_9	-599.15	76.27	-375.09	-248.85	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99862128	5702.3	0.151	0.68	0.68
	L_9-U_{10}	-1.45	183.38	-122.52	-121.87	150.6	150.64	119.72	206.64	3160	1826.6	1.41	6999	0.99899321	4214.3	0.594	0.80	0.80
	L_{10}-U_{10}	-257.73	-21.29	-287.40	-15.01	104.5	104.75	86.43	150.53	2599	1554.3	1.44	4971	0.99880042	3452.8	0.089	0.23	0.23
	L_{10}-U_{11}	-501.91	540.01	-337.09	225.14	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.8	0.928	0.23	0.23
	U_0-L_1	-44.89	-205.58	4.84	-442.31	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.011	0.60	0.60
	L_1-U_1	-38.88	-237.08	-32.79	-512.76	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.077	0.58	0.58
	L_1-U_2	-77.21	-343.49	-155.17	-737.33	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9620	0.99857	7005.5	0.210	0.68	0.68
	L_2-U_2	-60.33	-459.39	-153.52	-1025.3	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9620	0.99857	7005.5	0.032	0.68	0.68
	L_2-U_3	-466.32	-465.73	-622.90	-1075.18	251.7	251.73	211.49	360.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.579	0.83	0.83
	L_3-U_3	-453.72	-178.58	-604.96	-238.11	251.7	251.73	211.49	360.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.256	0.66	0.66
	L_3-U_4	-1223.3	1009.5	-1630.9	1346.0	251.7	251.73	211.49	360.62	7161	3870.6	1.45	12066	0.99919	8298.1	0.604	0.84	0.84
	L_4-U_4	-214.64	453.02	-849.46	1792.22	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885303	7670.6	0.711	0.88	0.88
	L_4-U_5	-285.39	-303.35	-564.84	-688.86	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885303	7670.6	0.820	0.93	0.93
	L_5-U_5	-381.67	-52.26	-592.98	-108.83	232.7	232.70	195.45	340.10	6520	3217.6	1.46	11223	0.99885303	7670.6	0.953	0.98	0.98
	L_5-U_6	-237.02	39.91	-368.46	-68.98	-139.91	181.9	181.87	147.20	249.02	3787	2047.8	1.37	7089	0.99864752	5992.8	0.342	0.74	0.74
	L_6-U_6	-116.69	170.79	-73.53	3.75	-8.91	-5.88	-101.30	47.87	-113.89	-75.08	181.9	181.87	147.20	249.02	3787	2047.8	1.37
	L_6-U_7	-59.44	-59.51	1.83	2.69	-5.34	-12.92	18.31	25.63	-79.37	-330.81	156.6	156.80	126.72	214.81	3285	1852.3	1.37
	L_7-U_7	-211.04	1121.68	-14.93	25.14	-0.45	-2.48	-190.78	321.24	-5.74	-6.17	156.6	156.80	126.72	214.81	3285	1852.3	1.37
	L_7-U_8	1028.71	-26.69	0.44	1.46	22.50	-19.91	5.93	18.47	284.12	-251.37	221.8	221.77	186.91	327.26	6244	3427.0	1.48
	L_8-U_8	1152.72	806.57	0.49	1.85	2.84	-2.36	28.23	14.22	-229.96	-229.96	221.8	221.77	186.91	327.26	6244	3427.0	1.48
	L_8-U_9	271.39	21.19	2.83	2.65	1.35	-17.16	35.67	33.48	-177.16	-216.61	173.0	173.03	144.25	241.17	3969	2180.7	1.39
	L_9-U_9	253.74	24.51	2.28	2.65	1.35	-17.16	41.45	33.48	-177.16	-216.61	173.0	173.03	144.25	241.17	3969	2180.7	1.39
	L_9-U_{10}	156.55	-8.67	3.88	2.96	1.29	-17.96	49.00	37.41	-165.25	-226.74	150.6	150.64	119.72	206.64	3160	1826.6	1.41
	L_{10}-U_{10}	48.55	11.41	3.83	3.11	4.70	-19.52	48.29	39.25	-99.36	-250.21	104.8	104.75	86.43	150.53	2599	1554.3	1.44
	L_{10}-U_{11}	257.73	21.29	2.65	2.65	1.35	-17.16	49.29	62.32	-77.60	-147.13	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	U_0-L_1	-92.57	-65.85	1.45	2.03	-6.29	-26.20	18.31	25.63	-79.37	-330.81	156.6	156.80	126.72	214.81	3285	1852.3	1.37
	L_1-U_1	-59.44	-59.51	1.83	2.69	-5.34	-12.92	-101.30	47.87	-113.89	-75.08	181.9	181.87	147.20	249.02	3787	2047.8	1.37
	U_1-L_2	-48.31	-31.52	0.12	3.15	0.53	-15.59	14.46	39.78	6.64	-196.84	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	L_2-U_2	-48.31	-31.52	0.12	3.15	0.53	-15.59	14.46	39.78	6.64	-196.84	104.8	104.75	86.43	150.63	2589	1554.3	1.44
	U_2-L_3	10.77	-137.63	-5.07	4.34	-6.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-inspected**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_z Information

M_y Information

| Location | | Member | ZZ Axis Moments from STAAD: Dead Load Start-End (k-ft) | ZZ Axis Moments from STAAD: Live Load (Max) Start-End (k-ft) | ZZ Axis Moments from STAAD: Live Load (Min) Start-End (k-ft) | ZZ Axis Moments from STAAD: Pedestrian Load (Max) Start-End (k-ft) | ZZ Axis Moments from STAAD: Pedestrian Load (Min) Start-End (k-ft) | Lane Reduction & Impact Live Load Max Start-End (k-ft) | Lane Reduction & Impact Live Load Min Start-End (k-ft) | Impact Pedestrian Load Max Start-End (k-ft) | Impact Pedestrian Load Min Start-End (k-ft) | Pos. Mz. Mom. Max Start (k-in) | Pos. Mz. Mom. Max End (k-in) | Max. Mz. Mom. (k-in) | S_{bz} (in^3) | S_{tz} (in^3) | Z_z (in^3) | I_z (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F'c/S_{bz} | M_z (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mx} | Pass | Dead Load Start-End (k-ft) | Live Load (Max) Start-End (k-ft) | Live Load (Min) Start-End (k-ft) | Pedestrian Load (Max) Start-End (k-ft) | Pedestrian Load (Min) Start-End (k-ft) | Lane Reduction & Impact Live Load Max Start-End (k-ft) | Lane Reduction & Impact Live Load Min Start-End (k-ft) | Impact Pedestrian Load Max Start-End (k-ft) | Impact Pedestrian Load Min Start-End (k-ft) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | Max. Neg. Mom. (k-in) | S_{bz} (in^3) | S_{tz} (in^3) | Z_z (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F'c/S_{bz} | M_n (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mx} | Pass | Axial Stress Portion | Moment Stress Portion | Total | Pass | Axial Stress Portion | Moment Stress Portion | Total | Pass | Axial Stress Portion | Moment Stress Portion | Total | Pass |
|---|---|---|---

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreadsheet
Loading: HF1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1998

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) Start (k-ft)	Live Load (Max) End (k-ft)	Pedestrian Load (Max) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Max Start (k-ft)	Lane Reduction & Impact Live Load Max End (k-ft)	Impact Pedestrian Load Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_1–L_1	-55.75	82.39	-3.30	4.23	0.51	-0.68				
	L_1–L_2	-14.37	23.26	-3.43	3.37	0.70	-0.70				
	L_2–U_2	36.81	5.17	-3.19	3.53	0.84	-0.90				
	U_2–L_2	36.81	-39.20	-2.35	2.58	1.89	-1.69				
	L_2–L_3	49.94	-49.31	-0.86	0.75	1.62	-2.40				
	L_3–U_3	57.83	-70.07	-0.08	0.04	3.16	-3.53				
	U_3–L_3	67.02	-94.83	-0.07	0.04	3.74	-4.14				
	L_3–L_4	102.14	-112.44	-0.12	0.11	4.49	-4.62				
	U_4–L_4	-10.55	7.04	4.11	4.93	5.45	-6.48				
	L_4–U_5	-144.53	166.25	-4.92	4.27	0.52	-0.31				
	U_5–L_5	-101.27	95.46	-2.92	3.40	0.02	-0.32				
	L_5–U_6	-111.05	108.51	-2.71	4.43	0.31	-0.27				
	U_6–L_6	-96.41	93.86	-3.46	3.54	0.59	-0.46				
	L_6–U_7	-90.90	75.93	-3.21	3.38	0.84	-0.82				
	U_7–L_7	-53.33	39.66	-3.30	2.84	1.41	-1.50				
	L_7–U_8	8.32	-15.89	-1.49	1.53	3.13	-3.28				
	U_8–L_8	47.73	-50.39	-0.50	0.72	3.24	-3.34				
	L_8–U_9	61.54	-72.81	-0.46	0.47	3.27	-3.44				
	U_9–L_9	133.07	-138.05	-0.64	0.65	3.58	-3.76				
	L_9–U_{10}	158.01	-154.56	-0.66	0.69	3.72	-3.84				
	U_{10}–L_{10}	131.43	-213.61	-0.29	0.48	4.40	-5.81				
	L_{10}–L_{11}	-144.68	167.26	-3.09	5.74	0.49	-0.15				
	L_{11}–U_{12}	-122.98	131.23	-4.89	4.95	0.60	-0.62				
	U_{12}–L_{12}	-113.72	109.36	-3.58	3.26	0.10	-0.75				
	L_{12}–U_{13}	-62.37	68.86	-2.92	2.96	0.48	-0.49				
	U_{13}–L_{13}	-37.86	43.18	-2.94	2.85	0.27	-0.61				
	L_{13}–U_{14}	-9.12	15.71	2.84	2.99	1.38	-1.33				
	U_{14}–L_{14}	14.83	-14.93	-2.50	2.55	1.64	-1.74				
	L_{14}–U_{15}	39.68	-45.44	-1.00	1.00	1.74	-1.91				
	U_{15}–L_{15}	88.79	-97.90	-1.01	0.84	3.87	-4.03				
	L_{15}–U_{16}	133.02	-133.00	-0.90	0.72	3.63	-4.09				
	U_{16}–L_{16}	140.07	-146.97	-0.01	0.09	4.87	-5.13				
	L_{16}–U_{17}	148.94	-153.41	-0.11	0.20	4.78	-4.99				
	U_{17}–L_{17}	143.94	-139.93	-0.29	0.52	4.75	-4.74				
	L_{17}–U_{18}	185.37	-182.48	-0.54	0.54	5.82	-5.56				
	U_{18}–L_{18}	72.78	71.71	-0.54	0.54	5.82	-5.56				
	L_{18}–U_{19}	-128.23	129.95	-5.14	4.77	0.55	-0.49				
	U_{19}–L_{19}	-115.71	111.76	-4.13	3.84	0.20	-0.58				
	L_{19}–U_{20}	-125.93	122.62	-5.00	5.42	0.56	-0.52				
	U_{20}–L_{20}	-109.68	106.90	-5.52	5.72	0.73	-0.72				
	L_{20}–U_{21}	-53.25	53.05	-3.30	3.25	0.32	-0.32				
	U_{21}–L_{21}	-43.26	43.75	-3.12	3.17	0.79	-0.70				
	L_{21}–U_{22}	29.76	-29.26	-2.36	2.38	1.31	-1.21				
	U_{22}–L_{22}	5.29	1.62	-1.72	1.90	1.56	-1.71				
	L_{22}–U_{23}	38.80	-38.74	-1.50	1.42	1.58	-1.71				
	U_{23}–L_{23}	46.56	-51.19	-0.90	0.77	2.99	-3.12				
	L_{23}–U_{24}	62.64	-61.32	-0.74	0.71	4.12	-4.08				
	U_{24}–L_{24}	108.55	-105.78	-0.79	0.76	6.27	-6.46				
	L_{24}–U_{25}	50.19	49.04	-0.79	0.76	6.27	-6.46				
	U_{25}–L_{25}	114.59	-114.85	-0.38	0.32	6.29	-5.96				
	L_{25}–U_{26}	112.83	-111.86	-5.49	5.36	0.31	-0.20				
	U_{26}–L_{26}	-122.25	119.98	-4.64	4.37	0.60	-0.56				
	L_{26}–U_{27}	-93.55	87.71	-3.95	4.12	0.48	-0.66				
	U_{27}–L_{27}	-59.68	59.27	-4.40	4.35	0.26	-0.19				
	L_{27}–U_{28}	-96.77	103.24	-4.44	4.60	0.06	-0.23				
	U_{28}–L_{28}	-51.92	52.08	-4.22	4.23	0.07	-0.21				
	L_{28}–U_{29}	-83.45	70.58	-4.19	4.21	0.59	-0.53				
	U_{29}–L_{29}	-32.67	38.68	-2.11	2.43	0.78	-0.87				
	L_{29}–U_{30}	-16.12	17.79	-2.22	2.30	0.68	-0.72				
	U_{30}–L_{30}	4.43	-8.37	-1.79	1.57	2.50	-2.70				
	L_{30}–U_{31}	47.21	-50.58	-0.58	0.59	3.16	-3.29				
	U_{31}–L_{31}	47.21	-50.58	-0.58	0.59	3.16	-3.29				
	L_{31}–U_{32}	104.42	-111.67	-0.83	0.78	6.37	-6.36				
	U_{32}–L_{32}	108.14	-132.78	-0.42	0.49	6.13	-6.19				
	L_{32}–U_{33}	-123.31	162.85	-3.45	4.43	0.49	-0.45				
	U_{33}–L_{33}	-109.30	117.29	-4.96	4.94	0.43	-0.41				
	L_{33}–U_{34}	-68.62	68.77	-2.99	2.99	0.36	-0.36				
	U_{34}–L_{34}	-59.13	62.86	-3.24	3.24	0.34	-0.34				
	L_{34}–U_{35}	-5.41	11.54	3.18	3.33	1.18	-1.20				
	U_{35}–L_{35}	27.84	30.65	-1.83	1.92	1.93	-2.03				
	L_{35}–U_{36}	59.13	62.86	-3.24	3.24	0.34	-0.34				
	U_{36}–L_{36}	85.72	83.00	-0.66	0.56	3.56	-3.71				
	L_{36}–U_{37}	94.97	-87.87	0.10	0.25	3.64	-4.25				
	U_{37}–L_{37}	99.06	-131.45	-0.30	0.09	3.93	-4.95				
	L_{37}–U_{38}	94.97	-87.87	0.10	0.25	3.64	-4.25				
	U_{38}–L_{38}	99.06	-131.45	-0.30	0.09	3.93	-4.95				
	L_{38}–U_{39}	-144.53	166.25	-4.92	4.27	0.52	-0.31				
	U_{39}–L_{39}	-101.27	95.46	-2.92	3.40	0.02	-0.32				
	L_{39}–U_{40}	-111.05	108.51	-2.71	4.43	0.31	-0.27				
	U_{40}–L_{40}	-96.41	93.86	-3.46	3.54	0.59	-0.46				
	L_{40}–U_{41}	-90.90	75.93	-3.21	3.38	0.84	-0.82				
	U_{41}–L_{41}	-53.33	39.66	-3.30	2.84	1.41	-1.50				
	L_{41}–U_{42}	8.32	-15.89	-1.49	1.53	3.13	-3.28				
	U_{42}–L_{42}	47.73	-50.39	-0.50	0.72	3.24	-3.34				
	L_{42}–U_{43}	61.54	-72.81	-0.46	0.47	3.27	-3.44				
	U_{43}–L_{43}	133.07	-138.05	-0.64	0.65	3.58	-3.76				
	L_{43}–U_{44}	158.01	-154.56	-0.66	0.69	3.72	-3.84				
	U_{44}–L_{44}	131.43	-213.61	-0.29	0.48	4.40	-5.81				
	L_{44}–U_{45}	-144.68	167.26	-3.09	5.74	0.49	-0.15				
	U_{45}–L_{45}	-122.98	131.23	-4.89	4.95	0.60	-0.62				
	L_{45}–U_{46}	-113.72	109.36	-3.58	3.26	0.10	-0.75				
	U_{46}–L_{46}	-62.37	68.86	-2.92	2.96	0.48	-0.49				
	L_{46}–U_{47}	-37.86	43.18	-2.94	2.85	0.27	-0.61				
	U_{47}–L_{47}	-9.12	15.71	2.84	2.99	1.38	-1.33				
	L_{47}–U_{48}	14.83	-14.93	-2.50	2.55	1.64	-1.74				
	U_{48}–L_{48}	39.68	-45.44	-1.00	1.00	1.74	-1.91				
	L_{48}–U_{49}	88.79	-97.90	-1.01	0.84	3.87	-4.03				
	U_{49}–L_{49}	133.02	-133.00	-0.90	0.72	3.63	-4.09				
	L_{49}–U_{50}	140.07	-146.97	-0.01	0.09	4.87	-5.13				
	U_{50}–L_{50}	148.94	-153.41	-0.11	0.20	4.78	-4.99				
	L_{50}–U_{51}	143.94	-139.93	-0.29	0.52	4.75	-4.74				
	U_{51}–L_{51}	185.37	-182.48	-0.54	0.54	5.82	-5.56				
	L_{51}–U_{52}	72.78	71.71	-0.54	0.54	5.82	-5.56				
	U_{52}–L_{52}	-128.23	129.95	-5.14	4.77	0.55	-0.49				
	L_{52}–U_{53}	-115.71	111.76	-4.13	3.84	0.20	-0.58				
	U_{53}–L_{53}	-125.93	122.62	-5.00	5.42	0.56	-0.52				
	L_{53}–U_{54}	-109.68	106.90	-5.52	5.72	0.73	-0.72				
	U_{54}–L_{54}	-53.25	53.05	-3.30	3.25	0.32	-0.32				
	L_{54}–U_{55}	-43.26	43.75	-3.12	3.17	0.79	-0.70				
	U_{55}–L_{55}	29.76	-29.26	-2.36	2.38	1.31	-1.21				
	L_{55}–U_{56}	5.29	1.62	-1.72	1.90	1.56	-1.71				
	U_{56}–L_{56}	38.80	-38.74	-1.50	1.42	1.58	-1.71				
	L_{56}–U_{57}	46.56	-51.19	-0.90	0.77	2.99	-3.12				
	U_{57}–L_{57}	62.64	-61.32	-0.74	0.71	4.12	-4.08				
	L_{57}–U_{58}	108.55	-105.78	-0.79	0.76	6.27	-6.46				
	U_{58}–L_{58}	50.19	49.04	-0.79	0.76	6.27	-6.46				
	L_{58}–U_{59}	114.59	-114.85	-0.38	0.32	6.29	-5.96				
	U_{59}–L_{59}	112.83	-111.86	-5.49	5.36	0.31	-0.20				
	L_{59}–U_{60}	-122.25	119.98	-4.64	4.37	0.60	-0.56				
	U_{60}–L_{60}	-93.55	87.71	-3.95	4.12	0.48	-0.66				
	L_{60}–U_{61}	-59.68	59.27	-4.40	4.35	0.26	-0.19				
	U_{61}–L_{61}	-96.77	103.24	-4.44	4.60	0.06	-0.23				
	L_{61}–U_{62}	-51.92	52.08	-4.22	4.23	0.07	-0.21				
	U_{62}–L_{62}	-83.45	70.58	-4.19	4.21	0.59	-0.53				
	L_{62}–U_{63}	-32.67	38.68	-2.11	2.43	0.78	-0.87				
	U_{63}–L_{63}	-16.12	17.79	-2.22	2.30	0.68	-0.72				
	L_{63}–U_{64}	4.43	-8.37	-1.79	1.57	2.50	-2.70				
	U_{64}–L_{64}	47.21	-50.58	-0.58	0.59	3.16	-3.29				
	L_{64}–U_{65}	47.21	-50.58	-0.58	0.59	3.16	-3.29				
	U_{65}–L_{65}	104.42	-111.67	-0.83	0.78	6.37	-6.36				
	L_{65}–U_{66}	108.14	-132.78	-0.42	0.49	6.13	-6.19				
	U_{66}–L_{66}	-123.31	162.85	-3.45	4.43	0.49	-0.45				
	L_{66}–U_{67}	-109.30	117.29	-4.96	4.94	0.43	-0.41				
	U_{67}–L_{67}	-68.62	68.77	-2.99	2.99	0.36	-0.36				
	L_{67}–U_{68}	-59.13	62.86	-3.24	3.24	0.34	-0.34				
	U_{68}–L_{68}	-5.41	11.54	3.18	3.33	1.18	-1.20				
	L_{68}–U_{69}	27.84	30.65	-1.83	1.92	1.93	-2.03				
	U_{69}–L_{69}	59.13	62.86	-3.24	3.24	0.34	-0.34				
	L_{69}–U_{70}	85.72	83.00	-0.66	0.56	3.56	-3.71				
	U_{70}–L_{70}	94.97	-87.87	0.10	0.25	3.64	-4.25				
	L_{70}–U_{71}	99.06	-131.45	-0.30	0.09	3.93	-4.95				
	U_{71}–L_{71}	94.97	-87.87	0.10	0.25	3.64	-4.25				
	L_{71}–U_{72}	99.06	-131.45	-0.30	0.09	3.93	-4.95				
	U_{72}–L_{72}	-144.53	166.25	-4.92	4.27	0.52	-0.31				
	L_{72}–U_{73}	-101.27	95.46	-2.92	3.40	0.02	-0.32				
	U_{73}–L_{73}	-111.05	108.51	-2.71	4.43	0.31	-0.27				
	L_{73}–U_{74}	-96.41	93.86	-3.46	3.54	0.59	-0.46				
	U_{74}–L_{74}	-90.90	75.93	-3.21	3.38	0.84	-0.82				
	L_{74}–U_{75}	-53.33	39.66	-3.30	2.84	1.41	-1.50				
	U_{75}–L_{75}	8.32	-15.89	-1.49	1.53	3.13	-3.28				
	L_{75}–U_{76}	47.73	-50.39	-0.50	0.72	3.24	-3.34				
	U_{76}–L_{76}	61.54	-72.81	-0.46	0.47	3.27	-3.44				
	L_{76}–U_{77}	133.07	-138.05	-0.64	0.65	3.58	-3.76				
	U_{77}–L_{77}	158.01	-154.56	-0.66	0.69	3.72	-3.84				
	L_{77}–U_{78}	131.43	-213.61	-0.29	0.48	4.40	-5.81				
	U_{78}–L_{78}	-144.68	167.26	-3.09	5.74	0.49	-0.15				
	L_{78}–U_{79}	-122.98	131.23	-4.89	4.95	0.60	-0.62				
	U_{79}–L_{79}	-113.72	109.36	-3.58	3.26	0.10	-0.75				
	L_{79}–U_{80}	-62.37	68.86	-2.92	2.96	0.48	-0.49				
	U_{80}–L_{80}	-37.86	43.18	-2.94	2.85	0.27	-0.61				
	L_{80}–U_{81}	-9.12	15.71	2.84	2.99	1.38	-1.33				
	U_{81}–L_{81}	14.83	-14.93	-2.50	2.55	1.64	-1.74				
	L_{81}–U_{82}	39.68	-45.44	-1.00	1.00	1.74	-1.91				
	U_{82}–L_{82}	88.79	-97.90	-1.01	0.84	3.87	-4.03				
	L_{82}–U_{83}	133.02	-133.00	-0.90	0.72	3.63	-4.09				
	U_{83}–L_{83}	140.07	-146.97	-0.01	0.09	4.87	-5.13				
	L_{83}–U_{84}	148.94	-153.41	-0.11	0.20	4.78	-4.99				
	U_{84}–L_{84}	143.94	-139.93	-0.29	0.52	4.75	-4.74				
	L_{84}–U_{85}	185.37	-182.48	-0.54	0.54	5.82	-5.56				
	U_{85}–L_{85}	72.78	71.71	-0.54	0.54	5.82	-5.56				
	L_{85}–U_{86}	-128.23	129.95	-5.14	4.77	0.55	-0.49				
	U_{86}–L_{86}	-115.71	111.76	-4.13	3.84	0.20	-0.58				
	L_{86}–U_{87}	-125.93	122.62	-5.00	5.42	0.56	-0.52				
	U_{87}–L_{87}	-109.68	106.90	-5.52	5.72	0.73	-0.72				
	L_{87}–U_{88}	-53.25	53.05	-3.30	3.25	0.32	-0.32				
	U_{88}–L_{88}	-43.26	43.75	-3.12	3.17	0.79	-0.70				
	L_{88}–U_{89}	29.76	-29.26	-2.36	2.38	1.31	-1.21				
	U_{89}–L_{89}	5.29	1.62	-1.72	1.90	1.56	-1.71				
	L_{89}–U_{90}	38.80	-38.74	-1.50	1.42	1.58	-1.71				
	U_{90}–L_{90}	46.56	-51.19	-0.90	0.77	2.99	-3.12				
	L_{90}–U_{91}	62.64	-61.32	-0.74	0.71	4.12	-4.08				
	U_{91}–L_{91}	108.55	-105.78	-0.79	0.76	6.27	-6.46				
	L_{91}–U_{92}	50.19	49.04	-0.79	0.76	6.27	-6.46				
	U_{92}–L_{92}	114.59	-114.85	-0.38	0.32	6.29	-5.96				
	L_{92}–U_{93}	112.83	-111.86	-5.49	5.36	0.31	-0.20				
	U_{93}–L_{93}	-122.25	119.98	-4.64	4.37	0.60	-0.56				
	L_{93}–U_{94}	-93.55	87.71	-3.95	4.12	0.48	-0.66				
	U_{94}–L_{94}	-59.68	59.27	-4.40	4.35	0.26	-0.19				
	L_{94}–U_{95}	-96.77	103.24	-4.44	4.60	0.06	-0.23				
	U_{95}–L_{95}	-51.92	52.08	-4.22	4.23	0.07	-0.21				
	L_{95}–U_{96}	-83.45	70.58	-4.19	4.21	0.59	-0.53				
	U_{96}–L_{96}	-32.67	38.68	-2.11	2.43	0.78	-0.87				
	L_{96}–U_{97}	-16.12	17.79	-2.22	2.30	0.68	-0.72				
	U_{97}–L_{97}	4.43	-8.37	-1.79	1.57	2.50	-2.70				
	L_{97}–U_{98}	47.21	-50.58	-0.58	0.59	3.16	-3.29				
	U_{98}–L_{98}	47.21	-50.58	-0.58	0.59	3.16	-3.29				
	L_{98}–U_{99}	104.42	-111.67	-0.83	0.78	6.37	-6.36				
	U_{99}–L_{99}	108.14	-132.78	-0.42	0.49	6.13	-6.19				
	L_{99}–U_{100}	-123.31	162.85	-3.45	4.43	0.49	-0.45				
	U_{100}–L_{100}	-109.30	117.29	-4.96	4.94	0.43	-0.41				
	L_{100}–U_{101}	-68.62	68.77	-2.99	2.99	0.36	-0.36				
	U_{101}–L_{101}	-59.13	62.86	-3.24	3.24	0.34	-0.34				
	L_{101}–U_{102}	-5.41	11.54	3.18	3.33	1.18	-1.20				
	U_{102}–L_{102}	27.84	30.65	-1.83	1.92	1.93	-2.03				
	L_{102}–U_{103}	59.13	62.86	-3.24	3.24	0.34	-0.34				
	U_{103}–L_{103}	85.72	83.00	-0.66	0.56	3.56	-3.71				
	L_{103}–U_{104}	94.97	-87.87	0.10	0.25	3.64	-4.25				
	U_{104}–L_{104}	99.06	-131.45	-0.30	0.09	3.93	-4.95				
	L_{104}–U_{105}	94.97	-87.87	0.10	0.25	3.64	-4.25				
	U_{105}–L_{105}	99.06	-131.45	-0.30	0.09	3.93	-4.95				
	L_{105}–U_{106}	-144.53	166.25	-4.92	4.27	0.52	-0.31				
	U_{106}–L_{106}	-101.27	95.46	-2.92	3.40	0.02	-0.32				
	L_{106}–U_{107}	-111.05	108.51	-2.71	4.43	0.31	-0.27				
	U_{107}–L_{107}	-96.41	93.86	-3.46	3.54	0.59	-0.46				
	L_{107}–U_{108}	-90.90	75.93	-3.21	3.38	0.84	-0.82				
	U_{108}–L_{108}	-53.33	39.66	-3.30	2.84	1.41	-1.50				
	L_{108}–U_{109}	8.32	-15.89	-1.49	1.53	3.13	-3.28				
	U_{109}–L_{109}	47.73	-50.39	-0.50	0.72	3.24	-3.34				
	L_{109}–U_{110}	61.54	-72.81	-0.46	0.47	3.27	-3.44				
	U_{110}–L_{110}	133.07	-138.05	-0.64	0.65	3.58	-3.76				
	L_{110}–U_{111}	158.01	-154.56	-0.66	0.69	3.72	-3.84				
	U_{111}–L_{111}	131.43	-213.61	-0.29	0.48	4.40	-5.81				
	L_{111}–L_{112}	-144.68	167.26	-3.09	5.74	0.49	-0.15				
	L_{112}–U_{113}	-122.98	131.23	-4.89	4.95	0.60	-0.62				
	U_{113}–L_{113}	-113.72	109.36	-3.58	3.26	0.10	-0.75				
	L_{113}–U_{114}	-62.37	68.86	-2.92	2.96	0.48	-0.49				
	U_{114}–L_{114}	-37.86	43.18	-2.94	2.85	0.27	-0.61				
	L_{114}–U_{115}	-9.12	15.71	2.84	2.99	1.38	-1.33				
	U_{115}–L_{115}	14.83	-14.93	-2.50	2.55	1.64	-1.74				
	L_{115}–U_{116}	39.68	-45.44	-1.00	1.00	1.74	-1.91				
	U_{116}–L_{116}	88.79	-97.90	-1.01	0.84	3.87	-4.03				
	L_{116}–U_{117}	133.02	-133.00	-0.90	0.72	3.63	-4.09				
	U_{117}–L_{117}	140.07	-146.97	-0.01	0.09	4.87	-5.13				
	L_{117}–U_{118}	148.94	-153.41	-0.11	0.20	4.78	-4.99				
	U_{118}–L_{118}	143.94	-139.93	-0.29	0.52	4.75	-4.74				
	L_{118}–U_{119}	185.37	-182.48	-0.54	0.54	5.82	-5.56				
	U_{119}–L_{119}	72.78	71.71	-0.54	0.54	5.82	-5.56				
	L_{119}–U_{120}	-128.23	129.95	-5.14	4.77	0.55	-0.49				
	U_{120}–L_{120}	-115.71	111.76	-4.13	3.84	0.20	-0.58				
	L_{120}–U_{121}	-125.93	122.62	-5.00	5.42	0.56	-0.52				
	U_{121}–L_{121}	-109.68	106.90	-5.52	5.72	0.73	-0.72				
	L_{121}–U_{122}	-53.25	53.05	-3.30	3.25	0.32	-0.32				
	U_{122}–L_{122}	-43.26	43.75	-3.12	3.17	0.79	-0.70				
	L_{122}–U_{123}	29.76	-29.26	-2.36	2.38	1.31	-1.21				
	U_{123}–L_{123}	5.29	1.62	-1.72	1.90	1.56	-1.71				
	L_{123}–U_{124}	38.80	-38.74	-1.50	1.42	1.58	-1.71				
	U_{124}–L_{124}	46.56	-51.19	-0.90	0.77	2.99	-3.12				
	L_{124}–U_{125}	62.64	-61.32	-0.74	0.71	4.12	-4.08				
	U_{125}–L_{125}	108.55	-105.78	-0.79	0.76	6.27	-6.46				
	L_{125}–U_{126}	50.19	49.04	-0.79	0.76	6.27	-6.46				
	U_{126}–L_{126}	114.59	-114.85	-0.38	0.32	6.29	-5.96				
	L_{126}–U_{127}	112.83	-111.86	-5.49	5.36	0.31	-0.20				
	U_{127}–L_{127}	-122.25	119.98	-4.64	4.37	0.60	-0.56				
	L_{127}–U_{128}	-93.55	87.71	-3.95	4.12	0.48	-0.66				
	U_{128}–L_{128}	-59.68	59.27	-4.40	4.35	0.26	-0.19				
	L_{128}–U_{129}	-96.77	103.24	-4.44	4.60	0

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-23.63	-7.60	-1.63	0.80	0.21	-0.17				
	U_1-L_2	-3.36	-8.44	-1.01	0.48	-0.22	-0.24				
	U_2-L_3	7.94	-13.41	0.32	0.08	-0.31	-1.00				
	U_3-L_4	-14.57	-18.47	0.14	0.52	-1.21	-2.54				
	U_4-L_5	-37.80	-77.38	-2.03	2.18	-6.03	-0.38				
	U_5-L_6	-78.32	-74.26	-4.21	3.62	-10.01	-0.07				
	L_1-U_2	-9.33	102.64	-1.75	3.41	0.04	-0.04				
	L_2-U_3	-5.01	118.90	1.02	2.46	0.26	-0.20				
	L_3-U_4	-7.83	74.40	2.37	1.94	0.31	-0.13				
	L_4-U_5	-64.28	13.58	-1.78	1.37	-0.57	-0.35				
	L_5-U_6	-39.78	11.20	-2.26	1.12	-0.73	-0.45				
	U_0-U_1	-65.20	48.77	-1.79	1.73	0.02	-0.69				
	U_1-U_2	-24.89	8.62	0.84	0.64	0.22	-0.69				
	U_2-U_3	-0.81	3.28	-2.03	0.80	0.14	-0.30				
	U_3-U_4	-25.30	9.99	-1.54	1.25	0.44	-0.71				
	U_4-U_5	-50.13	20.00	-1.93	1.61	0.48	-0.77				
	U_5-U_6	-101.98	74.35	-3.69	3.20	0.42	-0.42				
	L_0-L_1	-115.65	79.79	-4.12	3.01	-0.38	-0.35				
	L_1-L_2	-76.53	79.74	3.21	3.08	0.69	-0.21				
	L_2-L_3	-109.78	99.44	-4.12	3.31	0.38	-0.40				
	L_3-L_4	-78.92	74.41	-3.29	2.80	0.56	-0.46				
	L_4-L_5	-39.38	13.68	-1.68	1.33	0.37	-0.68				
	L_5-L_6	-4.38	-11.20	-1.31	0.77	0.01	-0.57				
	L_0-U_1	6.85	-23.86	0.74	0.45	0.64	-1.23				
	U_1-L_1	-44.40	35.30	-1.60	1.35	0.43	-0.97				
	L_1-U_2	-96.54	69.68	-3.28	2.68	0.33	-0.74				
	U_2-L_2	-85.37	67.20	-3.22	2.17	-0.34	-0.52				
	L_2-U_3	-30.77	28.98	-2.52	2.03	0.07	-0.47				
	U_3-L_3	-109.81	116.32	-3.69	3.29	0.08	-0.57				
	L_3-U_4	-141.94	130.59	-4.84	4.08	0.63	-0.31				
	U_4-L_4	-80.17	108.32	-2.68	3.46	0.05	-0.55				
	L_4-U_5	-11.95	79.18	2.61	3.13	0.49	-0.39				
	U_5-L_5	-77.25	73.40	-3.91	2.67	0.72	-0.38				
	L_5-U_6	-66.17	89.96	-3.57	3.37	0.25	-0.32				
	U_0-L_0	-58.05	72.68	-3.06	2.66	0.04	-0.48				
	U_1-L_1	-56.05	72.68	-3.06	2.66	0.04	-0.48				
	U_2-L_2	-31.83	37.59	-2.06	1.92	0.04	-0.64				
	U_3-L_3	-10.04	3.78	-0.96	0.71	0.29	-0.96				
	U_4-L_4	-10.04	3.78	-0.96	0.71	0.29	-0.96				
	U_5-L_5	-8.76	2.44	-0.91	0.61	0.29	-0.96				
	U_0-L_1	-19.42	19.56	-1.55	1.33	0.49	-0.80				
	L_1-U_1	-30.32	30.68	-2.17	1.82	0.62	-0.91				
	U_1-L_2	-46.48	58.24	-3.40	2.87	0.23	-0.63				
	L_2-U_2	-54.27	68.32	-3.40	3.08	0.40	-0.49				
	U_2-L_3	-51.16	64.52	-3.40	3.08	0.40	-0.49				
	L_3-U_3	-69.31	71.94	-4.50	4.07	0.27	-0.33				
	U_3-L_4	-69.31	71.94	-4.50	4.07	0.27	-0.33				
	L_4-U_4	-38.18	54.54	-2.54	3.35	0.64	-0.52				
	U_4-L_5	-38.18	54.54	-2.54	3.35	0.64	-0.52				
	L_5-U_5	-27.58	31.93	-3.52	2.62	0.50	-0.21				
	U_5-L_6	-77.08	85.18	-2.99	2.96	0.50	-0.21				
	L_0-U_0	-78.35	71.28	-3.01	2.52	-0.11	-0.20				
	L_1-U_1	-78.35	71.28	-3.01	2.52	-0.11	-0.20				
	L_2-U_2	-76.62	55.14	-3.04	2.70	-0.08	-0.67				
	L_3-U_3	-76.62	55.14	-3.04	2.70	-0.08	-0.67				
	L_4-U_4	-77.08	85.18	-2.99	2.96	0.50	-0.21				
	L_5-U_5	-27.58	31.93	-3.52	2.62	0.50	-0.21				
	U_0-L_1	-8.47	4.15	-0.82	0.33	1.08	-1.38				
	L_1-U_1	-8.47	4.15	-0.82	0.33	1.08	-1.38				
	U_1-L_2	-15.43	10.63	-1.29	0.91	1.27	-1.38				
	L_2-U_2	-15.43	10.63	-1.29	0.91	1.27	-1.38				
	U_2-L_3	-33.68	19.58	-2.18	1.73	0.17	-0.43				
	L_3-U_3	-33.68	19.58	-2.18	1.73	0.17	-0.43				
	U_3-L_4	-78.90	59.78	-4.41	3.49	0.56	-0.51				
	L_4-U_4	-78.90	59.78	-4.41	3.49	0.56	-0.51				
	U_4-L_5	-68.27	63.59	-4.57	3.28	0.23	-0.22				
	L_5-U_5	-68.27	63.59	-4.57	3.28	0.23	-0.22				
	U_5-L_6	-90.31	64.36	-3.23	2.65	0.28	-0.26				
	L_0-L_1	-33.50	18.26	-1.74	1.55	0.08	-0.35				
	L_1-L_2	-33.50	18.26	-1.74	1.55	0.08	-0.35				
	L_2-L_3	-1.49	-18.98	-0.84	0.50	0.41	-1.01				
	L_3-L_4	-1.49	-18.98	-0.84	0.50	0.41	-1.01				
	L_4-L_5	-53.83	37.97	-1.89	1.59	0.00	-0.73				
	L_5-L_6	-61.79	22.37	-2.18	1.17	-0.84	-0.82				
Structure 2	U_0-L_1	-25.74	22.23	-1.86	1.44	-0.04	-0.25				
	L_1-U_1	-73.25	65.79	-2.67	2.26	0.01	-0.00				
	U_1-L_2	-73.25	65.79	-2.67	2.26	0.01	-0.00				
	L_2-U_2	-18.25	18.79	-0.32	0.20	-0.32	-0.32				
	U_2-L_3	-18.73	37.31	-2.69	2.24	0.00	-0.00				
	L_3-U_3	-40.99	33.85	-4.52	3.87	0.00	-0.00				
	U_3-L_4	-22.46	20.02	1.09	-4.50	0.00	-0.00				
	L_4-U_4	-19.17	19.78	0.31	-4.31	0.00	-0.00				
	U_4-L_5	-10.80	6.47	5.32	-13.03	0.00	-0.00				
	L_5-U_5	-24.45	20.52	-0.31	0.61	0.00	-0.00				
	U_5-L_6	-28.15	15.11	-10.80	-10.61	0.00	-0.00				
	L_0-U_0	-10.62	42.46	2.68	-2.68	0.00	-0.00				
	U_0-L_1	-34.33	29.18	0.06	-0.05	0.00	-0.00				
	L_1-U_1	-18.25	18.79	-0.32	0.20	-0.32	-0.32				
	U_1-L_2	-18.73	37.31	-2.69	2.24	0.00	-0.00				
	L_2-U_2	-40.99	33.85	-4.52	3.87	0.00	-0.00				
	U_2-L_3	-22.46	20.02	1.09	-4.50	0.00	-0.00				
	L_3-U_3	-19.17	19.78	0.31	-4.31	0.00	-0.00				
	U_3-L_4	-10.80	6.47	5.32	-13.03	0.00	-0.00				
	L_4-U_4	-24.45	20.52	-0.31	0.61	0.00	-0.00				
	U_4-L_5	-28.15	15.11	-10.80	-10.61	0.00	-0.00				
	L_5-U_5	-10.62	42.46	2.68	-2.68	0.00	-0.00				
	U_5-L_6	-34.33	29.18	0.06	-0.05	0.00	-0.00				
Structure 3	L_0-U_1	-18.25	18.79	-0.32	0.20	-0.32	-0.32				
	U_1-L_1	-18.73	37.31	-2.69	2.24	0.00	-0.00				
	L_1-U_2	-40.99	33.85	-4.52	3.87	0.00	-0.00				
	U_2-L_2	-22.46	20.02	1.09	-4.50	0.00	-0.00				
	L_2-U_3	-19.17	19.78	0.31	-4.31	0.00	-0.00				
	U_3-L_3	-10.80	6.47	5.32	-13.03	0.00	-0.00				
	L_3-U_4	-24.45	20.52	-0.31	0.61	0.00	-0.00				
	U_4-L_4	-28.15	15.11	-10.80	-10.61	0.00	-0.00				
	L_4-U_5	-10.62	42.46	2.68	-2.68	0.00	-0.00				
	U_5-L_5	-34.33	29.18	0.06	-0.05	0.00	-0.00				
	L_5-U_6	-25.74	22.23	-1.86	1.44	-0.04	-0.25				

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0-L_1	-108.00	-14.31	8.57	8.30	0.00	0.00	-177.31	-58.68	-30.97	-29.29
	U_1-L_2	-24.19	-29.73	93.34	24.50	0.00	0.00	-88.87	-91.60	63.93	-21.10
	U_2-L_3	-10.40	-10.95	37.32	-20.52	-9.47	0.00	-23.75	-27.55	-19.16	-64.63
	U_3-L_4	15.16	16.13	18.68	-35.47	0.00	0.00	-23.75	-27.55	-19.16	-64.63
	U_4-L_5	13.52	12.65	-120.24	-56.38	0.00	0.00	-20.33	-22.42	-194.17	-150.99
	U_5-L_6	-72.34	-62.99	-82.42	-22.69	0.00	0.00	-61.51	-114.51	-74.60	-62.01
	L_1-U_2	43.28	-36.32	102.49	-9.06	0.00	0.00	-43.28	-36.32	102.49	-9.06
	L_2-U_3	84.32	-5.63	112.72	-49.09	-14.16	0.00	-84.32	-5.63	112.72	-49.09
	L_3-U_4	-72.54	-59.02	15.00	3.99	0.00	0.00	-72.54	-59.02	15.00	3.99
	L_4-U_5	40.59	37.28	41.83	5.96	0.00	0.00	40.59	37.28	41.83	5.96
	L_5-U_6	18.54	26.06	5.42	-24.06	0.00	0.00	18.54	26.06	5.42	-24.06
	U_0-U_1	11.02	14.22	13.40	-13.44	0.00	0.00	11.02	14.22	13.40	-13.44
	U_1-U_2	8.22	5.84	3.51	-16.76	0.00	0.00	8.22	5.84	3.51	-16.76
	U_2-U_3	-9.22	-11.36	14.87	2.24	0.00	0.00	-9.22	-11.36	14.87	2.24
	U_3-U_4	1.51	-15.40	4.60	-53.96	-13.53	0.00	1.51	-15.40	4.60	-53.96
	U_4-U_5	-54.48	-154.74	-60.09	-134.10	94.0	0.00	-54.48	-154.74	-60.09	-134.10
	U_5-U_6	-150.36	-145.05	-111.00	-3.47	0.00	0.00	-150.36	-145.05	-111.00	-3.47
	L_0-L_1	-39.93	-38.43	-30.69	-5.49	0.00	0.00	-204.66	-175.29	-192.65	-132.47
	L_1-L_2	-66.58	-50.84	-51.26	-15.58	0.00	0.00	-204.62	-234.34	-229.71	-190.37
	L_2-L_3	-60.79	-78.13	-17.71	-13.43	0.00	0.00	-138.18	-130.46	-7.02	-6.04
	L_3-L_4	-65.39	-87.30	-23.29	-13.27	0.00	0.00	-257.63	-271.17	-156.58	-152.13
	L_4-L_5	-87.30	-120.07	-6.60	-6.10	-1.26	-1.03	-257.50	-298.65	-193.33	-180.61
	L_5-L_6	-128.87	-97.97	-13.99	-9.91	0.00	0.00	-322.13	-189.48	-136.94	-63.41
	U_0-L_1	-170.50	-32.94	-1.00	1.07	0.00	0.00	-277.23	-13.79	-56.88	-35.22
	L_1-U_1	-21.76	-27.35	33.06	8.23	0.00	0.00	-128.85	-32.16	-58.23	-17.61
	U_1-L_2	-19.88	-16.67	3.56	5.35	0.00	0.00	-66.51	-43.05	-36.03	-70.90
	L_2-U_2	-43.90	-37.74	-17.49	3.22	0.00	0.00	-66.51	-43.05	-36.03	-70.90
	U_2-L_3	-30.57	-8.74	-6.47	-16.64	0.00	0.00	-11.00	-72.95	-17.73	-104.64
	L_3-U_3	-10.80	-12.92	-16.61	-16.78	0.00	0.00	-66.48	-72.95	-17.73	-104.64
	U_3-L_4	0.57	-10.55	37.46	-22.19	0.00	0.00	-106.04	-188.52	-58.69	-231.08
	L_4-U_5	-21.45	-32.76	-21.60	1.24	0.00	0.00	-170.33	-256.97	-170.53	-212.77
	U_5-L_6	-60.36	-43.89	-41.69	-49.51	0.00	0.00	-120.68	-131.34	-127.08	-107.57
	U_0-L_0	-58.66	-66.87	-74.96	-17.18	0.00	0.00	-198.79	-226.86	-207.11	-162.27
	U_1-L_1	-77.57	-68.33	-47.13	-5.07	-4.69	0.00	-151.53	-220.00	-205.05	-164.53
	U_2-L_2	-48.38	-112.49	-23.76	-40.46	20.3	20.30	-231.30	-221.31	-271.6	-110.9
	U_3-L_3	-79.47	-72.10	-60.53	-16.69	0.00	0.00	-48.38	-112.49	-23.76	-40.46
	U_4-L_4	-78.15	-54.15	-32.29	-13.27	0.00	0.00	-25.18	-39.64	-192.60	-62.35
	U_5-L_5	-80.31	-99.25	-25.17	-1.00	0.00	0.00	-58.77	-13.31	-81.99	-39.01
	L_0-U_0	-13.87	-21.49	-91.72	-37.01	0.00	0.00	-62.87	-19.67	-107.37	-64.61
	L_1-U_1	-29.95	-32.71	-7.87	-6.99	0.00	0.00	-146.64	-137.08	-117.83	-86.68
	L_2-U_2	-8.32	-18.73	-6.33	-4.56	0.00	0.00	-83.64	-87.19	-61.49	-58.03
	L_3-U_3	4.28	-30.54	-3.16	-8.94	0.00	0.00	-83.60	-87.75	-73.93	-36.43
	L_4-U_4	-14.96	-19.48	-22.09	-3.09	0.00	0.00	-26.31	-23.74	-39.68	-5.61
	L_5-U_5	-16.11	-34.04	-21.36	-2.25	0.00	0.00	-26.31	-23.74	-39.68	-5.61
	L_0-L_1	-55.08	-50.54	-24.35	-79.33	94.0	0.00	-55.08	-50.54	-24.35	-79.33
	L_1-L_2	-29.58	-27.48	-20.22	-39.77	94.0	0.00	-29.58	-27.48	-20.22	-39.77
	L_2-L_3	-43.93	-49.98	-34.62	-26.26	-14.16	0.00	-43.93	-49.98	-34.62	-26.26
	L_3-L_4	-65.08	-69.22	-40.06	-11.27	0.00	0.00	-64.27	-112.59	-31.74	-42.46
	L_4-L_5	-71.02	-58.34	-15.59	11.50	0.00	0.00	6.22	-85.13	118.81	25.67
	L_5-L_6	-70.99	-53.05	-15.59	11.50	0.00	0.00	-82.12	-85.13	118.81	25.67
	U_0-U_1	-56.11	-49.28	10.43	5.98	0.00	0.00	85.16	7.66	171.65	79.50
	U_1-U_2	-46.34	-39.68	15.36	3.44	0.00	0.00	85.16	7.66	171.65	79.50
	U_2-U_3	13.96	-12.41	29.05	-1.13	0.00	0.00	93.69	14.61	114.08	-1.13
	U_3-U_4	-21.36	-31.71	-24.61	2.22	0.00	0.00	93.69	14.61	114.08	-1.13
	U_4-U_5	-28.15	-16.69	-12.42	4.41	0.00	0.00	-102.41	-131.90	-81.96	-116.34
	U_5-U_6	47.02	198.14	68.08	-137.98	20.3	20.30	-102.41	-131.90	-81.96	-116.34
	L_0-U_1	-17.54	-19.91	-1.34	-3.30	0.00	0.00	-102.75	-153.10	-160.99	-118.34
	L_1-U_2	8.55	-21.70	19.02	-22.22	0.00	0.00	-153.10	-160.99	-118.34	-103.08
	L_2-U_3	5.02	13.39	8.05	-8.81	0.00	0.00	5.28	-35.97	9.22	-66.13
	L_3-U_4	1.69	16.18	-41.47	26.22	0.00	0.00	-41.23	-21.16	-154.56	-60.85
	L_4-U_5	-22.42	-20.16	-22.47	5.80	0.00	0.00	-174.32	-140.65	-174.20	-119.40
	L_5-U_6	-38.06	-28.76	-14.56	0.00	0.00	0.00	-174.56	-140.65	-174.20	-119.40
	U_0-L_1	-44.27	-28.76	-14.56	0.00	0.00	0.00	-36.22	-24.28	-13.27	-0.00
	L_1-U_1	-29.92	54.10	-40.14	18.34	21.5	21.54	33.27	5.95	97.9	14.54
	U_1-L_2	-29.92	54.10	-40.14	18.34	21.5	21.54	33.27	5.95	97.9	14.54
	L_2-U_2	-148.58	119.24	-59.39	32.01	0.00	0.00	-148.58	119.24	-59.39	32.01
	U_2-L_3	-175.87	135.73	-93.22	69.33	42.7	42.74	65.30	8.95	1389.6	1.53
	L_3-U_3	-175.87	135.73	-93.22	69.33	42.7	42.74	65.30	8.95	1389.6	1.53
	U_3-L_4	-149.27	158.88	-81.87	107.26	46.7	46.71	71.43	10	1711.0	1.53
	L_4-U_5	-149.27	158.88	-81.87	107.26	46.7	46.71	71.43	10	1711.0	1.53
	U_5-L_6	-151.85	154.50	-153.61	89.39	46.7	46.71	71.43	10	1711.0	1.53
	L_0-U_0	-151.85	154.50	-153.61	89.39	46.7	46.71	71.43	10	1711.0	1.53
	U_0-L_1	-114.87	92.54	-84.49	52.54	20.8	20.80	20.67	34.66	1076.0	1.67
	L_1-U_1	-46.44	21.93	-28.59	-0.29	15.4	15.42	23.71	2	751.9	1.54
	L_2-U_2	-11.79	-12.78	13.16	14.25	15.4	15.42	23.71	2	751.9	1.54
	L_3-U_3	-37.80	-77.38	-2.03	2.18	-6.03	-0.38				
	L_4-U_4	-78.32	-74.26	-4.21	3.62	-10.01	-0.07				
	L_5-U_5	-115.65	79.79	-4.12	3.01	-0.38	-0.35				
	L_0-U_1	-76.53	79.74	3.21	3.08	0.69	-0.21				
	U_1-L_2	-109.78	99.44	-4.12	3.31	0.38	-0.40				
	L_2-U_3	-78.92	74.41	-3.29	2.80	0.56	-0.46				
	U_3-L_4	-39.38	13.68	-1.68	1.33	0.37	-0.68				
	L_4-U_5	-4.38	-11.20	-1.31	0.77	0.01	-0.57				
	U_5-L_6	6.85	-23.86	0.74	0.45	0.64	-1.23				
	L_0-L_1	-44.40	35.30	-1.60	1.35	0.43	-0.97				
	L_1-L_2	-96.54	69.68	-3.28	2.68	0.33	-0.74				
	L_2-L_3	-85.37	67.20	-3.22	2.17	-0.34	-0.52				
	L_3-L_4	-30.77	28.98	-2.52	2.03	0.07	-0.47				
	L_4-L_5	-109.81	116.32	-3.69	3.29	0.08	-0.57				
	L_5-L_6	-141.94	130.59	-4.84	4.08	0.63	-0.31				
	L_0-U_0	-80.17	108.32	-2.68	3.46	0.05	-0.55				
	U_0-L_1	-11.95	79.18	2.61	3.13	0.49	-0.39				
	L_1-U_1	-77.25	73.40	-3.91	2.67	0.72	-0.38				
	U_1-L_2	-66.17	89.96	-3.57	3.37	0.25	-0.32				
	L_2-U_2	-58.05	72.68	-3.06	2.66	0.04	-0.48				
	L_3-U_3	-56.05	72.68	-3.06	2.66	0.04	-0.48				
	L_4-U_4	-31.83	37.59	-2.06	1.92	0.04	-0.64				
	L_5-U_5	-10.04	3.78	-0.96	0.71	0.29	-0.96				
	L_0-L_1	-10.04	3.78	-0.96	0.71	0.29	-0.96				
	L_1-L_2	-8.76	2.44	-0.91	0.61	0.29	-0.96				
	L_2-L_3	-19.42	19.56	-1.55	1.33	0.49	-0.80				
	L_3-L_4	-30.32	30.68	-2.17	1.82	0.62	-0.91				
	L_4-L_5	-46.48	58.24	-3.40	2.87	0.23	-0.63				
	L_5-L_6	-54.27	68.32	-3.40	3.08	0.40	-0.49				
	L_0-U_0	-51.16	64.52	-3.40	3.08	0.40	-0.49				
	U_0-L_1	-69.31	71.94	-4.50	4.07	0.27	-0.33				
	L_1-U_1	-69.31	71.94	-4.50	4.07	0.27	-0.33				
	U_1-L_2	-38.18	54.54	-2.54	3.35	0.64	-0.52				
	L_2-U_2	-38.18	54.54	-2.54	3.35	0.64	-0.52				
	U_2-L_3	-27.58	31.93	-3.52	2.62	0.50	-0.21				
	L_3-U_3	-77.08	85.18	-2.99	2.96	0.50	-0.21				
	L_0-U_0	-78.35	71.28	-3.01	2.52	-0.11	-0.20				
	U_0-L_1	-78.35	71.28	-3.01	2.52	-0.11	-0.20				
	U_1-L_2	-76.62	55.14	-3.04	2.70	-0.08	-0.67				
	L_2-U_2	-76.62	55.14	-3.04	2.70	-0.08	-0.67				
	U_2-L_3	-77.08	85.18	-2.99	2.96	0.50	-0.21				
	L_3-U_3	-27.58	31.93	-3.52	2.62	0.50	-0.21				
	L_0-L_1	-8.47	4.15	-0.82	0.33	1.08	-1.38				
	L_1-L_2	-8.47	4.15	-0.82	0.33	1.08	-1.38				
	L_2-L_3	-15.43	10.63	-1.29	0.91	1.27	-1.38				
	L_3-L_4	-15.43	10.63	-1.29	0.91	1.27	-1.38				
	L_4-L_5	-33.68	19.58	-2.18	1.73	0.17	-0.43				
	L_5-L_6	-33.68	19.58	-2.18	1.73	0.17	-0.43				
	L_0-U_0	-78.90	59.78	-4.41	3.49	0.56	-0.51				
	U_0-L_1	-78.90	59.78	-4.41	3.49	0.56	-0.51				
	L_1-U_1	-68.27	63.59	-4.57	3.28	0.23	-0.22				
	U_1-L_2	-68.27	63.59	-4.57	3.28	0.23	-0.22				
	L_2-U_2	-90.31	64.36	-3.23	2.65	0.28	-0.26				
	U_2-L_3	-33.50	18.26	-1.74	1.55	0.08	-0.35				
	L_3-U_3	-33.50	18.26	-1.74	1.55	0.08	-0.35				
	U_3-L_4	-1.49	-18.98	-0.84	0.50	0.41	-1.01				
	L_4-U_4	-1.49	-18.98	-0.84	0.50	0.41	-1.01				
	U_4-L_5	-53.83	37.97	-1.89	1.59	0.00	-0.73				
	L_5-U_5	-61.79	22.37	-2.18	1.17	-0.84

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: **4F1**
Condition: **As-inspected**

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moment from STAAD

Location	Member	Dead Load (k-in)	Live Load (End-i) (k-in)	Live Load (Mid) (k-in)	End-i (k-in)	Pedestrian Load (Mid) (k-in)	Start-i (k-in)	Lane Reduction & Impact Live Load (End-i) (k-in)	Start-i (k-in)	Lane Reduction & Impact Live Load (Mid) (k-in)	Start-i (k-in)	Impact Pedestrian Load Max (End-i) (k-in)	Start-i (k-in)	Impact Pedestrian Load Max (Mid) (k-in)
Structure 1	U_1–U_2	-79.17	-0.72	-0.86	1.15	2.10	-16.36	-9.56	12.79	23.37	-182.09	0.00	0.00	0.00
	U_2–U_3	-46.82	-30.29	0.19	-2.21	-2.23	-18.54	-24.03	-205.43	0.00	0.00	0.00	0.00	0.00
	U_3–U_4	-112.29	86.52	1.01	2.78	-3.35	-18.90	11.24	30.94	-37.42	-210.37	0.00	0.00	0.00
	U_4–U_5	-75.71	66.12	6.41	2.95	-3.83	-17.33	-17.32	23.30	-42.64	-192.98	0.00	0.00	0.00
	U_5–L_1	-8.25	61.62	1.44	2.65	-0.29	-9.55	16.05	29.50	-4.38	-106.36	0.00	0.00	0.00
	U_6–L_2	42.76	120.21	-7.35	4.20	-2.81	-6.40	-81.81	46.77	-31.27	-11.26	0.00	0.00	0.00
	U_7–L_3	93.19	43.60	-1.74	2.00	-0.37	-3.50	-17.39	22.23	-4.14	-116.85	0.00	0.00	0.00
	U_8–L_4	-47.38	526.15	-12.43	18.05	0.09	-0.05	-138.39	200.93	0.69	-0.55	0.00	0.00	0.00
	L_1–L_2	475.03	124.16	1.16	1.45	12.78	-17.01	12.46	15.68	131.45	-183.42	0.00	0.00	0.00
	L_2–L_3	46.82	20.59	1.47	2.24	-0.25	-11.34	15.85	24.11	-2.65	-122.27	0.00	0.00	0.00
	L_3–L_4	64.59	-138.78	2.26	1.72	0.01	-15.78	24.41	15.85	0.49	-170.15	0.00	0.00	0.00
	L_4–U_5	27.91	-140.51	2.52	1.35	-0.60	-17.56	27.14	14.56	-6.44	-189.33	0.00	0.00	0.00
	U_5–U_6	-106.12	-155.13	1.94	0.69	-0.43	-20.00	20.87	7.43	-4.64	-211.64	0.00	0.00	0.00
	U_6–U_7	-138.04	-202.90	4.46	0.03	-0.35	-28.56	20.87	0.00	-4.64	-211.64	0.00	0.00	0.00
	U_7–U_8	-245.82	-183.07	1.33	0.98	-2.13	-20.25	14.31	10.61	-22.94	-218.31	0.00	0.00	0.00
	U_8–U_9	-123.51	-327.01	0.32	1.90	-1.97	-9.95	-47.32	-171.11	-9.95	-229.91	0.00	0.00	0.00
	U_9–U_{10}	-269.97	-145.19	-1.22	1.18	-12.15	-14.93	-13.16	12.71	-130.96	-166.99	0.00	0.00	0.00
	U_{10}–L_5	-144.36	-67.49	0.29	0.53	-3.41	-8.74	-100.13	5.96	-34.26	-8.00	0.00	0.00	0.00
	L_5–L_6	-170.82	-20.32	-0.84	2.24	-2.49	-5.76	-9.01	24.12	-26.88	-62.09	0.00	0.00	0.00
	L_6–L_7	-186.22	23.42	-7.23	8.40	-1.79	-13.96	-77.95	90.54	-19.32	-150.53	0.00	0.00	0.00
	L_7–L_8	114.62	29.70	-1.52	3.36	-0.16	-15.56	-3.16	19.86	-3.07	-169.68	0.00	0.00	0.00
	L_8–U_9	-71.24	180.99	-0.21	1.59	-1.80	-18.96	-2.21	16.89	-19.14	-201.88	0.00	0.00	0.00
	U_9–U_{10}	-59.68	-253.01	0.32	1.90	-1.97	-9.95	-47.32	-171.11	-9.95	-229.91	0.00	0.00	0.00
	U_{10}–U_{11}	-327.34	-325.40	0.82	2.64	-9.67	-33.16	8.77	28.09	-56.60	-353.03	0.00	0.00	0.00
	U_{11}–L_9	-338.58	-367.31	1.31	2.68	-7.40	-33.16	-8.59	18.71	-42.87	-353.03	0.00	0.00	0.00
	L_9–L_{10}	-396.14	-197.74	-10.43	4.49	-7.92	-26.57	-110.99	47.76	-88.33	-282.90	0.00	0.00	0.00
	L_{10}–L_{11}	-344.18	-179.44	3.29	2.87	-7.57	-41.99	35.03	30.60	-80.56	-447.02	0.00	0.00	0.00
	L_{11}–U_{12}	-226.16	-291.72	2.79	3.25	-1.93	-32.64	25.83	34.60	-127.04	-219.99	0.00	0.00	0.00
	U_{12}–U_{13}	-350.21	-90.73	2.19	3.74	-0.72	-16.64	23.35	39.86	-1.71	-177.16	0.00	0.00	0.00
	U_{13}–U_{14}	-229.16	-91.79	3.07	3.66	-0.33	-16.64	24.82	46.13	-0.33	-177.16	0.00	0.00	0.00
	U_{14}–U_{15}	-167.09	-39.84	3.52	3.57	-4.53	-11.00	37.90	38.03	-46.98	-117.07	0.00	0.00	0.00
	U_{15}–L_{12}	-109.78	170.74	-6.91	4.21	-0.90	-7.92	-62.95	44.85	-9.58	-19.81	0.00	0.00	0.00
	L_{12}–L_{13}	-8.75	79.50	0.34	1.75	-0.74	-8.45	-38.89	4.45	-188.89	-19.81	0.00	0.00	0.00
	L_{13}–L_{14}	-261.01	1266.00	-17.08	26.99	-0.56	-1.13	-181.86	287.39	-5.98	-12.65	0.00	0.00	0.00
	L_{14}–L_{15}	1192.78	0.00	0.00	28.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}–U_{16}	-25.29	11.66	1.84	3.39	-4.51	-20.86	20.29	35.65	-47.44	-219.44	0.00	0.00	0.00
	U_{16}–U_{17}	-341.12	88.64	2.68	3.25	-1.93	-32.64	28.24	34.60	-127.04	-222.07	0.00	0.00	0.00
	U_{17}–U_{18}	-150.60	33.06	2.51	2.70	2.63	-18.83	26.37	28.39	-21.40	-198.11	0.00	0.00	0.00
	U_{18}–L_{16}	-147.31	4.37	3.13	2.24	0.32	-21.49	32.88	23.51	-3.41	-226.10	0.00	0.00	0.00
	L_{16}–L_{17}	-29.55	54.01	1.06	1.42	-0.26	-11.34	15.85	24.11	-2.65	-122.27	0.00	0.00	0.00
	L_{17}–L_{18}	-31.69	-33.99	0.08	2.50	0.44	-23.51	0.81	26.27	4.65	-247.34	0.00	0.00	0.00
	L_{18}–U_{19}	-86.03	-71.79	1.59	16.73	-1.74	-37.99	-40.15	-10.03	-35.15	-365.72	0.00	0.00	0.00
	U_{19}–U_{20}	-60.96	-66.58	1.04	1.42	-3.85	-19.99	10.93	14.98	-40.47	-209.88	0.00	0.00	0.00
	U_{20}–U_{21}	-21.55	15.63	0.92	1.75	-0.74	-8.45	-38.89	4.45	-188.89	-19.81	0.00	0.00	0.00
	U_{21}–L_{19}	-33.07	-28.69	2.37	3.03	-5.75	-17.22	24.91	31.89	-60.49	-181.20	0.00	0.00	0.00
	L_{19}–L_{20}	-15.13	113.78	-9.70	4.65	-5.56	-11.94	-102.04	48.92	-58.53	-125.57	0.00	0.00	0.00
	L_{20}–L_{21}	-0.16	129.54	-9.77	4.65	-5.56	-11.94	-102.04	48.92	-58.53	-125.57	0.00	0.00	0.00
	L_{21}–U_{22}	-2.74	209.84	-12.06	6.54	-3.34	-10.86	-126.86	68.85	-35.17	-114.25	0.00	0.00	0.00
	U_{22}–U_{23}	-0.16	129.54	-9.77	4.65	-5.56	-11.94	-102.04	48.92	-58.53	-125.57	0.00	0.00	0.00
	U_{23}–L_{22}	-122.51	1157.56	-13.73	27.74	0.13	-1.48	-144.44	291.82	1.32	-13.53	0.00	0.00	0.00
	L_{22}–L_{23}	1154.91	-197.36	-0.09	3.00	24.45	-28.10	-1.00	31.91	260.35	-299.16	0.00	0.00	0.00
	L_{23}–U_{24}	1154.91	-197.36	-0.09	3.00	24.45	-28.10	-1.00	31.91	260.35	-299.16	0.00	0.00	0.00
	U_{24}–U_{25}	178.89	-59.81	2.75	3.33	1.95	-19.92	29.30	35.45	-20.72	-211.04	0.00	0.00	0.00
	U_{25}–L_{24}	68.66	-178.68	3.84	3.10	-2.81	-24.97	40.51	32.96	-29.92	-265.87	0.00	0.00	0.00
	L_{24}–L_{25}	68.66	-178.68	3.84	3.10	-2.81	-24.97	40.51	32.96	-29.92	-265.87	0.00	0.00	0.00
	L_{25}–U_{26}	-236.51	-153.10	3.91	2.55	-4.89	-40.90	30.96	27.18	-48.88	-426.48	0.00	0.00	0.00
	U_{26}–U_{27}	-99.60	-313.27	1.77	3.78	-6.01	-24.00	18.86	40.22	-64.02	-256.08	0.00	0.00	0.00
	U_{27}–L_{26}	-159.54	-360.07	3.86	3.16	-5.31	-31.92	24.16	33.96	-47.29	-324.10	0.00	0.00	0.00
	L_{26}–L_{27}	-350.37	-386.86	-5.25	1.88	-9.22	-29.20	20.06	20.56	-85.12	-310.91	0.00	0.00	0.00
	L_{27}–U_{28}	-279.39	-117.76	-9.75	4.67	-3.67	-13.41	-103.87	49.69	-41.93	-142.77	0.00	0.00	0.00
	U_{28}–U_{29}	-282.51	-281.61	-5.25	1.88	-9.22	-29.20	20.06	20.56	-85.12	-310.91	0.00	0.00	0.00
	U_{29}–L_{28}	-77.40	96.23	3.07	9.04	0.30	-16.50	-77.40	96.23	3.07	9.04	0.30	-16.50	0.00
	L_{28}–L_{29}	-139.08	-187.97	-6.82	1.01	5.75	-13.86	-92.89	10.87	62.00	-149.41	0.00	0.00	0.00
	L_{29}–U_{30}	-47.38	-118.55	-0.92	1.88	-0.17	-14.32	-52.58	-129.17	-4.34	-164.36	0.00	0.00	0.00
	U_{30}–L_{30}	-52.58	-129.17	-0.97	0.90	1.39	-18.76	-1.61	9.66	14.95	-202.22	0.00	0.00	0.00
	L_{30}–U_{31}	-277.84	-111.68	-8.82	2.49	-1.68	-22.99	-95.04	26.85	-20.26	-247.92	0.00	0.00	0.00
	U_{31}–L_{31}	-166.98	-243.52	1.19	1.64	-7.29	-28.56	12.82	17.64	-79.70	-312.01	0.00	0.00	0.00
	L_{31}–U_{32}	-287.74	-127.82	1.31	0.37	-7.17	-18.36	-57.62	-146.42	-368.91	-406.35	0.00	0.00	0.00
	U_{32}–L_{32}	-141.43	-113.94	-7.12	3.44	-2.08	-13.31	-76.75	37.08	-22.47	-142.50	0.00	0.00	0.00
	L_{32}–U_{33}	-140.52	-22.75	-3.82	2.80	-5.11	-9.57	-41.13	30.23	-59.05	-163.14	0.00	0.00	0.00
	U_{33}–L_{33}	-141.64	56.96	-5.59	3.12	-1.63	-5.01	-60.29	51.10	-17.55	-64.09	0.00	0.00	0.00
	L_{33}–U_{34}	-136.67	476.04	-11.21	13.49	0.11	-0.03	-120.88	145.49	1.21	-0.31	0.00	0.00	0.00
	U_{34}–L_{34}	-497.26	-34.44	2.13	1.54	18.83	-20.46	23.75	17.16	209.67	227.80	0.00	0.00	0.00
	L_{34}–U_{35}	41.03	109.94	1.67	2.20	-1.80	-12.28	18.64	24.49	-20.01	-136.74	0.00	0.00	0.00
	U_{35}–L_{35}	113.04	44.48	2.72	1.90	1.07	-14.32	30.25	21.17	11.89	-109.47	0.00	0.00	0.00
	L_{35}–U_{36}	59.35	15.11	2.63	1.66	-1.34	-16.87	29.28	18.49	-14.95	-187.76	0.00	0.00	0.00
	U_{36}–L_{36}	80.09	-19.75	2.65	1.40	1.08	-14.33	29.54	16.18	12.07	-109.49	0.00	0.00	0.00
	L_{36}–U_{37}	80.30	-119.58	-3.37	1.10	-2.98	-14.23	-37.66	12.29	-33.13	-168.46	0.00	0.00	0.00
	U_{37}–U_{38}	-24.63	-27.07	-0.96	1.04	-8.37	-9.41	-10.70	11.60	-104.33	-104.81	0.00	0.00	0.00
	U_{38}–U_{39}	-29.38	-160.66	-4.15	8.24	-1.75	-12.68	-68.61	91.70	-19.44	-141.20	0.00	0.00	0.00

ZZ Axis Moment Properties

Location	Member	Max. Pos. Mom. Start-i (k-in)	Max. Pos. Mom. End-i (k-in)	S_{top} (in^3)	S_b (in^3)	S_{bc} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term / F-S_{bc}	M_n (k-in)	Equivalent Mom. Factor a	$C_{m(x)}$	$C_{m(n)}$
Structure 1	U_1–U_2	-103.65	15.69	-60.84	-237.66	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.256	0.70	0.710
	U_2–U_3	-58.66	6.39	-33.89	-132.38	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.223	0.70	0.710
	U_3–U_4	-131.36	152.69	-194.62	-161.01	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.827	0.93	0.93
	U_4–U_5	-113.13	128.89	-164.03	-90.21	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.675	0.78	0.78
	U_5–L_1	8.84	118.46	-17.71	-58.17	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	0.075	0.63	0.63
	U_6–L_2	-50.76	217.07	14.93	63.63	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.234	0.51	0.51
	U_7–L_3	-99.64	151.75	-10.94	15.34	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880042	2974.3	-0.160	0.53	0.53
	U_8–L_4	-138.39	200.93	0.69	-0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_1–L_2	633.74	-141.28	788.48	-400.11	130.3	130.35	105.11	180.77	2960	1799.3	1.39	5965	0.99880039	4292.8	-0.507	0.40	0.40
	L_2–L_3	81.47	58.11	57.41	-132.18	96.6	96.61	79.12	135.29	2174	1387.9	1.40	4465	0.99873190	3184.1	-0.434	0.43	0.43
	L_3–L_4	11.70	-156.33	186.14	-461.61	96.6	96.61	79.12	135.29	2174	1387.9	1.40	4465	0.99873190	3184.1	-0.434	0.43	0.43
	L_4–U_5	71.56	-163.74	211.91	-428.79	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99872695	4241.5	-0.401	0.76	0.76
	U_5–U_6	-110.62	-192.02	-143.98	-452.01	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.99905082	5003.4	-0.299	0.72	0.72
	U_6–U_7	-269.68	-319.78	-136.89	-452.01	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.99905082	5003.4	-0.299	0.72	0.72
	U_7–U_8	-300.94	-224.20	-349.37	-521.80	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	-0.270	0.67	0.67
	U_8–U_9	-235.08	-402.87	-113.38	-722.10	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	-0.270	0.67	0.67
	U_9–U_{10}	-368.08	-172.21	-521.21	-398.02	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	-0.764	0.91	0.91
	U_{10}–L_5	-330.61	-22.90	-246.52	-210.27	127.3	127.33	110.40	189.23	3668	2326.5	1.44	6146	0.99907156	4197.7	-0.093	0.63	0.63
	L_5–L_6	-233.78	8.93	-257.01	-107.09	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.6	-0.417	0.77	0.77
	L_6–L_7	-77.95	90.54	-19.32	-150.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_7–L_8	-3.16	19.86	-3.07	-169.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_8–U_9	-2.21	16.89	-19.14	-201.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_9–U_{10}	-330.61	-22.90	-246.52	-210.27	127.3	127.33	110.40	189.23	3668	2326.5	1.44	6146	0.99907156	4197.7	-0.093	0.63	0.63
	U_{10}–U_{11}	-343.43	148.15	-267.21	-165.24	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99886042	3452.6	-0.431	0.43	0.43
	U_{11}–L_9	-414.14	-386.51	-551.12	-881.97	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.625	0.85	0.85
	L_9–L_{10}	-419.36	-443.41	-539.90	-1009.72	232.7	232.70	186.86	340.10	6520	3217.6	1.46	11223	0.99885838	7670.6	0.523	0.81	0.81
	L_{10}–L_{11}	-396.14	-197.74	-10.43	47.76	-88.33	-282.90	-110.99	47.76	-88.33	-282.90	0.00	0.00	0.00	0.00
	L_{11}–U_{12}	-344.18	-179.44	3.29	30.60	-80.56	-447.02	35.03	30.60	-80.56	-447.02	0.00	0.00	0.00	0.00
	U_{12}–U_{13}	-226.16	-291.72	2.79	34.60	-127.04	-219.99	25.83	34.60	-127.04	-219.99	0.00	0.00	0.00	0.00
	U_{13}–U_{14}	-350.21	-90.73	2.19	39.86	-1.71	-177.16	23.35	39.86	-1.71	-177.16	0.00	0.00	0.00	0.00
	U_{14}–U_{15}	-229.16	-91.79	3.07	46.13	-0.33	-177.16	24.82	46.13	-0.33	-177.16	0.00	0.00	0.00	0.00
	U_{15}–L_{12}	-167.09	-39.84	3.52	38.03	-46.98	-117.07	37.90	38.03	-46.98	-117.07	0.00	0.00	0.00	0.00
	L_{12}–L_{13}	-109.78	170.74	-6.91	44.85	-9.58	-19.81	-62.95	44.85	-9.58	-19.81	0.00	0.00	0.00	0.00
	L_{13}–L_{14}	-8.75	79.50	0.34	4.45	-188.89	-19.81	-38.89	4.45	-188.89	-19.81	0.00	0.00	0.00	0.00
	L_{14}–L_{15}	-261.01	1266.00	-17.08	287.39	-5.98	-12.65	-181.86	287.39	-5.98	-12.65	0.00	0.00	0.00	0.00
	L_{15}–U_{16}	1192.78	0.00	0.00	28.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{15}–U_{16}	-25.29	11.66	1.84	3.39	-4.51	-20.86	20.29	35.65	-47.44	-219.44	0.00	0.00	0.00	0.00
	U_{16}–U_{17}	-341.12	88.64	2.68	34.60	-127.04	-222.07	28.24	34.60	-127.04	-222.07	0.00	0.00	0.00	0.00
	U_{17}–U_{18}	-150.60	33.06	2.51	2.70	2.63	-18.83	26.37	28.39	-21.40	-198.11	0.00	0.00	0.00	0.00
	U_{18}–L_{16}	-147.31	4.37	3.13	2.24	0.32	-21.49	32.88	23.51	-3.41	-226.10	0.00	0.00	0.00	0.00
	L_{16}–L_{17}	-29.55	54.01	1.06	1.42	-0.26	-11.34	15.85	24.11	-2.65	-122.27	0.00	0.00	0.00	0.00
	L_{17}–L_{18}	-31.69	-33.99	0.08	2.50	0.44	-23.51	0.81	26.27	4.65	-247.34	0.00	0.00	0.00	0.00
	L_{18}–U_{19}	-86.03	-71.79	1.59	16.73	-1.74	-37.99	-40.15	-10.03	-35.15	-365.72	0.00	0.00	0.00	0.00
	U_{19}–U_{20}	-60.96	-66.58	1.04	1.42	-3.85	-19.99	10.93	14.98	-40.47	-209.88	0.00	0.00	0.00	0.00
	U_{20}–U_{21}	-21.55	15.63	0.92	1.75	-0.74	-8.45	-38.89	4.45	-188.89	-19.81	0.00	0.00	0.00	0.00
	U_{21}–L_{19}	-33.07	-28.69	2.37	3.03	-5.75	-17.22	24.91	31.89	-60.49	-181.20	0.00	0.00	0.00	0.00
	L_{19}–L_{20}	-15.13	113.78	-9.70	4.65	-5.56	-11.94	-102.04	48.92	-58.53	-125.57	0.00	0.00	0.00	0.00
	L_{20}–L_{21}	-0.16	129.54	-9.77	4.65	-5.56	-11.94	-102.04	48.92	-58.53	-125.57	0.00	0.00	0.00	0.00
	L_{21}–U_{22}	-2.74	209.84	-12.06	6.54	-3.34	-10.86	-126.86	68.85	-35.17	-114.25	0.00	0.00	0.00	0.00
	U_{22}–U_{23}	-0.16	129.54	-9.77	4.65	-5.56	-11.94	-102.04	48.92	-58.53	-125.57	0.00	0.00	0.00	0.00
	U_{23}–L_{22}	-122.51	1157.56	-13.73	27.74	0.13	-1.48	-144.44	291.82	1.32	-13.53	0.00	0.00	0.00	0.00
	L_{22}–L_{23}	1154.91	-197.36	-0.09	3.00	24.45	-28.10	-1.00	31.91	260.35	-299.16	0.00	0.00	0.00	0.00
	L_{23}–U_{24}	1154.91	-197.36	-0.09	3.00	24.45	-28.10	-1.00	31.91	260.35	-299.16	0.00	0.00	0.00	0.00
	U_{24}–U_{25}	178.89	-59.81	2.75	3.33	1.95	-19.92	29.30	35.45	-20.72	-211.04	0.00	0.00	0.00	0.00
	U_{25}–L_{24}	68.66	-178.68	3.84	3.10	-2.81	-24.97	40.51	32.96	-29.92	-265.87	0.00	0.00	0.00	0.00
	L_{24}–L_{25}	68.66	-178.68	3.84	3.10	-2.81	-24.97	40.51	32.96	-29.92	-265.87	0.00	0.00	0.00	0.00
	L_{25}–U_{26}	-236.51	-153.10	3.91	2.55	-4.89	-40.90	30.96	27.18	-48.88	-426.48	0.00	0.00	0.00	0.00
	U_{26}–U_{27}	-99.60	-313.27	1.77	3.78	-6.01	-24.00	18.86	40.22	-64.02	-256.08	0.00	0.00	0.00	0.00
	U_{27}–L_{26}	-159.54	-360.07	3.86	3.16	-5.31	-31.92	24.16	33.96	-47.29	-324.10	0.00	0.00	0.00	0.00
	L_{26}–L_{27}	-350.37	-386.86	-5.25	1.88	-9.22	-29.20	20.06	20.56	-85.12	-310.91	0.00	0.00	0.00	0.00
	L_{27}–U_{28}	-279.39	-117.76	-9.75	4.67	-3.67	-13.41	-103.87	49.69	-41.93	-142.77	0.00	0.00	0.00	0.00
	U_{28}–U_{29}	-282.51	-281.61	-5.25	1.88	-9.22	-29.20	20.06	20.56	-85.12	-310.91	0.00	0.00	0.00	0.00
	U_{29}–L_{28}	-77.40	96.23	3.07	9.04	0.30	-16.50	-77.40	96.23	3.07	9.04	0.30	-16.50	0.00	0.00
	L_{28}–L_{29}	-139.08	-187.97	-6.82	1.01	5.75	-13.86	-92.89	10.87	62.00	-149.41	0.00	0.00	0.00	0.00
	L_{29}–U_{30}	-47.38	-118.55	-0.92	1.88	-0.17	-14.32	-52.58	-129.17	-4.34	-164.36	0.00	0.00	0.00	0.00
	U_{30}–L_{30}	-52.58	-129.17	-0.97	0.90	1.39	-18.76	-1.61	9.66	14.95	-202.22

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	L_0-L_1	-15.50	-73.38	-0.76	0.79	3.83	-8.19				
	L_1-L_2	39.75	-88.06	-0.10	1.76	3.35	-11.79				
	L_2-L_3	79.50	-42.24	1.09	-1.70	-13.10					
	L_3-L_4	-11.39	11.52	0.89	3.06	-0.87	-15.26				
	L_4-L_5	-49.18	2.08	-5.08	-0.38	-6.24	4.27				
	L_5-L_6	-6.43	187.22	-3.99	4.36	-4.53	-7.47				
	L_6-L_7	41.36	78.74	-3.10	4.47	-4.02	-9.28				
	L_7-L_8	-25.09	448.92	-3.17	13.16	0.08	-0.05				
	L_8-L_9	426.08	-36.00	2.02	1.03	10.02	-6.76				
	L_9-L_{10}	150.12	-105.15	0.71	2.33	2.08	9.27				
	L_{10}-L_{11}	120.53	-116.03	2.97	1.43	0.25	-7.55				
	L_{11}-L_{12}	109.16	-122.23	3.01	1.44	3.76	-9.26				
	L_0-L_{12}	-45.20	-121.29	1.87	0.89	-1.75	-10.31				
	L_{12}-L_{13}	96.42	-350.16	1.48	1.05	1.83	-19.68				
	L_{13}-L_{14}	82.72	-350.17	1.48	1.05	1.83	-19.68				
	L_{14}-L_{15}	-192.00	-318.69	-1.28	-1.32	-10.26	-17.47				
	L_{15}-L_{16}	339.87	44.80	-4.33	3.22	-0.24	-9.98				
	L_{16}-L_{17}	-154.69	-31.48	-4.23	3.81	-5.26	-5.26				
	L_{17}-L_{18}	-216.17	148.84	-6.50	4.18	-2.07	-2.30				
	L_{18}-L_{19}	-136.64	-69.93	4.54	4.50	-0.30	-0.21				
	L_0-L_{19}	2.99	-170.85	-0.54	1.05	2.99	-10.39				
	L_{19}-L_{20}	162.59	-245.54	1.30	4.12	14.50	-12.36				
	L_{20}-L_{21}	-6.26	-180.81	-0.13	1.14	-2.44	-12.68				
	L_{21}-L_{22}	150.12	-105.15	0.71	2.33	2.08	9.27				
	L_{22}-L_{23}	-253.03	-206.08	1.56	1.85	-3.91	-20.26				
	L_{23}-L_{24}	3.39	-67.31	0.89	3.39	-0.87	-15.26				
	L_{24}-L_{25}	-475.14	-252.78	2.84	2.87	-6.65	-28.41				
	L_{25}-L_{26}	-280.52	-64.48	-13.07	4.97	-8.57	-16.62				
	L_{26}-L_{27}	-82.72	-350.17	1.48	1.05	1.83	-19.68				
	L_{27}-L_{28}	-225.89	141.33	-8.84	4.47	-6.23	-9.98				
	L_{28}-L_{29}	351.68	-255.06	-2.76	4.86	-4.10	-7.25				
	L_{29}-L_{30}	-160.00	387.18	-5.93	6.07	-5.62	-8.09				
	L_{30}-L_{31}	-202.72	-204.41	0.81	2.80	-5.65	-17.61				
	L_{31}-L_{32}	-150.12	-105.15	0.71	2.33	2.08	-10.54				
	L_{32}-L_{33}	1072.48	-412.36	0.31	1.24	20.38	-18.44				
	L_{33}-L_{34}	337.48	-47.03	1.09	3.24	-1.87	-13.59				
	L_{34}-L_{35}	470.61	-49.01	3.79	1.76	3.88	-12.90				
	L_{35}-L_{36}	226.53	-41.80	1.53	1.86	1.63	-11.59				
	L_{36}-L_{37}	214.46	-56.64	2.22	2.34	-0.19	-13.78				
	L_{37}-L_{38}	33.88	-56.64	2.22	2.34	-0.19	-16.27				
Structure 2	L_{38}-L_{39}	49.26	-202.49	0.37	2.32	-0.52	-26.36				
	L_{39}-L_{40}	-197.13	-84.93	2.30	2.74	-5.83	-158.01				
	L_{40}-L_{41}	-111.93	0.87	-3.50	3.79	-8.68	-16.39				
	L_{41}-L_{42}	-60.79	179.83	-5.90	4.91	-4.39	-10.03				
	L_{42}-L_{43}	-81.88	265.66	-4.98	6.25	-6.60	-9.30				
	L_{43}-L_{44}	-100.08	-279.84	1.59	2.74	-7.39	-19.60				
	L_{44}-L_{45}	-132.46	69.61	-3.50	3.79	-8.68	-16.39				
	L_{45}-L_{46}	1027.57	362.88	-1.29	1.52	18.75	-17.43				
	L_{46}-L_{47}	-227.20	-125.85	0.82	3.85	-4.23	-13.66				
	L_{47}-L_{48}	-84.29	-84.29	-11.50	3.85	-4.23	-13.66				
	L_{48}-L_{49}	278.16	-133.13	1.79	3.41	4.01	-12.40				
	L_{49}-L_{50}	119.13	33.61	-3.50	3.79	-8.68	-16.39				
	L_{50}-L_{51}	222.98	-243.33	2.44	2.68	-3.57	-13.08				
	L_{51}-L_{52}	84.29	-84.29	-11.50	3.85	-4.23	-13.66				
	L_{52}-L_{53}	278.16	-133.13	1.79	3.41	4.01	-12.40				
	L_{53}-L_{54}	119.13	33.61	-3.50	3.79	-8.68	-16.39				
	L_{54}-L_{55}	222.98	-243.33	2.44	2.68	-3.57	-13.08				
	L_{55}-L_{56}	-291.76	319.69	-5.36	6.71	-5.85	-15.27				
	L_{56}-L_{57}	-392.42	38.25	-6.20	3.32	-9.76	-13.19				
	L_{57}-L_{58}	-297.20	199.08	-7.25	3.94	-5.63	-5.23				
	L_{58}-L_{59}	-297.20	199.08	-7.25	3.94	-5.63	-5.23				
	L_{59}-L_{60}	24.89	-109.69	-0.33	3.51	4.59	-8.60				
	L_{60}-L_{61}	139.96	-178.06	-0.32	0.72	3.74	-9.01				
	L_{61}-L_{62}	11.70	-187.21	-0.54	1.05	3.74	-9.01				
	L_{62}-L_{63}	47.96	-293.92	-0.22	1.00	-3.46	-13.71				
	L_{63}-L_{64}	8.37	-350.16	1.48	1.05	1.83	-19.68				
	L_{64}-L_{65}	-41.79	-343.26	0.29	1.80	-5.78	-23.00				
	L_{65}-L_{66}	-341.01	86.25	-13.04	5.61	-6.49	-15.27				
	L_{66}-L_{67}	-392.42	38.25	-6.20	3.32	-9.76	-13.19				
	L_{67}-L_{68}	-201.18	152.50	-5.46	3.57	-2.83	-7.35				
Structure 3	L_{68}-L_{69}	26.91	-26.91	-0.71	3.51	4.59	-8.60				
	L_{69}-L_{70}	-147.72	149.48	-5.24	4.47	-2.54	-7.13				
	L_{70}-L_{71}	-428.40	-26.47	-2.57	3.69	-6.89	-11.01				
	L_{71}-L_{72}	70.64	27.55	2.08	2.49	3.43	-9.92				
	L_{72}-L_{73}	194.51	-25.06	2.83	2.20	1.47	-14.01				
	L_{73}-L_{74}	45.44	-80.85	0.48	1.43	-6.19	-15.04				
	L_{74}-L_{75}	-74.43	-5.53	-8.82	4.93	0.58	-0.56				

M_2 Information

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{xx} (in^3)	S_{nx} (in^3)	Z_x (in^3)	I (in^4)	I_{nx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_xx	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}
Structure 1	L_0-L_1	-0.03	-14.79	0.15	0.59	-0.63	-2.30								
	L_1-L_2	1.66	6.08	-6.97	-25.61	0.00	0.00	0.00							
	L_2-L_3	0.54	-31.07	-12.66	-9.61	0.00	0.00	0.00							
	L_3-L_4	-2.36	-2.37	-27.05	-5.81	0.00	0.00	0.00							
	L_4-L_5	5.03	-5.70	-11.78	-7.80	0.00	0.00	0.00							
	L_5-L_6	-7.26	12.26	-37.62	-1.39	0.00	0.00	0.00							
	L_6-L_7	4.81	15.24	-39.51	-27.41	0.00	0.00	0.00							
	L_7-L_8	-1.26	-7.56	-1.26	-0.65	0.00	0.00	0.00							
	L_8-L_9	39.98	14.01	0.38	0.01	-1.39	0.54								
	L_9-L_{10}	-29.59	44.27	0.15	-0.61	-0.94	-0.28								
	L_{10}-L_{11}	-3.53	-4.17	-0.22	-0.33	-0.39	-0.04								
	L_{11}-L_{12}	0.64	-5.42	-14.35	-3.42	0.00	0.00	0.00							
	L_0-L_{12}	-7.64	6.00	-42.37	-14.55	0.00	0.00	0.00							
	L_{12}-L_{13}	16.83	20.40	-3.55	-31.75	375.47	322.87	431.42	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{13}-L_{14}	16.83	20.40	-3.55	-31.75	375.47	322.87	431.42	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{14}-L_{15}	-0.54	10.47	-21.06	-6.60	0.00	0.00	0.00							
	L_{15}-L_{16}	-9.16	11.05	-2.35	-33.06	0.00	0.00	0.00							
	L_{16}-L_{17}	-14.39	-2.28	-18.78	-81.32	0.00	0.00	0.00							
	L_{17}-L_{18}	-4.51	-29.43	-1.33	-0.21	-2.71	5.71								
	L_{18}-L_{19}	0.64	14.70	0.08	0.08	0.00	0.00	0.00							
	L_0-L_{19}	0.72	2.50	-13.30	-46.19	0.00	0.00	0.00							
	L_{19}-L_{20}	3.75	1.16	-22.20	-21.39	0.00	0.00	0.00							
	L_{20}-L_{21}	1.64	19.08	-0.15	0.27	-1.66	-1.34								
	L_{21}-L_{22}	39.98	14.01	0.38	0.01	-1.39	0.54								
	L_{22}-L_{23}	-0.81	-4.43	-9.07	-2.08	0.00	0.00	0.00							
	L_{23}-L_{24}	-0.27	-0.32	-0.04	-0.06	-0.07	-0.01								
	L_{24}-L_{25}	0.84	-5.93	-20.80	-5.56	-1.95	-0.12								
	L_{25}-L_{26}	6.51	16.81	-29.63	-19.96	0.00	0.00	0.00							
	L_{26}-L_{27}	-7.64	6.00	-42.37	-14.55	0.00	0.00	0.00							
	L_{27}-L_{28}	16.83	20.40	-3.55	-31.75	375.47	322.87	431.42	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{28}-L_{29}	8.99	15.26	-3.39	-19.84	0.00	0.00	0.00							
	L_{29}-L_{30}	7.07	13.37	-9.17	-16.43	0.00	0.00	0.00							
	L_{30}-L_{31}	-37.49	-25.73	-6.58	9.11	0.00	0.00	0.00							
	L_{31}-L_{32}	1.31	6.55	-13.30	-46.19	0.00	0.00	0.00							
	L_{32}-L_{33}	29.89	25.81	-8.95	-0.77	0.00	0.00	0.00							
	L_{33}-L_{34}	1.16	12.92	-10.17	-2.57	0.00	0.00	0.00							
	L_{34}-L_{35}	13.85	4.76	-12.19	-4.93	0.00	0.00	0.00							
	L_{35}-L_{36}	2.99	7.04	-6.66	-3.56	-1.95	-0.12								
	L_{36}-L_{37}	-8.24	-7.47	-10.32	-3.47	0.00	0.00	0.00							
	L_{37}-L_{38}	2.68	-6.39	-13.75	-4.62	0.00	0.00	0.00							
	L_{38}-L_{39}	12.96	-16.02	-0.04	-0.01	-0.04	0.00								
	L_{39}-L_{40}	-4.25	49.52	0.12	-0.08	-1.95	-0.04								
	L_{40}-L_{41}	-0.49	38.32	-0.28	0.01	-0.49	-0.01								
	L_{41}-L_{42}	8.58	-15.12	0.26	0.32	0.37	0.01								
	L_{42}-L_{43}	9.28	12.38	-10.93	-15.34	0.00	0.00	0.00							
	L_{43}-L_{44}	3.99	7.45	-16.52	-5.77	0.00	0.00	0.00							
	L_{44}-L_{45}	8.84	8.84	-0.07	-0.07	-0.07	-0.01								
	L_{45}-L_{46}	-12.96	-14.52	-15.57	-2.76	0.00	0.00	0.00							
	L_{46}-L_{47}	3.86	3.86	-0.14	-0.14	-0.14	-0.01								
	L_{47}-L_{48}	-27.84	-18.63	-5.14	-3.05	0.00	0.00	0.00							
	L_{48}-L_{49}	-14.41	-4.84	4.25	17.73	0.00	0.00	0.00							
	L_{49}-L_{50}	5.05	17.73	-25.94	-6.18	0.00	0.00	0.00							
	L_{50}-L_{51}	-13.29	8.93	10.96	38.21	383.93	329.77	440.93	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{51}-L_{52}	-27.84	-18.63	-5.14	-3.05	0.00	0.00	0.00							
	L_{52}-L_{53}	-14.41	-4.84	4.25	17.73	0.00	0.00	0.00							
	L_{53}-L_{54}	5.05	17.73	-25.94	-6.18	0.00	0.00	0.00							
	L_{54}-L_{55}	-13.29	8.93	10.96	38.21	383.93	329.77	440.93	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{55}-L_{56}	-88.86	56.93	-109.09	79.96	292.3	292.29	239.93	321.85	1516.9	1.10	19621	19621	0.746	0.245	0.250
	L_{56}-L_{57}	-14.88	16.88	31.50	33.54	313.36	313.36	344.53	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{57}-L_{58}	-12.02	58.71	-133.19	52.80	328.23	254.42	360.93	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{58}-L_{59}	-12.02	58.71	-133.19	52.80	328.23	254.42	360.93	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{59}-L_{60}	0.64	14.70	0.08	0.08	0.00	0.00	0.00							
	L_{60}-L_{61}	1.25	11.19	-46.19	-14.08	0.00	0.00	0.00							
	L_{61}-L_{62}	0.37	1.68	-12.30	-55.80	0.00	0.00	0.00							
	L_{62}-L_{63}	1.25	11.19	-46.19	-14.08	0.00	0.00	0.00							
	L_{63}-L_{64}	0.64	-5.42	-14.35	-3.42	0.00	0.00	0.00							
	L_{64}-L_{65}	-0.53	4.77	-39.31	-24.26	-17.17	233.3	233.26	201.34	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{65}-L_{66}	-0.69	-15.08	-24.26	-17.17	233.3	233.26	201.34	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{66}-L_{67}	-0.69	15.08	-24.26	-17.17	233.3	233.26	201.34	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{67}-L_{68}	-0.53	-4.77	-39.31	-24.26	-17.17	233.3	233.26	201.34	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{68}-L_{69}	0.64	-5.42	-14.35	-3.42	0.00	0.00	0.00							
	L_{69}-L_{70}	1.25	11.19	-46.19	-14.08	0.00	0.00	0.00							
	L_{70}-L_{71}	0.37	1.68	-12.30	-55.80	0.00	0.00	0.00							
	L_{71}-L_{72}	1.25	11.19	-46.19	-14.08	0.00	0.00	0.00							
	L_{72}-L_{73}	0.64	-5.42	-14.35	-3.42	0.00	0.00	0.00							
	L_{73}-L_{74}	-0.53	4.77	-39.31	-24.26	-17.17	233.3	233.26	201.34	1347.7	1.15	14237	14237	0.746	0.245	0.250
	L_{74}-L_{75}	-0.69	15.08	-24.26	-17.17	233.3	233.26	201.34	1347.7	1.15	14237	14237	0.746	0.245	0.250

Tension

Member	Yield Axial Portion	Yield Moment Portion	Yield Total	Yield Pass	Fracture Axial Portion	Fracture Moment Portion	Fracture Total	Fracture Pass
L_0-L_1	0.012	0.075	0.09	Yes	0.007	0.046	0.06	Yes
L_1-L_2	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_2-L_3	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_3-L_4	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_4-L_5	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_5-L_6	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_6-L_7	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_7-L_8	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_8-L_9	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_9-L_{10}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{10}-L_{11}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{11}-L_{12}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_0-L_{12}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{12}-L_{13}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{13}-L_{14}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{14}-L_{15}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{15}-L_{16}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{16}-L_{17}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{17}-L_{18}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{18}-L_{19}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_0-L_{19}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{19}-L_{20}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{20}-L_{21}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{21}-L_{22}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{22}-L_{23}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{23}-L_{24}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{24}-L_{25}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{25}-L_{26}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{26}-L_{27}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{27}-L_{28}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{28}-L_{29}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{29}-L_{30}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{30}-L_{31}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{31}-L_{32}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{32}-L_{33}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{33}-L_{34}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{34}-L_{35}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{35}-L_{36}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{36}-L_{37}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{37}-L_{38}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{38}-L_{39}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{39}-L_{40}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{40}-L_{41}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{41}-L_{42}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{42}-L_{43}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{43}-L_{44}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{44}-L_{45}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{45}-L_{46}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{46}-L_{47}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{47}-L_{48}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{48}-L_{49}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{49}-L_{50}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{50}-L_{51}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{51}-L_{52}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{52}-L_{53}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{53}-L_{54}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{54}-L_{55}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{55}-L_{56}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{56}-L_{57}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{57}-L_{58}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{58}-L_{59}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{59}-L_{60}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{60}-L_{61}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{61}-L_{62}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{62}-L_{63}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{63}-L_{64}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{64}-L_{65}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{65}-L_{66}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{66}-L_{67}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{67}-L_{68}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{68}-L_{69}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{69}-L_{70}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{70}-L_{71}	0.010	0.062	0.08	Yes	0.006	0.038	0.05	Yes
L_{71}-L_{72}	0.010	0.062	0.08	Yes	0.006	0.038	0.05

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Member
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
Structure 1	U_0~L_1	-29.87	49.03	-3.61	4.56	0.65	-0.71	-40.20	55.05	-7.21	-7.85
	U_1~L_2	-9.08	15.18	-3.91	3.54	0.55	-0.60	-43.57	39.41	6.15	-6.64
	U_2~L_3	10.20	9.70	-3.38	1.10	-0.83	-0.83	-37.65	42.32	12.22	-9.25
	U_3~L_4	33.45	-34.40	-2.95	3.11	2.33	-2.23	-32.79	34.61	25.88	-24.78
	U_4~L_5	41.64	-42.40	-1.49	1.99	2.33	-2.23	-16.63	14.41	29.98	-28.78
	U_5~L_6	45.56	-51.10	-0.74	0.52	3.23	-3.50	-8.28	5.77	36.00	-39.30
	U_6~L_7	55.60	-55.68	0.48	0.27	3.23	-3.50	6.31	-7.37	40.69	-44.94
	U_7~L_8	91.24	-101.87	-0.03	0.03	4.89	-5.10	-0.29	0.32	-54.42	-56.81
	U_8~L_9	-20.57	21.23	4.93	5.92	5.90	-6.95	-54.89	65.90	65.71	27.33
	U_9~L_{10}	-68.47	88.21	-3.65	3.77	-0.02	-0.27	-39.40	40.61	-0.17	-2.86
	U_{10}~L_{11}	-91.11	124.05	-3.92	4.05	0.94	-0.40	-42.30	59.43	5.84	-4.81
	U_{11}~L_{12}	-79.57	78.39	3.75	3.73	1.02	-0.96	-40.44	40.18	11.04	-10.20
	U_{12}~L_{13}	-49.26	60.16	-3.58	3.65	1.26	-1.28	-38.62	39.38	13.60	-13.76
	U_{13}~L_{14}	-29.77	34.66	-3.26	3.28	1.26	-1.30	-36.78	37.58	16.08	-16.26
	U_{14}~L_{15}	-1.50	-2.65	-2.30	2.32	3.25	-3.36	-24.74	25.05	35.95	-36.26
	U_{15}~L_{16}	24.13	-36.55	-1.61	1.30	3.25	-3.36	-12.71	12.68	55.89	-56.57
	U_{16}~L_{17}	46.23	-56.85	-0.47	0.35	3.21	-3.33	-5.11	3.74	64.64	-65.48
	U_{17}~L_{18}	110.44	-114.63	-0.37	0.38	1.90	-1.96	-4.00	4.50	62.68	-61.08
	U_{18}~L_{19}	121.36	-131.24	-0.33	0.33	5.78	-5.79	-3.54	3.56	62.30	-62.43
	U_{19}~L_{20}	134.59	-173.50	-0.20	0.28	5.71	-6.44	-2.19	3.01	61.55	-69.43
	U_{20}~L_{21}	114.23	168.97	-0.50	0.48	6.75	-7.00	-2.05	2.76	59.35	-77.17
	U_{21}~L_{22}	-123.79	131.39	-5.36	5.44	7.72	-8.13	-57.07	57.90	67.87	-8.13
	U_{22}~L_{23}	-105.48	113.43	-5.72	5.48	4.52	-4.96	-60.69	61.76	72.76	-8.96
	U_{23}~L_{24}	-56.01	62.13	-3.09	3.11	6.48	-6.51	-32.90	33.10	5.14	-5.43
	U_{24}~L_{25}	-34.05	39.79	-3.16	3.01	1.61	-1.61	-33.68	32.25	13.80	-13.66
	U_{25}~L_{26}	-7.04	12.29	2.95	3.06	1.84	-1.82	-31.41	32.60	19.60	-19.40
	U_{26}~L_{27}	15.85	-15.59	-2.86	2.86	2.23	-2.35	-30.49	30.46	23.73	-24.97
	U_{27}~L_{28}	38.85	-44.94	-1.38	1.30	2.23	-2.35	-14.74	13.50	21.83	-22.97
	U_{28}~L_{29}	86.91	-96.07	-1.68	1.56	4.38	-4.29	-17.86	16.62	46.67	-45.53
	U_{29}~L_{30}	135.08	-139.47	-1.40	1.70	1.30	-1.28	-20.84	20.14	65.19	-67.28
	U_{30}~L_{31}	141.23	-149.41	-1.06	0.74	4.76	-4.94	-11.28	7.83	60.69	-62.62
	U_{31}~L_{32}	192.55	-192.83	-0.44	0.37	4.68	-4.66	-4.66	3.89	47.67	-49.81
	U_{32}~L_{33}	187.41	-188.61	-0.32	0.42	5.25	-5.23	-4.23	3.76	43.76	-45.16
	U_{33}~L_{34}	203.52	-203.17	-0.40	0.42	6.05	-5.82	-4.23	4.51	54.07	-41.95
	U_{34}~L_{35}	83.05	-33.11	-0.39	0.39	5.76	-5.76	-67.79	63.99	64.97	64.97
	U_{35}~L_{36}	-109.89	162.61	6.44	6.09	0.64	-0.68	-67.79	63.99	6.77	-7.11
	U_{36}~L_{37}	-113.84	168.63	6.44	6.09	0.64	-0.68	-67.79	63.99	6.77	-7.11
	U_{37}~L_{38}	-130.37	127.18	-6.89	5.79	0.61	-0.60	-41.99	60.91	6.44	-6.29
	U_{38}~L_{39}	-113.07	114.60	-5.76	5.93	0.92	-0.83	-60.56	62.40	9.63	-8.69
	U_{39}~L_{40}	-94.47	92.64	-3.75	3.82	0.92	-0.83	-58.73	60.61	14.21	-13.39
	U_{40}~L_{41}	-44.77	46.58	-3.24	3.24	1.20	-1.14	-34.12	34.11	12.58	-11.96
	U_{41}~L_{42}	-30.30	34.39	-3.28	3.28	1.20	-1.14	-32.31	32.48	15.08	-16.31
	U_{42}~L_{43}	-3.69	4.33	-2.17	2.28	1.83	-2.01	-22.80	23.97	19.28	-21.77
	U_{43}~L_{44}	22.61	25.72	-2.04	2.04	1.83	-2.01	-21.00	22.06	34.43	-34.01
	U_{44}~L_{45}	39.85	-42.14	-1.53	1.32	3.14	-3.25	-16.12	13.90	33.01	-34.44
	U_{45}~L_{46}	88.57	-87.50	-1.20	0.98	3.92	-3.87	-12.63	10.31	61.28	-60.68
	U_{46}~L_{47}	138.29	-139.04	-0.57	0.57	6.29	-6.41	-6.03	5.94	66.14	-67.45
	U_{47}~L_{48}	129.54	-124.64	-0.49	0.49	5.76	-5.84	-4.23	4.23	44.57	-44.57
	U_{48}~L_{49}	173.96	-176.28	-0.32	0.28	6.63	-6.39	-3.38	2.98	69.76	-67.27
	U_{49}~L_{50}	2.25	-2.25	-6.19	6.19	0.61	-0.61	-59.67	57.52	6.19	-6.88
	U_{50}~L_{51}	-167.25	167.49	-5.60	5.40	0.58	-0.65	-59.67	57.52	6.19	-6.88
	U_{51}~L_{52}	-116.13	110.00	-4.73	4.63	0.29	-0.52	-50.34	49.33	3.11	-5.48
	U_{52}~L_{53}	-94.98	92.09	-4.90	4.66	1.02	-0.93	-48.71	49.38	7.67	-8.03
	U_{53}~L_{54}	-119.87	124.44	-4.58	4.64	0.72	-0.53	-48.71	49.38	7.67	-5.69
	U_{54}~L_{55}	-118.40	122.77	-4.64	4.70	0.72	-0.53	-47.24	47.91	10.37	-10.37
	U_{55}~L_{56}	-79.51	88.87	-4.48	4.36	1.20	-1.10	-47.72	46.46	12.77	-11.72
	U_{56}~L_{57}	-43.96	51.94	-2.30	2.54	1.22	-1.36	-24.43	27.06	12.98	-14.52
	U_{57}~L_{58}	-20.98	23.76	-2.30	2.54	1.22	-1.36	-22.63	25.16	15.48	-17.02
	U_{58}~L_{59}	-5.58	1.82	-2.33	2.13	2.88	-3.09	-24.82	22.67	30.79	-32.89
	U_{59}~L_{60}	16.80	-16.80	-1.61	1.61	2.88	-3.09	-13.43	10.97	30.79	-32.89
	U_{60}~L_{61}	55.25	-61.09	-0.47	0.48	3.01	-3.12	-4.97	5.08	31.99	-33.18
	U_{61}~L_{62}	115.62	-127.71	-0.40	0.40	6.71	-6.96	-3.76	3.76	60.00	-59.92
	U_{62}~L_{63}	137.15	-150.77	-0.62	0.63	5.96	-5.99	-6.57	6.67	63.49	-63.81
	U_{63}~L_{64}	165.74	-206.85	-0.45	0.61	5.31	-6.67	-4.62	6.44	56.51	-70.98
	U_{64}~L_{65}	82.96	144.15	-0.49	0.49	6.71	-7.00	-2.11	2.76	59.35	-77.17
	U_{65}~L_{66}	-109.90	112.02	-5.59	5.53	6.41	-6.44	-60.28	59.67	64.39	-11.98
	U_{66}~L_{67}	-93.79	96.09	-4.99	5.01	4.99	-5.16	-53.78	55.06	72.76	-8.54
	U_{67}~L_{68}	-38.43	48.15	-3.20	3.17	0.30	-0.32	-34.48	34.13	3.21	-3.44
	U_{68}~L_{69}	-37.08	34.15	-3.29	3.29	0.72	-0.56	-34.48	34.13	3.21	-3.44
	U_{69}~L_{70}	-2.76	8.37	3.31	3.41	1.83	-1.92	-35.68	36.72	19.75	-20.66
	U_{70}~L_{71}	25.90	-28.71	2.19	2.27	2.40	-2.59	-23.66	24.45	25.88	-27.33
	U_{71}~L_{72}	51.68	-57.27	2.19	2.27	2.40	-2.59	-23.66	24.45	25.88	-27.33
	U_{72}~L_{73}	79.40	-77.51	-1.39	1.29	3.70	-3.76	-14.98	13.52	39.86	-40.70
	U_{73}~L_{74}	94.27	-125.94	-1.01	0.74	3.76	-4.72	-10.92	7.98	40.52	-50.91
	U_{74}~L_{75}	92.31	-95.87	-0.48	0.36	3.69	-4.14	-5.21	3.86	39.80	-44.59
	U_{75}~L_{76}	142.75	-166.20	-0.08	0.11	5.32	-5.86	-2.89	1.15	57.37	-63.18
	U_{76}~L_{77}	37.53	-58.52	-0.43	7.24	4.57	-5.80	-71.09	80.43	50.83	49.14
	U_{77}~L_{78}	-87.20	89.91	-4.54	4.66	0.62	-0.54	-50.54	51.85	0.19	-0.43
	U_{78}~L_{79}	-48.49	45.44	-3.30	3.71	0.24	-0.20	-36.71	41.33	2.71	-2.18
	U_{79}~L_{80}	-38.99	42.97	-2.89	3.25	0.42	-0.38	-32.17	36.17	4.72	-4.23
	U_{80}~L_{81}	-39.90	40.31	-3.13	3.00	1.13	-1.04	-34.86	33.43	12.52	-11.54
	U_{81}~L_{82}	-37.48	38.74	-2.94	2.89	2.65	-2.88	-32.68	32.22	29.55	-32.03
	U_{82}~L_{83}	-10.30	11.14	-1.40	1.41	3.20	-3.69	-15.54	15.72	35.60	-41.04
	U_{83}~L_{84}	3.52	-11.96	-0.58	0.56	4.06	-3.95	-6.43	6.25	45.24	-44.01
	U_{84}~L_{85}	44.79	-53.88	-0.40	0.55	4.09	-5.53	-4.44	6.07	43.53	-61.58

M_2 Information

Max. Neg. Mom.

Member	Start (k-in)	End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I_x (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_u (k-in)	Equivalent Mom. Factor a	$C_{m(a)}$	$C_{m(b)}$
U_0~L_1	-91.10	139.31	29.46	63.54	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_1~L_2	-68.46	70.97	-3.82	11.11	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_2~L_3	-26.55	62.40	29.15	-24.64	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_3~L_4	0.86	0.28	77.13	-76.93	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_4~L_5	32.51	-66.49	79.91	-77.51	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_5~L_6	48.45	-98.93	106.03	-117.61	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
U_6~L_7	69.31	-98.33	106.03	-117.61	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
U_7~L_8	118.23	-132.01	189.35	-209.29	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
U_8~L_9	-88.09	113.26	58.68	-72.93	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5
U_9~L_{10}	-243.40	272.62	-172.63	198.44	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
U_{10}~L_{11}	-166.23	167.45	-115.24	110.95	39.5	39.52	39.44	58.46	14	1309.7	1.65	1929	1.5
U_{11}~L_{12}	-42.30	69.23	5.84	-4.81	42.74	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5
U_{12}~L_{13}	-156.02	154.14	-89.09	88.64	21.1	21.09	21.09	35.48	10	1137.6	1.68	1170	1.5
U_{13}~L_{14}	-114.25	129.40	-46.36	60.32	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
U_{14}~L_{15}	-78.22	86.08	-13.21	16.56	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{15}~L_{16}	-34.12	29.12	15.83	-20.67	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{16}~L_{17}	-21.89	28.43	83.24	-83.52	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{17}~L_{18}	-53.43	67.74	105.13	-119.33	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
U_{18}~L_{19}	-138.37	-143.78	221.46	-224.42	19.3	19.29	19.29	29.73	3	1137.2	1.57	1166	1.5
U_{19}~L_{20}	-153.17	-166.01	238.75	-251.79	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5
U_{20}~L_{21}	-172.13	-321.63	254.99	-315.80	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
U_{21}~L_{22}	-205.05	-309.35	118.10	-118.10	46.71	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
U_{22}~L_{23}	-233.11	246.07	-150.96	160.23	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
U_{23}~L_{24}	-83.33	85.03	-54.01	54.01	46.71	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
U_{24}~L_{25}	-58.05	57.86	3.75	-4.96	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
U_{25}~L_{26}	-115.58	123.80	-66.12	73.71	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
U_{26}~L_{27}	-88.04	88.04	-52.80	52.80	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
U_{27}~L_{28}	-89.99	98.36	16.32	-19.40	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{28}~L_{29}	-19.03	19.33	51.46	-52.73	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{29}~L_{30}	-31.36	-27.72	78.59	-81.72	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{30}~L_{31}	-89.78	-103.28	173.65	-184.07	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5
U_{31}~L_{32}	-51.24	-60.83	73.42	-84.31	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{32}~L_{33}	-168.94	-184.06	249.50	-262.64	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
U_{33}~L_{34}	-169.65	-191.02	257.68	-262.83	43.0	43.01	43.24	43.76	70.66	16	1515.6	1.63	2332	1.5
U_{34}~L_{35}	-259.08	-258.25	348.26	-344.66	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
U_{35}~L_{36}	-27.06	-27.06	49.79	-49.79	31.2	31.22	31.22	50.49	14	1392.6	1.62	2090	1.5
U_{36}~L_{37}	-295.94	-294.84	-199.03	202.41	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
U_{37}~L_{38}	-295.94	-294.84	-199.03	202.41	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
U_{38}~L_{39}	-250.07	244.51	-161.11	157.15	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5
U_{39}~L_{40}	-250.07	244.51	-161.11	157.15	42.7	42.74	42.74	65.30	9	1389.6	1.53	2155	1.5
U_{40}~L_{41}	-102.55	104.89	-41.84	45.00	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
U_{41}~L_{42}	-89.60	87.74	-16.31	20.39	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{42}~L_{43}	-34.43	36.78	20.28	-21.89	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{43}~L_{44}	-22.60	23.97	19.28	-21.77	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{44}~L_{45}	-39.85	-42.14	1.53	-3.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{45}~L_{46}	-30.86	-36.71	94.73	-99.16	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
U_{46}~L_{47}	-70.13	-74.35	140.21	-140.64	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5
U_{47}~L_{48}	-143.34	-147.52	231.32	-232.80	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
U_{48}~L_{49}	-171.93	-173.02	265.75	-268.43	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
U_{49}~L_{50}	-2.25	2.25	6.19	-6.19	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{50}~L_{51}	-294.98	292.50	-209.38	208.79	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
U_{51}~L_{52}	-216.41	207.12	-146.93	135.87	43.2	43.24	43.16	70.66	15	1515.6	1.63	2332	1.5
U_{52}~L_{53}	-216.41	207.12	-146.93	135.87	43.2	43.24	42.96	68.66	14	1479.6	1.60	2266	1.5
U_{53}~L_{54}	-219.13	225.96	-145.87	154.37	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
U_{54}~L_{55}	-219.13	225.96	-145.87	154.37	43.0	43.01	43.24	43.76	70.66	16	1515.6	1.63	2332	1.5
U_{55}~L_{56}	-160.40	175.93	66.77	-100.29	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5
U_{56}~L_{57}	-100.40	175.93	66.77	-100.29	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5
U_{57}~L_{58}	-88.79	102.71	-40.15	48.65	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{58}~L_{59}	-76.80	80.47	-3.71	11.77	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{59}~L_{60}	-30.27	31.83	32.64	-40.39	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{60}~L_{61}	-14.48	-24.86	58.62	-72.82	113.42	-122.55	21.5	21.54	33.27	5	987.9	1.54	1098	1.5
U_{61}~L_{62}	-65.37	-72.82	113.42	-122.55	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
U_{62}~L_{63}	-143.34	-147.52	231.32	-232.80	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
U_{63}~L_{64}	-209.79	-187.34	260.83	-278.95	46.3	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
U_{64}~L_{65}	-209.79	-260.53	288.93	-361.19	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
U_{65}~L_{66}	-211.36	-211.36	315.35	-315.35	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
U_{66}~L_{67}	-264.01	-214.57	260.19	-299.29	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
U_{67}~L_{68}	-43.76	-35.35	53.33	-53.33	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
U_{68}~L_{69}	-43.76	-35.35	53.33	-53.33	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5
U_{69}~L_{70}	-92.50	102.88	-44.54	50.35	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
U_{70}~L_{71}	-92.50	102.88	-44.54	50.35	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
U_{71}~L_{72}	-97.18	95.87	-35.59	37.40	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{72}~L_{73}	-97.18	95.87	-35.59	37.40	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{73}~L_{74}	-52.40	-62.16	117.42	-150.09	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{74}~L_{75}	-3.79	-7.43	63.39	-72.16	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
U_{75}~L_{76}	-6.43	6.25	45.24	-44.01	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0
U_{76}~L_{77}	-4.44	6.07	43.53	-61.58	0.00	0.00	0.00	0.00	0	0.0	0.00	0	0.0

M_2 Information

YY Axis Moments from STAAD

Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)
U_0~L_1	-105.35	-33.79	-16.95	-3.51	1.49	0.48	-121.88	-39.09	-16.54	5.30
U_1~L_2	29.95	22.74	11.79	5.95	0.00	0.00	0.00	0.00	0.00	0.00
U_2~L_3	-13.10	7.04	-2.01	2.71	-2.61	-0.87	-20.30	10.91	-5.28	-3.43
U_3~L_4	29.87	27.10	-2.39	-0.60	0.00	0.00	0.00	0.00	0.00	0.00
U_4~L_5	12.71	5.63	-20.34	6.54	0.00	0.00	0.00	0.00	0.00	0.00
U_5~L_6	9.14	5.01	5.89	-10.32	0.00	0.00	0.00	0.00	0.00	0.00
U_6~L_7	10.61	6.97	44.35	-13.61	0.00	0.00	0.00	0.00	0.00	0.00
U_7~L_8	0.53	-0.07	3.06	3.57	0.00	0.00	0.00	0.00	0.00	0.00
U_8~L_9	4.29	3.81	-5.80	-3.44	0.00	0.00	0.00	0.00	0.00	0.00
U_9~L_{10}	-0.03	-4.66	0.08	3.22	0.00	0.00	0.00	0.00	0.00	0.00
U_{10}~L_{11}	-156.98	-112.09	-0.15	-0.32	-0.73	-0.99	-204.96	-150.81	-213.14	-160.27
U_{11}~L_{12}

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Max Start (k-in) | Lane Reduction & Impact Live Load Max End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_bb | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mdx} | YY Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Max Start (k-in) | Lane Reduction & Impact Live Load Max End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | Z_y (in^3) | I_{yy} (in^4) | Tension: Shape Factor | Tension: M_p (k-in) | Fracture: P_{nt} (k) | Fracture: Formula 1.8 Term * F_u/S_bb | Fracture: M_u (k-in) | Fracture: Equivalent Mom. Factor a | Fracture: Equivalent Mom. Factor C_{mx} | Fracture: Equivalent Mom. Factor C_{mdx} | Pass | Buckle: Axial Problem | Buckle: Moment Problem | Buckle: Pass | Compression: Axial Problem | Compression: Moment Problem | Compression: Pass | Yield: Axial Problem | Yield: Moment Problem | Yield: Pass |
|---|---|---|---

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: HF1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.50	DL Factor:	1.50
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Bridge Section 3.22

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

(Case I considered in Max. Tension/Compression Load)

M_z Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) Start (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | S_{tt} (in^3) | S_t (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor f | M_p (k-in) | Formula 1.8 Term / F_y/S_xx | M_u (k-in) | Equivalent Mom. Factor: a | $C_{m(x)}$ | $C_{m(b)}$ | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) Start (k-in) | Live Load (Min) Start (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Min) Start (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Max Start (k-in) | Impact Pedestrian Load Max End (k-in) | YY Axis Moment Properties: Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | S_{tt} (in^3) | S_t (in^3) | Z_Y (in^3) | I_{YY} (in^4) | Shape Factor f | M_p (k-in) | σ_{cr} (ksi) | Formula 1.8 Term / F_y/S_xx | M_u (k-in) | Equivalent Mom. Factor: a | $C_{m(x)}$ | $C_{m(b)}$ | Yield: Axial Action | Moment Portion | Total | Pass | Tension: Axial Action | Moment Portion | Total | Pass | Fracture: Axial Action | Moment Portion | Total | Pass | Compression: Axial Action | Moment Portion | Total | Pass | Buckle: Axial Action | Moment Portion | Total | Pass | Yield: Axial Action | Moment Portion | Total | Pass |
|---|---|---|---

Moment (End) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors: DL Factor: 1.30, LL Factor: 1.30
Pedestrian Load Factors: DL Factor: 1.30, LL Factor: 1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
Guide Specifications for Design Strength Design of Truss Bridges (LDF) 1985 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

| Location | Member | ZZ Axis Moments from STAAD: Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian Load (Max) End (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | Max. Neg. Moms Start (k-in) | Max. Neg. Moms End (k-in) | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F'c/f_{bb} | M_2 (k-in) | Equivalent Mom. Factor C_m | C_{mDL} | C_{mDL} | ZZ Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) (k-in) | Live Load (Min) (k-in) | Pedestrian Load (Max) (k-in) | Pedestrian Load (Min) (k-in) | Lane Reduction & Impact Live Load Max (k-in) | Lane Reduction & Impact Live Load Min (k-in) | Impact Pedestrian Load (Max) (k-in) | Impact Pedestrian Load (Min) (k-in) | Max. Neg. Moms Start (k-in) | Max. Neg. Moms End (k-in) | S_{bb} (in^3) | S_{tb} (in^3) | Z_z (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | P_{DL} (k) | Formula 1.8 Term * F'c/f_{bb} | M_2 (k-in) | Equivalent Mom. Factor C_m | C_{mDL} | C_{mDL} | Pass | Axial Axial | Moment Bottom | Moment Top | Total | Pass | Axial Axial | Moment Bottom | Moment Top | Total | Pass | Axial Axial | Moment Bottom | Moment Top | Total | Pass |
|---|---|---

Moment (End) - Al2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Min) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_y (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Factor a	$C_{m(a)}$	$C_{m(b)}$	Dead Load (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Min) Start (k-in)	Pedestrian Load (Min) End (k-in)	Lane Reduction & Impact Live Load Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor f	M_p (k-in)	r_{min} (in)	Formula 1.8 Term * F_y/S_top	M_y (k-in)	Equivalent Mom. Factor a	$C_{m(a)}$	$C_{m(b)}$	Pass
Structure 1	U_1–L_1	-15.73	54.50	-2.72	2.97	0.23	-0.56	-0.04	0.43	0.03	-0.13	-36.36	39.65	3.11	-7.51	-0.48	5.10	0.34	-1.05	-67.72	122.39	16.40	61.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.553	0.38	0.38	129.29	39.52	-34.71	-11.13	1.29	0.42	1.77	0.57	0.12	0.04	-463.73	-148.73	17.25	5.54	26.29	8.43	1.81	0.58	-442.57	-141.98	182.69	58.58	94.0	93.99	93.97	104.66	65.3	1.11	3454	237	0.9832467	2993.9	0.321	0.73	0.73	—	—	—	—	—	—	—	—	—	—	—	—	0.462	0.185	0.65	Yes	0.437	0.156	0.60	Yes
	U_1–L_2	-27.56	29.23	-2.47	2.33	0.75	-0.69	-0.57	0.52	0.20	-0.18	-32.93	31.14	10.01	-9.18	-6.82	6.19	2.41	-2.14	-78.64	78.69	52.63	39.25	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.998	0.20	0.20	389.45	135.81	-14.32	-4.59	3.30	1.14	5.35	1.84	0.37	0.13	-1397.4	-480.35	55.94	19.24	79.26	27.25	5.47	1.88	-1333.4	-458.51	592.45	203.74	94.0	93.99	93.99	104.66	65.3	1.11	3454	386	0.9182625	3035.4	0.431	0.77	0.77	—	—	—	—	—	—	—	—	—	—	—	—	0.431	0.148	0.58	Yes	0.243	0.101	0.36	Yes
	U_2–L_2	-40.63	41.52	-1.00	1.11	0.97	-0.92	-0.06	0.10	0.17	-0.21	-13.40	14.76	12.92	-12.25	-0.70	1.25	2.00	-2.46	-39.40	-34.79	69.62	-89.90	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.996	0.20	0.20	419.04	158.44	-5.29	-1.40	-12.98	-5.85	5.12	2.07	-0.39	-0.21	-70.65	-18.72	-173.45	-78.09	76.06	30.68	-5.73	-3.15	452.91	181.65	319.27	104.49	94.0	93.99	93.99	104.66	65.3	1.11	3454	356	0.9183157	3029.8	0.407	0.76	0.76	0.114	0.220	0.34	Yes	0.063	0.121	0.19	Yes	0.483	0.183	0.76	Yes
	U_2–L_3	56.81	-57.81	-2.27	2.25	1.37	-1.39	0.30	-0.30	0.24	-0.26	18.36	-17.88	0.00	0.00	0.00	0.00	-68.19	67.76	113.92	-114.42	23.71	7	751.9	1.54	782	1.5	763.3	-0.999	0.20	0.20	627.73	206.44	1.87	0.51	24.94	1.42	-183.01	-67.21	0.00	0.00	37.26	12.27	-18.48	2.91	448.18	218.66	142.0	93.99	93.99	104.66	65.3	1.11	3454	344	0.9164878	3022.2	0.467	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	0.122	0.217	0.34	Yes	0.117	0.126	0.25	Yes
	U_3–L_3	64.44	-72.23	-0.09	0.14	1.58	-1.77	0.00	0.00	0.42	-0.47	-18.11	-18.28	23.05	0.00	0.00	0.00	0.02	-0.65	82.14	-111.18	-124.63	19.4	19.37	19.31	29.87	2	907.0	1.54	986	1.5	958.8	-0.992	0.24	0.24	536.46	296.06	4.94	2.96	-6.73	-1.52	0.00	0.00	0.00	0.00	63.80	32.30	78.01	436.22	584.35	358.40	113.3	113.27	90.38	105.15	82.8	1.15	4295	279	0.9754504	3630.7	0.574	0.89	0.89	—	—	—	—	—	—	—	—	—	—	—	—	0.401	0.226	0.63	Yes	0.383	0.126	0.31	Yes
	U_3–L_4	72.27	-80.93	0.33	1.07	-1.82	0.00	-0.26	1.45	0.00	-0.26	-21.58	21.58	24.25	0.00	0.00	0.00	0.00	0.00	285.50	319.31	-234.49	263.92	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	0.639	0.86	0.86	642.39	307.70	11.81	4.53	-8.56	-2.06	0.00	0.00	5.09	2.42	152.85	58.59	-110.78	-26.61	0.00	0.00	73.22	34.75	1033.82	476.17	786.28	845.68	172.1	172.06	161.49	200.70	206.6	1.17	6623	284	0.9799175	5372.9	0.461	0.78	0.78	—	—	—	—	—	—	—	—	—	—	—	—	0.508	0.328	0.84	Yes	0.481	0.157	0.64	Yes
	U_4–L_4	109.02	-121.41	-0.60	0.65	1.90	-1.96	0.00	0.00	0.74	-0.81	-8.07	8.68	25.34	26.12	0.00	0.00	8.90	-9.77	131.23	-146.55	174.67	-191.79	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3	-0.911	0.24	0.24	607.21	120.27	10.10	2.47	-6.41	-0.32	0.00	0.00	4.15	1.08	134.91	33.05	-85.66	-4.23	0.00	0.00	61.57	15.97	834.75	199.32	548.01	192.84	124.7	124.69	119.31	145.38	96.3	1.17	4798	196	0.9579598	3941.6	0.239	0.70	0.70	—	—	—	—	—	—	—	—	—	—	—	—	0.416	0.223	0.65	Yes	0.386	0.189	0.58	Yes
	U_4–L_5	-42.58	47.68	0.25	-0.27	-1.73	0.00	-0.93	1.07	-0.13	0.00	-36.67	44.13	30.25	36.43	-9.28	11.14	9.24	-11.11	-115.08	133.05	-16.04	13.84	107.1	107.11	107.11	162.57	26	2726.9	1.52	5369	1.5	5302.3	-0.616	0.35	0.35	371.66	42.07	-11.96	-1.62	-4.57	-0.71	0.21	0.03	2.42	0.76	210.06	17.82	29.79	2.72	214.48	317.44	837.8	114.9	1.16	10523	359	0.9179257	8856.7	0.279	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	0.488	0.343	0.64	Yes	0.469	0.025	0.50	Yes
	U_5–L_5	-101.49	100.77	-2.35	3.13	0.09	-0.17	-0.94	1.08	0.00	0.00	-285.50	319.31	-234.49	263.92	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	0.804	0.24	0.24	1798.2	-0.984	0.21	0.21	772.45	425.35	8.93	-1.90	0.07	-0.68	-0.41	6.13	3.32	115.48	63.72	-24.53	0.87	-9.73	-5.85	88.11	47.77	1154.31	639.76	972.29	594.08	183.7	183.71	163.68	198.75	204.3	1.21	6599	365	0.9177394	5280.3	0.551	0.82	0.82	—	—	—	—	—	—	—	—	—	—	—	—	0.419	0.220	0.64	Yes	0.400	0.105	0.51	Yes
	U_5–L_6	180.45	-209.65	-0.67	0.79	2.01	-2.19	0.00	0.00	0.93	-1.09	-8.62	10.18	25.97	28.35	0.00	0.00	11.17	-13.03	223.36	-269.30	282.87	180.79	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	0.639	0.86	0.86	642.39	307.70	11.81	4.53	-8.56	-2.06	0.00	0.00	5.09	2.42	152.85	58.59	-110.78	-26.61	0.00	0.00	73.22	34.75	1033.82	476.17	786.28	845.68	172.1	172.06	161.49	200.70	206.6	1.17	6623	284	0.9799175	5372.9	0.461	0.78	0.78	—	—	—	—	—	—	—	—	—	—	—	—	0.508	0.328	0.84	Yes	0.481	0.157	0.64	Yes
	U_6–L_6	24.87	-49.22	-3.20	3.65	1.89	-2.41	-0.77	0.86	0.79	-1.01	-42.80	43.82	25.28	-32.14	-8.24	10.38	5.43	-12.11	-35.33	12.94	65.17	-109.77	107.1	107.13	107.11	162.71	26	2726.9	1.52	5369	1.5	5302.3	-0.616	0.35	0.35	490.27	136.85	-14.09	-4.97	-2.46	0.70	2.17	0.89	2.87	1.07	-188.22	-66.33	32.82	9.33	32.17	10.24	-42.54	15.91	434.47	194.99	680.02	190.03	214.5	214.51	214.48	266.07	168.9	1.17	10523	359	0.9179257	8856.7	0.279	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	0.495	0.267	0.57	Yes	0.479	0.020	0.58	Yes
	U_6–L_7	-121.63	132.23	-2.60	2.69	0.06	-0.10	-0.72	0.78	0.00	0.00	-34.72	35.99	0.83	-1.28	-8.66	9.37	0.00	0.00	203.26	218.69	-157.05	170.23	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3	-0.929	0.23	0.23	405.57	88.39	-26.21	-3.69	2.64	1.40	4.50	1.24	0.00	0.00	-350.09	-49.26	35.20	18.65	66.75	18.48	0.00	0.00	72.13	50.87	573.01	139.15	124.7	124.69	119.31	145.38	96.3	1.17	4798	196	0.9579088	3941.6	0.243	0.70	0.70	—	—	—	—	—	—	—	—	—	—	—	—	0.533	0.184	0.72	Yes	0.492	0.215	0.71	Yes
	U_7–L_7	-66.44	79.85	-1.82	1.93	0.27	-0.25	-0.35	0.40	0.00	0.00	-23.03	24.91	3.55	-3.22	-4.24	4.82	0.00	0.00	-116.97	136.18	-81.77	99.62	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.899	0.25	0.25	291.14	254.13	-11.53	-2.24	-3.68	-1.56	0.21	1.87	0.00	0.00	-149.18	-28.97	-67.65	-20.24	14.84	26.81	0.00	0.00	314.54	227.71	446.53	229.06	103.1	103.08	103.08	116.41	73.3	1.13	3841	240	0.9655715	3264.9	0.535	0.81	0.81	—	—	—	—	—	—	—	—	—	—	—	—	0.427	0.166	0.6	Yes	0.404	0.155	0.56	Yes
	U_7–L_8	31.82	-36.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-14.42	12.94	0.00	0.00	0.00	0.00	-58.97	57.25	114.42	-124.58	23.71	7	751.9	1.54	782	1.5	763.3	-0.999	0.20	0.20	414.42	124.81	-3.55	-0.87	-6.75	-3.30	0.06	0.00	0.00	0.00	47.63	10.35	45.16	13.13	94.0	93.99	93.99	104.66	65.3	1.11	3454	244	0.9637181	2987.5	0.210	0.60	0.60	—	—	—	—	—	—	—	—	—	—	—	—	0.153	0.077	0.24	Yes	0.153	0.077	0.24	Yes
	U_8–L_8	17.15	-23.67	-0.68	0.64	1.62	-1.74	-0.10	0.11	0.26	-0.30	-8.79	8.29	21.00	22.51	-1.20	1.31	3.17	-3.56	10.87	-19.99	49.59	-60.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.926	0.22	0.22	320.07	56.66	-2.27	-4.15	-7.49	-1.46	-0.24	5.82	1.84	-29.31	-53.71	-96.91	-18.83	-3.39	-1.47	83.61	26.42	278.00	3.84	290.11	49.19	94.0	93.99	93.99	104.66	65.3	1.11	3454	224	0.9637181	2987.5	0.210	0.60	0.60	—	—	—	—	—	—	—	—	—	—	—	—	0.153	0.077	0.24	Yes	0.153	0.077	0.24	Yes
	U_8–L_9	60.44	-64.12	-0.39	0.51	1.07	-1.82	0.00	0.00	0.49	-0.85	-23.15	23.91	-1.10	1.08	4.66	-4.92	17.75	-19.91	138.68	-158.49	89.71	-86.62	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.998	0.20	0.20	346.79	83.13	-2.46	-0.58	-5.14	-2.19	0.16	3.34	-0.78	5.41	3.39	-5.58	-1.21	0.31	88.08	20.69	109.91	272.75	71.8	71.79	68.68	81.14	51.1	1.09	3454	220	0.9637181	2987.5	0.210	0.60	0.60	—	—	—	—	—	—	—	—	—	—	—	—	0.319	0.150	0.47	Yes	0.319	0.150	0.47	Yes
	U_9–L_9	74.38	-85.04	-0.28	0.29	1.76	-1.83	-0.06	0.06	0.44	-0.53	-8.46	-3.66	37.73	22.76	-23.73	-0.72	0.73	5.14	-5.52	51.93	-105.70	126.28	-141.40	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.893	0.24	0.24	387.19	163.06	0.03	-0.19	-7.68	-2.14	-0.12	-0.01	5.05	1.48	0.41	-2.51	-99.34	-27.66	-1.67	-0.07	72.54	21.32	503.89	208.71	374.20	176.01	113.4	113.37	113.37	130.15	82.8	1.15	4295	174	0.9526009	3553.9	0.414	0.77	0.77	—	—	—	—	—	—	—	—	—	—	—	—	0.501	0.168	0.67	Yes	0.462	0.143	0.61	Yes
	U_9–L_{10}	137.76	-162.61	-0.38	0.39	2.71	-2.75	-0.08	0.08	0.83	-0.87	-8.46	8.29	35.05	36.06	-2.92	-1.00	1.00	-10.42	187.72	-204.52	250.67	-234.37	33.1	33.05	32.91	54.51	14	1182.1	1.53	1766	1.5	1737.0	-0.970	0.21	0.21	1122.9	144.17	-0.29	-0.18	-5.85	-1.67	-0.02	0.01	1.21	0.23	-16.18	-21.58	-0.33	0.13	73.26	17.39	859.14	109.56	139.34	139.31	147.58	167.25	201.8	1.13	5019	248	0.9647621	4729.5	0.264	0.77	0.77	—	—	—	—	—	—	—	—	—	—	—	—	0.445	0.146	0.6	Yes	0.429	0.156	0.63	Yes
	U_{10}–L_{10}	163.50	-173.08	-0.33	0.32	2.63	-2.69	-0.07	0.07	0.91	-0.96	-4.31	4.14	33.98	34.79	-0.85	0.83	10.90	-11.36	206.95	-219.62	270.88	152.55	42.7	42.74	42.74	65.30	3	1289.6	1.53	2155	1.5	2115.6	0.543	0.83	0.83	676.86	97.47	-0.33	-0.09	-3.39	-0.72	0.04	0.03	4.25	0.81	-4.22	-1.16	-16.42	-9.32	0.50	0.37	61.05	11.69	614.43	125.20	639.35	233.06	173.7	173.70	173.70	201.30	201.3	1.16	6599	407	0.9600555	5553.1	0.974	0.89	0.89	—	—	—	—	—	—	—	—	—	—	—	—	0.485	0.250	0.72	Yes	0.434	0.126	0.66	Yes
	U_{10}–L_{11}	187.90	-226.20	-0.21	0.28	2.23	-2.61	-0.06	0.07	0.93	-1.13	-2.77	3.57	28.79	-33.76	-0.74	0.84	12.36	-13.56	240.66	-289.42	297.76	182.73	37.4	37.40	37.40	57.29	8	1264.8	1.53	1890	1.5	1851.3	0.614	0.85	0.85	341.30	44.77	-0.15	-0.02	-3.95	-0.52	0.01	0.01	2.95	0.39	-1.91	-0.25	-61.13	-6.70	0.95	0.13	42.37	5.56	441.20	57.87	432.30	442.21	139.8	139.82	173.70	176.96	216.6	1.27	5840	143	0.9422287	4347.5	0.976	0.99	0.99	—	—	—	—	—	—	—	—	—	—	—	—	0.573	0.316	0.9	Yes	0.504	0.158	0.67	Yes
	U_{11}–L_{11}	133.50	-204.40	-1.36	1.94	0.29	-0.72	0.04	-0.05	0.46	-0.48	-1.25	-229.06	307.13	-338.52	-0.74	0.84	0.46	-1.25	-229.06	307.13	-338.52	-0.74	0.84	0.46	-1.25	-229.06	307.13	-338.52	-0.74	0.84	0.46	-1.25	2312.1	-0.911	0.28	0.28	468.53	149.39	-2.03	-0.01	-4.99	-1.60	0.00	0.16	4.18	1.34	-6.42	-6.13	-66.72	-21.39	7.26	2.36	62.03	19.89	605.53	194.25	519.76	166.68	94.0	93.99	93.97	104.66	65.3	1.11	3454	237	0.9653467	2993.9	0.321	0.73	0.73	—	—	—	—	—	—	—	—	—	—	—	—	0.462	0.185	0.65	Yes	0.437	0.156	0.60	Yes
	U_{11}–L_{12}	-201.27	204.39	3.69	3.66	0.69	-0.66	-0.91	0.88	0.15	-0.14	-47.12	46.70	8.65	-8.45	-10.88	10.50	1.81	-1.68	-302.91	326.92	-250.10	250.23	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.988	0.20	0.20	460.80	137.23	-12.60	-2.42	-0.06	-0.09	-0.21	4.24	-0.06	-0.09	-160.53	-31.52	0.70	0.20	125.26	17.43	625.96	140.74	303.2	303.20	201.30	221.31	271.8	1.10	7303	210	0.9607792	6382.4	0.279	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	0.489	0.112	0.61	Yes	0.408	0.139	0.60	Yes
	U_{12}–L_{12}	-79.55	88.71	-1.87	1.94	0.47	-0.48	-0.37	0.41	0.10	-0.10	-23.69	24.75	5.94	-6.13	-4.46	4.87	1.18	-1.21	-134.47	147.30	-66.69	107.34	21.5	21.54	21.54	33.27	2	987.9	1.54	1098	1.5	1066.2	-0.912	0.24	0.24	407.66	221.75	-7.68	-0.86	0.26	-0.39	3.57	1.62	-0.52	-0.13	-50.39	-11.04	-135.74	-30.79	41.67	27.52	533.57	281.83	133.5	133.48	133.48	144.11	92.3	1.17	4798	183	0.9549372	3891.2	0.528	0.81	0.81	—	—	—	—	—	—	—	—	—	—	—	—	0.496	0.168	0.67	Yes	0.456	0.134	0.60	Yes
	U_{13}–L_{13}	-67.01	54.58	-1.76	1.76	0.11	-0.11	-0.11	0.11	0.02	-0.02	-6.80	6.69	-3.67	3.67	1.16	-1.36	-6.26	6.26	-67.01	54.58	-1.76	1.76	0.11	-0.11	-0.11	0.11	0.02	-0.02	-6.80	6.69	-3.67	3.67	1.16	-1.36	-123.85	100.84	-3.17	3.17	0.28	-0.28	0.44	-0.44	0.07	-0.07	-12.52	12.32	-0.79	0.79	203.34	165.57	4.09	-4.09	0.64	-0.64	0.10	-0.10	93.99	93.99	93.99	104.66	65.3	1.11	3454	200	0.9637181	2987.5	0.210	0.60	0.60	—	—	—	—	—	—	—	—	—	—	—	—	0.153	0.077	0.24	Yes	0.153	0.077	0.24	Yes
	U_{14}–L_{14}	-4.55	12.51	-1.40	1.54	0.73	-0.63	-0.17	0.21	0.13	-0.13	-17.87	19.71	9.33	-8.30	-2.05	2.93	1.51	-1.60	-29.14	68.32	-29.14	68.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.696	0.32	0.32	369.10	159.88	-19.16	-7.89	-3.53	-5.77	3.63	1.14	-0.64	-0.07	-160.33	-70.98	19.24	6.41	-0.91	279.91	172.65	406.09	156.56	94.0	93.99	93.99	104.66	65.3	1.11	3454	201	0.9637181	2987.5	0.210	0.60	0.60	—	—	—	—	—	—	—	—	—	—	—	—	0.153	0.077	0.24	Yes	0.153	0.077	0.24	Yes
	U_{15}–L_{15}	27.52	-27.99	-1.02	1.08	1.08	-1.11	-0.04	0.05	0.10	-0.12	-13.04	13.85	13.75	-14.21	-0.43	0.60	1.22	-1.39	18.82	-18.38	53.65	-54.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.976	0.21	0.21	387.13	153.41	-5.78	-1.48	-5.89	-3.33	3.81	1.24	-0.11	-0.09	-73.83	-18.86	-75.20	-42.49	54.02	17.56	-1.49	-1.21	457.28	174.91	405.31	144.18	94.0	93.99	93.99	104.66	65.3	1.11	3454	211	0.9683838	2982.2	0.429	0.77	0.77	0.195	0.188	0.39	Yes	0.107	0.103	0.22	Yes	0.524	0.186	0.77	Yes
	U_{16}–L_{16}	59.94	-59.39	-0.13	0.13	0.50	-0.50	-0.03	0.03	0.03	-0.03	-2.23	2.05	15.15	-16.03	-0.13	0.13	0.03	-0.03	-72.42	-59.39	-0.13	0.13	0.03	-0.03	-0.03	0.03	0.03	-0.03	-2.23	2.05	15.15	-16.03	-0.13	0.13	420.39	59.25	-0.13	0.13	0.03	-0.03	-0.03	0.03	0.03	-0.03	-2.23	2.05	15.15	-16.03	-0.13	0.13	420.39	59.25	-0.13	0.13	0.03	-0.03	-0.03	0.03	93.99	93.99	93.99	104.66	65.3	1.11	3454	200	0.9637181	2987.5	0.210	0.60	0.60	—	—	—	—	—	—	—	—	—	—	—	—	0.153	0.077	0.24	Yes	0.153	0.077	0.24	Yes
	U_{16}–L_{17}	130.30	-141.79	-0.26	0.20	2.28	-2.39	0.00	0.00	0.67	-0.68	-2.46	3.58	34.79	-36.50	0.00	0.00	0.00	0.00	165.11	-181.02	207.28	-224.01	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.925	0.23	0.23	403.29	140.21	-2.62	-1.50	-14.30	-3.87	0.00	0.00	4.36	1.53	-33.51	-24.28	-182.75	-49.66	0.00	0.00	61.80	21.69	567.81	151.63	373.80	130.71	128.7	128.70	132.30	108.3	137.0	1.07	5026	241	0.9683833	4156.1	0.257	0.71	0.71	—	—	—	—	—	—	—	—	—	—	—	—	0.431	0.148	0.58	Yes	0.429	0.156	0.63	Yes
	U_{17}–L_{17}	216.97	-221.44	-3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	-46.28	47.48	0.00	0.00	0.00	0.00	0.00	0.00	313.92	-313.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-46.28	47.48	0.00	0.00	0.00	0.00	640.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-46.28	47.48	0.00	0.00	0.00	0.00	640.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.99	93.99	93.99	104.66	65.3	1.11	3454	200	0.9637181	2987.5	0.210	0.60	0.60	—	—	—	—	—	—	—	—	—	—	—	—	0.153	0.077	0.24	Yes	0.153	0.077	0.24	Yes
	U_{17}–L_{18}	193.17	-200.18	-0.19	0.28	2.72	-2.86	0.00	0.00	0.67	-0.68	-2.46	3.58	34.79	-36.50	0.00	0.00	8.02	-8.10	247.94	-255.58	296.34	-307.75	43.0	43.01	42.96	68.16	14	1479.6	1.60	2366	1.5	2129.0	-0.963	0.21	0.21	600.53	302.05	4.83	3.13	-6.73	-1.38	0.00	0.00	6.10	2.90	63.10	27.90	796.40	444.57	604.48	369.77	185.0	184.95	184.93	225.21	249.1	1.22	7432	308	0.9732363	5940.0	0.559	0.82	0.82	—	—	—

Moment (End) - AI2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-inspected

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
LL Factor:	1.30	LL Factor:	1.30

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1995 rev 1996

* MCEB Table 6.6.2.1-1, A.36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

M_2 Information

M_7 Information

Location		Member	ZZ Axis Moments from STAAD: Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) Start (k-in)	Live Load (Max) End (k-in)	Pedestrian Load (Max) Start (k-in)	Pedestrian Load (Max) End (k-in)	Lane Reduction & Impact Live Load Max Start (k-in)	Lane Reduction & Impact Live Load Max End (k-in)	Impact Pedestrian Load Max Start (k-in)	Impact Pedestrian Load Max End (k-in)	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	YY Axis Moments from STAAD: Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Yield: S_{tot} (in^3)	Yield: S_b (in^3)	Yield: Z_y (in^3)	Yield: I_{yy} (in^4)	Yield: Shape Factor	Yield: M_p (k-in)	Yield: P_{cm} (k)	Yield: Formula 1.8 Term * F_y/S_tot	Yield: M_n (k-in)	Yield: Equivalent Mom. Factor a	Yield: C_{mx}	Yield: C_{axis}	Yield: Axial Force (k)	Yield: Moment Stress (ksi)	Yield: Total	Yield: Pass	Tension: Axial Force (k)	Tension: Moment Stress (ksi)	Tension: Total	Tension: Pass	Fracture: Axial Force (k)	Fracture: Moment Stress (ksi)	Fracture: Total	Fracture: Pass	Buckle: Axial Force (k)	Buckle: Moment Stress (ksi)	Buckle: Total	Buckle: Pass	Compression: Axial Force (k)	Compression: Moment Stress (ksi)	Compression: Total	Compression: Pass
Structure 1		U_1-L_1	3.62	-1.41	1.36	0.65	0.05	-0.10	0.15	0.01	-0.03	-0.02	-18.13	8.63	0.61	-1.31	1.75	0.12	-0.35	-0.23	-16.59	9.54	5.50	-3.53	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.575	0.37	0.37	-84.71	-28.00	-16.49	-3.76	1.31	-1.34	-1.09	-0.56	0.65	0.50	-140.17	-60.17	-17.50	17.94	-16.17	-8.33	8.12	7.41	-313.36	-112.44	-87.38	-13.07	100.5	100.60	100.48	126.29	66.1	1.20	3970	144	0.94257776	3126.1	0.3359	0.74	0.74	0.225	0.098	0.33	Yes	0.136	0.054	0.19	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_1-L_2	-11.46	-3.33	-0.61	0.26	-0.04	-0.21	0.25	0.07	0.08	-0.04	-0.14	8.12	3.42	-0.57	-2.31	-2.95	0.84	0.98	-0.47	-25.46	-15.14	-7.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.004	0.60	0.60	-72.41	-23.66	-5.32	-2.06	-0.13	-0.32	1.18	-0.11	0.49	0.45	-71.06	-27.45	-10.74	-67.75	17.52	-1.60	7.33	6.62	66.76	-4.93	-67.58	-44.25	90.4	90.49	90.38	0.86	0.147	0.052	0.20	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_1-L_2	-12.13	-1.79	-0.53	0.13	-0.29	-0.41	0.00	0.00	-0.04	-0.06	-5.72	1.79	-3.82	-0.45	-0.04	-0.14	0.15	0.06	-0.47	-0.74	-7.58	-12.99	6.13	-22.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.004	0.60	0.60	-72.41	-23.66	-5.32	-2.06	-0.13	-0.32	1.18	-0.11	0.49	0.45	-71.06	-27.45	-10.74	-67.75	17.52	-1.60	7.33	6.62	66.76	-4.93	-67.58	-44.25	90.4	90.49	90.38	0.86	0.147	0.052	0.20	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_2-U_3	9.82	-15.00	0.10	0.09	-0.02	-0.60	0.08	0.01	-0.08	-0.12	1.30	1.14	-0.28	-1.98	0.90	0.13	-0.94	-1.40	15.69	-17.85	12.40	-29.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.415	0.43	0.43	206.42	91.50	2.67	1.79	-12.76	-4.02	0.11	1.69	2.85	2.65	32.60	8.61	316.88	153.68	46.79	49.13	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.91180782	2952.4	0.4851	0.79	0.79	—	—	—	—	—	—	—	—	0.420	0.116	0.54	Yes	0.388	0.038	0.43	Yes
		U_3-L_3	-16.21	25.07	0.04	0.03	0.12	-0.17	-0.01	1.89	0.26	-0.55	-2.73	-2.76	0.36	1.43	-0.29	0.05	-0.25	-0.77	-24.05	19.4	19.37	-29.87	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.472	0.41	0.41	-154.18	8.21	6.03	-3.78	0.23	-0.24	2.19	-0.83	8.70	12.73	0.27	-32.35	-12.36	-19.75	-113.4	113.37	113.37	132.15	82.8	1.11	3454	171	0.91613746	3508.3	0.144	0.54	0.54	0.349	0.084	0.44	Yes	0.192	0.046	0.24	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_3-U_4	-34.06	79.11	-1.25	1.15	-0.12	-0.13	-0.28	0.44	0.00	0.00	-16.74	15.39	-3.76	-3.32	5.26	0.00	0.00	0.00	-66.04	122.85	46.35	100.55	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.538	0.38	0.38	-192.50	23.39	-1.21	1.87	10.36	0.34	-1.71	2.34	19.38	21.46	-5.48	0.00	0.00	-271.26	62.84	-70.33	36.37	148.0	147.96	147.96	167.25	201.8	1.13	5519	262	0.95648452	4728.8	0.2	0.33	0.33	0.119	0.043	0.16	Yes	0.203	0.066	0.27	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_4-L_4	-1.45	1.74	-0.74	1.37	0.27	-0.45	-0.29	0.65	0.00	0.00	-12.09	17.96	-1.32	-3.13	-4.56	1.36	-1.07	2.78	0.00	0.00	-12.42	131.03	-42.87	116.62	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.093	0.56	0.56	-153.51	-53.38	0.57	2.18	-2.93	-1.73	-1.81	-0.82	0.00	0.00	-7.60	29.14	-39.18	-23.10	-26.87	-12.17	0.00	0.00	-189.68	-83.52	-250.95	-151.42	148.0	147.96	147.96	167.25	201.8	1.13	5519	265	0.9599541	4689.9	0.604	0.84	0.84	0.349	0.136	0.48	Yes	0.184	0.075	0.26	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_4-U_5	-12.32	139.19	0.70	1.86	-0.16	-0.09	0.01	0.01	0.00	0.00	-9.04	24.00	-2.04	-1.16	0.14	8.52	0.00	0.00	-27.77	212.14	-18.67	179.43	40.7	40.70	40.44	67.92	25	1951.0	1.51	2945	1.5	2914.7	-0.131	0.55	0.55	-251.85	97.14	-5.78	-18.69	39.24	4.50	28.12	9.59	0.00	0.00	-74.84	-48.89	39.24	4.50	28.12	9.59	0.00	0.00	-298.62	-122.73	-421.35	-264.62	248.0	247.93	247.93	281.19	338.9	1.13	9272	228	0.963845	6452.3	0.349	0.74	0.74	0.254	0.081	0.34	Yes	0.143	0.045	0.19	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_5-L_5	-73.41	69.80	-1.29	0.90	-0.38	-0.10	-0.31	0.35	0.00	0.00	-16.72	11.68	-4.85	-1.28	-3.77	4.25	0.00	0.00	-117.16	105.89	-101.74	89.07	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.904	0.24	0.24	62.43	-78.54	-6.51	-5.05	-11.94	-4.14	1.99	0.00	0.00	0.00	-28.40	-187.10	-175.58	-177.72	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.9683136	6308.9	0.152	0.66	0.66	0.415	0.079	0.50	Yes	0.257	0.044	0.31	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_5-U_6	-87.96	102.69	-1.20	1.29	-0.39	-0.23	0.22	0.00	0.00	0.00	-19.26	8.64	-5.58	-0.38	-5.05	-0.52	2.71	0.00	0.00	0.00	-137.71	94.00	-120.04	36.21	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.533	0.46	0.46	49.24	-37.24	-3.85	-15.19	-7.52	2.23	0.00	0.00	0.00	0.00	-37.85	-174.89	-87.75	-264.52	197.4	197.41	184.99	230.30	248.6	1.17	7600	277	0.9152525	5901.6	0.991	0.99	0.99	0.426	0.098	0.53	Yes	0.234	0.054	0.29	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_6-L_7	-69.88	47.84	1.20	0.95	-0.14	-0.25	-0.31	0.21	0.00	0.00	-15.66	12.34	-1.81	-1.38	-3.70	2.66	0.00	0.00	-111.08	78.24	-90.23	58.06	20.8	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1029.6	-0.704	0.32	0.32	5.30	-86.18	-4.58	-4.33	-8.11	-2.34	1.54	0.89	0.00	0.00	-84.88	-229.43	-151.39	-133.5	133.45	123.27	155.40	108.8	1.16	5128	176	0.9503181	4196.9	0.379	0.75	0.75	0.385	0.133	0.52	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_7-U_8	-27.39	6.37	-0.50	0.29	-0.01	-0.44	-0.03	0.05	-0.12	-0.02	-6.52	3.69	-0.18	-0.64	-0.31	0.61	-1.43	-0.28	-44.08	13.07	-35.84	0.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.297	0.48	0.48	59.28	-19.74	-2.56	-1.13	-13.24	-3.02	-0.09	-0.07	2.44	0.86	-33.12	-14.62	-171.24	-39.05	-1.32	-0.93	35.13	12.33	33.98	-122.67	-145.37	-154.42	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.9423755	2925.7	0.943	0.98	0.98	0.369	0.101	0.47	Yes	0.203	0.056	0.26	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_8-L_9	-0.38	3.20	-0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-0.06	0.08	-0.01	0.01	-0.01	0.01	-0.01	0.01	-14.96	-25.30	-14.96	-25.30	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.209	0.50	0.50	-250.90	-183.33	-0.71	-0.65	-0.65	0.00	0.00	0.00	-40.93	-8.78	-327.47	-231.47	-78.40	94.0	93.99	93.99	104.66	65.3	1.11	3454	23	0.9184756	2514.8	0.988	0.99	0.99	0.491	0.015	0.51	Yes	0.349	0.084	0.44	Yes	0.099	0.048	0.15	Yes
		L_9-U_{10}	-31.03	12.71	-0.86	0.68	0.17	-0.34	-0.19	0.11	0.00	0.00	-5.64	11.06	0.80	2.13	-0.40	-2.29	1.32	0.56	-0.32	-54.72	27.96	-37.57	10.80	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.511	0.40	0.40	-199.71	-100.30	-0.56	0.84	2.86	-0.24	-2.86	-0.48	0.07	-0.03	-72.21	-18.26	-211.60	-134.50	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.9337272	2894.2	0.433	0.77	0.77	0.225	0.148	0.38	Yes	0.124	0.081	0.21	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{10}-L_{11}	-46.63	27.25	-0.14	0.18	-0.28	-0.19	0.04	0.04	-14.75	11.04	-2.14	-2.32	-3.31	2.27	0.00	0.00	-79.79	69.77	-59.43	49.71	-29.40	43.61	15.4	15.42	15.42	23.71	2	907.0	1.54	986	1.5	958.8	-0.032	0.55	0.55	-216.68	-68.69	-13.44	-0.08	15.51	4.55	-3.11	-1.16	0.08	0.04	-152.62	-89.79	-269.21	-242.31	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.9601955	4688.3	0.195	0.68	0.68	0.405	0.181	0.59	Yes	0.223	0.100	0.33	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{11}-U_{12}	-118.88	85.28	-1.69	1.68	0.28	-0.26	-0.55	0.42	0.06	-0.05	-25.70	21.71	3.56	-3.30	-6.59	5.04	0.67	-0.62	-187.69	139.09	-149.66	106.57	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.741	0.30	0.30	-302.82	-67.43	-1.13	0.42	-0.09	-0.29	-3.14	-1.42	0.03	0.05	-145.85	5.46	-1.15	-3.69	-45.08	-20.43	0.39	0.79	-412.71	-80.56	-395.16	-92.46	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.9601955	4688.3	0.195	0.68	0.68	0.405	0.181	0.59	Yes	0.223	0.100	0.33	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{12}-L_{13}	-117.64	87.57	-1.91	1.54	-0.20	-0.57	-0.45	0.54	-0.04	-0.04	-24.76	13.57	-3.78	-2.56	-6.79	5.48	0.00	-0.46	-183.72	139.70	-149.06	110.01	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.789	0.28	0.28	-299.59	-101.21	0.14	-0.08	-3.28	-1.67	0.22	-0.62	-0.17	0.22	-145.20	-68.11	-175.75	-127.31	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.9601955	4688.3	0.195	0.68	0.68	0.405	0.181	0.59	Yes	0.223	0.100	0.33	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{13}-U_{14}	-148.08	120.85	1.92	1.63	0.10	-0.10	-0.79	0.63	0.04	-0.04	-24.89	21.10	1.99	-2.04	-6.47	7.56	0.50	-0.46	-237.03	194.37	-189.94	154.45	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.829	0.22	0.27	-219.49	-107.79	1.00	1.79	0.01	0.01	-1.86	-1.02	0.02	0.01	12.94	22.59	0.08	0.24	-26.68	-14.61	-0.30	0.16	-291.02	-93.01	-291.54	-68.89	148.0	147.96	147.96	167.25	201.8	1.13	5519	265	0.9601955	4688.3	0.195	0.68	0.68	0.405	0.181	0.59	Yes	0.223	0.100	0.33	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{14}-L_{15}	-86.91	116.74	-2.62	2.23	0.17	-0.32	-0.13	0.38	0.01	-0.06	-33.33	28.50	2.16	-4.13	-1.51	4.57	0.14	-0.70	-156.55	188.82	-110.18	146.40	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.829	0.27	0.27	-185.49	-31.21	-10.76	-7.99	1.23	0.62	-1.06	-0.10	0.40	0.20	-137.42	-102.07	15.69	7.96	-15.09	-1.36	5.79	7.83	-424.93	-173.27	-225.89	-30.23	173.7	173.70	173.70	202.71	247.5	1.17	6890	180	0.9541562	5469.3	0.408	0.76	0.76	0.454	0.151	0.61	Yes	0.250	0.083	0.34	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{15}-U_{16}	-54.13	114.46	-2.47	2.27	-0.69	-0.33	0.12	0.36	0.00	-0.05	-27.44	30.97	-1.97	-4.51	-0.25	4.96	-1.21	-2.44	-244.03	194.46	-178.43	153.26	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.705	0.29	0.29	-216.6	-39.1	-9.38	-7.25	1.29	0.63	-1.23	-0.25	0.34	0.16	-40.66	-27.92	-16.46	-4.32	4.32	4.32	-47.58	-16.04	-63.62	-19.83	173.7	173.70	173.70	202.71	247.5	1.17	6890	209	0.9552525	5905.3	0.258	0.77	0.77	0.426	0.077	0.50	Yes	0.297	0.045	0.34	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{16}-L_{17}	-118.23	92.26	-2.44	2.01	0.56	-0.49	-0.52	0.43	0.11	-0.10	-31.11	25.63	7.09	-6.27	-6.28	5.11	1.37	-1.25	-194.15	153.26	-144.69	113.78	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.789	0.28	0.28	32.87	-71.82	-5.67	-7.25	1.29	1.03	1.01	0.01	0.33	0.26	-213.83	64.13	-149.70	147.96	147.96	167.25	201.8	1.13	5519	217	0.9618975	4696.6	0.241	0.70	0.70	0.423	0.149	0.59	Yes	0.238	0.082	0.32	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{17}-U_{18}	-57.38	72.27	-1.03	1.03	-0.22	-0.11	-0.27	0.27	-0.03	-0.03	-21.47	21.44	-1.92	-3.31	-0.19	3.77	-0.54	-1.62	-2.39	3.48	-68.01	72.27	42.7	42.74	42.74	65.30	8	967.7	1.52	1466	1.5	1444.2	-0.829	0.27	0.27	58.36	-67.83	-2.53	-1.91	-3.94	-0.24	0.50	0.17	0.00	0.00	-54.21	-17.17	-124.05	-72.88	147.96	147.96	147.96	167.25	201.8	1.13	5519	114	0.9618975	4696.6	0.241	0.70	0.70	0.423	0.149	0.59	Yes	0.238	0.082	0.32	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{18}-L_{19}	-24.33	8.61	-0.56	0.74	0.10	-0.31	-0.18	0.11	0.07	-0.06	-12.24	9.44	1.32	-3.94	-2.14	1.27	0.86	-0.72	-47.54	23.46	-29.92	6.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.409	0.40	0.40	88.13	-32.75	-4.61	-3.94	-6.24	-1.05	1.44	0.29	0.21	0.14	-58.87	-62.28	-78.74	-13.63	20.43	4.07	3.04	1.52	38.03	-157.93	10.91	-60.06	94.0	93.99	93.99	104.66	65.3	1.11	3454	96	0.9139827	2834.9	-0.352	0.46	0.46	0.213	0.092	0.31	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{19}-U_{20}	-1.47	1.42	-0.62	0.65	0.01	-0.01	-0.01	0.01	0.00	0.00	-4.78	5.37	-1.11	0.00	-0.96	0.00	-0.06	0.00	-8.87	8.53	-8.87	8.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.004	0.60	0.60	-124.13	-22.46	-1.47	-0.91	-1.15	-0.48	0.12	-0.05	0.02	0.01	-29.54	-9.76	-39.30	-15.15	94.0	93.99	93.99	104.66	65.3	1.11	3454	50	0.9618975	4696.6	0.241	0.70	0.70	0.423	0.149	0.59	Yes	0.238	0.082	0.32	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{20}-L_{21}	13.33	-37.03	-0.34	0.16	0.45	-0.79	0.00	0.00	0.14	-0.13	-4.40	2.01	0.77	0.77	10.13	0.00	0.00	0.00	-11.61	46.53	24.53	24.53	41.31	17.72	17.24	17.24	28.54	8	824.7	1.54	878	1.5	853.4	-0.405	0.44	0.44	131.99	1.76	-2.36	-1.62	-8.27	-0.51	0.00	0.00	0.00	0.00	-29.68	10.41	-131.90	-145.83	33.78	-0.21	103.1	103.08	103.08	116.41	73.3	1.11	3841	126	0.9345645	3779.0	-0.187	0.53	0.53	0.436	0.070	0.50	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{21}-U_{22}	-66.01	54.01	-1.12	0.88	0.00	-0.39	-0.23	0.17	0.00	0.00	-14.36	11.23	-0.54	-4.92	-2.80	2.04	0.00	0.00	-104.49	84.82	-85.67	63.82	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.812	0.28	0.28	-243.56	-138.11	0.01	1.90	7.16	0.35	-1.76	-0.67	0.00	0.00	-316.51	-147.96	-197.72	-173.72	128.2	128.15	118.23	148.43	106.4	1.16	4888	160	0.9485836	4011.5	0.4657	0.79	0.79	0.423	0.158	0.59	Yes	0.266	0.090	0.36	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{22}-L_{23}	-133.77	94.44	-2.73	2.13	-0.42	-0.57	-0.60	0.45	-0.04	-0.04	-27.22	19.39	-5.01	-3.89	-4.22	3.27	-0.54	-1.62	-209.26	170.92	-174.69	139.12	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1	-0.829	0.22	0.27	-220.63	-103.61	0.61	1.25	0.01	0.01	-1.15	-0.63	0.01	0.01	12.94	22.51	-0.37	0.01	-26.54	-14.55	-0.30	0.16	-291.54	-92.89	-291.84	-68.79	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.9601955	4688.3	0.195	0.68	0.68	0.405	0.181	0.59	Yes	0.223	0.100	0.33	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{23}-U_{24}	-116.17	105.67	-1.88	1.35	-0.07	-0.20	-0.36	0.36	0.00	0.00	-24.08	17.30	-0.93	-2.54	-4.27	4.21	0.00	0.00	-182.30	159.86	-152.23	134.06	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.877	0.25	0.25	-153.55	-20.51	0.80	2.25	3.37	0.78	-1.64	-0.32	0.00	0.00	8.69	28.73	42.99	9.95	-23.31	-4.96	0.00	0.00	-188.33	10.69	-143.73	-13.73	173.7	173.70	173.70	202.71	247.5	1.17	6890	204	0.9547539	5530.1	0.292	0.78	0.78	0.508	0.062	0.57	Yes	0.275	0.062	0.34	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{24}-L_{25}	-131.97	151.07	-2.00	1.80	0.48	-0.26	-0.42	0.51	0.00	0.00	-25.67	23.06	0.97	-3.37	-3.03	6.11	0.00	0.00	-204.79	226.29	-163.67	192.00	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.905	0.24	0.24	-325.20	1.03	-1.69	3.21	-1.75	0.72	-2.21	-0.57	0.00	0.00	-20.54	41.05	-21.75	9.20	-31.42	-8.12	0.00	0.00	-460.76	54.70	-451.02	13.36	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.9518445	6323.0	-0.029	0.99	0.99	0.495	0.108	0.60	Yes	0.272	0.087	0.36	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{25}-U_{26}	-175.19	162.79	-2.13	1.93	0.78	-0.56	-0.64	0.56	0.04	0.02	-27.25	24.66	9.99	-7.18	-7.64	6.66	0.42	-0.22	-263.18	243.68	-214.76	202.29	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.526	0.33	0.33	-293.55	-32.41	-1.35	1.33	-1.77	0.49	-2.02	-0.23	0.16	-0.19	-172.17	-72.30	-202.71	-147.31	173.7	173.70	173.70	202.71	247.5	1.17	6890	209	0.9451773	5417.8	0.063	0.63	0.63	0.469	0.184	0.65	Yes	0.285	0.130	0.42	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		U_{26}-L_{27}	-84.29	98.67	-1.22	1.03	0.00	-0.22	-0.23	0.22	0.00	0.00	-22.14	27.88	-0.48	-2.13	-2.72	4.24	0.00	0.00	-105.35	124.42	-84.29	98.67	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.705	0.29	0.29	-185.21	-79.28	0.56	1.99	3.05	0.36	-3.97	-0.71	0.00	0.00	-231.29	-76.36	-189.44	-97.08	133.5	133.45	123.27	155.40	108.8	1.16	5128	176	0.9503181	4196.9	0.379	0.75	0.75	0.385	0.133	0.52	Yes	—	—	—	—	—	—	—	—	—	—	—	—
		L_{27}-U_{28}	-45.28	135.71	-2.21	-0

Moment (End) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Upper Chord	Structure 1	U_5 - U_1			-----	-493.13	-184	63	-340	-873	9	-10	140	-391	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.322	1.00	Yes	0.665	0.208	0.88	Yes	1.00	**3.96**
		U_1 - U_2			-----	-579.69	-62	32	-127	-768	-7	-37	-1	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.210	1.00	Yes	0.782	0.182	0.97	Yes	1.00	**2.45**
		U_2 - U_3			68.10	-570.24	-142	194	-354	-585	5	28	62	188	0.078	0.171	0.25	Yes	0.053	0.111	0.17	Yes	0.776	0.217	1.00	Yes	0.769	0.139	0.91	Yes	1.00	**2.30**
		U_3 - U_4			252.52	-547.71	35	245	-352	-718	21	38	144	35	0.289	0.195	0.49	Yes	0.199	0.134	0.34	Yes	0.745	0.253	1.00	Yes	0.739	0.171	0.91	Yes	1.00	**2.83**
		U_4 - U_5			331.31	-601.00	115	277	-654	-475	19	-29	35	-173	0.380	0.185	0.57	Yes	0.261	0.127	0.39	Yes	0.818	0.181	1.00	Yes	0.810	0.156	0.97	Yes	1.00	**3.72**
		U_5 - U_6			-----	-569.68	-946	616	-375	-483	266	-10	341	-382	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.169	0.95	Yes	0.768	0.225	1.00	Yes	1.00	**7.87**
		U_6 - U_7			847.37	-----	370	224	-24	-614	-289	-108	205	-402	0.810	0.186	1.00	Yes	0.566	0.128	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		U_7 - U_8			579.48	-----	-1718	3441	-51	768	365	-662	-417	-271	0.402	0.589	1.00	Yes	0.280	0.401	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.70**
		U_8 - U_9			462.65	-----	640	19	2766	-2846	-1114	-23	-259	667	0.379	0.614	1.00	Yes	0.259	0.418	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.63**
		U_9 - U_{10}			678.87	-238.90	237	281	70	-704	-155	21	51	623	0.736	0.258	1.00	Yes	0.499	0.173	0.68	Yes	0.308	0.276	0.59	Yes	0.305	0.158	0.47	Yes	1.00	**4.78**
		U_{10} - U_{11}			256.90	-602.51	313	-79	238	-1027	31	93	307	181	0.279	0.280	0.56	Yes	0.186	0.179	0.37	Yes	0.776	0.201	0.98	Yes	0.769	0.230	1.00	Yes	1.00	**3.74**
		U_{11} - U_{12}			-----	-853.65	205	-119	57	-867	109	410	245	642	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.184	1.00	Yes	0.801	0.144	0.95	Yes	1.00	**2.61**
		U_{12} - U_{13}			-----	-1177.14	-8	-241	-203	-1033	351	209	577	425	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1.00	Yes	0.786	0.142	0.93	Yes	1.00	**2.66**
		U_{13} - U_{14}			-----	-1315.44	-153	-387	-541	-1500	225	180	368	539	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.232	1.00	Yes	0.754	0.166	0.92	Yes	1.00	**2.48**
		U_{14} - U_{15}			-----	-1366.48	-250	-237	-630	-1161	202	28	532	54	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.206	1.00	Yes	0.783	0.128	0.92	Yes	1.00	**3.20**
		U_{15} - U_{16}			-----	-1372.93	-194	-411	-413	-1406	77	46	384	88	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1.00	Yes	0.787	0.155	0.95	Yes	1.00	**3.05**
		U_{16} - U_{17}			-----	-1369.97	-485	-169	-1199	-924	276	-79	606	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.199	1.00	Yes	0.785	0.132	0.92	Yes	1.00	**3.48**
		U_{17} - U_{18}			-----	-1101.61	-698	215	-405	-434	433	12	321	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.121	1.00	Yes	0.862	0.114	0.98	Yes	1.00	**3.68**
		U_{18} - U_{19}			-----	-742.39	-703	62	-437	-438	399	-189	283	-349	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1.00	Yes	0.835	0.141	0.98	Yes	1.00	**3.78**
		U_{19} - U_{20}			-----	-563.68	-1594	1799	-413	-496	267	-664	257	-618	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.196	0.84	Yes	0.634	0.362	1.00	Yes	1.00	**7.16**
	Structure 2	U_5 - U_1			-----	-581.15	-93	-91	270	-1823	4	-71	82	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.286	0.98	Yes	0.686	0.309	1.00	Yes	1.00	**7.32**
		U_1 - U_2			-----	-804.11	-46	-192	-116	-1301	-69	-218	-118	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1.00	Yes	0.776	0.197	0.98	Yes	1.00	**3.81**
		U_2 - U_3			-----	-1123.13	-98	-281	-372	-1666	-29	367	-92	535	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.197	1.00	Yes	0.797	0.170	0.97	Yes	1.00	**3.52**
		U_3 - U_4			-----	-1308.67	-416	-413	-766	-1813	353	538	413	552	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.241	1.00	Yes	0.745	0.162	0.91	Yes	1.00	**2.90**
		U_4 - U_5			-----	-1427.44	-462	-390	-908	-2124	763	302	441	324	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.259	1.00	Yes	0.733	0.176	0.91	Yes	1.00	**2.85**
		U_5 - U_6			-----	-1526.95	-428	-10	-927	-1467	187	-210	363	451	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.203	1.00	Yes	0.784	0.122	0.91	Yes	1.00	**3.12**
		U_6 - U_7			-----	-1312.70	-299	-117	-860	-1844	-127	-181	319	118	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.238	1.00	Yes	0.747	0.164	0.92	Yes	1.00	**2.72**
		U_7 - U_8			-----	-1392.33	-177	-153	-1139	-1480	-113	-192	183	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.196	1.00	Yes	0.793	0.132	0.93	Yes	1.00	**3.44**
		U_8 - U_9			-----	-1198.72	-270	126	-1216	-888	-99	-201	351	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.177	1.00	Yes	0.813	0.129	0.95	Yes	1.00	**3.33**
		U_9 - U_{10}			276.46	-1004.43	-5	435	-786	-855	-167	-168	260	-216	0.203	0.132	0.34	Yes	0.137	0.089	0.23	Yes	0.872	0.126	1.00	Yes	0.867	0.104	0.98	Yes	1.00	**4.74**
		U_{10} - U_{11}			667.18	-830.82	286	470	-944	-885	-223	-176	382	-306	0.564	0.180	0.75	Yes	0.384	0.117	0.51	Yes	0.831	0.163	1.00	Yes	0.826	0.133	0.96	Yes	1.00	**6.11**
		U_{11} - U_{12}			-----	-762.21	-1509	863	-1676	-784	575	-60	832	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1.00	Yes	0.757	0.236	1.00	Yes	1.00	**10.31**
		U_{12} - U_{13}			1124.88	-----	467	167	-27	-1523	-419	-368	166	-485	0.760	0.238	1.00	Yes	0.541	0.162	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		U_{13} - U_{14}			563.26	-----	-3411	6740	-369	1357	184	-1362	-408	-509	0.277	0.717	1.00	Yes	0.196	0.470	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.65**
		U_{14} - U_{15}			761.53	-----	1423	254	5775	-3961	-1185	-883	-934	53	0.374	0.616	1.00	Yes	0.265	0.404	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.01**
		U_{15} - U_{16}			1226.86	-----	118	464	-140	-1636	-617	-384	-85	832	0.742	0.256	1.00	Yes	0.528	0.173	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		U_{16} - U_{17}			993.47	-120.62	635	297	488	-1679	-198	-22	514	445	0.732	0.265	1.00	Yes	0.487	0.174	0.67	Yes	0.105	0.260	0.37	Yes	0.105	0.211	0.32	Yes	1.00	**6.08**
		U_{17} - U_{18}			688.33	-283.70	437	310	389	-1136	8	257	255	769	0.691	0.305	1.00	Yes	0.460	0.202	0.67	Yes	0.337	0.310	0.65	Yes	0.335	0.193	0.53	Yes	1.00	**4.69**
		U_{18} - U_{19}			528.65	-636.83	506	219	304	-1409	110	119	488	463	0.531	0.311	0.85	Yes	0.348	0.198	0.55	Yes	0.757	0.178	0.94	Yes	0.752	0.239	1.00	Yes	1.00	**4.74**
		U_{19} - U_{20}			273.08	-690.69	283	194	-207	-1125	33	24	215	518	0.256	0.250	0.51	Yes	0.170	0.164	0.34	Yes	0.767	0.228	1.00	Yes	0.762	0.180	0.95	Yes	1.00	**3.50**
		U_{20} - U_{21}			64.84	-871.67	-65	101	-36	-1187	75	-10	325	284	0.050	0.207	0.26	Yes	0.035	0.134	0.17	Yes	0.801	0.194	1.00	Yes	0.796	0.172	0.97	Yes	1.00	**3.76**
		U_{21} - U_{22}			52.54	-790.57	-49	15	-431	-1381	43	63	209	378	0.041	0.241	0.29	Yes	0.029	0.162	0.20	Yes	0.727	0.267	1.00	Yes	0.722	0.200	0.93	Yes	1.00	**3.01**
		U_{22} - U_{23}			93.16	-832.26	85	-28	-612	-1167	53	-2	385	-13	0.072	0.211	0.29	Yes	0.051	0.142	0.20	Yes	0.765	0.232	1.00	Yes	0.760	0.169	0.93	Yes	1.00	**3.67**
		U_{23} - U_{24}			235.41	-875.65	-54	205	-22	-1257	-37	-64	232	-8	0.183	0.207	0.40	Yes	0.128	0.133	0.27	Yes	0.805	0.194	1.00	Yes	0.799	0.182	0.99	Yes	1.00	**4.75**
		U_{24} - U_{25}			331.47	-716.72	212	310	-467	-935	-73	-87	324	-245	0.311	0.193	0.51	Yes	0.206	0.127	0.34	Yes	0.796	0.201	1.00	Yes	0.791	0.150	0.95	Yes	1.00	**4.40**
		U_{25} - U_{26}			-----	-729.66	-467	591	-614	-771	181	-207	291	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.124	1.00	Yes	0.862	0.131	1.00	Yes	1.00	**5.79**
		U_{26} - U_{27}			-----	-663.01	-982	908	-179	-1136	416	-311	324	-438	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1.00	Yes	0.783	0.193	0.98	Yes	1.00	**9.97**
		U_{27} - U_{28}			-----	-784.05	-1508	2142	-542	-2325	694	-485	778	-444	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.308	1.00	Yes	0.680	0.292	0.98	Yes	1.00	**18.45**
		U_{28} - U_{29}			1057.33	-----	-23	527	-521	-2675	88	-622	416	-497	0.639	0.357	1.00	Yes	0.455	0.239	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.80**
		U_{29} - U_{30}			681.44	-----	-2511	6395	-67	656	145	-970	-256	34	0.335	0.658	1.00	Yes	0.237	0.431	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.64**
		U_{30} - U_{31}			781.43	-----	1095	380	5815	-5018	-1113	-594	-744	481	0.384	0.614	1.00	Yes	0.272	0.403	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.22**
		U_{31} - U_{32}			1101.51	-----	48	408	-438	-1320	-385	-188	66	923	0.744	0.254	1.00	Yes	0.530	0.174	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		U_{32} - U_{33}			843.84	-264.24	447	251	455	-1481	-70	16	600	518	0.713	0.282	1.00	Yes	0.479	0.188	0.67	Yes	0.264	0.169	0.44	Yes	0.263	0.209	0.48	Yes	1.00	**5.55**
		U_{33} - U_{34}			637.55	-695.15	348	229	-118	-1559	41	278	545	1048	0.539	0.348	0.89	Yes	0.366	0.228	0.60	Yes	0.695	0.304	1.00	Yes	0.691	0.220	0.92	Yes	1.00	**5.33**
		U_{34} - U_{35}			302.70	-873.89	319	43	-142	-1597	216	171	634	582	0.222	0.263	0.49	Yes	0.150	0.178	0.33	Yes	0.759	0.236	1.00	Yes	0.754	0.194	0.95	Yes	1.00	**3.99**
		U_{35} - U_{36}			110.61	-1154.49	148	-146	-115	-1467	113	93	450	577	0.064	0.204	0.27	Yes	0.045	0.134	0.18	Yes	0.789	0.206	1.00	Yes	0.783	0.156	0.94	Yes	1.00	**3.82**
		U_{36} - U_{37}			-----	-1311.21	-80	17	-578	-2041	91	1	436	319	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.247	1.00	Yes	0.747	0.182	0.93	Yes	1.00	**3.50**
		U_{37} - U_{38}			-----	-1361.59	137	-136	-694	-1924	42	19	307	250	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1.00	Yes	0.775	0.171	0.95	Yes	1.00	**4.08**
		U_{38} - U_{39}			-----	-1462.07	99	-298	-1003	-2149	132	-34	646	120	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.235	1.00	Yes	0.751	0.178	0.93	Yes	1.00	**3.77**
		U_{39} - U_{40}			-----	-1437.69	-232	-302	-908	-2289	51	1	463	141	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1.00	Yes	0.738	0.190	0.93	Yes	1.00	**4.34**
		U_{40} - U_{41}			-----	-1318.95	-238	-313	-1325	-1891	48	-88	541	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.242	1.00	Yes	0.751	0.169	0.92	Yes	1.00	**4.30**
		U_{41} - U_{42}			-----	-1119.71	-800	212	-1462	-910	322	-59	438	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1.00	Yes	0.795	0.149	0.95	Yes	1.00	**4.74**
		U_{42} - U_{43}			-----	-737.73	-429	58	-522	-1125	-130	-424	293	-595	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.276	1.00	Yes	0.712	0.171	0.89	Yes	1.00	**8.13**
		U_{43} - U_{44}			-----	-584.21	-1658	1800	-191	-994	147	-688	168	-596	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.243	0.94	Yes	0.690	0.306	1.00	Yes	1.00	**8.08**
	Structure 3	U_5 - U_1			-----	-602.02	-5	-160	567	-1580	-2	-50	-32	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.259	0.95	Yes	0.677	0.318	1.00	Yes	1.00	**7.56**
		U_1 - U_2			-----	-710.49	-32	-142	68	-868	-62	-232	-102	-311	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.799	0.175	0.98	Yes	1.00	**3.21**
		U_2 - U_3			-----	-1023.08	-71	-167	-18	-1013	-50	333	-69	494	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.188	1.00	Yes	0.801	0.165	0.97	Yes	1.00	**3.08**
		U_3 - U_4			-----	-1349.80	-168	-297	-297	-1413	372	585	421	541	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.212	1.00	Yes	0.774	0.156	0.93	Yes	1.00	**3.28**
		U_4 - U_5			-----	-1341.80	-400	-72	-561	-1101	693	230	487	293	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.217	1.00	Yes	0.769	0.121	0.90	Yes	1.00	**2.75**
		U_5 - U_6			-----	-1319.67	-187	-281	-626	-1592	140	-148	285	329	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.228	1.00	Yes	0.757	0.176	0.94	Yes	1.00	**2.64**
		U_6 - U_7			-----	-1375.13	-363	-74	-591	-1090	-111	-201	365	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.196	1.00	Yes	0.788	0.120	0.91	Yes	1.00	**3.83**
		U_7 - U_8			-----	-1202.32	-154	36	-447	-909	-71	-192	252	-195	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.185	1.00	Yes	0.803	0.125	0.93	Yes	1.00	**3.70**
		U_8 - U_9			-----	-914.49	-72	226	-635	-430	-52	-164	317	-308	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.128	1.00	Yes	0.858	0.105	0.97	Yes	1.00	**3.45**
		U_9 - U_{10}			489.07	-679.60	66	399	-419	-345	-166	-129	287	-363	0.530	0.152	0.69	Yes	0.354	0.099	0.46	Yes	0.875	0.117	1.00	Yes	0.867	0.094	0.97	Yes	1.00	**6.62**
		U_{10} - U_{11}			-----	-569.48	-1005	720	-291	-1078	637	-569	673	-1143	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1.00	Yes	0.727	0.242	0.97	Yes	1.00	**15.46**
		U_{11} - U_{12}			319.14	-----	-2615	3584	-141	527	516	-1049	-459	-450	0.261	0.730	1.00	Yes	0.179	0.497	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.33**
		U_{12} - U_{13}			941.70	-----	1016	125	1937	-1334	-529	-489	-343	80	0.652	0.347	1.00	Yes	0.455	0.237	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		U_{13} - U_{14}			826.02	-55.03	218	419	55	-649	-325	-205	-7	520	0.790	0.209	1.00	Yes	0.552	0.144	0.70	Yes	0.063	0.212	0.28	Yes	0.062	0.138	0.20	Yes	1.00	**4.63**
		U_{14} - U_{15}			639.89	-408.93	422	292	215	-899	-126	-40	287	139	0.733	0.262	1.00	Yes	0.495	0.171	0.67	Yes	0.556	0.286	0.85	Yes	0.551	0.214	0.77	Yes	1.00	**4.50**
		U_{15} - U_{16}			412.46	-578.46	324	226	-20	-900	-64	133	149	434	0.473	0.287	0.77	Yes	0.324	0.197	0.53	Yes	0.787	0.205	1.00	Yes	0.780	0.214	1.00	Yes	1.00	**3.82**
		U_{16} - U_{17}			487.88	-542.99	451	162	188	-1087	59	70	385	70	0.559	0.324	0.89	Yes	0.384	0.222	0.61	Yes	0.739	0.187	0.93	Yes	0.732	0.258	1.00	Yes	1.00	**4.73**
		U_{17} - U_{18}			232.91	-557.32	341	-62	-186	-947	-62	72	277	118	0.267	0.272	0.54	Yes	0.180	0.177	0.36	Yes	0.758	0.238	1.00	Yes	0.752	0.225	0.98	Yes	1.00	**3.63**
		U_{18} - U_{19}			-----	-540.53	-88	-17	-648	-701	92	-87	488	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.264	1.00	Yes	0.729	0.167	0.90	Yes	1.00	**3.72**
		U_{19} - U_{20}			-----	-549.19	-975	1058	71	-758	350	-477	230	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.136	0.89	Yes	0.741	0.252	1.00	Yes	1.00	**5.81**

Moment (End) Al Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Lower Chord	Structure 1	L_0 - L_1	-----	-85.15	-328	168	1365	-2807	-24	-89	289	1063	-----	-----	-----	-----	-----	-----	-----	-----	0.155	0.791	0.95	Yes	0.153	0.843	1.00	Yes	1.00	**21.92**
		L_1 - L_2	462.06	-----	151	-33	135	-846	-28	-33	-56	-158	0.707	0.288	1.00	Yes	0.431	0.194	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		L_2 - L_3	660.50	-44.37	-14	35	-287	-857	-33	27	-198	38	0.760	0.239	1.00	Yes	0.440	0.143	0.59	Yes	0.061	0.223	0.29	Yes	0.060	0.207	0.27	Yes	1.00	**3.68**
		L_3 - L_4	663.34	-142.39	85	255	-180	-897	60	69	-122	-40	0.763	0.236	1.00	Yes	0.453	0.153	0.61	Yes	0.195	0.195	0.39	Yes	0.193	0.217	0.41	Yes	1.00	**3.44**
		L_4 - L_5	528.33	-----	-784	730	-627	-225	-330	-109	-306	577	0.684	0.310	1.00	Yes	0.411	0.200	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_5 - L_6	20.39	-733.89	165	603	-313	-134	77	131	189	46	0.020	0.159	0.18	Yes	0.013	0.097	0.11	Yes	0.856	0.140	1.00	Yes	0.847	0.133	0.99	Yes	1.00	**3.83**
		L_6 - L_7	-----	-985.74	-1289	1230	-649	-911	-463	85	-12	854	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.159	0.97	Yes	0.793	0.203	1.00	Yes	1.00	**11.24**
		L_7 - L_8	-----	-1183.79	-103	1747	18	581	-41	-188	-135	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1.00	Yes	0.750	0.231	0.99	Yes	1.00	**5.26**
		L_8 - L_9	-----	-1276.59	1208	57	1223	-520	-173	-59	77	403	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.178	1.00	Yes	0.809	0.162	0.98	Yes	1.00	**6.24**
		L_9 - L_{10}	-----	-1050.72	163	131	621	-932	29	133	-180	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.078	0.94	Yes	0.846	0.146	1.00	Yes	1.00	**6.18**
		L_{10} - L_{11}	57.56	-542.78	517	-13	210	-649	138	45	27	-1	0.075	0.196	0.28	Yes	0.043	0.118	0.17	Yes	0.834	0.109	0.95	Yes	0.827	0.172	1.00	Yes	1.00	**4.32**
		L_{11} - L_{12}	539.58	-280.73	512	-149	561	-974	102	-33	-219	-202	0.699	0.296	1.00	Yes	0.419	0.194	0.62	Yes	0.432	0.126	0.56	Yes	0.428	0.258	0.69	Yes	1.00	**4.89**
		L_{12} - L_{13}	1028.59	-----	178	-67	-114	-870	21	28	98	265	0.812	0.185	1.00	Yes	0.519	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_{13} - L_{14}	1260.37	-----	353	-444	298	-1795	9	-2	133	-45	0.741	0.258	1.00	Yes	0.480	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		L_{14} - L_{15}	1649.31	-----	-1313	20	-1345	-1194	-328	-152	-164	371	0.806	0.188	1.00	Yes	0.524	0.114	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		L_{15} - L_{16}	1587.20	-----	-220	-367	-1064	-1666	-124	-57	10	-333	0.775	0.224	1.00	Yes	0.498	0.131	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{16} - L_{17}	1213.17	-----	-1038	410	-1251	-553	-519	-35	-370	400	0.767	0.230	1.00	Yes	0.498	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		L_{17} - L_{18}	926.56	-----	-636	424	-798	-448	-190	-152	34	-306	0.807	0.193	1.00	Yes	0.516	0.116	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		L_{18} - L_{19}	312.98	-----	-1234	970	-538	46	-721	-99	-373	471	0.479	0.520	1.00	Yes	0.324	0.330	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.16**
		L_{19} - L_{20}	138.73	-377.18	-1040	533	-83	-49	618	139	-25	-6	0.212	0.440	0.66	Yes	0.130	0.291	0.43	Yes	0.685	0.288	0.98	Yes	0.679	0.312	1.00	Yes	1.00	**7.68**
	Structure 2	L_0 - L_1	41.01	-91.93	-125	26	1061	-3695	-18	-64	-332	-1154	0.050	0.941	1.00	Yes	0.030	0.601	0.64	Yes	0.132	0.656	0.79	Yes	0.131	0.752	0.89	Yes	1.00	**21.66**
		L_1 - L_2	544.63	-----	162	-219	539	-1505	-38	35	-102	-190	0.661	0.338	1.00	Yes	0.393	0.218	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		L_2 - L_3	982.35	-----	-44	-165	-15	-1264	78	77	-11	230	0.784	0.211	1.00	Yes	0.516	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		L_3 - L_4	1294.25	-----	45	-430	-276	-1705	36	58	276	100	0.768	0.225	1.00	Yes	0.518	0.145	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		L_4 - L_5	1703.35	-----	-389	-249	-627	-1942	94	203	-73	125	0.794	0.197	1.00	Yes	0.526	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		L_5 - L_6	1792.54	-----	-147	-387	-862	-2437	112	-16	10	-135	0.769	0.225	1.00	Yes	0.516	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_6 - L_7	1778.80	-----	-415	-64	-1372	-2485	-170	45	-167	410	0.753	0.244	1.00	Yes	0.500	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		L_7 - L_8	1416.89	-----	-211	295	-1529	-1190	-131	8	83	-131	0.812	0.180	1.00	Yes	0.534	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_8 - L_9	1129.95	-----	-943	589	-1097	-520	-285	28	-130	645	0.790	0.209	1.00	Yes	0.532	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_9 - L_{10}	894.77	-649.05	-93	753	-1067	-683	20	97	154	-219	0.799	0.197	1.00	Yes	0.465	0.122	0.59	Yes	0.686	0.127	0.82	Yes	0.682	0.171	0.86	Yes	1.00	**6.06**
		L_{10} - L_{11}	606.77	-----	-1549	1081	-1551	-247	-728	13	-380	900	0.606	0.392	1.00	Yes	0.355	0.243	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.60**
		L_{11} - L_{12}	116.05	-972.80	-1042	1465	-996	-703	3	259	254	-443	0.081	0.241	0.33	Yes	0.054	0.145	0.20	Yes	0.804	0.151	0.96	Yes	0.798	0.200	1.00	Yes	1.00	**10.87**
		L_{12} - L_{13}	-----	-1276.26	-555	0	-1193	-1625	75	-91	37	447	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.224	1.00	Yes	0.763	0.161	0.93	Yes	1.00	**6.75**
		L_{13} - L_{14}	-----	-1303.24	-1311	3828	-348	1184	-166	-314	-181	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.662	0.247	0.91	Yes	0.656	0.334	1.00	Yes	1.00	**7.40**
		L_{14} - L_{15}	-----	-1426.86	1409	-260	3145	-2105	-221	-329	-92	250	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.186	0.92	Yes	0.718	0.275	1.00	Yes	1.00	**7.38**
		L_{15} - L_{16}	-----	-1434.32	-853	344	-1192	-1215	-20	369	90	51	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.129	1.00	Yes	0.858	0.121	0.98	Yes	1.00	**7.05**
		L_{16} - L_{17}	-----	-1151.82	1201	119	1169	-1077	402	189	-137	-89	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.145	1.00	Yes	0.839	0.148	0.99	Yes	1.00	**6.00**
		L_{17} - L_{18}	-----	-810.46	469	223	518	-886	99	-55	-75	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.080	0.94	Yes	0.851	0.142	1.00	Yes	1.00	**4.26**
		L_{18} - L_{19}	131.06	-627.48	655	110	75	-710	-1	34	214	293	0.148	0.182	0.34	Yes	0.086	0.108	0.20	Yes	0.841	0.152	1.00	Yes	0.836	0.137	0.98	Yes	1.00	**4.20**
		L_{19} - L_{20}	457.08	-568.43	549	221	449	-1256	58	-42	102	-189	0.518	0.271	0.79	Yes	0.306	0.173	0.48	Yes	0.762	0.192	0.96	Yes	0.758	0.242	1.00	Yes	1.00	**5.44**
		L_{20} - L_{21}	886.07	-452.32	548	45	-361	-1618	-92	-102	14	346	0.716	0.279	1.00	Yes	0.471	0.161	0.64	Yes	0.433	0.214	0.65	Yes	0.430	0.241	0.68	Yes	1.00	**6.27**
		L_{21} - L_{22}	771.22	-1.31	51	-38	77	-2353	-35	45	-81	-208	0.623	0.373	1.00	Yes	0.418	0.225	0.65	Yes	0.001	0.279	0.29	Yes	0.001	0.350	0.36	Yes	1.00	**5.09**
		L_{22} - L_{23}	893.39	-97.79	-155	200	-1434	-1306	-21	3	-72	510	0.722	0.269	1.00	Yes	0.484	0.165	0.65	Yes	0.094	0.249	0.35	Yes	0.093	0.213	0.31	Yes	1.00	**4.62**
		L_{23} - L_{24}	912.04	-299.27	4	372	-942	-1565	10	78	94	-247	0.737	0.260	1.00	Yes	0.485	0.150	0.64	Yes	0.287	0.322	0.61	Yes	0.285	0.233	0.52	Yes	1.00	**6.16**
		L_{24} - L_{25}	610.45	-----	-564	398	-1026	-778	-229	159	-256	681	0.692	0.302	1.00	Yes	0.409	0.189	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_{25} - L_{26}	607.71	-472.38	-697	970	-1311	-1100	-67	-143	352	-343	0.688	0.307	1.00	Yes	0.397	0.182	0.58	Yes	0.633	0.158	0.80	Yes	0.630	0.253	0.89	Yes	1.00	**9.41**
		L_{26} - L_{27}	163.21	-754.02	-1288	1237	-1001	-800	-586	-35	-215	755	0.146	0.297	0.45	Yes	0.085	0.182	0.27	Yes	0.797	0.163	0.97	Yes	0.792	0.206	1.00	Yes	1.00	**9.41**
		L_{27} - L_{28}	-----	-1140.21	-472	1340	-798	-314	-96	-38	182	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.136	0.98	Yes	0.830	0.165	1.00	Yes	1.00	**6.65**
		L_{28} - L_{29}	-----	-1399.30	10	-53	-448	-1423	-49	0	55	255	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.149	1.00	Yes	0.837	0.141	0.98	Yes	1.00	**5.29**
		L_{29} - L_{30}	-----	-1379.30	-1153	3408	-384	768	41	114	-58	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.199	0.90	Yes	0.694	0.298	1.00	Yes	1.00	**7.07**
		L_{30} - L_{31}	-----	-1376.13	1561	-265	3466	-2498	-460	-370	488	842	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.233	0.94	Yes	0.692	0.303	1.00	Yes	1.00	**9.86**
		L_{31} - L_{32}	-----	-1096.92	-484	526	-309	-2506	-530	31	-352	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.331	1.00	Yes	0.662	0.252	0.92	Yes	1.00	**13.81**
		L_{32} - L_{33}	-----	-988.49	959	136	574	-1374	-127	-67	185	241	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.143	0.97	Yes	0.811	0.187	1.00	Yes	1.00	**7.91**
		L_{33} - L_{34}	94.74	-658.23	394	166	688	-1287	7	-88	-166	-233	0.095	0.257	0.36	Yes	0.055	0.161	0.22	Yes	0.778	0.110	0.89	Yes	0.773	0.225	1.00	Yes	1.00	**6.19**
		L_{34} - L_{35}	737.84	-639.11	657	51	328	-1701	-31	64	200	557	0.659	0.339	1.00	Yes	0.383	0.210	0.60	Yes	0.676	0.227	0.91	Yes	0.671	0.272	0.95	Yes	1.00	**7.66**
		L_{35} - L_{36}	1082.82	-270.31	389	-5	190	-1501	101	-49	364	-53	0.757	0.237	1.00	Yes	0.510	0.148	0.66	Yes	0.224	0.156	0.38	Yes	0.222	0.203	0.43	Yes	1.00	**5.77**
		L_{36} - L_{37}	1317.76	-23.28	230	-8	-701	-1873	-102	14	38	458	0.756	0.244	1.00	Yes	0.496	0.145	0.65	Yes	0.016	0.229	0.25	Yes	0.016	0.207	0.23	Yes	1.00	**4.69**
		L_{37} - L_{38}	1758.33	-----	-56	-366	-1177	-2742	-43	-10	217	-83	0.744	0.254	1.00	Yes	0.495	0.148	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_{38} - L_{39}	1823.01	-----	-248	-158	-1802	-2111	-56	5	-64	425	0.782	0.214	1.00	Yes	0.525	0.131	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_{39} - L_{40}	1629.78	-----	-207	-309	-1292	-2191	-51	-36	-2	-379	0.760	0.233	1.00	Yes	0.503	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_{40} - L_{41}	1285.96	-----	-1127	193	-1691	-834	-429	-8	-282	541	0.756	0.241	1.00	Yes	0.509	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		L_{41} - L_{42}	1033.24	-----	-994	413	-900	-890	-100	-2	26	-347	0.814	0.181	1.00	Yes	0.534	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.21**
		L_{42} - L_{43}	478.62	-----	-1141	546	-1021	-378	-281	90	-325	772	0.612	0.385	1.00	Yes	0.366	0.219	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		L_{43} - L_{44}	220.33	-187.83	-2340	829	-69	-13	1534	448	-155	-45	0.268	0.728	1.00	Yes	0.159	0.459	0.62	Yes	0.270	0.471	0.75	Yes	0.268	0.476	0.75	Yes	1.00	**13.79**
	Structure 3	L_0 - L_1	173.12	-261.82	-13	-84	906	-1664	-9	-40	-138	-627	0.275	0.642	0.92	Yes	0.169	0.420	0.59	Yes	0.494	0.368	0.87	Yes	0.490	0.502	1.00	Yes	1.00	**11.99**
		L_1 - L_2	369.52	-----	139	-176	749	-1346	-54	19	-76	-101	0.566	0.425	1.00	Yes	0.383	0.263	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.44**
		L_2 - L_3	875.87	-----	-36	-160	205	-1052	37	23	34	245	0.763	0.234	1.00	Yes	0.488	0.140	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		L_3 - L_4	1212.34	-----	61	-363	48	-1477	42	53	142	52	0.767	0.229	1.00	Yes	0.497	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		L_4 - L_5	1644.32	-----	-380	-181	-1321	-1379	116	224	184	372	0.803	0.192	1.00	Yes	0.516	0.113	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		L_5 - L_6	1477.47	-----	-83	-346	-215	-2156	142	77	-19	-40	0.722	0.270	1.00	Yes	0.469	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		L_6 - L_7	1325.99	-----	-1234	394	-1075	-724	-256	7	-131	487	0.780	0.211	1.00	Yes	0.505	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		L_7 - L_8	1089.61	-----	-84	118	-632	-715	-29	38	110	-40	0.860	0.140	1.00	Yes	0.550	0.083	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		L_8 - L_9	565.78	-----	-726	417	-492	-127	-236	143	-191	422	0.733	0.266	1.00	Yes	0.440	0.172	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		L_9 - L_{10}	333.75	-563.62	16	517	-504	-303	76	140	199	28	0.432	0.172	0.61	Yes	0.252	0.103	0.36	Yes	0.866	0.113	0.98	Yes	0.859	0.137	1.00	Yes	1.00	**5.73**
		L_{10} - L_{11}	-----	-1031.54	-972	1024	-1038	-585	-295	-100	123	1369	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.149	0.99	Yes	0.830	0.163	1.00	Yes	1.00	**10.00**
		L_{11} - L_{12}	-----	-1213.08	-318	1553	-32	457	-199	-439	-235	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.218	1.00	Yes	0.768	0.206	0.98	Yes	1.00	**6.28**
		L_{12} - L_{13}	-----	-1233.11	1244	85	1571	-717	-149	-311	-114	302	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.206	1.00	Yes	0.781	0.208	0.99	Yes	1.00	**7.48**
		L_{13} - L_{14}	-----	-1104.78	-41	281	-23	-668	-229	121	186	39	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.071	0.97	Yes	0.889	0.105	1.00	Yes	1.00	**4.95**
		L_{14} - L_{15}	-----	-749.87	571	167	334	-455	149	-6	1	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.122	1.00	Yes	0.865	0.126	1.00	Yes	1.00	**3.63**
		L_{15} - L_{16}	175.75	-524.61	415	185	298	-726	12	-56	-43	-50	0.228	0.202	0.43	Yes	0.137	0.134	0.28	Yes	0.807	0.177	0.99	Yes	0.799	0.192	1.00	Yes	1.00	**3.07**
		L_{16} - L_{17}	621.35	-218.49	308	28	-149	-920	97	-35	84	378	0.715	0.283	1.00	Yes	0.425	0.181	0.61	Yes	0.299	0.229	0.53	Yes	0.296	0.222	0.52	Yes	1.00	**3.10**
		L_{17} - L_{18}	656.72	-114.02	87	-9	-556	-902	3	12	147	-54	0.756	0.242	1.00	Yes	0.437	0.145	0.59	Yes	0.156	0.249	0.41	Yes	0.154	0.218	0.38	Yes	1.00	**3.32**
		L_{18} - L_{19}	404.62	-----	-697	271	-416	-650	-163	133	-168	754	0.619	0.371	1.00	Yes	0.378	0.242	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_{19} - L_{20}	5.84	-141.50	-1734	1042	-605	-208	2178	593	-816	-222	0.009	0.988	1.00	Yes	0.005	0.591	0.60	Yes	0.257	0.701	0.96	Yes	0.255	0.521	0.78	Yes	1.00	**15.17**

Moment (End) Al Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 Vehicle 1.300 Pedestrian
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-286.28	-158	217	-59	89	-61	-20	-24	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.146	0.86	Yes	0.669	0.324	1.00	Yes	1.00	**1.50**
		$U_1 - L_1$	14.32	-330.67	-219	228	22	-11	-458	-161	-2	-1	0.026	0.424	0.45	Yes	0.014	0.233	0.25	Yes	0.722	0.200	0.93	Yes	0.700	0.291	1.00	Yes	1.00	**3.37**
		$U_2 - L_2$	98.88	-280.44	-273	314	84	-94	-329	-25	61	29	0.178	0.496	0.68	Yes	0.098	0.273	0.38	Yes	0.613	0.193	0.81	Yes	0.593	0.401	1.00	Yes	1.00	**5.23**
		$U_3 - L_3$	194.11	-283.76	-276	311	309	-279	50	36	225	187	0.349	0.462	0.82	Yes	0.192	0.254	0.45	Yes	0.622	0.170	0.80	Yes	0.600	0.397	1.00	Yes	1.00	**7.95**
		$U_4 - L_4$	-----	-213.37	-58	43	425	-414	-249	68	-365	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.469	0.237	0.71	Yes	0.451	0.543	1.00	Yes	1.00	**8.22**
		$U_5 - L_5$	-----	-423.74	71	-89	228	-262	38	2	100	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.101	0.87	Yes	0.731	0.265	1.00	Yes	1.00	**2.78**
		$U_6 - L_6$	-----	-489.47	86	-80	242	-261	-196	-50	253	25	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.133	0.92	Yes	0.739	0.253	1.00	Yes	1.00	**2.46**
		$U_7 - L_7$	-----	-411.54	129	-143	272	-290	-146	15	177	23	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.142	0.88	Yes	0.671	0.321	1.00	Yes	1.00	**1.79**
		$U_8 - L_8$	-----	-1191.16	-374	440	463	-557	232	121	971	280	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.137	1.00	Yes	0.826	0.104	0.93	Yes	1.00	**5.04**
		$U_9 - L_9$	-----	-635.10	-399	440	-171	200	-396	-268	-413	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.157	0.94	Yes	0.735	0.256	1.00	Yes	1.00	**3.11**
		$U_{10} - L_{10}$	-----	-754.29	-334	360	-130	102	-563	-480	-427	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.176	1.00	Yes	0.775	0.201	0.98	Yes	1.00	**4.13**
		$U_{11} - L_{11}$	-----	-654.11	-392	500	-124	190	-663	-493	-521	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.196	0.99	Yes	0.761	0.232	1.00	Yes	1.00	**3.97**
		$U_{12} - L_{12}$	-----	-521.73	-329	330	-90	95	-144	-172	-347	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.158	0.92	Yes	0.716	0.282	1.00	Yes	1.00	**3.50**
		$U_{13} - L_{13}$	-----	-359.18	-240	268	-37	57	-107	-47	-185	6	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.132	0.86	Yes	0.688	0.305	1.00	Yes	1.00	**2.97**
		$U_{14} - L_{14}$	-----	-170.38	-468	494	214	-222	100	271	117	36	-----	-----	-----	-----	-----	-----	-----	-----	0.380	0.209	0.59	Yes	0.361	0.632	1.00	Yes	1.00	**10.83**
		$U_{15} - L_{15}$	144.12	-309.76	-100	94	245	-266	80	52	343	-80	0.259	0.440	0.70	Yes	0.143	0.242	0.39	Yes	0.694	0.166	0.87	Yes	0.655	0.340	1.00	Yes	1.00	**4.45**
		$U_{16} - L_{16}$	7.98	-322.04	14	-27	236	-245	47	-51	256	-154	0.014	0.387	0.41	Yes	0.008	0.213	0.23	Yes	0.726	0.133	0.86	Yes	0.681	0.313	1.00	Yes	1.00	**3.20**
		$U_{17} - L_{17}$	-----	-438.06	60	-75	219	-240	-122	-113	215	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.123	0.95	Yes	0.756	0.244	1.00	Yes	1.00	**2.52**
		$U_{18} - L_{18}$	-----	-539.72	144	-150	425	-440	-134	-122	278	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.100	0.90	Yes	0.751	0.249	1.00	Yes	1.00	**2.69**
		$U_{19} - L_{19}$	-----	-643.04	171	-170	533	-522	-118	-46	211	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.105	0.91	Yes	0.748	0.248	1.00	Yes	1.00	**3.11**
		$U_{20} - L_{20}$	-----	-560.34	160	-260	337	-497	27	4	521	68	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1.00	Yes	0.686	0.239	0.93	Yes	1.00	**2.24**
	Structure 2	$U_0 - L_0$	-----	-606.32	-409	492	-167	216	-850	-144	-37	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.235	1.00	Yes	0.680	0.222	0.91	Yes	1.00	**2.61**
		$U_1 - L_1$	-----	-718.05	-510	526	-117	126	37	74	-106	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.074	0.90	Yes	0.770	0.223	1.00	Yes	1.00	**4.32**
		$U_2 - L_2$	-----	-581.54	-494	494	-105	115	-297	-53	-107	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.111	0.89	Yes	0.741	0.253	1.00	Yes	1.00	**3.91**
		$U_3 - L_3$	-----	-488.13	-241	251	-55	63	-100	-67	77	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.093	0.93	Yes	0.766	0.229	1.00	Yes	1.00	**3.29**
		$U_4 - L_4$	-----	-343.30	-210	212	-15	23	14	2	242	74	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.150	0.93	Yes	0.726	0.271	1.00	Yes	1.00	**3.29**
		$U_5 - L_5$	126.23	-320.27	-229	249	94	-81	-114	-41	-130	94	0.227	0.356	0.59	Yes	0.125	0.196	0.33	Yes	0.723	0.153	0.88	Yes	0.678	0.318	1.00	Yes	1.00	**4.60**
		$U_6 - L_6$	357.73	-249.25	-250	256	196	-207	96	11	-75	100	0.643	0.356	1.00	Yes	0.354	0.196	0.55	Yes	0.561	0.117	0.68	Yes	0.527	0.327	0.86	Yes	1.00	**6.49**
		$U_7 - L_7$	-----	-133.96	-187	212	488	-559	-86	206	29	60	-----	-----	-----	-----	-----	-----	-----	-----	0.303	0.251	0.56	Yes	0.283	0.715	1.00	Yes	1.00	**14.32**
		$U_8 - L_8$	-----	-465.93	56	-77	345	-366	-40	-42	150	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.106	0.79	Yes	0.671	0.321	1.00	Yes	1.00	**3.58**
		$U_9 - L_9$	-----	-695.28	162	-171	573	-593	-61	-155	528	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.142	0.92	Yes	0.745	0.252	1.00	Yes	1.00	**4.41**
		$U_{10} - L_{10}$	-----	-796.01	181	-185	541	-570	-149	-102	479	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.116	0.91	Yes	0.744	0.252	1.00	Yes	1.00	**4.44**
		$U_{11} - L_{11}$	-----	-816.75	186	-186	513	-531	-187	-70	202	-149	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.103	0.93	Yes	0.764	0.234	1.00	Yes	1.00	**4.03**
		$U_{12} - L_{12}$	-----	-881.61	157	-135	514	-531	-144	8	469	12	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.145	1.00	Yes	0.764	0.228	1.00	Yes	1.00	**4.15**
		$U_{13} - L_{13}$	-----	-749.09	210	-206	576	-557	-163	20	419	46	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.162	1.00	Yes	0.722	0.275	1.00	Yes	1.00	**3.46**
		$U_{14} - L_{14}$	-----	-1212.66	-580	540	782	-746	56	284	600	296	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.109	1.00	Yes	0.804	0.138	0.95	Yes	1.00	**6.61**
		$U_{15} - L_{15}$	-----	-711.83	-638	606	-116	124	-492	-107	-300	13	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1.00	Yes	0.686	0.305	1.00	Yes	1.00	**5.58**
		$U_{16} - L_{16}$	-----	-697.03	-522	504	-90	64	-818	-408	-782	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1.00	Yes	0.747	0.221	0.97	Yes	1.00	**4.56**
		$U_{17} - L_{17}$	-----	-633.63	-561	551	-124	122	-682	-442	-275	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.197	0.98	Yes	0.737	0.260	1.00	Yes	1.00	**4.40**
		$U_{18} - L_{18}$	-----	-576.37	-500	512	-95	95	-314	-308	-114	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.128	0.90	Yes	0.734	0.262	1.00	Yes	1.00	**3.95**
		$U_{19} - L_{19}$	-----	-477.46	-294	293	-57	61	-43	-137	-66	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.100	0.82	Yes	0.713	0.283	1.00	Yes	1.00	**3.39**
		$U_{20} - L_{20}$	-----	-373.18	-239	242	-10	16	-138	-103	-178	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.119	0.89	Yes	0.715	0.277	1.00	Yes	1.00	**3.57**
		$U_{21} - L_{21}$	53.14	-315.10	-243	256	26	-21	-28	-39	-88	48	0.096	0.352	0.45	Yes	0.053	0.194	0.25	Yes	0.712	0.112	0.83	Yes	0.667	0.327	1.00	Yes	1.00	**3.81**
		$U_{22} - L_{22}$	-----	-128.28	-512	568	461	-506	70	266	142	145	-----	-----	-----	-----	-----	-----	-----	-----	0.289	0.255	0.55	Yes	0.271	0.727	1.00	Yes	1.00	**18.12**
		$U_{23} - L_{23}$	92.91	-316.06	-61	51	236	-253	32	117	185	-63	0.167	0.377	0.55	Yes	0.092	0.208	0.30	Yes	0.714	0.130	0.85	Yes	0.669	0.324	1.00	Yes	1.00	**3.99**
		$U_{24} - L_{24}$	-----	-374.02	8	-22	234	-247	-56	-123	210	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.145	0.92	Yes	0.717	0.282	1.00	Yes	1.00	**3.53**
		$U_{25} - L_{25}$	-----	-471.58	42	-42	302	-298	-85	-30	367	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.106	0.82	Yes	0.704	0.291	1.00	Yes	1.00	**3.26**
		$U_{26} - L_{26}$	-----	-567.31	70	-74	499	-527	-120	-23	368	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.130	0.89	Yes	0.723	0.269	1.00	Yes	1.00	**3.74**
		$U_{27} - L_{27}$	-----	-634.50	87	-88	547	-558	-134	2	539	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.138	0.93	Yes	0.738	0.259	1.00	Yes	1.00	**3.97**
		$U_{28} - L_{28}$	-----	-709.52	78	-74	547	-548	-152	16	569	19	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.127	0.95	Yes	0.760	0.232	1.00	Yes	1.00	**4.13**
		$U_{29} - L_{29}$	-----	-714.93	120	-125	632	-607	-115	27	468	20	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.167	0.97	Yes	0.689	0.302	1.00	Yes	1.00	**4.68**
		$U_{30} - L_{30}$	-----	-1189.93	-745	672	830	-815	310	355	623	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.108	1.00	Yes	0.804	0.149	0.96	Yes	1.00	**7.98**
		$U_{31} - L_{31}$	-----	-748.94	-549	524	-108	109	-214	-103	-311	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.163	1.00	Yes	0.722	0.263	0.99	Yes	1.00	**5.06**
		$U_{32} - L_{32}$	-----	-846.45	-453	460	-81	58	-387	-343	-666	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.184	1.00	Yes	0.734	0.197	0.94	Yes	1.00	**5.06**
		$U_{33} - L_{33}$	-----	-813.37	-492	489	-117	106	-518	-469	-448	-340	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1.00	Yes	0.767	0.220	0.99	Yes	1.00	**5.01**
		$U_{34} - L_{34}$	-----	-806.39	-513	536	-120	114	-24	-266	-295	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.112	0.91	Yes	0.754	0.237	1.00	Yes	1.00	**5.25**
		$U_{35} - L_{35}$	-----	-697.65	-578	579	-96	119	-243	-191	-215	1	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.095	0.88	Yes	0.748	0.245	1.00	Yes	1.00	**5.01**
		$U_{36} - L_{36}$	-----	-472.56	-346	357	-46	60	37	3	-63	64	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.093	0.78	Yes	0.681	0.312	1.00	Yes	1.00	**3.79**
		$U_{37} - L_{37}$	-----	-116.80	-504	583	129	-140	-147	157	-194	107	-----	-----	-----	-----	-----	-----	-----	-----	0.264	0.272	0.54	Yes	0.247	0.746	1.00	Yes	1.00	**13.20**
		$U_{38} - L_{38}$	345.62	-173.93	-232	238	154	-159	42	101	230	-73	0.622	0.371	1.00	Yes	0.342	0.204	0.55	Yes	0.391	0.109	0.51	Yes	0.368	0.304	0.68	Yes	1.00	**5.19**
		$U_{39} - L_{39}$	140.22	-326.13	-146	122	217	-239	116	143	185	-107	0.252	0.359	0.62	Yes	0.139	0.197	0.34	Yes	0.737	0.117	0.86	Yes	0.690	0.306	1.00	Yes	1.00	**5.09**
		$U_{40} - L_{40}$	-----	-342.61	-5	0	208	-210	14	-37	296	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.107	0.89	Yes	0.725	0.268	1.00	Yes	1.00	**3.44**
		$U_{41} - L_{41}$	-----	-486.48	29	-33	240	-252	6	-32	182	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.094	0.93	Yes	0.763	0.229	1.00	Yes	1.00	**3.41**
		$U_{42} - L_{42}$	-----	-589.56	62	-71	465	-480	10	-36	471	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.103	0.90	Yes	0.751	0.245	1.00	Yes	1.00	**3.70**
		$U_{43} - L_{43}$	-----	-706.96	82	-95	549	-553	-49	-49	501	7	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.114	0.93	Yes	0.758	0.235	1.00	Yes	1.00	**3.90**
		$U_{44} - L_{44}$	-----	-632.72	118	-135	388	-513	-129	-22	1009	171	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.240	1.00	Yes	0.678	0.218	0.90	Yes	1.00	**3.31**
	Structure 3	$U_0 - L_0$	-----	-574.84	-409	481	-144	192	-611	-80	-57	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.209	1.00	Yes	0.690	0.230	0.93	Yes	1.00	**2.74**
		$U_1 - L_1$	-----	-658.36	-486	495	-112	124	16	126	-123	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.082	0.91	Yes	0.766	0.230	1.00	Yes	1.00	**4.12**
		$U_2 - L_2$	-----	-544.27	-414	426	-110	116	-51	13	-149	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.089	0.89	Yes	0.757	0.241	1.00	Yes	1.00	**3.38**
		$U_3 - L_3$	-----	-438.61	-218	232	-45	57	-154	-74	45	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.121	0.95	Yes	0.757	0.235	1.00	Yes	1.00	**3.09**
		$U_4 - L_4$	-----	-323.09	-239	245	-16	25	-87	-3	-48	33	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.110	0.84	Yes	0.684	0.313	1.00	Yes	1.00	**3.45**
		$U_5 - L_5$	108.59	-315.44	-237	256	78	-71	124	8	-97	111	0.195	0.362	0.56	Yes	0.107	0.199	0.31	Yes	0.707	0.144	0.86	Yes	0.667	0.327	1.00	Yes	1.00	**4.29**
		$U_6 - L_6$	-----	-221.39	-296	309	387	-410	-271	136	99	12	-----	-----	-----	-----	-----	-----	-----	-----	0.494	0.216	0.71	Yes	0.468	0.524	1.00	Yes	1.00	**10.83**
		$U_7 - L_7$	-----	-366.80	9	-27	235	-255	23	5	199	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.110	0.86	Yes	0.703	0.291	1.00	Yes	1.00	**3.17**
		$U_8 - L_8$	-----	-516.17	71	-73	331	-336	-8	-100	313	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.138	0.89	Yes	0.708	0.287	1.00	Yes	1.00	**3.66**
		$U_9 - L_9$	-----	-655.14	109	-165	393	-503	-25	-172	115	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.104	0.89	Yes	0.763	0.234	1.00	Yes	1.00	**4.00**
		$U_{10} - L_{10}$	-----	-784.20	130	-110	383	-430	-12	13	543	97	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.171	0.99	Yes	0.774	0.223	1.00	Yes	1.00	**4.24**
		$U_{11} - L_{11}$	-----	-649.22	168	-193	426	-472	-160	-32	430	99	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.148	0.93	Yes	0.733	0.263	1.00	Yes	1.00	**2.91**
		$U_{12} - L_{12}$	-----	-1182.92	-472	517	529	-685	187	153	777	342	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.144	1.00	Yes	0.820	0.128	0.95	Yes	1.00	**5.91**
		$U_{13} - L_{13}$	-----	-449.42	-292	303	-66	75	-409	-138	-342	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.187	0.94	Yes	0.693	0.298	1.00	Yes	1.00	**3.21**
		$U_{14} - L_{14}$	-----	-511.11	-250	261	-45	29	-711	-427	-648	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1.00	Yes	0.733	0.228	0.97	Yes	1.00	**3.65**
		$U_{15} - L_{15}$	-----	-445.60	-200	228	-36	43	-233	-264	-449	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.190	1.00	Yes	0.769	0.231	1.00	Yes	1.00	**3.27**
		$U_{16} - L_{16}$	-----	-131.94	-558	544	70	-52	-448	-105	-846	-419	-----	-----	-----	-----	-----	-----	-----	-----	0.290	0.412	0.71	Yes	0.279	0.713	1.00	Yes	1.00	**10.51**
		$U_{17} - L_{17}$	224.12	-264.48	-341	335	213	-240	155	167	-22	-135	0.403	0.484	0.89	Yes	0.222	0.266	0.49	Yes	0.580	0.146	0.73	Yes	0.560	0.436	1.00	Yes	1.00	**7.17**
		$U_{18} - L_{18}$	115.13	-297.11	-107	120	237	-284	-107	15	141	-94	0.207	0.404	0.62	Yes	0.114	0.222	0.34	Yes	0.649	0.151	0.81	Yes	0.629	0.363	1.00	Yes	1.00	**5.13**
		$U_{19} - L_{19}$	39.63	-322.21	-49	38	247	-236	-83	-8	246	28	0.071	0.387	0.46	Yes	0.039	0.213	0.26	Yes	0.704	0.139	0.85	Yes	0.682	0.315	1.00	Yes	1.00	**3.09**
		$U_{20} - L_{20}$	-----	-328.87	19	-29	116	-209	-45	-14	470	151	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.256	1.00	Yes	0.696	0.267	0.97	Yes	1.00	**1.92**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

				Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression											
						Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
DL Factor:	Vehicle 1.300	Pedestrian 1.300		Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
LL Factor:	1.300	1.300		(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
North Truss - Diagonals	Structure 1		$U_0 - L_1$	505.85	-----	-149	68	-16	-2	-626	-118	-12	5	0.664	0.332	1.00	Yes	0.401	0.183	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
			$U_1 - L_2$	424.85	-----	-77	24	-20	-28	-189	-215	450	80	0.764	0.229	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
			$U_2 - L_3$	435.45	-311.38	-118	34	-120	-116	-193	-158	178	-140	0.783	0.209	1.00	Yes	0.431	0.115	0.55	Yes	0.717	0.241	0.96	Yes	0.659	0.153	0.82	Yes	1.00	**9.20**
			$U_3 - L_4$	-----	-376.40	29	-13	-8	-76	23	22	38	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.132	1.00	Yes	0.796	0.097	0.90	Yes	1.00	**3.36**
			$U_4 - L_5$	337.82	-----	0	98	-191	-53	106	57	-1313	-676	0.500	0.500	1.00	Yes	0.275	0.277	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.16**
			$U_5 - L_6$	680.07	-----	-200	226	-51	79	-278	-303	-321	-130	0.804	0.187	1.00	Yes	0.442	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
			$U_6 - L_7$	670.34	-----	-292	253	-96	102	-157	-190	145	51	0.793	0.201	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
			$U_7 - L_8$	658.18	-----	-104	312	-10	131	-114	-132	229	114	0.778	0.219	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.01**
			$U_8 - L_9$	985.62	-----	-96	370	17	137	359	315	367	104	0.788	0.212	1.00	Yes	0.488	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
			$U_9 - L_{10}$	1034.43	-----	-297	284	-73	85	181	317	83	103	0.827	0.173	1.00	Yes	0.512	0.097	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
			$U_{10} - L_{11}$	996.60	-----	-231	209	-131	67	53	308	355	219	0.842	0.153	1.00	Yes	0.521	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
			$U_{11} - L_{12}$	858.81	-----	-252	131	-133	-13	-4	166	123	116	0.850	0.142	1.00	Yes	0.467	0.078	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
			$U_{12} - L_{13}$	653.28	-----	-202	177	-84	21	43	38	55	-112	0.796	0.199	1.00	Yes	0.501	0.111	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
			$U_{13} - L_{14}$	458.86	-10.43	-88	54	-17	-35	-23	-82	-47	-199	0.825	0.171	1.00	Yes	0.454	0.094	0.55	Yes	0.024	0.102	0.13	Yes	0.022	0.113	0.14	Yes	1.00	**3.99**
			$U_{15} - L_{14}$	188.42	-315.52	-47	0	43	-110	-221	-220	-383	-129	0.339	0.252	0.60	Yes	0.186	0.139	0.33	Yes	0.739	0.259	1.00	Yes	0.668	0.141	0.81	Yes	1.00	**4.34**
			$U_{16} - L_{15}$	406.37	-66.46	-128	90	-6	-31	-344	-309	-300	-152	0.731	0.263	1.00	Yes	0.402	0.145	0.55	Yes	0.158	0.185	0.35	Yes	0.141	0.164	0.31	Yes	1.00	**3.68**
			$U_{17} - L_{16}$	518.57	-----	-138	99	-41	6	-409	-354	-354	-226	0.760	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.77**
			$U_{18} - L_{17}$	611.85	-----	-313	253	-112	76	-522	-464	-113	-119	0.723	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
			$U_{19} - L_{18}$	689.12	-----	-346	256	-132	87	-440	-446	-67	-107	0.746	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
			$U_{20} - L_{19}$	692.67	-----	-265	263	-95	93	-669	-426	-100	-39	0.750	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
	Structure 2		$U_0 - L_1$	653.56	-----	-430	360	-116	101	-986	123	-61	-51	0.647	0.347	1.00	Yes	0.356	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
			$U_1 - L_2$	791.27	-----	-389	314	-95	71	-222	-33	-100	-29	0.783	0.214	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
			$U_2 - L_3$	660.26	-----	-328	283	-82	62	-142	-18	-22	91	0.781	0.212	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
			$U_3 - L_4$	599.88	-----	-180	139	-66	14	-147	-49	143	-41	0.800	0.195	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
			$U_4 - L_5$	430.20	-108.52	-132	108	0	-36	-143	-35	-19	-172	0.774	0.219	1.00	Yes	0.426	0.120	0.55	Yes	0.268	0.102	0.38	Yes	0.230	0.169	0.40	Yes	1.00	**4.32**
			$U_5 - L_6$	434.94	-284.95	-122	79	63	-108	-134	-50	-120	-195	0.782	0.212	1.00	Yes	0.430	0.117	0.55	Yes	0.673	0.171	0.85	Yes	0.603	0.156	0.76	Yes	1.00	**5.55**
			$U_6 - L_7$	48.84	-385.01	-33	-6	45	-101	-104	-156	59	-300	0.080	0.193	0.28	Yes	0.044	0.106	0.15	Yes	0.824	0.173	1.00	Yes	0.738	0.115	0.86	Yes	1.00	**3.40**
			$U_8 - L_7$	593.82	-----	-178	148	-25	-27	-269	-408	-270	-207	0.757	0.243	1.00	Yes	0.477	0.138	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
			$U_8 - L_9$	707.63	-----	-324	244	-119	32	-397	-379	-386	-239	0.766	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
			$U_{10} - L_9$	790.49	-----	-311	222	-132	55	-442	-465	-474	-223	0.782	0.215	1.00	Yes	0.430	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
			$U_{11} - L_{10}$	871.94	-----	-339	278	-133	101	-395	-446	-241	-195	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
			$U_{12} - L_{11}$	869.57	-----	-361	350	-133	147	-322	-361	-232	-98	0.792	0.203	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
			$U_{13} - L_{12}$	752.23	-----	-429	376	-153	154	-176	-183	332	127	0.744	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.04**
			$U_{14} - L_{13}$	755.18	-----	-277	425	-36	149	-202	-161	367	182	0.747	0.252	1.00	Yes	0.411	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
			$U_{14} - L_{15}$	643.76	-----	-223	352	23	72	100	209	213	-44	0.761	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
			$U_{15} - L_{16}$	632.07	-----	-375	343	-63	69	-171	-100	-14	21	0.747	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
			$U_{16} - L_{17}$	716.91	-----	-327	344	-69	96	-267	269	-150	62	0.776	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
			$U_{17} - L_{18}$	663.81	-----	-289	296	-65	78	-32	232	-27	101	0.785	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
			$U_{18} - L_{19}$	676.84	-----	-279	273	-70	62	101	211	61	0	0.800	0.196	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
			$U_{19} - L_{20}$	624.11	-----	-196	193	-38	1	95	114	138	-20	0.796	0.203	1.00	Yes	0.438	0.114	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
			$U_{20} - L_{21}$	450.74	-40.00	-124	119	-7	-13	41	52	28	-93	0.811	0.185	1.00	Yes	0.446	0.102	0.55	Yes	0.095	0.061	0.16	Yes	0.085	0.158	0.25	Yes	1.00	**3.88**
			$U_{21} - L_{22}$	447.83	-259.55	-106	74	15	-89	18	3	200	-168	0.805	0.194	1.00	Yes	0.443	0.107	0.55	Yes	0.613	0.132	0.75	Yes	0.549	0.136	0.69	Yes	1.00	**5.92**
			$U_{23} - L_{22}$	435.11	-296.52	-108	65	59	-101	-256	-256	-201	-30	0.783	0.213	1.00	Yes	0.430	0.117	0.55	Yes	0.706	0.198	0.91	Yes	0.627	0.138	0.77	Yes	1.00	**6.05**
			$U_{24} - L_{23}$	427.47	-51.93	-119	106	4	-23	-260	-227	-235	-60	0.769	0.228	1.00	Yes	0.423	0.125	0.55	Yes	0.124	0.128	0.26	Yes	0.110	0.153	0.27	Yes	1.00	**3.70**
			$U_{25} - L_{24}$	581.03	-----	-187	180	-31	6	-372	-321	-400	-137	0.741	0.249	1.00	Yes	0.407	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
			$U_{26} - L_{25}$	652.80	-----	-276	257	-46	36	-306	-355	-180	-84	0.772	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
			$U_{27} - L_{26}$	662.85	-----	-287	285	-45	58	-259	-283	177	69	0.784	0.214	1.00	Yes	0.431	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
			$U_{28} - L_{27}$	707.47	-----	-341	353	-49	68	-241	-280	200	110	0.766	0.226	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
			$U_{29} - L_{28}$	636.42	-----	-362	340	-74	74	-111	-164	208	100	0.752	0.243	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
			$U_{30} - L_{29}$	640.31	-----	-223	356	-15	78	-135	-137	189	106	0.757	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
			$U_{30} - L_{31}$	753.14	-----	-287	440	13	73	179	91	295	0	0.745	0.248	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
			$U_{31} - L_{32}$	736.26	-----	-414	371	-73	76	-170	167	9	47	0.765	0.232	1.00	Yes	0.421	0.119	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
			$U_{32} - L_{33}$	889.63	-----	-355	358	-57	93	-254	215	-149	140	0.810	0.187	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
			$U_{33} - L_{34}$	893.01	-----	-345	296	-110	77	-41	268	61	121	0.813	0.183	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
			$U_{34} - L_{35}$	827.32	-----	-297	255	-106	38	134	162	250	-18	0.818	0.175	1.00	Yes	0.450	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
			$U_{35} - L_{36}$	751.38	-----	-327	273	-106	22	28	25	46	-111	0.814	0.185	1.00	Yes	0.448	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
			$U_{36} - L_{37}$	620.88	-----	-180	176	-49	-17	-43	-1	152	-226	0.792	0.207	1.00	Yes	0.498	0.117	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
			$U_{38} - L_{37}$	39.46	-387.94	-29	-4	69	-101	-183	-214	-184	-82	0.064	0.171	0.24	Yes	0.035	0.094	0.13	Yes	0.838	0.157	1.00	Yes	0.743	0.116	0.86	Yes	1.00	**3.41**
			$U_{38} - L_{39}$	368.83	-321.66	-106	61	90	-125	-302	-273	-301	-111	0.663	0.248	0.92	Yes	0.365	0.136	0.51	Yes	0.766	0.232	1.00	Yes	0.681	0.160	0.85	Yes	1.00	**5.35**
			$U_{40} - L_{39}$	394.81	-139.44	-131	94	12	-44	-334	-315	-401	-117	0.710	0.284	1.00	Yes	0.391	0.156	0.55	Yes	0.334	0.202	0.54	Yes	0.295	0.168	0.47	Yes	1.00	**4.22**
			$U_{41} - L_{40}$	568.11	-----	-172	127	-34	0	-380	-362	-300	-185	0.757	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
			$U_{42} - L_{41}$	625.03	-----	-318	265	-49	32	-421	-416	-67	-64	0.739	0.256	1.00	Yes	0.406	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
			$U_{43} - L_{42}$	751.16	-----	-388	303	-66	45	-470	-451	-6	-47	0.743	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
			$U_{44} - L_{43}$	729.69	-----	-316	327	-94	80	-802	-428	54	-21	0.722	0.271	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
	Structure 3		$U_0 - L_1$	623.50	-----	-407	309	-113	95	-668	-35	-63	-53	0.675	0.318	1.00	Yes	0.371	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
			$U_1 - L_2$	717.73	-----	-339	265	-98	66	-282	-130	-126	-45	0.777	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
			$U_2 - L_3$	650.94	-----	-329	255	-96	63	-232	78	-49	79	0.770	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
			$U_3 - L_4$	555.84	-----	-148	117	-38	3	-129	-74	80	-26	0.815	0.180	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
			$U_4 - L_5$	428.96	-105.48	-131	100	-14	-33	-186	-20	-8	-183	0.771	0.221	1.00	Yes	0.424	0.122	0.55	Yes	0.250	0.104	0.36	Yes	0.223	0.167	0.40	Yes	1.00	**4.08**
			$U_5 - L_6$	335.27	-331.22	-74	18	33	-111	-154	-196	-88	-313	0.603	0.233	0.84	Yes	0.332	0.128	0.46	Yes	0.776	0.217	1.00	Yes	0.701	0.142	0.85	Yes	1.00	**5.11**
			$U_7 - L_6$	444.89	-74.99	-83	45	2	-53	-221	-275	-307	-201	0.800	0.195	1.00	Yes	0.440	0.107	0.55	Yes	0.174	0.152	0.33	Yes	0.159	0.106	0.27	Yes	1.00	**4.41**
			$U_8 - L_7$	591.59	-----	-192	152	-70	2	-413	-378	-545	-231	0.721	0.274	1.00	Yes	0.454	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
			$U_8 - L_9$	767.46	-----	-234	111	-139	-29	-536	-515	-846	-454	0.759	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
			$U_{10} - L_9$	890.90	-----	-218	179	-151	45	-567	-555	-1068	-415	0.753	0.241	1.00	Yes	0.466	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
			$U_{11} - L_{10}$	1003.01	-----	-301	259	-95	85	-482	-434	53	-20	0.802	0.195	1.00	Yes	0.497	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
			$U_{12} - L_{11}$	989.10	-----	-112	357	-10	129	-329	-299	241	118	0.791	0.201	1.00	Yes	0.490	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
			$U_{12} - L_{13}$	657.41	-----	-105	308	23	71	199	91	227	-24	0.777	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
			$U_{13} - L_{14}$	676.67	-----	-284	258	-25	55	-81	158	-81	23	0.800	0.190	1.00	Yes	0.440	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
			$U_{14} - L_{15}$	694.09	-----	-173	243	-23	39	-60	191	131	61	0.821	0.173	1.00	Yes	0.451	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
			$U_{15} - L_{16}$	610.09	-----	-83	72	-47	-16	-64	32	47	88	0.895	0.104	1.00	Yes	0.492	0.057	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
			$U_{17} - L_{16}$	-----	-294.50	31	1	-89	-121	369	224	-533	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.322	1.00	Yes	0.623	0.155	0.78	Yes	1.00	**7.21**
			$U_{18} - L_{17}$	237.20	-289.49	-65	17	-65	-83	-244	-178	-868	-126	0.427	0.358	0.79	Yes	0.235	0.197	0.44	Yes	0.666	0.330	1.00	Yes	0.613	0.107	0.72	Yes	1.00	**5.63**
			$U_{19} - L_{18}$	425.93	-133.43	-93	30	26	-20	-385	-333	164	127	0.766	0.230	1.00	Yes	0.421	0.126	0.55	Yes	0.306	0.214	0.53	Yes	0.282	0.118	0.41	Yes	1.00	**4.09**
			$U_{20} - L_{19}$	590.20	-----	-52	40	58	-7	-602	-402	462	-1	0.774	0.220	1.00	Yes	0.468	0.121	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Upper Chord	Structure 1	$U_0 - U_1$	-----	-503.54	-150	78	54	-1129	17	-10	18	-428	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.306	1	Yes	0.679	0.268	0.95	Yes	1.00	**4.77**
		$U_1 - U_2$	25.50	-563.42	-52	74	-162	-867	4	46	-32	-6	0.029	0.214	0.25	Yes	0.020	0.147	0.17	Yes	0.767	0.226	1	Yes	0.760	0.206	0.97	Yes	1.00	**3.13**
		$U_2 - U_3$	108.80	-555.43	-101	237	-296	-732	10	-90	162	-148	0.125	0.201	0.33	Yes	0.084	0.131	0.22	Yes	0.756	0.244	1	Yes	0.749	0.174	0.93	Yes	1.00	**3.09**
		$U_3 - U_4$	-----	-530.83	-383	254	-237	-895	86	-33	-18	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.269	1	Yes	0.716	0.213	0.93	Yes	1.00	**3.91**
		$U_4 - U_5$	442.89	-552.29	134	349	-52	-889	-123	51	-258	-257	0.508	0.255	0.77	Yes	0.348	0.175	0.53	Yes	0.751	0.243	1	Yes	0.745	0.211	0.96	Yes	1.00	**7.01**
		$U_5 - U_6$	-----	-567.06	-857	678	-293	-639	53	-348	-267	-457	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.227	1	Yes	0.765	0.204	0.97	Yes	1.00	**8.58**
		$U_6 - U_7$	242.28	-429.15	-245	527	33	-2417	-728	-438	-640	-462	0.232	0.614	0.85	Yes	0.162	0.421	0.59	Yes	0.488	0.286	0.78	Yes	0.483	0.514	1.00	Yes	1.00	**16.29**
		$U_7 - U_8$	453.27	-----	-2357	4017	-50	675	-708	192	-248	157	0.314	0.681	1.00	Yes	0.219	0.464	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.76**
		$U_8 - U_9$	718.91	-----	757	14	2093	-2220	-152	29	59	286	0.589	0.407	1.00	Yes	0.403	0.277	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.63**
		$U_9 - U_{10}$	583.58	-489.79	223	273	34	-1222	74	306	223	573	0.633	0.366	1.00	Yes	0.429	0.245	0.68	Yes	0.631	0.253	0.89	Yes	0.625	0.274	0.90	Yes	1.00	**7.85**
		$U_{10} - U_{11}$	116.01	-589.54	213	-83	170	-1077	212	55	296	73	0.126	0.289	0.42	Yes	0.084	0.185	0.27	Yes	0.759	0.211	0.97	Yes	0.752	0.241	1.00	Yes	1.00	**4.05**
		$U_{11} - U_{12}$	-----	-872.89	159	-117	7	-1036	156	57	233	80	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.819	0.172	1.00	Yes	1.00	**3.47**
		$U_{12} - U_{13}$	-----	-1174.89	-35	-165	-161	-1263	223	-37	239	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.200	1	Yes	0.785	0.174	0.96	Yes	1.00	**3.79**
		$U_{13} - U_{14}$	-----	-1318.68	-519	-337	-246	-1877	287	23	106	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.756	0.207	0.97	Yes	1.00	**3.77**
		$U_{14} - U_{15}$	-----	-1320.73	-235	-175	-455	-1528	186	-46	106	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.227	1	Yes	0.757	0.169	0.93	Yes	1.00	**4.55**
		$U_{15} - U_{16}$	-----	-1332.80	-486	-328	-217	-1725	289	-78	-89	-470	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.764	0.190	0.96	Yes	1.00	**4.37**
		$U_{16} - U_{17}$	-----	-1375.87	-434	-108	-1181	-1209	180	-280	-257	-372	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.201	1	Yes	0.789	0.133	0.93	Yes	1.00	**4.88**
		$U_{17} - U_{18}$	-----	-1074.91	-750	186	-403	-605	-80	-299	-183	-222	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.144	1	Yes	0.841	0.122	0.97	Yes	1.00	**4.22**
		$U_{18} - U_{19}$	-----	-688.98	-301	185	-458	-572	-223	-260	-2	-498	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.209	1	Yes	0.775	0.115	0.90	Yes	1.00	**6.76**
		$U_{19} - U_{20}$	-----	-540.87	-1252	1203	-492	-1919	-212	-133	251	-852	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.336	0.96	Yes	0.609	0.386	1.00	Yes	1.00	**9.96**
	Structure 2	$U_0 - U_1$	-----	-569.18	170	-138	695	-1905	95	184	12	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.238	0.92	Yes	0.672	0.323	1.00	Yes	1.00	**7.41**
		$U_1 - U_2$	-----	-755.23	-104	-151	-189	-1248	338	638	227	330	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.729	0.189	0.92	Yes	1.00	**3.86**
		$U_2 - U_3$	-----	-1100.07	-79	-233	-23	-1870	601	4	466	2	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.212	1	Yes	0.781	0.190	0.98	Yes	1.00	**3.88**
		$U_3 - U_4$	-----	-1311.90	-384	-289	-888	-2111	206	-256	221	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.245	1	Yes	0.747	0.188	0.94	Yes	1.00	**3.68**
		$U_4 - U_5$	-----	-1407.76	-370	-339	-820	-2554	-56	-348	19	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.269	1	Yes	0.723	0.212	0.94	Yes	1.00	**3.74**
		$U_5 - U_6$	-----	-1570.48	-1161	21	-1006	-1904	143	-226	-81	-403	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1	Yes	0.806	0.158	0.97	Yes	1.00	**4.48**
		$U_6 - U_7$	-----	-1248.15	-289	-95	-811	-2250	-73	-256	-44	-353	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.278	1	Yes	0.711	0.200	0.92	Yes	1.00	**3.47**
		$U_7 - U_8$	-----	-1327.16	-134	-168	-1087	-1715	-201	-227	-302	-451	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.232	1	Yes	0.756	0.153	0.91	Yes	1.00	**4.80**
		$U_8 - U_9$	-----	-1131.70	-289	166	-510	-1381	-160	-108	-197	-401	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.223	1	Yes	0.768	0.147	0.92	Yes	1.00	**5.48**
		$U_9 - U_{10}$	241.33	-953.50	-35	388	-851	-1044	-178	-24	-224	-270	0.177	0.156	0.34	Yes	0.120	0.106	0.23	Yes	0.828	0.164	1	Yes	0.823	0.127	0.95	Yes	1.00	**6.14**
		$U_{10} - U_{11}$	642.30	-777.29	178	452	-725	-1181	-200	-62	-329	-334	0.543	0.207	0.75	Yes	0.369	0.134	0.51	Yes	0.777	0.214	1	Yes	0.772	0.167	0.94	Yes	1.00	**8.10**
		$U_{11} - U_{12}$	-----	-754.48	-1698	1330	-379	-1750	-245	-774	-528	-745	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.203	0.96	Yes	0.750	0.247	1.00	Yes	1.00	**19.00**
		$U_{12} - U_{13}$	755.29	-----	130	191	-82	-3060	-781	-1008	-799	-302	0.510	0.482	1.00	Yes	0.364	0.327	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.17**
		$U_{13} - U_{14}$	519.74	-----	-3872	7228	-456	1412	-1092	-233	-594	-277	0.256	0.744	1.00	Yes	0.181	0.487	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.94**
		$U_{14} - U_{15}$	1050.07	-----	1551	192	4814	-3399	-530	-163	-69	485	0.516	0.482	1.00	Yes	0.366	0.315	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.33**
		$U_{15} - U_{16}$	1039.86	-----	215	527	-610	-2578	-116	272	479	894	0.629	0.369	1.00	Yes	0.447	0.248	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.36**
		$U_{16} - U_{17}$	867.48	-219.80	616	284	512	-2311	200	73	583	339	0.639	0.352	1.00	Yes	0.425	0.232	0.66	Yes	0.192	0.331	0.53	Yes	0.191	0.290	0.49	Yes	1.00	**8.11**
		$U_{17} - U_{18}$	658.69	-460.89	443	309	397	-1816	-24	2	166	97	0.661	0.333	1.00	Yes	0.440	0.221	0.67	Yes	0.548	0.346	0.9	Yes	0.544	0.308	0.86	Yes	1.00	**7.22**
		$U_{18} - U_{19}$	417.30	-608.13	428	175	216	-1619	19	37	115	-63	0.419	0.292	0.72	Yes	0.275	0.185	0.46	Yes	0.723	0.136	0.86	Yes	0.718	0.275	1.00	Yes	1.00	**5.53**
		$U_{19} - U_{20}$	226.04	-702.88	269	141	-187	-1394	14	139	69	23	0.212	0.242	0.46	Yes	0.141	0.159	0.30	Yes	0.780	0.203	0.99	Yes	0.775	0.223	1.00	Yes	1.00	**4.74**
		$U_{20} - U_{21}$	47.70	-838.17	-36	120	-12	-1586	64	-93	121	-198	0.037	0.251	0.29	Yes	0.026	0.161	0.19	Yes	0.771	0.222	1	Yes	0.765	0.230	1.00	Yes	1.00	**4.80**
		$U_{21} - U_{22}$	34.43	-782.18	-23	4	-488	-1653	-10	-49	1	-76	0.027	0.248	0.28	Yes	0.019	0.164	0.19	Yes	0.719	0.275	1	Yes	0.714	0.240	0.96	Yes	1.00	**4.09**
		$U_{22} - U_{23}$	77.35	-796.78	-5	-11	-355	-1543	-85	-103	-89	-249	0.060	0.251	0.32	Yes	0.043	0.167	0.21	Yes	0.732	0.261	1	Yes	0.727	0.224	0.96	Yes	1.00	**5.24**
		$U_{23} - U_{24}$	-----	-804.01	-852	168	32	-1600	77	-145	-216	-316	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.252	1	Yes	0.734	0.232	0.97	Yes	1.00	**6.09**
		$U_{24} - U_{25}$	233.02	-655.80	131	260	-465	-1229	-252	-29	-174	-204	0.219	0.231	0.45	Yes	0.145	0.152	0.30	Yes	0.728	0.269	1	Yes	0.724	0.197	0.93	Yes	1.00	**5.37**
		$U_{25} - U_{26}$	-----	-687.91	-1005	621	-585	-1065	-63	-39	-194	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.117	0.94	Yes	0.812	0.181	1.00	Yes	1.00	**7.43**
		$U_{26} - U_{27}$	-----	-599.63	-1498	837	28	-1718	-200	-116	-332	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.195	0.91	Yes	0.708	0.292	1.00	Yes	1.00	**11.72**
		$U_{27} - U_{28}$	-----	-685.45	-3189	2002	-887	-2596	-417	-635	-578	-858	-----	-----	-----	-----	-----	-----	-----	-----	0.598	0.324	0.93	Yes	0.594	0.401	1.00	Yes	1.00	**19.32**
		$U_{28} - U_{29}$	937.90	-----	-110	302	-258	-3152	-709	-444	-774	-297	0.567	0.424	1.00	Yes	0.403	0.284	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.34**
		$U_{29} - U_{30}$	723.24	-----	-2510	6254	-138	1252	-876	197	-112	334	0.356	0.639	1.00	Yes	0.252	0.418	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.52**
		$U_{30} - U_{31}$	1091.54	-----	1490	120	4571	-3784	-458	-219	201	483	0.537	0.456	1.00	Yes	0.380	0.299	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.07**
		$U_{31} - U_{32}$	1013.49	-44.65	128	463	-645	-1819	-32	230	553	883	0.684	0.313	1.00	Yes	0.488	0.214	0.71	Yes	0.036	0.400	0.44	Yes	0.035	0.229	0.27	Yes	1.00	**8.35**
		$U_{32} - U_{33}$	748.62	-405.30	505	251	425	-2037	207	57	586	91	0.632	0.359	1.00	Yes	0.425	0.240	0.67	Yes	0.405	0.181	0.59	Yes	0.403	0.287	0.70	Yes	1.00	**7.14**
		$U_{33} - U_{34}$	481.78	-750.76	351	196	-224	-1733	84	39	227	60	0.407	0.272	0.68	Yes	0.277	0.175	0.46	Yes	0.751	0.220	0.98	Yes	0.746	0.244	1.00	Yes	1.00	**6.12**
		$U_{34} - U_{35}$	194.75	-892.50	336	-34	-91	-1834	117	-11	171	-23	0.143	0.242	0.39	Yes	0.097	0.164	0.27	Yes	0.775	0.185	0.96	Yes	0.770	0.223	1.00	Yes	1.00	**4.64**
		$U_{35} - U_{36}$	-----	-1195.68	129	-233	-161	-1692	81	22	125	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.181	1	Yes	0.811	0.180	1.00	Yes	1.00	**4.61**
		$U_{36} - U_{37}$	-----	-1283.58	-149	-60	-557	-2422	163	-54	186	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.262	1	Yes	0.731	0.216	0.95	Yes	1.00	**3.93**
		$U_{37} - U_{38}$	-----	-1354.95	-2	-138	-557	-2122	15	-277	-19	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.214	1	Yes	0.772	0.189	0.97	Yes	1.00	**5.15**
		$U_{38} - U_{39}$	-----	-1456.20	79	-381	123	-2858	84	-96	66	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.246	1	Yes	0.748	0.237	0.99	Yes	1.00	**5.38**
		$U_{39} - U_{40}$	-----	-1383.99	-796	-381	-1054	-2399	89	-179	-223	-390	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.277	1	Yes	0.711	0.199	0.91	Yes	1.00	**4.69**
		$U_{40} - U_{41}$	-----	-1256.92	-435	-402	-1054	-2048	17	-256	-326	-379	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.272	1	Yes	0.716	0.182	0.90	Yes	1.00	**4.57**
		$U_{41} - U_{42}$	-----	-1206.43	-1134	216	-668	-1213	-101	-199	-174	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.136	1	Yes	0.856	0.124	0.98	Yes	1.00	**5.71**
		$U_{42} - U_{43}$	-----	-810.68	-442	201	-776	-1021	27	-200	217	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.206	1	Yes	0.782	0.155	0.94	Yes	1.00	**9.13**
		$U_{43} - U_{44}$	-----	-494.44	-1179	1068	-204	-2223	-258	-134	83	-892	-----	-----	-----	-----	-----	-----	-----	-----	0.588	0.405	1	Yes	0.584	0.377	0.97	Yes	1.00	**9.31**
	Structure 3	$U_0 - U_1$	-----	-578.43	-729	-138	788	-1708	323	141	3	-504	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.259	0.92	Yes	0.651	0.344	1.00	Yes	1.00	**7.53**
		$U_1 - U_2$	-----	-669.05	-67	-117	-69	-809	253	511	210	268	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.232	1	Yes	0.753	0.163	0.92	Yes	1.00	**3.25**
		$U_2 - U_3$	-----	-982.55	-77	-123	1	-1107	520	8	513	21	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.212	1	Yes	0.769	0.180	0.95	Yes	1.00	**3.57**
		$U_3 - U_4$	-----	-1342.33	-142	-206	-353	-1703	136	-247	208	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.215	1	Yes	0.770	0.188	0.96	Yes	1.00	**4.19**
		$U_4 - U_5$	-----	-1395.46	-878	1	-471	-1492	341	-165	9	-418	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.191	1	Yes	0.800	0.165	0.97	Yes	1.00	**4.18**
		$U_5 - U_6$	-----	-1283.96	-155	-231	-605	-1834	-47	-206	-98	-283	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.252	1	Yes	0.736	0.202	0.94	Yes	1.00	**3.74**
		$U_6 - U_7$	-----	-1283.97	-288	-62	-347	-1431	-117	-242	-103	-390	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.249	1	Yes	0.736	0.158	0.90	Yes	1.00	**5.25**
		$U_7 - U_8$	-----	-1154.90	-625	65	-313	-973	63	-168	-248	-484	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1	Yes	0.771	0.134	0.91	Yes	1.00	**4.42**
		$U_8 - U_9$	-----	-884.00	-461	229	-553	-652	64	-212	-210	-347	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.160	1	Yes	0.829	0.108	0.94	Yes	1.00	**5.09**
		$U_9 - U_{10}$	-----	-637.89	-808	422	-366	-485	-143	-334	-228	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.171	1	Yes	0.814	0.181	1.00	Yes	1.00	**7.96**
		$U_{10} - U_{11}$	-----	-565.05	-728	594	-390	-1234	-527	-284	-442	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.240	0.97	Yes	0.721	0.276	1.00	Yes	1.00	**15.47**
		$U_{11} - U_{12}$	359.83	-----	-2740	3696	-152	606	-640	5	-272	28	0.295	0.698	1.00	Yes	0.202	0.475	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.30**
		$U_{12} - U_{13}$	846.69	-----	850	102	2440	-1994	-420	-84	-104	253	0.587	0.412	1.00	Yes	0.409	0.281	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		$U_{13} - U_{14}$	745.42	-243.95	208	341	-113	-999	-141	268	147	488	0.713	0.279	1.00	Yes	0.498	0.192	0.69	Yes	0.277	0.296	0.58	Yes	0.274	0.212	0.49	Yes	1.00	**6.39**
		$U_{14} - U_{15}$	537.89	-481.35	363	209	232	-1081	60	135	316	98	0.617	0.310	0.93	Yes	0.416	0.202	0.62	Yes	0.655	0.336	1	Yes	0.649	0.257	0.91	Yes	1.00	**5.49**
		$U_{15} - U_{16}$	285.11	-557.53	240	122	-6	-1022	-3	135	80	84	0.327	0.266	0.60	Yes	0.224	0.182	0.41	Yes	0.759	0.196	0.96	Yes	0.752	0.243	1.00	Yes	1.00	**4.27**
		$U_{16} - U_{17}$	358.91	-530.29	328	92	200	-1190	30	80	43	-75	0.411	0.296	0.71	Yes	0.282	0.204	0.49	Yes	0.722	0.165	0.89	Yes	0.715	0.283	1.00	Yes	1.00	**5.62**
		$U_{17} - U_{18}$	-----	-549.81	-116	-83	-90	-1084	45	-241	-64	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.223	0.98	Yes	0.741	0.258	1.00	Yes	1.00	**4.51**
		$U_{18} - U_{19}$	-----	-557.09	-95	33	-647	-653	13	72	171	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.238	1	Yes	0.751	0.155	0.91	Yes	1.00	**4.53**
		$U_{19} - U_{20}$	-----	-420.26	-607	653	-146	-1535	60	-54	126	-658	-----	-----	-----	-----	-----	-----	-----	-----	0.572	0.423	1	Yes	0.567	0.365	0.94	Yes	1.00	**7.22**

Moment (End) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1			-----	-132.29	-245	138	1107	-2509	39	142	-190	-697	-----	-----	-----	-----	-----	-----	-----	-----	0.240	0.608	0.85	Yes	0.238	0.753	1.00	Yes	1.00	**20.36**
		L_1 - L_2			445.24	-38.44	44	21	310	-1023	32	14	-32	-30	0.681	0.314	1.00	Yes	0.416	0.213	0.63	Yes	0.070	0.175	0.25	Yes	0.069	0.307	0.38	Yes	1.00	**5.33**
		L_2 - L_3			614.78	-98.52	-19	88	-233	-1065	6	-11	-168	-35	0.707	0.284	1.00	Yes	0.409	0.171	0.58	Yes	0.135	0.282	0.42	Yes	0.133	0.257	0.40	Yes	1.00	**5.32**
		L_3 - L_4			596.15	-215.82	56	258	-84	-1196	-23	32	-143	17	0.686	0.312	1.00	Yes	0.407	0.202	0.61	Yes	0.295	0.246	0.55	Yes	0.292	0.289	0.59	Yes	1.00	**5.49**
		L_4 - L_5			583.44	-23.16	-649	710	-587	-715	-27	22	-307	-104	0.756	0.244	1.00	Yes	0.453	0.159	0.62	Yes	0.036	0.138	0.18	Yes	0.035	0.189	0.23	Yes	1.00	**7.11**
		L_5 - L_6			690.55	-377.37	-780	1086	-883	-1222	63	347	-83	-85	0.677	0.317	1.00	Yes	0.438	0.193	0.64	Yes	0.440	0.217	0.66	Yes	0.435	0.270	0.71	Yes	1.00	**13.48**
		L_6 - L_7			-----	-890.01	-1092	1010	-974	-1783	57	-182	33	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.122	0.85	Yes	0.716	0.280	1.00	Yes	1.00	**14.06**
		L_7 - L_8			-----	-1123.00	-417	2179	-22	577	55	140	32	75	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.273	1	Yes	0.711	0.289	1.00	Yes	1.00	**8.38**
		L_8 - L_9			-----	-1151.57	845	101	1999	-1025	-5	-34	-53	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.226	0.97	Yes	0.729	0.265	1.00	Yes	1.00	**10.29**
		L_9 - L_{10}			-----	-947.26	194	162	486	-1466	46	49	41	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.099	0.87	Yes	0.762	0.230	1.00	Yes	1.00	**10.01**
		L_{10} - L_{11}			180.69	-501.24	441	-14	182	-874	88	20	-81	70	0.234	0.247	0.49	Yes	0.136	0.150	0.29	Yes	0.771	0.116	0.89	Yes	0.764	0.231	1.00	Yes	1.00	**6.83**
		L_{11} - L_{12}			558.86	-165.07	361	-171	440	-968	-24	13	-111	39	0.724	0.276	1.00	Yes	0.434	0.182	0.62	Yes	0.254	0.115	0.37	Yes	0.251	0.256	0.51	Yes	1.00	**5.46**
		L_{12} - L_{13}			1031.14	-----	86	-89	-193	-953	-23	-40	-142	-51	0.814	0.186	1.00	Yes	0.520	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		L_{13} - L_{14}			1237.57	-----	227	-390	251	-1812	-106	61	-202	74	0.728	0.266	1.00	Yes	0.472	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_{14} - L_{15}			1627.65	-----	-1457	86	-1229	-1515	-21	149	-284	-47	0.795	0.203	1.00	Yes	0.517	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		L_{15} - L_{16}			1579.86	-----	-345	-315	-1019	-1725	50	176	-160	-131	0.772	0.220	1.00	Yes	0.495	0.128	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		L_{16} - L_{17}			1264.79	-----	-799	324	-1205	-766	-37	4	-198	-41	0.800	0.195	1.00	Yes	0.519	0.120	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		L_{17} - L_{18}			949.98	-----	-584	303	-685	-517	-28	53	-124	-316	0.827	0.173	1.00	Yes	0.530	0.104	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.45**
		L_{18} - L_{19}			400.18	-----	-913	586	-482	-39	-141	-59	-216	517	0.612	0.381	1.00	Yes	0.414	0.242	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		L_{19} - L_{20}			246.08	-39.39	-1451	736	-222	34	904	202	1	0	0.377	0.623	1.00	Yes	0.230	0.412	0.65	Yes	0.072	0.368	0.44	Yes	0.071	0.436	0.51	Yes	1.00	**10.64**
	Structure 2	L_0 - L_1			5.00	-46.88	-144	63	813	-3038	13	46	-344	-1193	0.008	0.986	1.00	Yes	0.005	0.495	0.50	Yes	0.084	0.724	0.81	Yes	0.083	0.732	0.82	Yes	1.00	**19.58**
		L_1 - L_2			550.56	-----	160	-194	579	-1367	80	101	-121	304	0.669	0.328	1.00	Yes	0.398	0.210	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.48**
		L_2 - L_3			998.36	-----	-20	-137	-217	-1319	124	165	-5	10	0.787	0.208	1.00	Yes	0.516	0.124	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_3 - L_4			1304.10	-----	57	-325	-534	-1763	44	124	-55	220	0.766	0.224	1.00	Yes	0.516	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		L_4 - L_5			1668.57	-----	-233	-217	-682	-2213	16	-11	-54	-25	0.778	0.213	1.00	Yes	0.515	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		L_5 - L_6			1776.17	-----	-33	-344	-1358	-2496	-93	58	-252	61	0.762	0.237	1.00	Yes	0.511	0.144	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_6 - L_7			1728.03	-----	-357	-64	-1229	-2937	54	-19	-133	21	0.731	0.266	1.00	Yes	0.486	0.155	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.64**
		L_7 - L_8			1405.08	-----	-1469	336	-1089	-1489	-49	196	-336	-87	0.806	0.192	1.00	Yes	0.529	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		L_8 - L_9			1166.69	-----	-773	647	-1176	-842	37	69	-177	-40	0.816	0.175	1.00	Yes	0.550	0.109	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_9 - L_{10}			868.44	-----	-1205	644	-936	-845	41	202	-98	-137	0.775	0.217	1.00	Yes	0.451	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		L_{10} - L_{11}			675.84	-----	-1604	1225	-1014	-868	-78	-6	-264	-151	0.675	0.316	1.00	Yes	0.396	0.199	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.49**
		L_{11} - L_{12}			556.55	-831.04	-1968	2304	-1874	-1897	183	437	-270	-393	0.388	0.355	0.75	Yes	0.258	0.212	0.47	Yes	0.687	0.200	0.89	Yes	0.681	0.314	1.00	Yes	1.00	**21.44**
		L_{12} - L_{13}			-----	-997.93	-140	160	-1760	-2942	-471	-441	-59	57	-----	-----	-----	-----	-----	-----	-----	-----	0.602	0.389	1	Yes	0.597	0.292	0.89	Yes	1.00	**10.98**
		L_{13} - L_{14}			-----	-1247.48	-1691	4207	-476	1312	-63	-32	-202	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.256	0.89	Yes	0.628	0.367	1.00	Yes	1.00	**8.90**
		L_{14} - L_{15}			-----	-1235.82	1438	-363	4247	-3117	270	235	-220	-119	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.235	0.87	Yes	0.622	0.371	1.00	Yes	1.00	**10.23**
		L_{15} - L_{16}			-----	-1227.10	-385	485	-2312	-2119	-49	146	-23	147	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.251	1	Yes	0.734	0.230	0.97	Yes	1.00	**10.83**
		L_{16} - L_{17}			-----	-1089.76	1059	144	1069	-1592	177	50	-115	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.136	0.94	Yes	0.794	0.196	1.00	Yes	1.00	**8.63**
		L_{17} - L_{18}			-----	-776.21	481	205	548	-1124	15	-41	-21	35	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.090	0.92	Yes	0.815	0.180	1.00	Yes	1.00	**6.09**
		L_{18} - L_{19}			89.47	-605.53	608	78	526	-998	-42	-74	-58	-43	0.101	0.204	0.31	Yes	0.058	0.122	0.19	Yes	0.812	0.142	0.96	Yes	0.807	0.193	1.00	Yes	1.00	**5.95**
		L_{19} - L_{20}			597.19	-532.53	503	160	260	-1469	-31	-30	-189	76	0.677	0.313	0.99	Yes	0.400	0.200	0.60	Yes	0.714	0.206	0.93	Yes	0.710	0.284	1.00	Yes	1.00	**7.39**
		L_{20} - L_{21}			926.87	-354.12	370	4	-666	-1702	0	-38	-87	-15	0.739	0.258	1.00	Yes	0.485	0.152	0.64	Yes	0.335	0.213	0.55	Yes	0.332	0.248	0.59	Yes	1.00	**7.09**
		L_{21} - L_{22}			779.90	-88.23	94	-77	38	-2388	-52	58	-219	62	0.622	0.372	1.00	Yes	0.416	0.233	0.65	Yes	0.083	0.261	0.35	Yes	0.083	0.349	0.44	Yes	1.00	**5.89**
		L_{22} - L_{23}			926.40	-----	-1359	204	-1170	-1593	-25	57	-185	107	0.739	0.252	1.00	Yes	0.494	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{23} - L_{24}			944.14	-----	-508	353	-1045	-1519	79	209	-155	-42	0.753	0.244	1.00	Yes	0.494	0.145	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		L_{24} - L_{25}			699.67	-----	-615	533	-936	-855	114	84	-158	125	0.793	0.205	1.00	Yes	0.469	0.131	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.93**
		L_{25} - L_{26}			635.78	-----	-1083	962	-717	-1224	115	223	-165	-160	0.720	0.270	1.00	Yes	0.416	0.161	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.63**
		L_{26} - L_{27}			706.94	-498.26	-1863	1917	-1765	-2009	148	148	-332	-168	0.631	0.361	1.00	Yes	0.367	0.225	0.60	Yes	0.527	0.192	0.72	Yes	0.523	0.321	0.85	Yes	1.00	**18.39**
		L_{27} - L_{28}			53.14	-964.12	-1603	2387	-1534	-1146	203	442	-120	-459	0.033	0.333	0.37	Yes	0.022	0.198	0.22	Yes	0.708	0.229	0.94	Yes	0.702	0.294	1.00	Yes	1.00	**15.14**
		L_{28} - L_{29}			-----	-1067.37	113	55	-1261	-3361	-67	-195	-105	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.353	1	Yes	0.638	0.334	0.98	Yes	1.00	**11.18**
		L_{29} - L_{30}			-----	-1231.30	-2067	4287	-496	1165	67	177	99	134	-----	-----	-----	-----	-----	-----	-----	-----	0.625	0.246	0.88	Yes	0.620	0.374	1.00	Yes	1.00	**9.19**
		L_{30} - L_{31}			-----	-1278.88	1154	-256	3986	-2936	-376	-269	-74	3	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.235	0.89	Yes	0.644	0.348	1.00	Yes	1.00	**10.21**
		L_{31} - L_{32}			-----	-1204.77	-193	317	-822	-1866	-163	-41	55	223	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.269	1	Yes	0.721	0.185	0.91	Yes	1.00	**9.01**
		L_{32} - L_{33}			-----	-999.68	932	82	763	-1312	17	-38	24	157	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.144	0.98	Yes	0.820	0.179	1.00	Yes	1.00	**7.59**
		L_{33} - L_{34}			54.58	-672.54	506	102	685	-1174	-19	11	-26	141	0.054	0.224	0.28	Yes	0.032	0.141	0.18	Yes	0.795	0.084	0.88	Yes	0.790	0.205	1.00	Yes	1.00	**5.83**
		L_{34} - L_{35}			671.04	-686.67	701	-6	513	-1742	-9	-66	-111	107	0.599	0.292	0.90	Yes	0.349	0.183	0.54	Yes	0.726	0.133	0.86	Yes	0.721	0.279	1.00	Yes	1.00	**8.53**
		L_{35} - L_{36}			1098.72	-308.75	511	-72	-34	-1505	-80	14	-213	139	0.768	0.223	1.00	Yes	0.518	0.139	0.66	Yes	0.256	0.118	0.38	Yes	0.254	0.203	0.46	Yes	1.00	**6.57**
		L_{36} - L_{37}			1250.77	-59.04	337	-53	224	-2446	15	-6	-79	85	0.717	0.277	1.00	Yes	0.471	0.161	0.64	Yes	0.040	0.214	0.26	Yes	0.040	0.270	0.31	Yes	1.00	**6.21**
		L_{37} - L_{38}			1735.12	-----	9	-448	-1074	-2785	-82	46	-199	13	0.734	0.257	1.00	Yes	0.488	0.150	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		L_{38} - L_{39}			1795.71	-----	-367	-70	-1863	-2376	-3	-57	-142	-21	0.770	0.220	1.00	Yes	0.517	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.14**
		L_{39} - L_{40}			1646.79	-----	-1141	-80	-1317	-2271	81	197	-150	-181	0.768	0.228	1.00	Yes	0.508	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_{40} - L_{41}			1371.80	-----	-1101	366	-1441	-1209	-44	32	-202	-25	0.806	0.185	1.00	Yes	0.543	0.114	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		L_{41} - L_{42}			1048.02	-----	-761	392	-988	-911	32	128	-99	-222	0.826	0.167	1.00	Yes	0.542	0.100	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		L_{42} - L_{43}			509.87	-----	-1148	621	-978	-343	61	7	-169	886	0.619	0.379	1.00	Yes	0.368	0.238	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		L_{43} - L_{44}			27.94	-66.28	-3098	1050	-53	-65	2034	594	-49	-14	0.034	0.965	1.00	Yes	0.020	0.608	0.63	Yes	0.095	0.666	0.77	Yes	0.095	0.630	0.73	Yes	1.00	**20.92**
	Structure 3	L_0 - L_1			36.75	-160.49	-48	-17	1153	-2242	0	1	-287	-1301	0.056	0.943	1.00	Yes	0.034	0.624	0.66	Yes	0.291	0.579	0.88	Yes	0.289	0.673	0.97	Yes	1.00	**17.42**
		L_1 - L_2			413.02	-----	147	-167	515	-1047	38	58	-11	221	0.632	0.360	1.00	Yes	0.428	0.225	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		L_2 - L_3			901.01	-----	-24	-137	91	-1018	85	127	15	22	0.785	0.213	1.00	Yes	0.502	0.127	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.60**
		L_3 - L_4			1209.34	-----	46	-306	-201	-1427	30	118	-49	220	0.765	0.229	1.00	Yes	0.496	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_4 - L_5			1595.21	-----	-265	-124	-727	-1730	26	11	-78	-13	0.779	0.214	1.00	Yes	0.500	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		L_5 - L_6			1437.56	-----	-32	-304	-116	-2260	-64	132	-221	149	0.702	0.288	1.00	Yes	0.456	0.174	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		L_6 - L_7			1331.31	-----	-1420	533	-857	-1014	60	161	-207	114	0.783	0.213	1.00	Yes	0.507	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_7 - L_8			1055.47	-----	-357	105	-617	-767	63	235	-66	19	0.833	0.163	1.00	Yes	0.533	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		L_8 - L_9			626.20	-----	-642	446	-458	-311	37	-23	-96	-58	0.811	0.187	1.00	Yes	0.487	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_9 - L_{10}			444.57	-556.84	-23	503	-565	-457	-18	27	-26	71	0.576	0.162	0.74	Yes	0.335	0.098	0.44	Yes	0.856	0.101	0.96	Yes	0.848	0.150	1.00	Yes	1.00	**7.48**
		L_{10} - L_{11}			-----	-926.32	-1463	1278	-808	-1535	380	-145	79	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.085	0.85	Yes	0.750	0.243	1.00	Yes	1.00	**17.30**
		L_{11} - L_{12}			-----	-1203.22	-420	1783	-47	532	-37	-63	-85	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.217	0.99	Yes	0.762	0.236	1.00	Yes	1.00	**8.11**
		L_{12} - L_{13}			-----	-1153.12	891	85	2024	-1008	-317	-258	-170	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.256	1	Yes	0.730	0.268	1.00	Yes	1.00	**9.20**
		L_{13} - L_{14}			-----	-1008.45	124	249	484	-1172	-118	-67	-45	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.084	0.91	Yes	0.812	0.184	1.00	Yes	1.00	**7.91**
		L_{14} - L_{15}			-----	-713.20	551	144	240	-758	46	-48	-78	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.150	0.99	Yes	0.823	0.168	1.00	Yes	1.00	**5.98**
		L_{15} - L_{16}			226.94	-477.66	438	121	356	-1014	4	-66	-52	139	0.294	0.293	0.59	Yes	0.176	0.193	0.37	Yes	0.734	0.216	0.95	Yes	0.728	0.269	1.00	Yes	1.00	**4.84**
		L_{16} - L_{17}			615.69	-----	-488	58	-65	-1091	62	6	-146	96	0.708	0.287	1.00	Yes	0.421	0.186	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		L_{17} - L_{18}			626.30	-----	-32	-25	-517	-947	128	311	10	74	0.721	0.279	1.00	Yes	0.417	0.167	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		L_{18} - L_{19}			440.01	-----	-536	222	-435	-774	60	-104	-24	419	0.673	0.322	1.00	Yes	0.411	0.213	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		L_{19} - L_{20}			8.25	-25.33	-2355	1256	52	-151	1284	349	-133	-36	0.013	0.982	1.00	Yes	0.007	0.595	0.61	Yes	0.046	0.631	0.68	Yes	0.046	0.707	0.76	Yes	1.00	**17.70**

Moment (End) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-345.29	-135	196	-22	45	-429	-138	-97	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.224	1	Yes	0.731	0.250	0.99	Yes	1.00	**1.85**
		$U_1 - L_1$	25.43	-312.54	-262	246	24	-18	156	120	51	23	0.046	0.381	0.43	Yes	0.025	0.209	0.24	Yes	0.683	0.132	0.82	Yes	0.661	0.335	1.00	Yes	1.00	**4.42**
		$U_2 - L_2$	-----	-280.95	-278	314	108	-84	-36	70	-233	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.614	0.169	0.79	Yes	0.594	0.402	1.00	Yes	1.00	**5.95**
		$U_3 - L_3$	252.21	-272.66	-307	325	320	-310	210	287	-135	-9	0.454	0.499	0.96	Yes	0.249	0.274	0.53	Yes	0.597	0.156	0.76	Yes	0.577	0.416	1.00	Yes	1.00	**8.22**
		$U_4 - L_4$	24.47	-192.39	-170	139	458	-443	-16	55	113	14	0.044	0.618	0.67	Yes	0.024	0.340	0.37	Yes	0.423	0.160	0.59	Yes	0.407	0.586	1.00	Yes	1.00	**10.37**
		$U_5 - L_5$	-----	-427.73	20	-39	228	-251	-108	-23	-123	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.103	0.88	Yes	0.738	0.255	1.00	Yes	1.00	**3.61**
		$U_6 - L_6$	-----	-516.30	47	-58	266	-286	-85	33	76	67	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.085	0.87	Yes	0.740	0.250	1.00	Yes	1.00	**3.66**
		$U_7 - L_7$	-----	-443.42	118	-131	296	-318	-129	46	-121	58	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.122	0.87	Yes	0.684	0.313	1.00	Yes	1.00	**2.51**
		$U_8 - L_8$	-----	-1290.96	-420	500	445	-527	-189	-41	-261	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.054	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.52**
		$U_9 - L_9$	-----	-660.40	-394	444	-165	189	-245	-191	-224	-158	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.127	0.92	Yes	0.746	0.247	1.00	Yes	1.00	**3.23**
		$U_{10} - L_{10}$	-----	-787.74	-403	412	-116	94	-214	-171	-261	-225	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.108	0.93	Yes	0.777	0.213	1.00	Yes	1.00	**5.63**
		$U_{11} - L_{11}$	-----	-662.14	-387	480	-81	131	-101	23	-176	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.097	0.9	Yes	0.771	0.223	1.00	Yes	1.00	**4.88**
		$U_{12} - L_{12}$	-----	-515.54	-336	333	-40	43	26	144	-173	3	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.103	0.85	Yes	0.707	0.287	1.00	Yes	1.00	**4.42**
		$U_{13} - L_{13}$	-----	-359.63	-247	264	0	13	-56	118	-90	90	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.105	0.84	Yes	0.689	0.302	1.00	Yes	1.00	**3.64**
		$U_{14} - L_{14}$	17.78	-29.41	-679	710	366	-392	122	207	-167	-49	0.032	0.968	1.00	Yes	0.018	0.532	0.55	Yes	0.066	0.274	0.34	Yes	0.062	0.908	0.98	Yes	1.00	**16.21**
		$U_{15} - L_{15}$	225.15	-318.04	-174	170	241	-255	-115	-131	46	-156	0.405	0.371	0.78	Yes	0.223	0.204	0.43	Yes	0.713	0.156	0.87	Yes	0.673	0.326	1.00	Yes	1.00	**5.33**
		$U_{16} - L_{16}$	96.53	-324.16	-52	35	237	-245	-82	-118	-102	-172	0.174	0.363	0.54	Yes	0.095	0.200	0.30	Yes	0.730	0.151	0.89	Yes	0.686	0.313	1.00	Yes	1.00	**4.30**
		$U_{17} - L_{17}$	-----	-441.67	38	-56	212	-230	-118	-172	-129	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.134	0.96	Yes	0.762	0.233	1.00	Yes	1.00	**3.37**
		$U_{18} - L_{18}$	-----	-536.53	124	-129	432	-443	-163	-62	147	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.094	0.88	Yes	0.746	0.251	1.00	Yes	1.00	**3.70**
		$U_{19} - L_{19}$	-----	-651.85	138	-151	498	-512	-66	11	236	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.089	0.91	Yes	0.759	0.238	1.00	Yes	1.00	**4.21**
		$U_{20} - L_{20}$	-----	-588.00	167	-214	403	-483	31	4	714	94	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.223	1	Yes	0.684	0.224	0.91	Yes	1.00	**2.85**
	Structure 2	$U_0 - L_0$	-----	-622.47	-400	511	-115	181	-1041	-177	-262	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.249	1	Yes	0.667	0.217	0.89	Yes	1.00	**3.25**
		$U_1 - L_1$	-----	-720.80	-506	521	-115	122	-419	-45	34	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.130	0.96	Yes	0.772	0.221	1.00	Yes	1.00	**4.66**
		$U_2 - L_2$	-----	-581.56	-503	498	-84	94	-92	57	93	42	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.083	0.87	Yes	0.741	0.257	1.00	Yes	1.00	**4.63**
		$U_3 - L_3$	-----	-486.95	-240	249	-47	53	-40	113	16	126	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.094	0.93	Yes	0.764	0.227	1.00	Yes	1.00	**3.92**
		$U_4 - L_4$	50.56	-338.55	-218	217	19	-3	8	148	-104	61	0.091	0.322	0.42	Yes	0.050	0.177	0.23	Yes	0.768	0.103	0.88	Yes	0.716	0.279	1.00	Yes	1.00	**3.98**
		$U_5 - L_5$	191.72	-320.15	-234	249	131	-123	-112	125	-116	98	0.345	0.355	0.70	Yes	0.190	0.195	0.39	Yes	0.723	0.118	0.85	Yes	0.677	0.319	1.00	Yes	1.00	**5.51**
		$U_6 - L_6$	366.11	-215.58	-232	233	218	-227	-32	136	-135	84	0.658	0.337	1.00	Yes	0.362	0.185	0.55	Yes	0.485	0.094	0.58	Yes	0.456	0.297	0.76	Yes	1.00	**6.38**
		$U_7 - L_7$	54.91	-----	-302	322	572	-658	-121	30	-191	-114	0.099	0.896	1.00	Yes	0.054	0.493	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.39**
		$U_8 - L_8$	-----	-464.91	16	-35	366	-372	-134	-110	-177	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.121	0.8	Yes	0.670	0.325	1.00	Yes	1.00	**4.18**
		$U_9 - L_9$	-----	-695.23	103	-124	566	-585	-133	-102	-185	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.087	0.87	Yes	0.745	0.248	1.00	Yes	1.00	**5.08**
		$U_{10} - L_{10}$	-----	-797.78	105	-139	538	-563	-66	-42	41	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.080	0.87	Yes	0.746	0.248	1.00	Yes	1.00	**5.38**
		$U_{11} - L_{11}$	-----	-821.43	166	-171	502	-517	-66	-81	-103	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.078	0.91	Yes	0.768	0.228	1.00	Yes	1.00	**4.95**
		$U_{12} - L_{12}$	-----	-888.88	170	-154	522	-533	-15	109	28	67	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.078	0.94	Yes	0.770	0.228	1.00	Yes	1.00	**4.94**
		$U_{13} - L_{13}$	-----	-743.96	244	-243	571	-559	-83	44	69	78	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.110	0.94	Yes	0.717	0.273	1.00	Yes	1.00	**3.67**
		$U_{14} - L_{14}$	-----	-1301.08	-612	568	661	-632	-106	137	-61	11	-----	-----	-----	-----	-----	-----	-----	-----	0.951	0.044	1	Yes	0.863	0.117	0.98	Yes	1.00	**6.57**
		$U_{15} - L_{15}$	-----	-716.63	-634	614	-165	167	-145	-96	-81	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.142	0.95	Yes	0.691	0.303	1.00	Yes	1.00	**4.84**
		$U_{16} - L_{16}$	-----	-722.86	-513	506	-129	103	-271	-142	-167	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.110	0.95	Yes	0.775	0.217	1.00	Yes	1.00	**4.57**
		$U_{17} - L_{17}$	-----	-631.25	-552	541	-130	126	-129	-40	-99	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.087	0.87	Yes	0.735	0.256	1.00	Yes	1.00	**4.75**
		$U_{18} - L_{18}$	-----	-579.28	-497	510	-91	99	-117	-4	-161	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.089	0.87	Yes	0.738	0.261	1.00	Yes	1.00	**4.44**
		$U_{19} - L_{19}$	-----	-477.49	-296	288	-32	40	-42	52	-160	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.094	0.82	Yes	0.713	0.285	1.00	Yes	1.00	**4.05**
		$U_{20} - L_{20}$	27.37	-372.62	-243	245	10	-4	-122	39	-157	16	0.045	0.321	0.37	Yes	0.025	0.176	0.21	Yes	0.764	0.111	0.88	Yes	0.714	0.280	1.00	Yes	1.00	**4.17**
		$U_{21} - L_{21}$	75.56	-319.26	-239	248	53	-47	-123	55	-142	26	0.136	0.358	0.50	Yes	0.075	0.197	0.28	Yes	0.721	0.122	0.85	Yes	0.676	0.317	1.00	Yes	1.00	**4.32**
		$U_{22} - L_{22}$	122.53	-----	-522	550	433	-475	-36	37	-242	-88	0.220	0.773	1.00	Yes	0.121	0.425	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.47**
		$U_{23} - L_{23}$	148.12	-321.30	-103	96	238	-246	-96	-46	-108	-108	0.266	0.346	0.62	Yes	0.147	0.190	0.34	Yes	0.726	0.124	0.86	Yes	0.680	0.314	1.00	Yes	1.00	**4.75**
		$U_{24} - L_{24}$	34.98	-378.85	-33	19	226	-235	-48	-25	-103	-89	0.057	0.295	0.36	Yes	0.031	0.162	0.20	Yes	0.777	0.105	0.89	Yes	0.726	0.268	1.00	Yes	1.00	**4.06**
		$U_{25} - L_{25}$	-----	-476.51	22	-35	299	-297	-82	-29	10	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.081	0.8	Yes	0.712	0.288	1.00	Yes	1.00	**3.96**
		$U_{26} - L_{26}$	-----	-571.06	76	-106	498	-528	-73	32	-115	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.087	0.85	Yes	0.728	0.270	1.00	Yes	1.00	**4.39**
		$U_{27} - L_{27}$	-----	-635.15	147	-148	544	-552	-149	1	-106	4	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.083	0.87	Yes	0.739	0.256	1.00	Yes	1.00	**4.23**
		$U_{28} - L_{28}$	-----	-711.37	146	-132	552	-552	-51	43	128	88	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.074	0.9	Yes	0.762	0.234	1.00	Yes	1.00	**4.33**
		$U_{29} - L_{29}$	-----	-712.49	206	-212	635	-624	-113	26	-69	49	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.120	0.92	Yes	0.687	0.304	1.00	Yes	1.00	**4.51**
		$U_{30} - L_{30}$	-----	-1283.74	-587	524	592	-590	-149	73	-20	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.052	1	Yes	0.851	0.105	0.96	Yes	1.00	**6.23**
		$U_{31} - L_{31}$	-----	-758.75	-547	536	-183	180	-174	-90	-119	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.138	0.99	Yes	0.732	0.262	1.00	Yes	1.00	**4.25**
		$U_{32} - L_{32}$	-----	-883.58	-528	512	-128	102	-262	-121	-184	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.126	0.98	Yes	0.766	0.226	1.00	Yes	1.00	**5.76**
		$U_{33} - L_{33}$	-----	-830.43	-500	499	-162	144	-120	3	-135	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.082	0.92	Yes	0.776	0.221	1.00	Yes	1.00	**5.37**
		$U_{34} - L_{34}$	-----	-809.00	-538	549	-96	117	38	134	-206	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.088	0.89	Yes	0.756	0.242	1.00	Yes	1.00	**6.03**
		$U_{35} - L_{35}$	-----	-693.74	-588	587	-84	109	-100	115	-187	57	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.074	0.85	Yes	0.743	0.249	1.00	Yes	1.00	**5.70**
		$U_{36} - L_{36}$	-----	-471.16	-360	365	-35	53	-76	108	-142	70	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.095	0.78	Yes	0.679	0.320	1.00	Yes	1.00	**4.14**
		$U_{37} - L_{37}$	52.21	-----	-599	668	231	-255	-71	95	-177	-37	0.094	0.905	1.00	Yes	0.052	0.498	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.06**
		$U_{38} - L_{38}$	359.19	-138.71	-234	242	138	-140	-100	-104	-37	-138	0.646	0.349	1.00	Yes	0.355	0.192	0.55	Yes	0.312	0.120	0.44	Yes	0.293	0.309	0.61	Yes	1.00	**5.02**
		$U_{39} - L_{39}$	209.97	-331.79	-183	163	210	-231	-79	-55	-106	-150	0.378	0.339	0.72	Yes	0.208	0.186	0.40	Yes	0.750	0.155	0.91	Yes	0.702	0.295	1.00	Yes	1.00	**5.46**
		$U_{40} - L_{40}$	96.75	-339.45	-51	30	216	-218	-92	-74	-8	-87	0.174	0.305	0.48	Yes	0.096	0.168	0.27	Yes	0.770	0.113	0.89	Yes	0.718	0.278	1.00	Yes	1.00	**4.18**
		$U_{41} - L_{41}$	-----	-484.78	46	-53	241	-255	-105	-44	-78	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.100	0.93	Yes	0.760	0.232	1.00	Yes	1.00	**4.06**
		$U_{42} - L_{42}$	-----	-582.39	108	-117	479	-488	-86	-48	50	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.079	0.86	Yes	0.742	0.249	1.00	Yes	1.00	**4.21**
		$U_{43} - L_{43}$	-----	-706.38	141	-159	534	-553	-36	-14	506	44	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.135	0.95	Yes	0.757	0.235	1.00	Yes	1.00	**4.31**
		$U_{44} - L_{44}$	-----	-678.82	194	-240	467	-585	-29	-5	494	84	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.178	1	Yes	0.727	0.248	0.98	Yes	1.00	**3.43**
	Structure 3	$U_0 - L_0$	-----	-557.84	-339	418	-107	171	-971	-127	-250	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.258	1	Yes	0.649	0.194	0.85	Yes	1.00	**2.56**
		$U_1 - L_1$	-----	-659.26	-492	497	-112	119	-165	11	2	-77	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.091	0.92	Yes	0.767	0.231	1.00	Yes	1.00	**4.52**
		$U_2 - L_2$	-----	-550.30	-391	408	-94	100	-139	49	83	31	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.086	0.9	Yes	0.765	0.231	1.00	Yes	1.00	**3.90**
		$U_3 - L_3$	-----	-437.62	-223	234	-34	45	-44	139	0	119	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.105	0.93	Yes	0.755	0.237	1.00	Yes	1.00	**3.85**
		$U_4 - L_4$	66.87	-326.29	-235	240	30	-19	-127	148	-168	79	0.120	0.355	0.48	Yes	0.066	0.195	0.27	Yes	0.735	0.099	0.84	Yes	0.690	0.306	1.00	Yes	1.00	**4.21**
		$U_5 - L_5$	198.19	-314.85	-246	261	131	-130	-30	148	-157	66	0.356	0.379	0.74	Yes	0.196	0.208	0.41	Yes	0.706	0.129	0.84	Yes	0.666	0.333	1.00	Yes	1.00	**5.23**
		$U_6 - L_6$	100.80	-84.48	-419	431	529	-572	-109	111	-281	-103	0.181	0.812	1.00	Yes	0.100	0.447	0.55	Yes	0.189	0.252	0.45	Yes	0.179	0.731	0.91	Yes	1.00	**14.73**
		$U_7 - L_7$	-----	-367.21	-26	9	237	-255	-155	-110	-197	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.149	0.9	Yes	0.703	0.291	1.00	Yes	1.00	**3.55**
		$U_8 - L_8$	-----	-515.17	16	-19	335	-337	-155	-132	-59	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.112	0.86	Yes	0.707	0.288	1.00	Yes	1.00	**4.47**
		$U_9 - L_9$	-----	-661.40	53	-113	382	-489	-101	-20	-174	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.102	0.9	Yes	0.770	0.227	1.00	Yes	1.00	**4.92**
		$U_{10} - L_{10}$	-----	-788.64	85	-99	388	-425	-20	4	-54	39	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.070	0.89	Yes	0.778	0.220	1.00	Yes	1.00	**5.18**
		$U_{11} - L_{11}$	-----	-649.65	182	-211	422	-476	-50	62	69	120	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.101	0.88	Yes	0.734	0.265	1.00	Yes	1.00	**3.17**
		$U_{12} - L_{12}$	-----	-1287.02	-481	521	426	-559	-48	41	32	31	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.042	0.98	Yes	0.892	0.104	1.00	Yes	1.00	**5.70**
		$U_{13} - L_{13}$	-----	-451.21	-287	303	-105	115	-148	-109	-113	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.138	0.9	Yes	0.696	0.299	1.00	Yes	1.00	**2.76**
		$U_{14} - L_{14}$	-----	-534.93	-245	264	-50	48	-258	-152	-205	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.128	0.94	Yes	0.767	0.231	1.00	Yes	1.00	**3.81**
		$U_{15} - L_{15}$	-----	-441.24	-205	230	-28	36	-31	30	-167	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.108	0.91	Yes	0.761	0.233	1.00	Yes	1.00	**3.70**
		$U_{16} - L_{16}$	8.14	-25.43	-682	657	174	-156	21	209	-363	-213	0.015	0.977	1.00	Yes	0.008	0.537	0.55	Yes	0.056	0.283	0.34	Yes	0.054	0.871	0.93	Yes	1.00	**13.90**
		$U_{17} - L_{17}$	264.84	-253.10	-356	354	229	-251	-38	-13	-70	-178	0.476	0.507	0.99	Yes	0.262	0.279	0.55	Yes	0.555	0.155	0.71	Yes	0.536	0.456	1.00	Yes	1.00	**7.24**
		$U_{18} - L_{18}$	97.89	-292.86	-129	132	252	-291	-31	-20	-78	-117	0.176	0.406	0.59	Yes	0.097	0.223	0.33	Yes	0.640	0.143	0.79	Yes	0.620	0.372	1.00	Yes	1.00	**5.73**
		$U_{19} - L_{19}$	13.39	-325.27	-28	16	234	-239	-165	-86	101	-16	0.024	0.353	0.38	Yes	0.013	0.194	0.21	Yes	0.711	0.133	0.85	Yes	0.688	0.305	1.00	Yes	1.00	**3.90**
		$U_{20} - L_{20}$	-----	-333.92	47	-54	176	-229	-175	-56	220	71	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.164	0.91	Yes	0.707	0.292	1.00	Yes	1.00	**1.98**

Moment (End) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
Center Truss - Diagonals	Structure 1	$U_0 - L_1$			380.35	-47.19	-212	102	10	-11	-996	-176	-40	-13	0.499	0.499	1.00	Yes	0.301	0.275	0.58	Yes	0.081	0.348	0.43	Yes	0.073	0.248	0.33	Yes	1.00	**5.87**
		$U_1 - L_2$			367.14	-----	-72	42	-26	-45	-1	-128	-832	-400	0.660	0.333	1.00	Yes	0.363	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		$U_2 - L_3$			275.25	-327.59	-53	35	-39	-87	-124	-323	-386	-196	0.495	0.223	0.72	Yes	0.272	0.123	0.40	Yes	0.754	0.245	1	Yes	0.693	0.111	0.81	Yes	1.00	**6.69**
		$U_3 - L_4$			-----	-379.84	0	-10	13	-64	-177	-153	-215	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.125	1	Yes	0.804	0.082	0.89	Yes	1.00	**3.56**
		$U_4 - L_4$			554.38	-----	-62	83	-140	-35	-38	-172	-132	-182	0.813	0.184	1.00	Yes	0.447	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		$U_4 - L_5$			714.53	-----	-186	225	-8	31	57	-72	95	62	0.845	0.145	1.00	Yes	0.465	0.080	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_5 - L_6$			653.02	-----	-275	241	-77	85	349	152	295	169	0.772	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_6 - L_7$			644.13	-----	-108	302	-8	115	310	209	241	173	0.762	0.229	1.00	Yes	0.419	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		$U_8 - L_9$			994.20	-----	-104	366	-2	135	261	218	95	110	0.795	0.196	1.00	Yes	0.492	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_9 - L_{10}$			1030.31	-----	-296	275	-156	83	216	177	330	246	0.824	0.174	1.00	Yes	0.510	0.098	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		$U_{10} - L_{11}$			1029.48	-----	-238	203	-103	23	-90	-151	-106	-91	0.870	0.130	1.00	Yes	0.538	0.072	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{11} - L_{12}$			837.77	-----	-239	147	-104	-41	-353	-360	-302	-236	0.829	0.165	1.00	Yes	0.456	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_{12} - L_{13}$			627.13	-----	-185	173	-54	-8	-359	-339	-270	-281	0.764	0.232	1.00	Yes	0.481	0.131	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{13} - L_{14}$			443.38	-45.88	-77	53	-12	-35	-296	-335	-287	-314	0.797	0.195	1.00	Yes	0.439	0.107	0.55	Yes	0.107	0.158	0.27	Yes	0.097	0.098	0.20	Yes	1.00	**3.79**
		$U_{15} - L_{16}$			211.10	-337.46	-47	9	58	-102	-192	-318	-228	-301	0.380	0.223	0.61	Yes	0.209	0.123	0.34	Yes	0.791	0.207	1	Yes	0.714	0.131	0.85	Yes	1.00	**4.40**
		$U_{16} - L_{15}$			421.80	-184.16	-124	93	31	-65	-226	-263	-171	-176	0.759	0.234	1.00	Yes	0.417	0.129	0.55	Yes	0.437	0.173	0.61	Yes	0.390	0.158	0.55	Yes	1.00	**4.99**
		$U_{17} - L_{18}$			538.47	-----	-148	106	-12	-23	-145	-220	-128	-134	0.790	0.201	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_{18} - L_{17}$			648.70	-----	-334	261	-113	54	-170	-167	-231	-79	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		$U_{19} - L_{18}$			729.02	-----	-354	264	-93	65	-51	-151	-149	-14	0.790	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{20} - L_{19}$			697.98	-----	-376	318	-127	106	-264	-186	0	34	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
	Structure 2	$U_0 - L_1$			714.80	-----	-376	340	-69	77	-743	-238	-122	48	0.707	0.285	1.00	Yes	0.389	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_1 - L_2$			791.67	-----	-406	305	-89	60	-61	-158	40	10	0.783	0.212	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_2 - L_3$			654.78	-----	-314	273	-65	49	-203	-232	-76	-179	0.774	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_3 - L_4$			576.19	-----	-170	139	-41	-6	-338	-305	-323	-217	0.768	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_4 - L_5$			413.39	-143.07	-122	90	16	-46	-336	-252	-220	-217	0.743	0.253	1.00	Yes	0.409	0.139	0.55	Yes	0.353	0.197	0.56	Yes	0.303	0.156	0.46	Yes	1.00	**4.34**
		$U_5 - L_6$			347.33	-312.31	-94	69	65	-108	-404	-300	-370	-246	0.625	0.255	0.88	Yes	0.344	0.140	0.49	Yes	0.738	0.257	1	Yes	0.661	0.138	0.80	Yes	1.00	**5.33**
		$U_6 - L_7$			37.48	-374.35	-21	-6	55	-94	-298	-259	-287	-253	0.061	0.185	0.25	Yes	0.034	0.102	0.14	Yes	0.801	0.190	1	Yes	0.717	0.107	0.83	Yes	1.00	**3.23**
		$U_8 - L_7$			620.59	-60.04	-169	165	4	-45	-139	-278	-151	-245	0.791	0.207	1.00	Yes	0.498	0.117	0.62	Yes	0.100	0.095	0.2	Yes	0.090	0.151	0.25	Yes	1.00	**5.70**
		$U_8 - L_9$			733.56	-----	-326	265	-84	1	-84	-187	-115	-152	0.795	0.197	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{10} - L_9$			834.67	-----	-309	240	-98	38	-59	-147	-81	-64	0.826	0.165	1.00	Yes	0.454	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{11} - L_{10}$			912.00	-----	-352	298	-108	81	114	-34	92	32	0.831	0.165	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{12} - L_{11}$			885.60	-----	-370	347	-112	126	158	65	199	133	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_{13} - L_{12}$			739.20	-----	-422	369	-199	168	280	130	442	223	0.731	0.262	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{14} - L_{13}$			759.02	-----	-274	434	-67	177	289	136	231	137	0.751	0.245	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{14} - L_{15}$			648.01	-----	-226	364	-3	104	152	81	53	38	0.766	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{15} - L_{16}$			647.07	-----	-373	343	-111	104	121	91	61	69	0.765	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		$U_{16} - L_{17}$			748.83	-----	-350	348	-75	99	13	-6	10	6	0.811	0.181	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{17} - L_{18}$			684.76	-----	-294	302	-78	74	-77	-70	-19	-23	0.810	0.185	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		$U_{18} - L_{19}$			680.82	-----	-275	260	-53	30	-151	-147	-163	-110	0.805	0.185	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.69**
		$U_{19} - L_{20}$			607.91	-41.63	-189	199	-16	-14	-229	-204	-146	-151	0.775	0.224	1.00	Yes	0.426	0.126	0.56	Yes	0.069	0.100	0.17	Yes	0.062	0.178	0.25	Yes	1.00	**5.34**
		$U_{20} - L_{21}$			436.98	-68.52	-113	111	-1	-22	-208	-180	-220	-153	0.786	0.208	1.00	Yes	0.432	0.115	0.55	Yes	0.163	0.104	0.27	Yes	0.145	0.145	0.29	Yes	1.00	**4.22**
		$U_{21} - L_{22}$			430.52	-343.24	-89	78	39	-86	-253	-273	-286	-262	0.774	0.197	0.98	Yes	0.426	0.108	0.54	Yes	0.811	0.183	1	Yes	0.726	0.114	0.85	Yes	1.00	**6.33**
		$U_{22} - L_{22}$			397.03	-355.64	-88	73	77	-103	-79	-241	-111	-219	0.714	0.202	0.92	Yes	0.393	0.111	0.51	Yes	0.847	0.147	1	Yes	0.753	0.132	0.89	Yes	1.00	**6.89**
		$U_{24} - L_{23}$			448.32	-133.72	-119	109	26	-44	-30	-125	-61	-85	0.806	0.188	1.00	Yes	0.443	0.104	0.55	Yes	0.320	0.056	0.38	Yes	0.283	0.152	0.44	Yes	1.00	**4.82**
		$U_{25} - L_{24}$			625.79	-31.03	-198	180	-2	-23	10	-96	-66	-55	0.798	0.197	1.00	Yes	0.439	0.110	0.55	Yes	0.052	0.056	0.11	Yes	0.047	0.177	0.23	Yes	1.00	**5.03**
		$U_{26} - L_{25}$			686.45	-----	-284	264	-25	19	110	-25	62	20	0.812	0.181	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{27} - L_{26}$			672.88	-----	-301	287	-66	65	146	33	128	70	0.796	0.197	1.00	Yes	0.438	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{28} - L_{27}$			718.21	-----	-343	353	-85	106	195	80	187	111	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{29} - L_{28}$			628.89	-----	-355	330	-126	120	269	116	217	111	0.744	0.250	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_{30} - L_{29}$			632.17	-----	-219	363	-38	128	208	91	178	102	0.747	0.243	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{30} - L_{31}$			773.85	-----	-283	452	-27	133	125	69	63	38	0.766	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{31} - L_{32}$			782.64	-----	-449	382	-132	131	55	39	36	47	0.774	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{32} - L_{33}$			908.39	-----	-359	357	-103	115	-112	-97	16	-22	0.827	0.168	1.00	Yes	0.455	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{33} - L_{34}$			895.37	-----	-336	300	-121	71	-295	-250	-262	-161	0.816	0.183	1.00	Yes	0.449	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		$U_{34} - L_{35}$			825.28	-----	-284	250	-95	33	-317	-312	-202	-242	0.816	0.179	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{35} - L_{36}$			712.15	-----	-301	263	-111	17	-369	-304	-398	-281	0.771	0.219	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_{36} - L_{37}$			598.23	-57.43	-161	171	-22	-30	-347	-368	-348	-335	0.763	0.228	1.00	Yes	0.480	0.130	0.61	Yes	0.095	0.129	0.23	Yes	0.086	0.153	0.24	Yes	1.00	**5.26**
		$U_{38} - L_{37}$			22.46	-391.69	-16	-8	79	-103	-123	-226	-130	-219	0.037	0.177	0.22	Yes	0.020	0.097	0.12	Yes	0.846	0.148	1	Yes	0.750	0.118	0.87	Yes	1.00	**3.49**
		$U_{39} - L_{38}$			287.19	-346.79	-81	52	92	-120	-161	-224	-140	-182	0.517	0.219	0.74	Yes	0.284	0.120	0.41	Yes	0.826	0.173	1	Yes	0.734	0.154	0.89	Yes	1.00	**5.08**
		$U_{40} - L_{39}$			431.89	-196.53	-127	93	37	-67	-124	-184	-136	-108	0.777	0.215	1.00	Yes	0.427	0.118	0.55	Yes	0.470	0.141	0.62	Yes	0.416	0.162	0.58	Yes	1.00	**4.89**
		$U_{41} - L_{40}$			602.85	-----	-180	136	-20	-17	-61	-141	-70	-59	0.804	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_{42} - L_{41}$			663.58	-----	-339	274	-75	50	-94	-87	0	-4	0.785	0.209	1.00	Yes	0.431	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		$U_{43} - L_{42}$			797.84	-----	-397	314	-96	65	-104	-152	-5	-28	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{44} - L_{43}$			762.43	-----	-404	372	-139	122	-340	-199	34	6	0.754	0.238	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
	Structure 3	$U_0 - L_1$			570.36	-----	-404	305	-70	72	-1050	-35	-132	45	0.618	0.380	1.00	Yes	0.340	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_1 - L_2$			724.75	-----	-360	267	-91	57	-67	-149	38	13	0.785	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_2 - L_3$			649.91	-----	-317	251	-78	48	-222	-241	-72	-168	0.768	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_3 - L_4$			528.78	-----	-139	111	-24	-20	-326	-318	-336	-235	0.775	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		$U_4 - L_5$			407.00	-202.06	-116	95	15	-56	-407	-307	-350	-240	0.732	0.267	1.00	Yes	0.403	0.147	0.55	Yes	0.479	0.222	0.71	Yes	0.428	0.149	0.58	Yes	1.00	**4.68**
		$U_5 - L_6$			229.89	-316.34	-44	16	42	-93	-379	-360	-295	-311	0.413	0.229	0.65	Yes	0.227	0.126	0.36	Yes	0.741	0.250	1	Yes	0.669	0.119	0.79	Yes	1.00	**4.30**
		$U_7 - L_6$			453.73	-90.27	-81	50	12	-43	-101	-276	-132	-262	0.816	0.184	1.00	Yes	0.449	0.101	0.55	Yes	0.210	0.119	0.33	Yes	0.191	0.104	0.30	Yes	1.00	**4.30**
		$U_8 - L_7$			643.52	-1.18	-190	155	-41	-15	-156	-223	-197	-164	0.784	0.209	1.00	Yes	0.494	0.118	0.62	Yes	0.002	0.098	0.1	Yes	0.002	0.166	0.17	Yes	1.00	**4.43**
		$U_8 - L_9$			853.95	-----	-259	135	-110	-46	-11	-175	-182	-138	0.845	0.147	1.00	Yes	0.465	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		$U_{10} - L_9$			1022.14	-----	-249	189	-70	23	153	-13	111	62	0.863	0.135	1.00	Yes	0.534	0.075	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_{11} - L_{10}$			965.24	-----	-294	241	-101	80	411	246	704	458	0.772	0.220	1.00	Yes	0.478	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{12} - L_{11}$			977.19	-----	-104	360	-14	141	419	274	281	210	0.781	0.214	1.00	Yes	0.484	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{12} - L_{13}$			664.91	-----	-107	312	-3	106	191	136	113	92	0.786	0.212	1.00	Yes	0.432	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_{13} - L_{14}$			681.84	-----	-288	245	-70	76	138	95	97	122	0.806	0.189	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{14} - L_{15}$			696.34	-----	-164	244	-17	23	-107	-175	63	-10	0.823	0.171	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{15} - L_{16}$			575.04	-27.23	-66	82	-28	-25	-247	-277	-188	-150	0.843	0.148	1.00	Yes	0.464	0.081	0.55	Yes	0.051	0.103	0.16	Yes	0.047	0.083	0.14	Yes	1.00	**5.13**
		$U_{17} - L_{16}$			6.93	-332.04	0	-4	-93	-118	-8	-126	-420	-374	0.012	0.272	0.29	Yes	0.007	0.150	0.16	Yes	0.759	0.232	1	Yes	0.703	0.150	0.86	Yes	1.00	**8.55**
		$U_{18} - L_{17}$			200.63	-353.37	-44	26	-53	-81	-2	-211	-390	-128	0.361	0.217	0.58	Yes	0.198	0.119	0.32	Yes	0.813	0.177	1	Yes	0.748	0.104	0.86	Yes	1.00	**5.93**
		$U_{19} - L_{18}$			468.43	-64.32	-89	41	24	-47	84	-127	91	-52	0.842	0.151	1.00	Yes	0.463	0.083	0.55	Yes	0.148	0.076	0.23	Yes	0.136	0.114	0.25	Yes	1.00	**6.72**
		$U_{20} - L_{19}$			225.21	-92.38	-298	169	-12	-6	-1405	-2	47	-14	0.295	0.702	1.00	Yes	0.178	0.387	0.57	Yes	0.158	0.444	0.61	Yes	0.143	0.348	0.50	Yes	1.00	**9.55**

Moment (End) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Upper Chord	Structure 1	$U_0 - U_1$			6.62	-546.20	-98	54	339	-1096	-46	105	-91	-820	0.008	0.399	0.41	Yes	0.005	0.273	0.28	Yes	0.743	0.210	0.96	Yes	0.737	0.261	1.00	Yes	1.00	**6.38**
		$U_1 - U_2$			13.12	-528.90	-106	79	-299	-762	-153	115	-134	-459	0.015	0.259	0.28	Yes	0.010	0.177	0.19	Yes	0.720	0.273	1	Yes	0.713	0.181	0.90	Yes	1.00	**3.60**
		$U_2 - U_3$			157.13	-563.54	-99	286	-525	-471	-115	111	-161	-561	0.180	0.220	0.40	Yes	0.121	0.145	0.27	Yes	0.767	0.228	1	Yes	0.760	0.125	0.89	Yes	1.00	**4.23**
		$U_3 - U_4$			511.61	-578.31	157	426	-328	-772	-223	-4	-414	-319	0.586	0.254	0.84	Yes	0.402	0.174	0.58	Yes	0.787	0.206	1	Yes	0.780	0.184	0.97	Yes	1.00	**6.92**
		$U_4 - U_5$			562.44	-594.93	233	446	-511	-531	-84	-1	-536	487	0.645	0.217	0.87	Yes	0.442	0.148	0.60	Yes	0.810	0.184	1	Yes	0.802	0.126	0.93	Yes	1.00	**7.61**
		$U_5 - U_6$			723.02	-79.54	296	514	-283	42	103	147	-219	260	0.829	0.166	1.00	Yes	0.559	0.109	0.67	Yes	0.108	0.146	0.26	Yes	0.107	0.122	0.23	Yes	1.00	**6.91**
		$U_6 - U_7$			854.74	-----	395	217	204	-244	317	267	-127	678	0.817	0.177	1.00	Yes	0.571	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		$U_7 - U_8$			818.92	-----	-806	2180	141	590	369	689	984	847	0.567	0.430	1.00	Yes	0.396	0.294	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		$U_8 - U_9$			810.15	-----	1038	-125	1624	-1033	248	487	195	-505	0.664	0.334	1.00	Yes	0.454	0.228	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_9 - U_{10}$			631.63	-358.81	244	255	174	-895	-6	305	-117	-708	0.685	0.314	1.00	Yes	0.464	0.211	0.68	Yes	0.462	0.172	0.64	Yes	0.458	0.200	0.66	Yes	1.00	**8.46**
		$U_{10} - U_{11}$			68.99	-619.53	250	-173	132	-921	46	107	-74	-543	0.075	0.294	0.37	Yes	0.050	0.190	0.24	Yes	0.798	0.188	0.99	Yes	0.791	0.206	1.00	Yes	1.00	**4.28**
		$U_{11} - U_{12}$			-----	-901.58	154	-208	-52	-810	12	102	162	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.140	1	Yes	0.846	0.134	0.99	Yes	1.00	**3.21**
		$U_{12} - U_{13}$			-----	-1233.07	-52	-269	-235	-838	81	6	-117	-509	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.158	1	Yes	0.824	0.116	0.94	Yes	1.00	**3.62**
		$U_{13} - U_{14}$			-----	-1366.21	-196	-505	-451	-1506	-43	-8	-224	-211	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.206	1	Yes	0.783	0.166	0.95	Yes	1.00	**3.43**
		$U_{14} - U_{15}$			-----	-1408.37	-389	-282	-1078	-929	44	-272	-284	100	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.176	1	Yes	0.807	0.119	0.93	Yes	1.00	**4.13**
		$U_{15} - U_{16}$			-----	-1407.19	-251	-423	-472	-1159	-25	-233	-403	94	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1	Yes	0.807	0.128	0.94	Yes	1.00	**4.69**
		$U_{16} - U_{17}$			-----	-1410.82	-375	-191	-920	-856	-9	-228	-188	331	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.175	1	Yes	0.809	0.102	0.92	Yes	1.00	**5.31**
		$U_{17} - U_{18}$			-----	-1108.75	-686	108	-572	-264	-32	-224	-412	577	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.120	1	Yes	0.868	0.112	0.98	Yes	1.00	**5.11**
		$U_{18} - U_{19}$			-----	-730.78	-680	124	-403	-51	185	-303	644	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1	Yes	0.822	0.137	0.96	Yes	1.00	**5.34**
		$U_{19} - U_{20}$			-----	-685.88	-1065	489	-686	-209	-272	-136	2	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.213	1	Yes	0.772	0.214	0.99	Yes	1.00	**13.06**
	Structure 2	$U_0 - U_1$			-----	-589.38	271	-311	1157	-1777	76	47	174	-708	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.155	0.86	Yes	0.696	0.302	1.00	Yes	1.00	**8.51**
		$U_1 - U_2$			-----	-804.91	-149	-324	-203	-1130	-17	18	-46	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.777	0.171	0.95	Yes	1.00	**4.12**
		$U_2 - U_3$			-----	-1126.94	-130	-435	-205	-1457	-34	-63	-97	-661	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.188	1	Yes	0.800	0.148	0.95	Yes	1.00	**3.89**
		$U_3 - U_4$			-----	-1337.73	-534	-549	-1017	-1607	-114	-41	-62	-472	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.223	1	Yes	0.762	0.143	0.91	Yes	1.00	**3.40**
		$U_4 - U_5$			-----	-1469.42	-586	-564	-995	-1810	-120	-89	-312	-688	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.238	1	Yes	0.754	0.150	0.91	Yes	1.00	**3.60**
		$U_5 - U_6$			-----	-1546.36	-579	-20	-1303	-1338	-195	-52	-491	-693	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.191	1	Yes	0.794	0.111	0.91	Yes	1.00	**4.00**
		$U_6 - U_7$			-----	-1366.03	-327	-214	-1196	-1433	-169	-97	-175	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.214	1	Yes	0.778	0.128	0.91	Yes	1.00	**4.05**
		$U_7 - U_8$			-----	-1368.70	-307	-147	-939	-1317	-73	-166	-515	117	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.208	1	Yes	0.779	0.117	0.90	Yes	1.00	**5.24**
		$U_8 - U_9$			28.08	-1199.01	-297	293	-1154	-852	2	-167	-667	339	0.016	0.178	0.20	Yes	0.011	0.118	0.13	Yes	0.819	0.174	1	Yes	0.813	0.123	0.94	Yes	1.00	**6.14**
		$U_9 - U_{10}$			431.14	-915.00	-3	633	-1228	-496	-106	-192	-812	70	0.316	0.238	0.56	Yes	0.214	0.160	0.38	Yes	0.794	0.196	1	Yes	0.790	0.149	0.94	Yes	1.00	**7.59**
		$U_{10} - U_{11}$			872.89	-634.51	365	639	-968	-498	-162	-81	-992	341	0.737	0.258	1.00	Yes	0.502	0.170	0.68	Yes	0.634	0.305	0.94	Yes	0.631	0.137	0.77	Yes	1.00	**9.21**
		$U_{11} - U_{12}$			-----	-535.19	-2904	1852	-1059	-1241	-881	-1368	-1374	2441	-----	-----	-----	-----	-----	-----	-----	-----	0.535	0.459	1	Yes	0.532	0.410	0.95	Yes	1.00	**36.64**
		$U_{12} - U_{13}$			1050.44	-----	684	296	-213	-1277	661	878	-1053	1292	0.709	0.284	1.00	Yes	0.506	0.196	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.63**
		$U_{13} - U_{14}$			1143.27	-----	-1172	3888	-97	1506	505	1032	706	1022	0.562	0.430	1.00	Yes	0.398	0.283	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		$U_{14} - U_{15}$			1255.12	-----	2359	-59	3635	-1623	525	646	594	-228	0.617	0.381	1.00	Yes	0.437	0.250	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		$U_{15} - U_{16}$			1320.59	-----	142	405	-564	-1352	174	416	254	-565	0.798	0.201	1.00	Yes	0.568	0.136	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.89**
		$U_{16} - U_{17}$			1015.23	-----	650	197	571	-1254	-29	305	-265	-864	0.748	0.248	1.00	Yes	0.498	0.163	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.45**
		$U_{17} - U_{18}$			715.72	-273.66	470	239	233	-1165	-58	277	-123	-526	0.718	0.275	1.00	Yes	0.478	0.182	0.67	Yes	0.325	0.217	0.55	Yes	0.323	0.198	0.53	Yes	1.00	**6.18**
		$U_{18} - U_{19}$			530.69	-665.67	557	138	-25	-1141	4	149	148	-799	0.533	0.311	0.85	Yes	0.349	0.199	0.55	Yes	0.791	0.199	1	Yes	0.786	0.194	0.98	Yes	1.00	**6.67**
		$U_{19} - U_{20}$			222.65	-724.65	259	95	-150	-1063	-55	129	-192	-396	0.209	0.224	0.44	Yes	0.138	0.147	0.29	Yes	0.805	0.194	1	Yes	0.800	0.170	0.97	Yes	1.00	**4.88**
		$U_{20} - U_{21}$			71.63	-830.01	-64	44	-399	-973	-77	-11	-174	-650	0.056	0.212	0.27	Yes	0.039	0.139	0.18	Yes	0.763	0.229	1	Yes	0.758	0.141	0.90	Yes	1.00	**4.64**
		$U_{21} - U_{22}$			71.27	-814.06	-78	-34	-665	-1184	-184	-98	-107	-211	0.055	0.195	0.25	Yes	0.039	0.130	0.17	Yes	0.748	0.247	1	Yes	0.743	0.172	0.92	Yes	1.00	**4.31**
		$U_{22} - U_{23}$			136.52	-832.77	21	-57	-617	-1009	-29	-149	-312	244	0.106	0.180	0.29	Yes	0.075	0.121	0.20	Yes	0.766	0.229	1	Yes	0.760	0.146	0.91	Yes	1.00	**5.63**
		$U_{23} - U_{24}$			284.16	-817.64	-75	244	-475	-984	11	-55	-533	279	0.220	0.201	0.43	Yes	0.154	0.131	0.29	Yes	0.752	0.243	1	Yes	0.746	0.143	0.89	Yes	1.00	**6.20**
		$U_{24} - U_{25}$			365.45	-718.75	224	367	-874	-679	-12	-70	-589	346	0.343	0.219	0.57	Yes	0.227	0.144	0.38	Yes	0.798	0.194	1	Yes	0.793	0.140	0.94	Yes	1.00	**6.98**
		$U_{25} - U_{26}$			774.71	-487.92	260	715	-432	-498	30	-17	-640	518	0.778	0.215	1.00	Yes	0.510	0.138	0.65	Yes	0.580	0.165	0.75	Yes	0.576	0.121	0.70	Yes	1.00	**10.33**
		$U_{26} - U_{27}$			-----	-543.99	-1217	1030	-734	-1139	-689	-348	-1608	1787	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.350	1	Yes	0.642	0.207	0.85	Yes	1.00	**20.40**
		$U_{27} - U_{28}$			840.32	-59.44	-1498	2189	-1153	-481	-214	-650	-993	661	0.619	0.379	1.00	Yes	0.412	0.250	0.67	Yes	0.052	0.252	0.31	Yes	0.052	0.275	0.33	Yes	1.00	**21.25**
		$U_{28} - U_{29}$			1308.70	-----	85	243	237	-937	-16	278	-220	1143	0.791	0.203	1.00	Yes	0.563	0.139	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.69**
		$U_{29} - U_{30}$			1131.14	-----	-901	3818	71	1548	571	1063	950	1265	0.556	0.440	1.00	Yes	0.394	0.289	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		$U_{30} - U_{31}$			1260.84	-----	2345	-213	3553	-1594	586	610	635	-293	0.620	0.372	1.00	Yes	0.439	0.244	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		$U_{31} - U_{32}$			1168.31	-----	84	339	-262	-1115	200	375	-111	-700	0.789	0.207	1.00	Yes	0.562	0.142	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		$U_{32} - U_{33}$			818.53	-231.84	578	130	329	-1254	9	216	-93	-1000	0.691	0.299	1.00	Yes	0.464	0.199	0.67	Yes	0.232	0.174	0.41	Yes	0.230	0.177	0.41	Yes	1.00	**6.64**
		$U_{33} - U_{34}$			574.98	-796.03	458	138	-190	-1405	-25	208	212	-612	0.486	0.273	0.76	Yes	0.331	0.178	0.51	Yes	0.796	0.201	1	Yes	0.791	0.198	0.99	Yes	1.00	**7.03**
		$U_{34} - U_{35}$			58.37	-949.84	364	-212	-11	-1376	43	35	-106	-519	0.043	0.224	0.27	Yes	0.029	0.151	0.19	Yes	0.825	0.166	1	Yes	0.820	0.167	0.99	Yes	1.00	**4.52**
		$U_{35} - U_{36}$			-----	-1195.17	77	-477	-296	-1429	-19	81	-86	-360	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1	Yes	0.811	0.152	0.97	Yes	1.00	**3.67**
		$U_{36} - U_{37}$			-----	-1401.76	-303	-325	-914	-1444	-23	-122	99	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1	Yes	0.798	0.129	0.93	Yes	1.00	**3.62**
		$U_{37} - U_{38}$			-----	-1403.05	-177	-404	-597	-1508	-93	-193	-416	48	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1	Yes	0.799	0.134	0.94	Yes	1.00	**4.35**
		$U_{38} - U_{39}$			-----	-1533.73	-141	-623	-758	-1839	10	-205	-459	123	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1	Yes	0.787	0.152	0.94	Yes	1.00	**4.40**
		$U_{39} - U_{40}$			-----	-1524.35	-624	-514	-1505	-1575	21	-115	-347	319	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.202	1	Yes	0.783	0.131	0.92	Yes	1.00	**4.78**
		$U_{40} - U_{41}$			-----	-1415.93	-515	-491	-1218	-1320	77	-166	91	221	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.806	0.118	0.93	Yes	1.00	**4.48**
		$U_{41} - U_{42}$			-----	-1207.35	-1185	96	-870	-615	139	-201	-332	677	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.133	1	Yes	0.857	0.121	0.98	Yes	1.00	**6.17**
		$U_{42} - U_{43}$			-----	-864.76	-913	50	-684	-174	16	-377	-258	740	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.150	1	Yes	0.835	0.138	0.98	Yes	1.00	**6.37**
		$U_{43} - U_{44}$			-----	-593.91	-1313	635	-695	-258	-340	-158	645	2	-----	-----	-----	-----	-----	-----	-----	-----	0.706	0.286	1	Yes	0.701	0.223	0.93	Yes	1.00	**12.54**
	Structure 3	$U_0 - U_1$			-----	-593.58	362	-300	560	-1616	89	71	324	-1236	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.203	0.88	Yes	0.668	0.325	1.00	Yes	1.00	**10.06**
		$U_1 - U_2$			-----	-709.51	-81	-228	-24	-774	-21	6	-69	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.191	1	Yes	0.798	0.156	0.96	Yes	1.00	**3.85**
		$U_2 - U_3$			-----	-1025.77	-54	-241	37	-844	-33	-60	-146	-685	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.180	1	Yes	0.803	0.137	0.95	Yes	1.00	**3.74**
		$U_3 - U_4$			-----	-1346.29	-220	-371	-472	-1354	-108	-37	-223	-559	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1	Yes	0.772	0.149	0.93	Yes	1.00	**3.99**
		$U_4 - U_5$			-----	-1402.85	-441	-128	-659	-846	-93	-53	-335	-757	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.177	1	Yes	0.804	0.093	0.90	Yes	1.00	**4.06**
		$U_5 - U_6$			-----	-1325.38	-255	-377	-573	-1445	-186	-150	-398	-344	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.227	1	Yes	0.760	0.159	0.92	Yes	1.00	**3.81**
		$U_6 - U_7$			-----	-1362.66	-502	-159	-1092	-782	-121	-300	-435	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.209	1	Yes	0.781	0.121	0.91	Yes	1.00	**3.63**
		$U_7 - U_8$			-----	-1191.37	-243	18	-733	-472	-113	-320	-476	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.185	1	Yes	0.796	0.101	0.90	Yes	1.00	**3.90**
		$U_8 - U_9$			-----	-852.69	-111	280	-545	-216	-215	-181	-532	272	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.189	1	Yes	0.800	0.090	0.90	Yes	1.00	**5.06**
		$U_9 - U_{10}$			668.47	-615.28	120	573	-641	-193	32	130	-495	791	0.725	0.271	1.00	Yes	0.483	0.176	0.66	Yes	0.792	0.187	0.98	Yes	0.785	0.144	0.93	Yes	1.00	**13.20**
		$U_{10} - U_{11}$			45.77	-434.89	-723	829	-597	-767	-791	-321	-2589	3083	0.050	0.681	0.74	Yes	0.034	0.456	0.49	Yes	0.560	0.434	1	Yes	0.555	0.186	0.75	Yes	1.00	**29.43**
		$U_{11} - U_{12}$			726.75	-----	-814	1790	-36	646	207	448	790	776	0.595	0.397	1.00	Yes	0.407	0.270	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		$U_{12} - U_{13}$			935.67	-----	1122	-5	1786	-1012	78	471	-41	-709	0.648	0.343	1.00	Yes	0.452	0.234	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		$U_{13} - U_{14}$			830.19	-27.01	219	358	83	-628	-101	375	-232	-513	0.794	0.204	1.00	Yes	0.555	0.140	0.70	Yes	0.031	0.208	0.24	Yes	0.030	0.134	0.17	Yes	1.00	**6.66**
		$U_{14} - U_{15}$			578.28	-418.38	428	198	260	-818	-54	237	-261	-805	0.663	0.330	1.00	Yes	0.447	0.218	0.67	Yes	0.569	0.267	0.84	Yes	0.564	0.195	0.76	Yes	1.00	**6.31**
		$U_{15} - U_{16}$			290.13	-589.21	261	113	-150	-858	-77	188	39	192	0.333	0.237	0.57	Yes	0.228	0.162	0.40	Yes	0.802	0.182	0.99	Yes	0.795	0.204	1.00	Yes	1.00	**5.09**
		$U_{16} - U_{17}$			360.29	-594.58	368	61	-285	-782	188	-58	111	477	0.413	0.267	0.68	Yes	0.283	0.182	0.47	Yes	0.809	0.182	1	Yes	0.802	0.186	0.99	Yes	1.00	**6.35**
		$U_{17} - U_{18}$			97.45	-599.56	232	-169	-268	-786	68	36	-201	146	0.112	0.221	0.34	Yes	0.075	0.144	0.22	Yes	0.816	0.150	0.97	Yes	0.808	0.187	1.00	Yes	1.00	**4.97**
		$U_{18} - U_{19}$			17.39	-523.17	44	-67	-599	-307	180	-199	-204	588	0.020	0.242	0.27	Yes	0.014	0.165	0.18	Yes	0.712	0.279	1	Yes	0.705	0.142	0.85	Yes	1.00	**5.61**
		$U_{19} - U_{20}$			-----	-529.42	-404	-50	-613	-537	-190	-96	742	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.272	1	Yes	0.714	0.146	0.86	Yes	1.00	**7.31**

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 LL Factor: 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
					(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Lower Chord	Structure 1	L_0 - L_1			19.09	-35.60	-150	12	744	-1227	63	231	-752	-2763	0.029	0.961	1.00	Yes	0.017	0.570	0.59	Yes	0.065	0.788	0.86	Yes	0.064	0.368	0.44	Yes	1.00	**13.58**
		L_1 - L_2			400.81	-11.90	-5	9	140	-866	352	-157	-554	401	0.613	0.379	1.00	Yes	0.374	0.250	0.63	Yes	0.022	0.219	0.25	Yes	0.021	0.260	0.29	Yes	1.00	**5.22**
		L_2 - L_3			624.93	-104.31	-42	64	-543	-683	-180	121	158	-718	0.719	0.280	1.00	Yes	0.416	0.166	0.59	Yes	0.143	0.255	0.4	Yes	0.141	0.165	0.31	Yes	1.00	**4.96**
		L_3 - L_4			626.22	-306.92	20	361	-317	-739	303	-236	-622	34	0.720	0.279	1.00	Yes	0.428	0.176	0.61	Yes	0.419	0.238	0.66	Yes	0.415	0.179	0.60	Yes	1.00	**6.11**
		L_4 - L_5			51.25	-552.18	96	466	-358	99	-67	193	-38	-659	0.066	0.241	0.31	Yes	0.040	0.152	0.20	Yes	0.849	0.147	1	Yes	0.841	0.123	0.97	Yes	1.00	**4.02**
		L_5 - L_6			-----	-747.39	124	590	-179	216	161	-240	-128	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.121	1	Yes	0.862	0.130	1.00	Yes	1.00	**3.89**
		L_6 - L_7			-----	-1009.54	-444	554	-180	-612	443	1086	-799	-1890	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.175	1	Yes	0.813	0.096	0.91	Yes	1.00	**9.79**
		L_7 - L_8			-----	-1271.32	-81	1123	-9	626	299	429	498	222	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.181	1	Yes	0.805	0.149	0.96	Yes	1.00	**4.30**
		L_8 - L_9			-----	-1123.10	996	11	1274	-287	174	326	196	-315	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.279	1	Yes	0.711	0.169	0.88	Yes	1.00	**4.82**
		L_9 - L_{10}			-----	-1015.58	145	227	449	-1112	439	-330	-1546	525	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.121	0.95	Yes	0.817	0.175	1.00	Yes	1.00	**10.88**
		L_{10} - L_{11}			46.19	-519.87	480	-63	259	-763	-277	47	9	-885	0.060	0.357	0.42	Yes	0.035	0.212	0.25	Yes	0.799	0.152	0.96	Yes	0.792	0.202	1.00	Yes	1.00	**6.97**
		L_{11} - L_{12}			514.47	-106.23	357	-233	292	-829	133	-91	-636	406	0.666	0.331	1.00	Yes	0.400	0.213	0.62	Yes	0.163	0.150	0.32	Yes	0.162	0.219	0.39	Yes	1.00	**4.93**
		L_{12} - L_{13}			1007.80	-----	58	-155	-355	-646	-160	120	-159	-726	0.795	0.199	1.00	Yes	0.509	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		L_{13} - L_{14}			1256.29	-----	200	-513	237	-1631	147	16	-399	151	0.739	0.258	1.00	Yes	0.479	0.158	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		L_{14} - L_{15}			1516.36	-----	-568	-152	-1462	-756	-153	160	-357	-1090	0.741	0.253	1.00	Yes	0.481	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_{15} - L_{16}			1589.65	-----	-303	-369	-917	-1419	109	-138	-671	3	0.777	0.218	1.00	Yes	0.499	0.129	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.96**
		L_{16} - L_{17}			1140.64	-----	-1046	235	-1100	-309	543	451	-391	-1288	0.721	0.276	1.00	Yes	0.468	0.173	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.65**
		L_{17} - L_{18}			920.95	-----	-645	227	-556	-205	148	-97	-538	-58	0.802	0.193	1.00	Yes	0.513	0.118	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.67**
		L_{18} - L_{19}			410.67	-----	-902	545	-401	141	66	234	-130	-463	0.629	0.367	1.00	Yes	0.425	0.232	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.70**
		L_{19} - L_{20}			43.50	-313.72	-1130	666	-179	65	133	30	144	32	0.074	0.402	0.48	Yes	0.045	0.241	0.29	Yes	0.629	0.225	0.86	Yes	0.624	0.369	1.00	Yes	1.00	**12.15**
	Structure 2	L_0 - L_1			45.39	-151.33	-57	-142	725	-2442	37	128	-772	-2681	0.055	0.937	1.00	Yes	0.033	0.584	0.62	Yes	0.218	0.662	0.88	Yes	0.216	0.497	0.72	Yes	1.00	**17.42**
		L_1 - L_2			473.65	-----	188	-334	603	-1425	156	-63	-183	795	0.575	0.421	1.00	Yes	0.342	0.266	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.99**
		L_2 - L_3			974.60	-----	-48	-267	60	-1089	-74	155	30	-663	0.768	0.228	1.00	Yes	0.504	0.139	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		L_3 - L_4			1295.33	-----	-13	-503	-19	-1622	182	-6	-515	563	0.761	0.235	1.00	Yes	0.512	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_4 - L_5			1712.79	-----	-438	-400	-1256	-1541	-80	163	205	-739	0.799	0.195	1.00	Yes	0.529	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_5 - L_6			1748.46	-----	-224	-511	-1087	-1992	188	-89	-1099	-21	0.750	0.245	1.00	Yes	0.504	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_6 - L_7			1822.69	-----	-556	-192	-1872	-1715	-161	218	91	-979	0.771	0.225	1.00	Yes	0.513	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_7 - L_8			1397.33	-76.47	-274	434	-1251	-990	229	-141	-649	88	0.801	0.191	1.00	Yes	0.526	0.115	0.65	Yes	0.052	0.144	0.2	Yes	0.052	0.138	0.19	Yes	1.00	**6.34**
		L_8 - L_9			977.33	-336.77	-122	578	-1105	-72	-86	175	-290	-1729	0.684	0.312	1.00	Yes	0.460	0.201	0.67	Yes	0.279	0.253	0.54	Yes	0.277	0.149	0.43	Yes	1.00	**6.19**
		L_9 - L_{10}			512.05	-812.30	-113	870	-742	-205	149	-127	-472	-83	0.457	0.196	0.66	Yes	0.266	0.120	0.39	Yes	0.859	0.092	0.96	Yes	0.853	0.139	1.00	Yes	1.00	**8.04**
		L_{10} - L_{11}			373.37	-----	-1537	1206	-1118	-136	874	648	-451	-2641	0.373	0.624	1.00	Yes	0.219	0.379	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.36**
		L_{11} - L_{12}			-----	-1027.68	-75	1103	-459	558	61	-368	-297	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.120	0.97	Yes	0.843	0.150	1.00	Yes	1.00	**4.95**
		L_{12} - L_{13}			-----	-1244.68	-399	-102	-332	-1392	-81	427	-541	-1040	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.239	1	Yes	0.751	0.140	0.90	Yes	1.00	**7.46**
		L_{13} - L_{14}			-----	-1490.69	-1228	2794	-432	1297	-64	163	690	596	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.205	0.97	Yes	0.750	0.244	1.00	Yes	1.00	**6.78**
		L_{14} - L_{15}			-----	-1286.68	1545	-485	2774	-1192	373	351	101	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.653	0.343	1	Yes	0.647	0.242	0.89	Yes	1.00	**3.88**
		L_{15} - L_{16}			-----	-1433.56	-935	419	-680	-1321	213	-357	-258	541	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.126	1	Yes	0.858	0.131	0.99	Yes	1.00	**10.19**
		L_{16} - L_{17}			-----	-1123.90	1162	51	747	-928	-404	-6	-144	-1141	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.168	1	Yes	0.819	0.143	0.97	Yes	1.00	**7.52**
		L_{17} - L_{18}			-----	-810.23	518	172	696	-911	126	-194	-193	587	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.090	0.95	Yes	0.851	0.146	1.00	Yes	1.00	**5.78**
		L_{18} - L_{19}			135.09	-632.65	710	31	229	-787	-210	61	179	-625	0.153	0.247	0.41	Yes	0.088	0.145	0.24	Yes	0.848	0.132	0.98	Yes	0.843	0.152	1.00	Yes	1.00	**6.21**
		L_{19} - L_{20}			528.51	-436.10	491	106	113	-1142	149	-170	-1127	431	0.599	0.393	1.00	Yes	0.354	0.244	0.60	Yes	0.585	0.177	0.77	Yes	0.581	0.220	0.81	Yes	1.00	**6.60**
		L_{20} - L_{21}			894.88	-281.65	399	-81	-499	-1252	-184	70	40	-894	0.714	0.279	1.00	Yes	0.468	0.171	0.64	Yes	0.266	0.194	0.47	Yes	0.264	0.183	0.45	Yes	1.00	**7.30**
		L_{21} - L_{22}			821.83	-10.57	-27	-212	-440	-1982	137	-148	-478	73	0.655	0.341	1.00	Yes	0.438	0.214	0.66	Yes	0.010	0.277	0.29	Yes	0.010	0.289	0.30	Yes	1.00	**5.56**
		L_{22} - L_{23}			861.84	-87.14	-289	129	-1210	-940	-52	211	-242	-1178	0.687	0.303	1.00	Yes	0.460	0.194	0.66	Yes	0.082	0.227	0.31	Yes	0.082	0.177	0.26	Yes	1.00	**5.84**
		L_{23} - L_{24}			926.95	-358.04	-47	483	-1129	-1070	166	-140	-877	-15	0.739	0.259	1.00	Yes	0.485	0.159	0.65	Yes	0.338	0.168	0.51	Yes	0.336	0.165	0.51	Yes	1.00	**8.38**
		L_{24} - L_{25}			540.58	-581.61	223	549	-789	-294	-99	146	24	-1510	0.612	0.383	1.00	Yes	0.362	0.234	0.60	Yes	0.780	0.166	0.95	Yes	0.775	0.152	0.93	Yes	1.00	**9.10**
		L_{25} - L_{26}			26.09	-638.27	28	725	-451	-51	102	-167	-478	-146	0.030	0.213	0.25	Yes	0.017	0.125	0.15	Yes	0.856	0.125	0.99	Yes	0.851	0.140	1.00	Yes	1.00	**6.23**
		L_{26} - L_{27}			-----	-693.98	-939	1025	-771	15	705	556	-314	-1611	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.263	1	Yes	0.729	0.164	0.90	Yes	1.00	**10.09**
		L_{27} - L_{28}			-----	-1136.43	-367	1380	-293	595	429	-201	-57	28	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.139	0.98	Yes	0.828	0.170	1.00	Yes	1.00	**7.06**
		L_{28} - L_{29}			-----	-1384.95	39	-339	-294	-1480	-109	400	-386	-795	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.155	1	Yes	0.828	0.147	0.98	Yes	1.00	**6.00**
		L_{29} - L_{30}			-----	-1491.26	-1304	2757	-575	1340	135	285	769	879	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.209	0.97	Yes	0.750	0.241	1.00	Yes	1.00	**6.82**
		L_{30} - L_{31}			-----	-1315.53	1730	-527	2571	-1019	494	421	66	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.330	1	Yes	0.662	0.225	0.89	Yes	1.00	**2.82**
		L_{31} - L_{32}			-----	-1408.23	-508	85	-571	-1019	249	-258	-281	246	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.147	1	Yes	0.842	0.101	0.95	Yes	1.00	**5.69**
		L_{32} - L_{33}			-----	-1034.28	1084	-41	871	-814	-382	-3	156	-487	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.123	0.98	Yes	0.848	0.148	1.00	Yes	1.00	**5.52**
		L_{33} - L_{34}			-----	-719.69	577	-18	597	-880	100	-130	-353	582	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.091	0.95	Yes	0.845	0.154	1.00	Yes	1.00	**4.96**
		L_{34} - L_{35}			480.46	-730.57	820	-109	436	-1451	-214	98	482	-1082	0.429	0.362	0.80	Yes	0.250	0.221	0.48	Yes	0.772	0.149	0.93	Yes	0.767	0.232	1.00	Yes	1.00	**8.97**
		L_{35} - L_{36}			1011.75	-373.50	617	-114	521	-1600	171	-138	-737	776	0.708	0.289	1.00	Yes	0.477	0.182	0.66	Yes	0.310	0.142	0.46	Yes	0.307	0.216	0.53	Yes	1.00	**8.36**
		L_{36} - L_{37}			1282.68	-----	285	-270	-407	-1717	-202	154	198	-886	0.735	0.262	1.00	Yes	0.483	0.158	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_{37} - L_{38}			1700.94	-----	-336	-658	-1036	-2463	106	-171	-896	26	0.720	0.272	1.00	Yes	0.478	0.162	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		L_{38} - L_{39}			1720.42	-----	-620	-225	-1985	-1387	-100	171	-273	-1258	0.738	0.255	1.00	Yes	0.495	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		L_{39} - L_{40}			1711.68	-----	-434	-314	-1327	-1808	127	-123	-407	404	0.798	0.198	1.00	Yes	0.528	0.118	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.07**
		L_{40} - L_{41}			1238.94	-----	-1211	207	-1331	-546	508	483	-333	-1319	0.735	0.265	1.00	Yes	0.496	0.172	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		L_{41} - L_{42}			952.05	-----	-876	302	-934	-418	376	-22	-904	-260	0.760	0.235	1.00	Yes	0.500	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		L_{42} - L_{43}			520.13	-----	-1198	600	-578	85	443	494	16	-723	0.632	0.363	1.00	Yes	0.376	0.229	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.80**
		L_{43} - L_{44}			116.01	-280.31	-2916	1228	-18	-95	1400	409	-81	-23	0.141	0.823	0.97	Yes	0.084	0.522	0.61	Yes	0.403	0.547	0.96	Yes	0.401	0.593	1.00	Yes	1.00	**31.65**
	Structure 3	L_0 - L_1			18.43	-341.10	21	-150	560	-1189	26	118	-233	-1057	0.028	0.576	0.61	Yes	0.017	0.378	0.40	Yes	0.619	0.378	1	Yes	0.614	0.357	0.98	Yes	1.00	**9.66**
		L_1 - L_2			310.54	-----	213	-250	579	-1180	152	-30	-427	798	0.475	0.520	1.00	Yes	0.321	0.331	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		L_2 - L_3			831.65	-----	-8	-218	-37	-791	-59	166	-167	-921	0.724	0.271	1.00	Yes	0.464	0.166	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		L_3 - L_4			1115.07	-----	31	-414	-118	-1280	189	8	-1188	308	0.705	0.294	1.00	Yes	0.457	0.183	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_4 - L_5			1595.39	-----	-387	-234	-1094	-1209	-48	213	151	-974	0.779	0.214	1.00	Yes	0.500	0.128	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.98**
		L_5 - L_6			1484.23	-----	-139	-419	-203	-2008	254	-47	-143	463	0.725	0.274	1.00	Yes	0.471	0.167	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		L_6 - L_7			1201.78	-----	-1377	349	-1257	-282	574	324	-266	-1235	0.707	0.293	1.00	Yes	0.458	0.181	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_7 - L_8			1050.83	-83.07	-84	196	-581	-530	153	-168	-576	13	0.829	0.170	1.00	Yes	0.530	0.104	0.64	Yes	0.078	0.134	0.22	Yes	0.077	0.103	0.19	Yes	1.00	**7.35**
		L_8 - L_9			471.75	-----	-723	464	-557	-4	278	306	-102	-1076	0.611	0.380	1.00	Yes	0.367	0.240	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		L_9 - L_{10}			-----	-563.78	-67	523	-389	80	124	-169	-258	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.075	0.95	Yes	0.859	0.138	1.00	Yes	1.00	**6.05**
		L_{10} - L_{11}			-----	-940.60	-545	753	-239	-370	176	744	-762	-2131	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.234	1	Yes	0.757	0.118	0.88	Yes	1.00	**9.89**
		L_{11} - L_{12}			-----	-1253.16	-84	1167	-7	618	203	356	556	156	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.189	1	Yes	0.794	0.155	0.95	Yes	1.00	**5.24**
		L_{12} - L_{13}			-----	-1102.85	932	-13	1334	-220	-120	71	-81	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.283	1	Yes	0.698	0.177	0.88	Yes	1.00	**3.32**
		L_{13} - L_{14}			-----	-1073.33	43	199	294	-673	228	-248	-433	141	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.121	1	Yes	0.864	0.106	0.97	Yes	1.00	**5.32**
		L_{14} - L_{15}			-----	-703.31	553	99	147	-424	-257	87	-188	-887	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.157	1	Yes	0.825	0.125	0.95	Yes	1.00	**4.83**
		L_{15} - L_{16}			231.40	-505.34	455	107	333	-850	253	-207	-910	355	0.300	0.387	0.69	Yes	0.180	0.247	0.43	Yes	0.777	0.202	0.98	Yes	0.770	0.225	1.00	Yes	1.00	**5.14**
		L_{16} - L_{17}			611.33	-----	-14	-70	-358	-830	-99	409	-146	-545	0.703	0.288	1.00	Yes	0.418	0.183	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		L_{17} - L_{18}			644.41	-57.82	28	-101	-569	-805	108	-110	-394	270	0.741	0.258	1.00	Yes	0.429	0.154	0.59	Yes	0.079	0.239	0.32	Yes	0.078	0.194	0.28	Yes	1.00	**6.54**
		L_{18} - L_{19}			399.57	-----	-653	124	-373	-196	373	546	102	-886	0.612	0.386	1.00	Yes	0.373	0.250	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_{19} - L_{20}			-----	-110.88	-2225	2049	375	-484	-1909	-518	265	72	-----	-----	-----	-----	-----	-----	-----	-----	0.201	0.790	1	Yes	0.200	0.668	0.87	Yes	1.00	**43.52**

Moment (End) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 Vehicle 1.300 Pedestrian
LL Factor: 1.300 1.300

			Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression									
					Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-281.67	-109	168	-13	52	-975	-313	202	65	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.366	1	Yes	0.596	0.215	0.82	Yes	1.00	**1.88**
		$U_1 - L_1$	18.98	-322.79	-242	233	27	-20	-693	-224	572	208	0.034	0.511	0.55	Yes	0.019	0.281	0.30	Yes	0.705	0.263	0.97	Yes	0.683	0.310	1.00	Yes	1.00	**4.83**
		$U_2 - L_2$	86.60	-216.36	-134	175	81	-89	-1654	-530	754	233	0.156	0.702	0.86	Yes	0.086	0.386	0.48	Yes	0.473	0.526	1	Yes	0.458	0.223	0.69	Yes	1.00	**5.82**
		$U_3 - L_3$	159.93	-108.30	-108	123	208	-201	-302	-18	-1535	-730	0.288	0.710	1.00	Yes	0.158	0.390	0.55	Yes	0.237	0.454	0.7	Yes	0.229	0.266	0.50	Yes	1.00	**9.22**
		$U_4 - L_4$	-----	-198.75	27	-31	312	-307	1009	352	-1684	-809	-----	-----	-----	-----	-----	-----	-----	-----	0.437	0.556	1	Yes	0.421	0.398	0.82	Yes	1.00	**9.96**
		$U_5 - L_5$	-----	-370.39	78	-85	189	-212	1031	583	251	283	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.326	1	Yes	0.639	0.215	0.86	Yes	1.00	**3.85**
		$U_6 - L_6$	-----	-418.39	77	-66	207	-217	1483	738	413	274	-----	-----	-----	-----	-----	-----	-----	-----	0.634	0.363	1	Yes	0.600	0.190	0.79	Yes	1.00	**4.02**
		$U_7 - L_7$	-----	-379.75	105	-119	256	-276	1268	306	273	137	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.360	1	Yes	0.586	0.272	0.86	Yes	1.00	**3.47**
		$U_8 - L_8$	-----	-1222.66	-515	614	247	-303	-849	-509	388	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.104	1	Yes	0.851	0.115	0.97	Yes	1.00	**7.70**
		$U_9 - L_9$	-----	-656.75	-414	455	-231	257	-294	-50	695	338	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.196	0.98	Yes	0.742	0.253	1.00	Yes	1.00	**3.58**
		$U_{10} - L_{10}$	-----	-770.91	-407	446	-165	144	-287	-15	709	315	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.191	0.99	Yes	0.761	0.231	1.00	Yes	1.00	**5.27**
		$U_{11} - L_{11}$	-----	-630.41	-336	448	-167	218	-1017	-144	636	369	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.237	1	Yes	0.734	0.208	0.95	Yes	1.00	**4.58**
		$U_{12} - L_{12}$	-----	-520.57	-315	324	-125	133	-400	-16	330	273	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.164	0.92	Yes	0.714	0.277	1.00	Yes	1.00	**5.25**
		$U_{13} - L_{13}$	-----	-369.90	-225	250	-66	85	-369	95	228	146	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.196	0.95	Yes	0.709	0.286	1.00	Yes	1.00	**4.53**
		$U_{14} - L_{14}$	-----	-176.32	-343	374	176	-187	-579	-760	-1366	-782	-----	-----	-----	-----	-----	-----	-----	-----	0.393	0.603	1	Yes	0.373	0.479	0.86	Yes	1.00	**16.91**
		$U_{15} - L_{15}$	67.74	-313.60	-68	55	238	-262	115	-479	-580	-120	0.122	0.503	0.63	Yes	0.067	0.277	0.35	Yes	0.703	0.247	0.95	Yes	0.664	0.335	1.00	Yes	1.00	**7.91**
		$U_{16} - L_{16}$	-----	-320.96	45	-50	236	-246	474	107	-479	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.219	0.95	Yes	0.679	0.314	1.00	Yes	1.00	**5.22**
		$U_{17} - L_{17}$	-----	-417.22	80	-93	203	-221	505	200	40	83	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.212	1	Yes	0.720	0.224	0.95	Yes	1.00	**3.59**
		$U_{18} - L_{18}$	-----	-533.30	173	-179	435	-447	679	172	205	46	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.183	0.97	Yes	0.742	0.253	1.00	Yes	1.00	**5.04**
		$U_{19} - L_{19}$	-----	-528.34	195	-209	390	-408	603	122	679	136	-----	-----	-----	-----	-----	-----	-----	-----	0.659	0.337	1	Yes	0.615	0.189	0.81	Yes	1.00	**3.05**
		$U_{20} - L_{20}$	-----	-422.86	239	-288	318	-379	440	58	428	56	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.374	1	Yes	0.541	0.200	0.75	Yes	1.00	**1.38**
	Structure 2	$U_0 - L_0$	-----	-622.01	-323	468	-161	267	-1032	-175	40	7	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.250	1	Yes	0.667	0.198	0.87	Yes	1.00	**2.69**
		$U_1 - L_1$	-----	-713.11	-548	550	-208	215	-352	-13	629	162	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.147	0.97	Yes	0.764	0.233	1.00	Yes	1.00	**4.67**
		$U_2 - L_2$	-----	-591.62	-442	462	-156	171	-493	110	623	286	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.177	0.97	Yes	0.754	0.236	1.00	Yes	1.00	**4.18**
		$U_3 - L_3$	-----	-456.94	-217	233	-75	86	101	236	545	265	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.213	1	Yes	0.717	0.212	0.93	Yes	1.00	**3.64**
		$U_4 - L_4$	-----	-321.68	-197	205	-20	30	-234	103	561	235	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.261	1	Yes	0.681	0.262	0.95	Yes	1.00	**4.66**
		$U_5 - L_5$	66.78	-271.18	-162	189	76	-56	-972	2	-123	-107	0.120	0.522	0.65	Yes	0.066	0.287	0.36	Yes	0.613	0.381	1	Yes	0.574	0.241	0.82	Yes	1.00	**6.72**
		$U_6 - L_6$	349.31	-91.41	-118	127	198	-204	-365	-22	-382	-301	0.628	0.371	1.00	Yes	0.346	0.204	0.55	Yes	0.206	0.162	0.37	Yes	0.193	0.260	0.46	Yes	1.00	**9.05**
		$U_7 - L_7$	-----	-192.04	12	-11	353	-404	-190	-179	-46	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.434	0.561	1	Yes	0.406	0.517	0.93	Yes	1.00	**12.08**
		$U_8 - L_8$	-----	-472.62	151	-170	335	-358	421	45	-429	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.156	0.85	Yes	0.681	0.313	1.00	Yes	1.00	**4.38**
		$U_9 - L_9$	-----	-693.32	269	-277	578	-593	759	358	-412	5	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.164	0.94	Yes	0.743	0.251	1.00	Yes	1.00	**5.65**
		$U_{10} - L_{10}$	-----	-747.37	233	-234	508	-530	1172	687	82	263	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.254	1	Yes	0.699	0.234	0.94	Yes	1.00	**5.68**
		$U_{11} - L_{11}$	-----	-735.31	226	-220	452	-459	1174	660	95	404	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.257	1	Yes	0.687	0.203	0.90	Yes	1.00	**4.66**
		$U_{12} - L_{12}$	-----	-724.03	187	-169	417	-412	1480	647	773	451	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.303	1	Yes	0.628	0.179	0.81	Yes	1.00	**4.64**
		$U_{13} - L_{13}$	-----	-625.61	224	-223	496	-484	1161	311	581	205	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.299	1	Yes	0.603	0.237	0.85	Yes	1.00	**4.88**
		$U_{14} - L_{14}$	-----	-1231.77	-584	544	448	-430	-712	-321	629	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.094	1	Yes	0.817	0.103	0.93	Yes	1.00	**9.31**
		$U_{15} - L_{15}$	-----	-647.52	-557	542	-264	258	-1022	-3	970	61	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.272	1	Yes	0.624	0.266	0.90	Yes	1.00	**4.61**
		$U_{16} - L_{16}$	-----	-702.85	-568	556	-202	171	60	130	818	179	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.753	0.241	1.00	Yes	1.00	**4.85**
		$U_{17} - L_{17}$	-----	-641.70	-524	529	-198	198	-619	61	595	194	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.160	0.96	Yes	0.747	0.245	1.00	Yes	1.00	**4.73**
		$U_{18} - L_{18}$	-----	-579.56	-478	502	-158	164	-78	97	622	214	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.168	0.95	Yes	0.739	0.257	1.00	Yes	1.00	**4.84**
		$U_{19} - L_{19}$	-----	-478.19	-289	288	-88	90	-319	92	520	195	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.168	0.89	Yes	0.714	0.278	1.00	Yes	1.00	**4.49**
		$U_{20} - L_{20}$	-----	-367.07	-203	216	-41	46	-596	-57	517	182	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.239	1	Yes	0.703	0.246	0.95	Yes	1.00	**4.72**
		$U_{21} - L_{21}$	39.66	-319.68	-230	249	29	-20	-204	79	7	-108	0.071	0.377	0.45	Yes	0.039	0.208	0.25	Yes	0.722	0.156	0.88	Yes	0.676	0.318	1.00	Yes	1.00	**6.96**
		$U_{22} - L_{22}$	-----	-233.73	-244	258	312	-342	-243	-751	-209	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.526	0.469	1	Yes	0.495	0.437	0.94	Yes	1.00	**16.73**
		$U_{23} - L_{23}$	-----	-320.88	15	-18	226	-244	526	166	-502	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.246	0.98	Yes	0.679	0.312	1.00	Yes	1.00	**5.37**
		$U_{24} - L_{24}$	-----	-369.87	54	-59	223	-232	585	205	-76	43	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.709	0.265	0.98	Yes	1.00	**4.33**
		$U_{25} - L_{25}$	-----	-474.69	100	-101	299	-297	589	224	107	167	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.183	0.9	Yes	0.709	0.288	1.00	Yes	1.00	**4.44**
		$U_{26} - L_{26}$	-----	-573.20	170	-178	489	-517	709	302	-265	160	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.189	0.96	Yes	0.730	0.264	1.00	Yes	1.00	**4.94**
		$U_{27} - L_{27}$	-----	-632.53	202	-205	551	-557	772	315	218	389	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.194	0.98	Yes	0.736	0.259	1.00	Yes	1.00	**5.42**
		$U_{28} - L_{28}$	-----	-614.71	157	-130	466	-449	1637	552	969	425	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.288	1	Yes	0.659	0.198	0.86	Yes	1.00	**5.15**
		$U_{29} - L_{29}$	-----	-621.79	156	-161	571	-562	1178	200	-154	109	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.302	1	Yes	0.599	0.273	0.88	Yes	1.00	**6.90**
		$U_{30} - L_{30}$	-----	-1186.01	-567	503	278	-290	-588	-296	303	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.095	1	Yes	0.816	0.105	0.93	Yes	1.00	**7.82**
		$U_{31} - L_{31}$	-----	-714.80	-546	527	-306	299	-241	20	510	96	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1	Yes	0.689	0.261	0.96	Yes	1.00	**4.05**
		$U_{32} - L_{32}$	-----	-848.30	-464	462	-219	192	-653	-34	612	190	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.179	1	Yes	0.735	0.199	0.94	Yes	1.00	**4.75**
		$U_{33} - L_{33}$	-----	-829.20	-507	506	-247	231	-258	136	549	237	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.159	1	Yes	0.775	0.224	1.00	Yes	1.00	**5.36**
		$U_{34} - L_{34}$	-----	-807.50	-528	550	-243	240	-747	-88	495	226	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.189	0.99	Yes	0.755	0.243	1.00	Yes	1.00	**5.96**
		$U_{35} - L_{35}$	-----	-695.46	-555	579	-255	269	-1134	-136	630	376	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.224	1	Yes	0.745	0.246	1.00	Yes	1.00	**5.61**
		$U_{36} - L_{36}$	-----	-477.20	-327	353	-134	156	-94	106	277	189	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.136	0.83	Yes	0.687	0.308	1.00	Yes	1.00	**4.91**
		$U_{37} - L_{37}$	-----	-191.39	-309	348	20	-18	-1198	-711	-328	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.432	0.565	1	Yes	0.405	0.445	0.85	Yes	1.00	**12.45**
		$U_{38} - L_{38}$	245.92	-119.90	-146	153	122	-129	-59	-252	-1243	-306	0.442	0.556	1.00	Yes	0.243	0.306	0.55	Yes	0.270	0.341	0.62	Yes	0.254	0.196	0.45	Yes	1.00	**7.43**
		$U_{39} - L_{39}$	59.44	-315.99	-62	46	212	-235	318	-290	-662	-66	0.107	0.492	0.60	Yes	0.059	0.271	0.33	Yes	0.714	0.277	1	Yes	0.669	0.300	0.97	Yes	1.00	**7.07**
		$U_{40} - L_{40}$	-----	-324.06	37	-45	215	-218	595	172	75	45	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.255	1	Yes	0.686	0.279	0.97	Yes	1.00	**4.65**
		$U_{41} - L_{41}$	-----	-460.25	88	-97	230	-244	578	193	-81	55	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.211	1	Yes	0.722	0.222	0.95	Yes	1.00	**3.90**
		$U_{42} - L_{42}$	-----	-582.23	170	-180	494	-502	669	172	61	61	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.173	0.96	Yes	0.742	0.257	1.00	Yes	1.00	**5.25**
		$U_{43} - L_{43}$	-----	-709.31	188	-206	534	-556	622	187	240	154	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.154	0.97	Yes	0.760	0.236	1.00	Yes	1.00	**6.42**
		$U_{44} - L_{44}$	-----	-670.15	250	-308	476	-604	542	92	494	84	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.189	1	Yes	0.718	0.256	0.98	Yes	1.00	**5.36**
	Structure 3	$U_0 - L_0$	-----	-544.49	-270	393	-132	230	-521	-68	107	14	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.218	1	Yes	0.682	0.202	0.89	Yes	1.00	**2.43**
		$U_1 - L_1$	-----	-648.06	-516	508	-206	206	-91	88	621	143	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.163	0.98	Yes	0.754	0.239	1.00	Yes	1.00	**4.56**
		$U_2 - L_2$	-----	-546.30	-403	421	-157	168	-254	150	661	306	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.196	1	Yes	0.760	0.238	1.00	Yes	1.00	**4.05**
		$U_3 - L_3$	-----	-406.69	-183	204	-69	85	-295	173	563	271	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1	Yes	0.702	0.207	0.91	Yes	1.00	**3.05**
		$U_4 - L_4$	-----	-320.98	-226	237	-30	36	-245	117	615	223	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.276	1	Yes	0.679	0.303	0.99	Yes	1.00	**5.43**
		$U_5 - L_5$	89.97	-285.59	-224	245	67	-59	-840	-10	-34	-44	0.162	0.557	0.72	Yes	0.089	0.306	0.40	Yes	0.640	0.353	1	Yes	0.604	0.314	0.92	Yes	1.00	**7.78**
		$U_6 - L_6$	-----	-177.02	-110	121	372	-406	-460	-473	-94	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.395	0.600	1	Yes	0.375	0.519	0.90	Yes	1.00	**14.44**
		$U_7 - L_7$	-----	-364.47	74	-92	231	-256	437	-36	-146	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.196	0.94	Yes	0.698	0.292	1.00	Yes	1.00	**4.07**
		$U_8 - L_8$	-----	-505.79	135	-134	326	-328	919	447	16	84	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.265	1	Yes	0.694	0.280	0.98	Yes	1.00	**5.13**
		$U_9 - L_9$	-----	-626.91	163	-219	371	-472	1094	469	4	254	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.244	1	Yes	0.730	0.219	0.95	Yes	1.00	**5.32**
		$U_{10} - L_{10}$	-----	-626.45	152	-140	314	-330	1718	947	853	558	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.346	1	Yes	0.618	0.171	0.79	Yes	1.00	**4.75**
		$U_{11} - L_{11}$	-----	-490.95	214	-248	324	-372	1204	541	745	420	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.414	1	Yes	0.555	0.207	0.77	Yes	1.00	**1.85**
		$U_{12} - L_{12}$	-----	-1191.38	-498	539	290	-391	-953	-394	972	273	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.131	1	Yes	0.826	0.100	0.93	Yes	1.00	**7.84**
		$U_{13} - L_{13}$	-----	-447.75	-278	296	-155	167	-682	-55	649	179	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1	Yes	0.691	0.292	0.99	Yes	1.00	**2.66**
		$U_{14} - L_{14}$	-----	-503.00	-266	286	-100	88	26	62	787	278	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1	Yes	0.721	0.250	0.98	Yes	1.00	**4.11**
		$U_{15} - L_{15}$	-----	-418.11	-200	226	-80	87	-536	-62	695	253	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.240	1	Yes	0.721	0.229	0.96	Yes	1.00	**4.37**
		$U_{16} - L_{16}$	-----	-189.61	-302	303	-7	20	-1450	-857	-854	-513	-----	-----	-----	-----	-----	-----	-----	-----	0.417	0.575	1	Yes	0.401	0.388	0.79	Yes	1.00	**11.10**
		$U_{17} - L_{17}$	164.17	-178.38	-203	202	130	-152	428	-213	-1528	-561	0.295	0.701	1.00	Yes	0.162	0.386	0.55	Yes	0.391	0.438	0.83	Yes	0.377	0.259	0.64	Yes	1.00	**9.42**
		$U_{18} - L_{18}$	93.36	-296.58	-99	107	242	-285	481	153	-830	-444	0.168	0.605	0.78	Yes	0.092	0.333	0.43	Yes	0.648	0.334	0.99	Yes	0.628	0.365	1.00	Yes	1.00	**8.59**
		$U_{19} - L_{19}$	-----	-329.31	-24	8	228	-237	431	221	75	51	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.214	0.94	Yes	0.697	0.303	1.00	Yes	1.00	**6.03**
		$U_{20} - L_{20}$	-----	-322.72	80	-92	192	-241	605	194	301	97	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.273	1	Yes	0.683	0.308	1.00	Yes	1.00	**3.52**

Moment (End) AI Operating

Operating Loads - 4F1

Calc: BKC Date: 10/28/2009
Check: NRF Date: 11/2/2009

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

			Vehicle	Pedestrian	Axial Force		ZZ Axis Bending				YY Axis Bending				Tension								Compression								Controlling Bi-Axial Moment & Axial Value	Rating
							Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield					
			Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass		
			(kips)&	(kips)&	k-in	k-in	k-in	k-in	k-in	k-in	k-in	k-in																		
South Truss - Diagonals	Structure 1	$U_0 - L_1$	424.84	-----	-111	60	9	-11	-1211	-448	13	90	0.557	0.434	1.00	Yes	0.337	0.239	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_1 - L_2$	319.58	-----	-75	21	-19	-25	-369	-173	-1136	-398	0.575	0.425	1.00	Yes	0.316	0.234	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_2 - L_3$	155.41	-203.11	-56	2	-38	-69	-234	-207	-1738	-361	0.280	0.591	0.88	Yes	0.154	0.325	0.48	Yes	0.468	0.525	1	Yes	0.430	0.088	0.52	Yes	1.00	**7.54**
		$U_3 - L_4$	-----	-318.60	25	-13	11	-63	473	265	-666	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.269	1	Yes	0.674	0.081	0.76	Yes	1.00	**4.22**
		$U_4 - L_4$	483.88	-----	-3	83	-136	5	-117	133	399	636	0.710	0.286	1.00	Yes	0.390	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		$U_6 - L_3$	623.94	-----	-163	212	-56	90	-365	207	730	63	0.738	0.253	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_7 - L_6$	582.13	-----	-255	234	-41	86	-328	45	-873	-84	0.688	0.304	1.00	Yes	0.379	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		$U_8 - L_7$	616.47	-----	-88	295	29	83	-133	132	-541	-323	0.729	0.266	1.00	Yes	0.401	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_9 - L_9$	942.37	-----	-85	365	-32	172	-247	-249	629	161	0.753	0.243	1.00	Yes	0.467	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		$U_9 - L_{10}$	1011.67	-----	-306	257	-122	116	-383	-278	367	152	0.809	0.185	1.00	Yes	0.501	0.104	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_{10} - L_{11}$	890.50	-----	-219	177	-131	81	-544	-587	-1064	-499	0.752	0.241	1.00	Yes	0.466	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{11} - L_{12}$	706.98	-----	-220	94	-168	13	-460	-392	-1320	-716	0.699	0.300	1.00	Yes	0.385	0.165	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_{12} - L_{13}$	572.04	-----	-192	143	-103	41	-380	-478	-678	-310	0.697	0.301	1.00	Yes	0.439	0.172	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{13} - L_{14}$	355.04	-----	-73	29	-37	-24	-112	-187	-900	-326	0.639	0.354	1.00	Yes	0.351	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_{15} - L_{14}$	297.47	-258.19	-81	2	22	-112	-284	-407	689	-211	0.535	0.343	0.88	Yes	0.294	0.188	0.49	Yes	0.605	0.393	1	Yes	0.546	0.143	0.69	Yes	1.00	**9.32**
		$U_{16} - L_{15}$	403.24	-41.30	-138	94	-22	-22	-323	-35	66	-158	0.725	0.270	1.00	Yes	0.399	0.148	0.55	Yes	0.098	0.164	0.27	Yes	0.087	0.176	0.27	Yes	1.00	**6.77**
		$U_{17} - L_{16}$	523.35	-----	-144	98	-60	22	-358	-87	204	-101	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{18} - L_{17}$	612.66	-----	-318	250	-132	90	-487	-53	-401	-111	0.724	0.269	1.00	Yes	0.398	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{19} - L_{18}$	692.88	-----	-333	253	-131	95	-455	-158	-458	-204	0.750	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{20} - L_{19}$	678.85	-----	-391	323	-181	145	-353	-94	-273	-139	0.735	0.258	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
	Structure 2	$U_0 - L_1$	698.96	-----	-306	316	-101	128	-1040	-630	-156	5	0.691	0.302	1.00	Yes	0.380	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_1 - L_2$	748.30	-----	-391	305	-161	115	-409	-457	148	-27	0.740	0.250	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_2 - L_3$	600.08	-----	-315	253	-117	87	-334	-574	128	-25	0.709	0.283	1.00	Yes	0.390	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_3 - L_4$	568.08	-----	-177	127	-49	22	-381	-334	180	18	0.757	0.241	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_4 - L_5$	374.79	-35.65	-132	88	-21	-21	-366	-453	-536	-152	0.674	0.324	1.00	Yes	0.371	0.178	0.55	Yes	0.088	0.163	0.26	Yes	0.075	0.168	0.25	Yes	1.00	**6.28**
		$U_5 - L_6$	281.21	-254.64	-86	35	53	-112	-391	-190	-1191	-186	0.506	0.488	1.00	Yes	0.278	0.268	0.55	Yes	0.601	0.303	0.91	Yes	0.539	0.143	0.69	Yes	1.00	**8.18**
		$U_6 - L_7$	-----	-385.05	-6	-37	48	-103	9	-109	-397	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.171	1	Yes	0.738	0.117	0.86	Yes	1.00	**4.14**
		$U_8 - L_7$	598.13	-----	-187	149	-86	36	-316	-9	326	-148	0.763	0.233	1.00	Yes	0.480	0.132	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_8 - L_9$	733.97	-----	-338	253	-178	111	-192	4	-113	-58	0.795	0.204	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		$U_{10} - L_9$	833.45	-----	-313	254	-157	120	-141	167	90	40	0.825	0.170	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		$U_{11} - L_{10}$	887.36	-----	-339	307	-171	159	-310	160	136	146	0.808	0.186	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		$U_{12} - L_{11}$	851.01	-----	-337	345	-132	175	-562	267	-563	61	0.775	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_{13} - L_{12}$	729.26	-----	-410	376	-161	164	-497	71	-533	0	0.721	0.270	1.00	Yes	0.397	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_{14} - L_{13}$	763.17	-----	-261	440	-16	122	-137	39	-220	-123	0.755	0.237	1.00	Yes	0.415	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		$U_{14} - L_{15}$	564.42	-----	-181	330	-50	163	132	-218	759	359	0.667	0.325	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{15} - L_{16}$	604.98	-----	-357	324	-176	164	186	-299	429	104	0.715	0.280	1.00	Yes	0.393	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**
		$U_{16} - L_{17}$	693.78	-----	-331	355	-127	154	-15	-290	373	110	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_{17} - L_{18}$	650.33	-----	-289	280	-110	126	-68	-315	358	89	0.769	0.228	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{18} - L_{19}$	648.05	-----	-281	266	-79	93	-239	-371	294	81	0.766	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{19} - L_{20}$	577.75	-----	-192	165	-69	38	-313	-312	-428	-130	0.737	0.259	1.00	Yes	0.405	0.147	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		$U_{20} - L_{21}$	369.40	-----	-112	98	-29	0	-160	-196	-650	-81	0.664	0.331	1.00	Yes	0.365	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_{21} - L_{22}$	193.09	-256.90	-46	49	21	-95	287	67	-1003	-121	0.347	0.412	0.76	Yes	0.191	0.226	0.42	Yes	0.607	0.387	1	Yes	0.544	0.121	0.67	Yes	1.00	**9.25**
		$U_{23} - L_{22}$	389.83	-125.96	-103	60	1	-58	-232	-142	562	-108	0.701	0.295	1.00	Yes	0.386	0.162	0.55	Yes	0.300	0.232	0.54	Yes	0.267	0.132	0.40	Yes	1.00	**7.86**
		$U_{24} - L_{23}$	436.60	-----	-126	108	-30	14	-182	115	-44	-44	0.785	0.214	1.00	Yes	0.432	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{25} - L_{24}$	597.81	-----	-191	176	-42	50	-187	54	-299	-81	0.762	0.232	1.00	Yes	0.419	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**
		$U_{26} - L_{25}$	672.39	-----	-280	276	-79	97	-120	168	-254	-57	0.795	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{27} - L_{26}$	650.82	-----	-284	290	-107	126	-293	206	-341	-6	0.769	0.226	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		$U_{28} - L_{27}$	675.92	-----	-302	341	-96	149	-514	199	-537	38	0.732	0.263	1.00	Yes	0.403	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{29} - L_{28}$	594.96	-----	-347	329	-93	106	-338	119	-543	-42	0.703	0.295	1.00	Yes	0.387	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		$U_{30} - L_{29}$	630.48	-----	-198	366	31	73	-133	167	-228	-189	0.745	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.13**
		$U_{30} - L_{31}$	733.49	-----	-259	442	-68	222	-76	-155	426	186	0.726	0.269	1.00	Yes	0.399	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{31} - L_{32}$	740.09	-----	-423	376	-232	215	-14	-173	461	121	0.732	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		$U_{32} - L_{33}$	850.34	-----	-347	340	-161	192	-237	-559	282	56	0.775	0.224	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{33} - L_{34}$	870.71	-----	-329	290	-175	153	-438	-365	95	-92	0.793	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{34} - L_{35}$	778.91	-----	-294	235	-175	118	-448	-542	-559	-295	0.771	0.220	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_{35} - L_{36}$	652.67	-----	-297	226	-190	98	-335	-262	-852	-353	0.707	0.292	1.00	Yes	0.389	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{36} - L_{37}$	526.70	-----	-169	142	-81	19	-219	-374	-848	-280	0.672	0.324	1.00	Yes	0.423	0.187	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		$U_{38} - L_{37}$	-----	-369.64	-19	-29	45	-98	-289	-215	266	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.193	1	Yes	0.708	0.111	0.82	Yes	1.00	**4.65**
		$U_{39} - L_{38}$	331.39	-203.08	-103	49	33	-91	-217	-155	908	-128	0.596	0.395	1.00	Yes	0.328	0.217	0.55	Yes	0.484	0.397	0.89	Yes	0.430	0.132	0.57	Yes	1.00	**8.06**
		$U_{40} - L_{39}$	409.67	-----	-134	94	-17	-14	-316	63	-154	-103	0.737	0.263	1.00	Yes	0.405	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		$U_{41} - L_{40}$	563.07	-----	-174	127	-57	30	-383	-108	-412	-179	0.751	0.245	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{42} - L_{41}$	621.95	-----	-322	261	-122	92	-433	1	-402	-168	0.735	0.261	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_{43} - L_{42}$	768.66	-----	-377	307	-136	103	-391	-72	-375	-193	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{44} - L_{43}$	799.44	-----	-381	375	-162	154	-92	60	-173	6	0.791	0.203	1.00	Yes	0.435	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
	Structure 3	$U_0 - L_1$	563.90	-----	-297	264	-80	106	-1393	-298	-155	-2	0.611	0.381	1.00	Yes	0.336	0.210	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_1 - L_2$	690.05	-----	-353	264	-155	105	-423	-399	175	-32	0.747	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_2 - L_3$	599.63	-----	-313	252	-122	83	-453	-586	139	-22	0.709	0.283	1.00	Yes	0.390	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_3 - L_4$	505.52	-----	-141	92	-41	19	-381	-467	159	-22	0.741	0.251	1.00	Yes	0.408	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_4 - L_5$	343.35	-58.28	-121	85	-28	-21	-384	-366	-764	-191	0.618	0.376	1.00	Yes	0.340	0.207	0.55	Yes	0.138	0.227	0.37	Yes	0.123	0.155	0.28	Yes	1.00	**6.21**
		$U_5 - L_6$	122.26	-203.72	-39	-15	9	-92	-123	-93	-1129	-281	0.220	0.445	0.67	Yes	0.121	0.245	0.37	Yes	0.477	0.513	1	Yes	0.431	0.118	0.55	Yes	1.00	**5.43**
		$U_7 - L_6$	417.84	-----	-85	39	-38	-14	-225	-211	473	-120	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_8 - L_7$	639.44	-----	-207	162	-89	45	-189	42	39	-70	0.779	0.218	1.00	Yes	0.490	0.122	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		$U_8 - L_9$	845.60	-----	-258	127	-116	22	-221	42	226	138	0.837	0.154	1.00	Yes	0.460	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.33**
		$U_{10} - L_9$	926.01	-----	-217	192	-94	81	-208	249	851	229	0.782	0.212	1.00	Yes	0.484	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		$U_{11} - L_{10}$	951.01	-----	-277	280	-78	106	-473	38	-891	-159	0.760	0.238	1.00	Yes	0.471	0.135	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		$U_{12} - L_{11}$	938.01	-----	-58	372	19	129	-286	120	-608	-244	0.750	0.243	1.00	Yes	0.465	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		$U_{12} - L_{13}$	611.24	-----	-89	292	-19	144	55	-292	565	159	0.723	0.269	1.00	Yes	0.397	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{13} - L_{14}$	638.00	-----	-278	246	-113	114	-146	-68	444	157	0.754	0.239	1.00	Yes	0.415	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_{14} - L_{15}$	608.70	-----	-172	201	-88	92	-155	-351	-861	-300	0.720	0.271	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_{15} - L_{16}$	346.81	-----	-8	83	-103	-16	466	239	-1628	-874	0.509	0.484	1.00	Yes	0.280	0.266	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		$U_{17} - L_{16}$	-----	-291.78	42	-12	-50	-90	-251	-30	791	122	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.329	1	Yes	0.617	0.115	0.74	Yes	1.00	**7.96**
		$U_{18} - L_{17}$	347.83	-----	-113	18	-121	-81	-348	-313	738	258	0.626	0.369	1.00	Yes	0.344	0.203	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.50**
		$U_{19} - L_{18}$	415.66	-----	-82	18	-61	-25	-323	-335	490	421	0.748	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		$U_{20} - L_{19}$	575.49	-----	-133	80	-32	7	-340	-74	-58	13	0.755	0.241	1.00	Yes	0.456	0.133	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

		Member Forces from STAAD										Maximum Positive Shear				Minimum Negative Shear				Depth of Web	Thickness of Web	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P	V_U	Shear Force Rating			
		D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &											Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)											(inches)	(inches							(kips)	(kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
Structure 1	U_1 - U_1	4.03	-7.05	2.05	2.05	-1.04	-1.04					1.24	0.90	4.03	2.28	-----	Vehicle	-7.05	-1.16	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**39.62**	**66.04**	**76.61**	**127.68**
	U_1 - U_2	3.66	-3.76	2.26	2.26	-0.32	-0.32					1.24	0.90	3.66	2.52	-----	Vehicle	-3.76	-0.35	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**35.98**	**59.96**	**258.07**	**430.11**
	U_2 - U_3	2.55	-7.28	1.82	1.82	-0.85	-0.85					1.24	0.90	2.55	2.02	-----	Vehicle	-7.28	-0.94	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**45.07**	**75.12**	**93.84**	**156.40**
	U_3 - U_4	2.05	-4.84	1.53	1.53	-1.08	-1.08					1.24	0.90	2.05	1.71	-----	Vehicle	-4.84	-1.20	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**53.59**	**89.32**	**74.94**	**124.90**
	U_4 - U_5	2.25	-4.26	0.77	0.77	-1.96	-1.96					1.24	0.90	2.25	0.86	-----	Vehicle	-4.26	-2.18	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**106.77**	**177.95**	**41.36**	**68.93**
	U_5 - U_6	3.34	-7.20	0.35	0.35	-1.99	-1.99					1.24	0.90	3.34	0.38	-----	Vehicle	-7.20	-2.21	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**236.28**	**393.80**	**39.94**	**66.56**
	U_6 - U_7	6.22	-5.16	0.93	0.93	-1.36	-1.36					1.24	0.90	6.22	1.04	-----	Vehicle	-5.16	-1.51	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**175.38**	**292.30**	**120.66**	**201.09**
	U_7 - U_8	-2.11	-14.70	0.07	0.07	-4.64	-4.64					1.24	0.90	-2.11	0.07	-----	Vehicle	-14.70	-5.16	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**3435.57**	**5725.95**	**46.20**	**77.01**
	U_8 - U_9	15.50	2.88	3.74	3.74	-0.20	-0.20					1.20	0.90	15.50	4.03	-----	Vehicle	2.88	-0.21	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**24.54**	**40.90**	**520.24**	**867.06**
	U_9 - U_{10}	6.69	-6.01	1.55	1.55	-0.43	-0.43					1.20	0.90	6.69	1.67	-----	Vehicle	-6.01	-0.46	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**53.00**	**88.33**	**191.84**	**319.73**
	U_{10} - U_{11}	9.67	-1.66	2.49	2.49	-0.13	-0.13					1.20	0.90	9.67	2.69	-----	Vehicle	-1.66	-0.14	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**32.36**	**53.94**	**635.11**	**1058.52**
	U_{11} - U_{12}	7.40	-2.11	2.32	2.32	-0.34	-0.34					1.20	0.90	7.40	2.50	-----	Vehicle	-2.11	-0.36	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**47.73**	**79.55**	**336.88**	**561.46**
	U_{12} - U_{13}	9.24	-6.21	2.25	2.25	-0.80	-0.80					1.20	0.90	9.24	2.43	-----	Vehicle	-6.21	-0.86	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**133.81**	**223.02**	**380.84**	**634.73**
	U_{13} - U_{14}	6.34	-2.26	3.01	3.01	-0.51	-0.51					1.20	0.90	6.34	3.24	-----	Vehicle	-2.26	-0.55	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**117.99**	**196.65**	**703.14**	**1171.90**
	U_{14} - U_{15}	3.46	-4.65	1.57	1.57	-2.16	-2.16					1.20	0.90	3.46	1.69	-----	Vehicle	-4.65	-2.32	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**227.52**	**379.20**	**165.13**	**275.22**
	U_{15} - U_{16}	9.23	-5.79	2.30	2.30	-1.32	-1.32					1.20	0.90	9.23	2.48	-----	Vehicle	-5.79	-1.42	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**153.88**	**256.47**	**269.93**	**449.88**
	U_{16} - U_{17}	2.63	-6.22	0.94	0.94	-2.60	-2.60					1.20	0.90	2.63	1.02	-----	Vehicle	-6.22	-2.80	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**378.97**	**631.62**	**136.80**	**228.00**
	U_{17} - U_{18}	5.96	-9.96	0.57	0.57	-2.31	-2.31					1.20	0.90	5.96	0.62	-----	Vehicle	-9.96	-2.49	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**454.35**	**757.26**	**111.49**	**185.82**
	U_{18} - U_{19}	3.04	-6.68	0.45	0.45	-1.76	-1.76					1.20	0.90	3.04	0.49	-----	Vehicle	-6.68	-1.90	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**217.34**	**362.24**	**54.85**	**91.42**
	U_{19} - U_{20}	-1.83	-11.18	1.13	1.13	-3.47	-3.47					1.20	0.90	-1.83	1.22	-----	Vehicle	-11.18	-3.74	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**89.56**	**149.27**	**27.12**	**45.21**
North Truss - Upper Chord	U_0 - U_1	10.02	-6.16	2.70	2.70	-0.52	-0.52					1.18	0.90	10.02	2.87	-----	Vehicle	-6.16	-0.55	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**37.12**	**61.86**	**197.14**	**328.57**
	U_1 - U_2	9.17	-4.67	2.42	2.42	-0.22	-0.22					1.18	0.90	9.17	2.58	-----	Vehicle	-4.67	-0.24	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**85.26**	**142.09**	**945.44**	**1575.73**
	U_2 - U_3	8.60	-2.60	3.63	3.63	-0.36	-0.36					1.18	0.90	8.60	3.87	-----	Vehicle	-2.60	-0.38	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**42.33**	**70.55**	**441.62**	**736.04**
	U_3 - U_4	8.30	-7.59	3.12	3.12	-0.71	-0.71					1.18	0.90	8.30	3.32	-----	Vehicle	-7.59	-0.76	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**111.52**	**185.87**	**489.25**	**815.42**
	U_4 - U_5	5.53	-4.81	3.64	3.64	-1.19	-1.19					1.18	0.90	5.53	3.86	-----	Vehicle	-4.81	-1.26	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**115.27**	**192.11**	**353.91**	**589.84**
	U_5 - U_6	2.61	-7.66	2.29	2.29	-2.66	-2.66					1.18	0.90	2.61	2.44	-----	Vehicle	-7.66	-2.83	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**184.06**	**306.76**	**157.52**	**262.53**
	U_6 - U_7	6.14	-9.62	3.82	3.82	-0.77	-0.77					1.18	0.90	6.14	4.07	-----	Vehicle	-9.62	-0.82	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**91.31**	**152.18**	**453.27**	**755.44**
	U_7 - U_8	8.07	-7.40	1.01	1.01	-3.45	-3.45					1.18	0.90	8.07	1.08	-----	Vehicle	-7.40	-3.68	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**344.29**	**573.81**	**100.94**	**168.24**
	U_8 - U_9	4.03	-10.39	1.57	1.57	-2.48	-2.48					1.18	0.90	4.03	1.67	-----	Vehicle	-10.39	-2.64	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**189.83**	**316.38**	**118.50**	**197.50**
	U_9 - U_{10}	2.04	-9.48	0.88	0.88	-2.62	-2.62					1.18	0.90	2.04	0.94	-----	Vehicle	-9.48	-2.79	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**139.10**	**231.84**	**45.12**	**75.20**
	U_{10} - U_{11}	4.39	-9.86	0.32	0.32	-2.18	-2.18					1.18	0.90	4.39	0.34	-----	Vehicle	-9.86	-2.32	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**375.60**	**626.01**	**54.04**	**90.07**
	U_{11} - U_{12}	3.80	-11.57	0.66	0.66	-2.43	-2.43					1.18	0.90	3.80	0.70	-----	Vehicle	-11.57	-2.59	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**184.59**	**307.65**	**48.03**	**80.04**
	U_{12} - U_{13}	9.58	-8.07	1.88	1.88	-1.21	-1.21					1.18	0.90	9.58	2.00	-----	Vehicle	-8.07	-1.29	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**137.58**	**229.31**	**215.17**	**358.61**
	U_{13} - U_{14}	-8.42	-23.99	0.27	0.27	-5.85	-5.85					1.18	0.90	-8.42	0.28	-----	Vehicle	-23.99	-6.22	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1404.48**	**2340.81**	**61.03**	**101.72**
	U_{14} - U_{15}	20.62	5.04	6.19	6.19	-0.33	-0.33					1.17	0.90	20.62	6.51	-----	Vehicle	5.04	-0.35	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**58.67**	**97.78**	**1144.14**	**1906.89**
	U_{15} - U_{16}	6.58	-9.91	2.18	2.18	-1.31	-1.31					1.17	0.90	6.58	2.29	-----	Vehicle	-9.91	-1.37	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**137.35**	**228.92**	**228.10**	**380.16**
	U_{16} - U_{17}	8.97	-2.82	2.78	2.78	-0.19	-0.19					1.17	0.90	8.97	2.92	-----	Vehicle	-2.82	-0.20	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**56.00**	**93.34**	**841.13**	**1401.89**
	U_{17} - U_{18}	8.01	-5.78	2.77	2.77	-0.41	-0.41					1.17	0.90	8.01	2.91	-----	Vehicle	-5.78	-0.43	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**37.03**	**61.71**	**254.94**	**424.89**
	U_{18} - U_{19}	8.40	-4.13	2.98	2.98	-0.28	-0.28					1.17	0.90	8.40	3.13	-----	Vehicle	-4.13	-0.29	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**34.33**	**57.22**	**377.97**	**629.94**
	U_{19} - U_{20}	5.53	-4.62	2.22	2.22	-0.56	-0.56					1.17	0.90	5.53	2.34	-----	Vehicle	-4.62	-0.58	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**54.77**	**91.28**	**219.90**	**366.50**
	U_{20} - U_{21}	6.82	-6.42	2.69	2.69	-1.11	-1.11					1.17	0.90	6.82	2.83	-----	Vehicle	-6.42	-1.16	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**84.66**	**141.09**	**206.60**	**344.33**
	U_{21} - U_{22}	6.17	-6.84	2.99	2.99	-0.31	-0.31					1.17	0.90	6.17	3.14	-----	Vehicle	-6.84	-0.32	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**76.45**	**127.41**	**740.43**	**1234.04**
	U_{22} - U_{23}	7.10	-6.07	1.22	1.22	-2.19	-2.19					1.17	0.90	7.10	1.29	-----	Vehicle	-6.07	-2.30	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**186.19**	**310.32**	**104.57**	**174.29**
	U_{23} - U_{24}	6.42	-6.83	2.37	2.37	-1.83	-1.83					1.17	0.90	6.42	2.50	-----	Vehicle	-6.83	-1.92	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**96.16**	**160.27**	**124.96**	**208.27**
	U_{24} - U_{25}	4.41	-5.74	1.10	1.10	-2.01	-2.01					1.17	0.90	4.41	1.16	-----	Vehicle	-5.74	-2.12	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**111.26**	**185.43**	**60.48**	**100.80**
	U_{25} - U_{26}	4.63	-7.90	0.58	0.58	-2.20	-2.20					1.17	0.90	4.63	0.61	-----	Vehicle	-7.90	-2.32	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**178.79**	**297.99**	**46.55**	**77.58**
	U_{26} - U_{27}	6.07	-7.72	0.96	0.96	-2.43	-2.43					1.17	0.90	6.07	1.01	-----	Vehicle	-7.72	-2.56	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**107.46**	**179.11**	**42.21**	**70.35**
	U_{27} - U_{28}	3.92	-7.87	0.98	0.98	-2.42	-2.42					1.17	0.90	3.92	1.03	-----	Vehicle	-7.87	-2.55	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**161.08**	**268.47**	**64.53**	**107.55**
	U_{28} - U_{29}	9.25	-7.25	1.70	1.70	-1.69	-1.69					1.17	0.90	9.25	1.79	-----	Vehicle	-7.25	-1.78	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**175.22**	**292.03**	**176.82**	**294.71**
	U_{29} - U_{30}	-2.24	-17.81	0.24	0.24	-6.35	-6.35					1.17	0.90	-2.24	0.25	-----	Vehicle	-17.81	-6.68	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1553.58**	**2589.30**	**57.45**	**95.75**
	U_{30} - U_{31}	19.02	3.44	6.00	6.00	-0.35	-0.35					1.18	0.90	19.02	6.38	-----	Vehicle	3.44	-0.37	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**59.97**	**99.95**	**1063.42**	**1772.36**
	U_{31} - U_{32}	7.21	-10.44	1.37	1.37	-1.18	-1.18					1.18	0.90	7.21	1.46	-----	Vehicle	-10.44	-1.26	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**190.36**	**317.26**	**218.96**	**364.93**
	U_{32} - U_{33}	10.43	-4.94	2.98	2.98	-0.17	-0.17					1.18	0.90	10.43	3.17	-----	Vehicle	-4.94	-0.19	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**39.44**	**65.74**	**693.30**	**1155.50**
	U_{33} - U_{34}	8.67	-5.58	2.58	2.58	-0.26	-0.26					1.18	0.90	8.67	2.74	-----	Vehicle	-5.58	-0.28	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**45.98**	**76.63**	**455.59**	**759.31**
	U_{34} - U_{35}	8.17	-3.35	2.98	2.98	-0.37	-0.37					1.18	0.90	8.17	3.17	-----	Vehicle	-3.35	-0.39	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**39.91**	**66.52**	**328.46**	**547.43**
	U_{35} - U_{36}	9.30	-5.12	2.92	2.92	-0.68	-0.68					1.18	0.90	9.30	3.11	-----	Vehicle	-5.12	-0.72	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**100.78**	**167.97**	**437.18**	**728.63**
	U_{36} - U_{37}	6.76	-8.71	4.05	4.05	-0.30	-0.30					1.18	0.90	6.76	4.32	-----	Vehicle	-8.71	-0.32	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**86.04**	**143.40**	**1174.71**	**1957.84**
	U_{37} - U_{38}	10.16	-5.61	2.16	2.16	-2.42	-2.42					1.18	0.90	10.16	2.30	-----	Vehicle	-5.61	-2.58	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**160.45**	**267.42**	**144.35**	**240.58**
	U_{38} - U_{39}	7.26	-3.01	3.76	3.76	-1.13	-1.13					1.18	0.90	7.26	4.01	-----	Vehicle	-3.01	-1.21	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**111.33**	**185.56**	**372.31**	**620.51**
	U_{39} - U_{40}	5.16	-5.17	2.80	2.80	-2.68	-2.68					1.18	0.90	5.16	2.99	-----	Vehicle	-5.17	-2.85	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**149.87**	**249.79**	**156.92**	**261.53**
	U_{40} - U_{41}	8.09	-7.79	1.15	1.15	-2.62	-2.62					1.18	0.90	8.09	1.22	-----	Vehicle	-7.79	-2.79	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**303.72**	**506.20**	**132.76**	**221.27**
	U_{41} - U_{42}	3.96	-7.24	1.01	1.01	-3.35	-3.35					1.18	0.90	3.96	1.07	-----	Vehicle	-7.24	-3.56	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**155.05**	**258.42**	**46.18**	**76.96**
	U_{42} - U_{43}	5.30	-8.54	0.89	0.89	-2.08	-2.08					1.18	0.90	5.30	0.95	-----	Vehicle	-8.54	-2.21	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**234.89**	**391.49**	**99.60**	**165.99**
	U_{43} - U_{44}	6.34	-9.84	1.16	1.16	-4.21	-4.21					1.18	0.90	6.34	1.24	-----	Vehicle	-9.84	-4.48	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**87.89**	**146.48**	**23.80**	**39.66**
Structure 2	U_0 - U_1	7.32	-2.03	2.39	2.39	-0.25	-0.25					1.20	0.90	7.32	2.58	-----	Vehicle	-2.03	-0.27	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**40.27**	**67.12**	**393.81**	**656.34**
	U_1 - U_2	6.45	-3.27	2.26	2.26	-0.14	-0.14					1.20	0.90	6.45	2.44	-----	Vehicle	-3.27	-0.15	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**42.80**	**71.34**	**698.91**	**1164.85**
	U_2 - U_3	9.46	-6.46	2.43	2.43	-0.29	-0.29					1.20	0.90	9.46	2.62	-----	Vehicle	-6.46	-0.31	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**106.15**	**176.91**	**901.43**	**1502.38**
	U_3 - U_4	5.96	-2.88	2.66	2.66	-0.39	-0.39					1.20	0.90	5.96	2.87	-----	Vehicle	-2.88	-0.42	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**133.56**	**222.60**	**926.87**	**1544.79**
	U_4 - U_5	5.42	-9.60	2.40	2.40	-1.27	-1.27					1.20	0.90	5.42	2.59	-----	Vehicle	-9.60	-1.37	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**147.85**	**246.42**	**277.82**	**463.03**
	U_5 - U_6	5.10	-3.00	2.71	2.71	-0.25	-0.25					1.20	0.90	5.10	2.92	-----	Vehicle	-3.00	-0.27	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**131.22**	**218.70**	**1410.19**	**2350.32**
	U_6 - U_7	2.12	-6.47	1.63	1.63	-2.84	-2.84					1.20	0.90	2.12	1.76	-----	Vehicle	-6.47	-3.06	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**218.65**	**364.41**	**124.95**	**208.24**
	U_7 - U_8	7.00	-8.45	1.29	1.29	-1.65	-1.65					1.20	0.90	7.00	1.39	-----	Vehicle	-8.45	-1.78	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**234.00**	**389.99**	**182.63**	**304.38**
	U_8 - U_9	2.51	-7.01	0.47	0.47	-2.00	-2.00					1.20	0.90	2.51	0.51	-----	Vehicle	-7.01	-2.15	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**239.05**	**398.41**	**55.46**	**92.43**
	U_9 - U_{10}	2.56	-8.76	0.32	0.32	-2.28	-2.28					1.20	0.90	2.56	0.35	-----	Vehicle	-8.76	-2.46	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**263.56**	**439.26**	**35.58**	**59.29**
	U_{10} - U_{11}	5.86	-6.85	0.54	0.54	-1.57	-1.57					1.20	0.90	5.86	0.58	-----	Vehicle	-6.85	-1.69	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**152.99**	**254.99**	**52.43**	**87.39**
	U_{11} - U_{12}	-1.36	-13.98	0.05	0.05	-3.82	-3.82					1.20	0.90	-1.36	0.05	-----	Vehicle	-13.98	-4.12	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**1982.80**	**3304.67**	**24.26**	**40.43**
	U_{12} - U_{13}	11.54	-1.05	4.55	4.55	-0.23	-0.23					1.24	0.90	11.54	5.06	-----	Vehicle	-1.05	-0.26	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**47.50**	**79.17**	**947.04**	**1578.40**
	U_{13} - U_{14}	4.46

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

		Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear													Shear Force Rating			
		D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																							
North Truss - Lower Chord																																		
Structure 1	L_0 - L_1	8.29	-6.54	2.07	2.07	-0.29	-0.29					1.24	0.90	8.29	2.30	-----	Vehicle	-6.54	-0.32	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**43.84**	**73.07**	**320.60**	**534.34**
	L_1 - L_2	13.57	-7.41	2.05	2.05	-0.33	-0.33					1.24	0.90	13.57	2.28	-----	Vehicle	-7.41	-0.37	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**42.84**	**71.40**	**273.95**	**456.58**
	L_2 - L_3	8.55	-7.89	1.55	1.55	-0.66	-0.66					1.24	0.90	8.55	1.73	-----	Vehicle	-7.89	-0.73	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**91.70**	**152.84**	**217.12**	**361.86**
	L_3 - L_4	10.78	-10.72	1.80	1.80	-1.25	-1.25					1.24	0.90	10.78	2.00	-----	Vehicle	-10.72	-1.39	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**78.63**	**131.05**	**112.98**	**188.29**
	L_4 - L_5	8.11	-17.42	0.15	0.15	-2.62	-2.62					1.24	0.90	8.11	0.16	-----	Vehicle	-17.42	-2.92	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**823.55**	**1372.59**	**43.61**	**72.69**
	L_5 - L_6	5.24	-12.36	0.32	0.32	-1.62	-1.62					1.24	0.90	5.24	0.35	-----	Vehicle	-12.36	-1.80	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**571.11**	**951.85**	**109.24**	**182.06**
	L_6 - L_7	8.00	-14.21	0.76	0.76	-1.94	-1.94					1.24	0.90	8.00	0.84	-----	Vehicle	-14.21	-2.16	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**376.19**	**626.98**	**145.56**	**242.60**
	L_7 - L_8	-2.07	-18.23	0.08	0.08	-4.40	-4.40					1.24	0.90	-2.07	0.08	-----	Vehicle	-18.23	-4.90	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**5076.26**	**8460.43**	**85.16**	**141.93**
	L_8 - L_9	18.91	4.31	3.67	3.67	-0.13	-0.13					1.20	0.90	18.91	3.95	-----	Vehicle	4.31	-0.14	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**105.45**	**175.75**	**3050.40**	**5083.99**
	L_9 - L_{10}	15.84	-6.96	1.81	1.81	-0.91	-0.91					1.20	0.90	15.84	1.95	-----	Vehicle	-6.96	-0.98	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**160.17**	**266.95**	**325.98**	**543.31**
	L_{10} - L_{11}	13.53	-2.36	2.00	2.00	-0.20	-0.20					1.20	0.90	13.53	2.15	-----	Vehicle	-2.36	-0.21	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**60.20**	**100.34**	**645.40**	**1075.66**
	L_{11} - L_{12}	19.25	-6.84	1.89	1.89	-0.24	-0.24					1.20	0.90	19.25	2.04	-----	Vehicle	-6.84	-0.26	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**61.83**	**103.05**	**521.03**	**868.39**
	L_{12} - L_{13}	12.12	-8.55	1.51	1.51	-0.57	-0.57					1.20	0.90	12.12	1.63	-----	Vehicle	-8.55	-0.62	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**161.35**	**268.92**	**430.74**	**717.91**
	L_{13} - L_{14}	22.27	-6.22	3.64	3.64	-0.32	-0.32					1.20	0.90	22.27	3.93	-----	Vehicle	-6.22	-0.35	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**94.99**	**158.31**	**1098.41**	**1830.68**
	L_{14} - L_{15}	10.80	-20.25	0.71	0.71	-2.72	-2.72					1.20	0.90	10.80	0.76	-----	Vehicle	-20.25	-2.93	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**621.65**	**1036.08**	**159.25**	**265.42**
	L_{15} - L_{16}	11.52	-8.07	1.52	1.52	-1.12	-1.12					1.20	0.90	11.52	1.64	-----	Vehicle	-8.07	-1.21	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**287.88**	**479.80**	**391.61**	**652.69**
	L_{16} - L_{17}	4.39	-17.69	0.20	0.20	-2.64	-2.64					1.20	0.90	4.39	0.22	-----	Vehicle	-17.69	-2.85	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**1607.43**	**2679.05**	**120.75**	**201.25**
	L_{17} - L_{18}	6.80	-13.02	0.22	0.22	-1.90	-1.90					1.20	0.90	6.80	0.24	-----	Vehicle	-13.02	-2.05	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**983.84**	**1639.73**	**112.50**	**187.49**
	L_{18} - L_{19}	5.40	-17.11	0.16	0.16	-1.89	-1.89					1.20	0.90	5.40	0.17	-----	Vehicle	-17.11	-2.03	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**603.24**	**1005.40**	**47.11**	**78.51**
	L_{19} - L_{20}	8.88	-11.26	0.11	0.11	-1.78	-1.78					1.20	0.90	8.88	0.12	-----	Vehicle	-11.26	-1.91	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**841.21**	**1402.02**	**51.86**	**86.43**
Structure 2	L_0 - L_1	8.18	-2.11	2.01	2.01	-0.20	-0.20					1.18	0.90	8.18	2.14	-----	Vehicle	-2.11	-0.21	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**64.55**	**107.58**	**666.12**	**1110.20**
	L_1 - L_2	10.03	-0.24	1.91	1.91	-0.19	-0.19					1.18	0.90	10.03	2.04	-----	Vehicle	-0.24	-0.20	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**67.27**	**112.12**	**706.71**	**1177.86**
	L_2 - L_3	7.20	-1.56	2.17	2.17	-0.24	-0.24					1.18	0.90	7.20	2.31	-----	Vehicle	-1.56	-0.26	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**111.54**	**185.89**	**1006.32**	**1677.20**
	L_3 - L_4	11.38	-0.50	2.42	2.42	-0.19	-0.19					1.18	0.90	11.38	2.58	-----	Vehicle	-0.50	-0.20	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**144.24**	**240.39**	**1849.17**	**3081.95**
	L_4 - L_5	6.29	-6.01	2.13	2.13	-1.47	-1.47					1.18	0.90	6.29	2.26	-----	Vehicle	-6.01	-1.56	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**217.96**	**363.27**	**316.04**	**526.74**
	L_5 - L_6	10.14	-2.08	2.59	2.59	-0.47	-0.47					1.18	0.90	10.14	2.75	-----	Vehicle	-2.08	-0.50	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**196.39**	**327.31**	**1082.89**	**1804.81**
	L_6 - L_7	3.45	-8.48	2.49	2.49	-2.29	-2.29					1.18	0.90	3.45	2.65	-----	Vehicle	-8.48	-2.44	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**208.90**	**348.16**	**225.73**	**376.21**
	L_7 - L_8	3.58	-10.31	0.94	0.94	-2.68	-2.68					1.18	0.90	3.58	1.00	-----	Vehicle	-10.31	-2.86	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**387.52**	**645.86**	**134.21**	**223.69**
	L_8 - L_9	0.48	-13.07	0.15	0.15	-2.40	-2.40					1.18	0.90	0.48	0.16	-----	Vehicle	-13.07	-2.55	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**1949.66**	**3249.43**	**116.51**	**194.18**
	L_9 - L_{10}	1.68	-14.60	0.60	0.60	-2.09	-2.09					1.18	0.90	1.68	0.64	-----	Vehicle	-14.60	-2.23	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**346.90**	**578.17**	**96.10**	**160.17**
	L_{10} - L_{11}	3.92	-15.22	0.31	0.31	-2.22	-2.22					1.18	0.90	3.92	0.33	-----	Vehicle	-15.22	-2.36	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**572.84**	**954.73**	**77.04**	**128.40**
	L_{11} - L_{12}	1.30	-14.23	0.32	0.32	-1.87	-1.87					1.18	0.90	1.30	0.34	-----	Vehicle	-14.23	-1.99	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**906.56**	**1510.94**	**149.78**	**249.64**
	L_{12} - L_{13}	6.61	-7.28	1.74	1.74	-1.87	-1.87					1.18	0.90	6.61	1.85	-----	Vehicle	-7.28	-1.99	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**240.61**	**401.02**	**223.78**	**372.97**
	L_{13} - L_{14}	-16.93	-26.03	0.19	0.19	-6.87	-6.87					1.18	0.90	-16.93	0.20	-----	Vehicle	-26.03	-7.31	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2836.67**	**4727.78**	**72.91**	**121.51**
	L_{14} - L_{15}	25.44	16.49	6.10	6.10	-0.18	-0.18					1.17	0.90	25.44	6.42	-----	Vehicle	16.49	-0.19	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**83.06**	**138.43**	**2982.14**	**4970.23**
	L_{15} - L_{16}	1.92	-10.98	1.66	1.66	-1.96	-1.96					1.17	0.90	1.92	1.75	-----	Vehicle	-10.98	-2.06	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**256.70**	**427.83**	**214.97**	**358.28**
	L_{16} - L_{17}	14.35	-0.89	2.28	2.28	-0.27	-0.27					1.17	0.90	14.35	2.40	-----	Vehicle	-0.89	-0.28	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**144.58**	**240.96**	**1271.79**	**2119.66**
	L_{17} - L_{18}	10.22	-3.50	2.48	2.48	-0.29	-0.29					1.17	0.90	10.22	2.61	-----	Vehicle	-3.50	-0.31	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**82.83**	**138.06**	**722.73**	**1204.56**
	L_{18} - L_{19}	9.38	-1.77	2.06	2.06	-0.52	-0.52					1.17	0.90	9.38	2.17	-----	Vehicle	-1.77	-0.54	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**70.63**	**117.72**	**289.81**	**483.02**
	L_{19} - L_{20}	12.39	-6.31	1.99	1.99	-0.17	-0.17					1.17	0.90	12.39	2.10	-----	Vehicle	-6.31	-0.18	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**72.29**	**120.48**	**857.78**	**1429.63**
	L_{20} - L_{21}	8.96	-3.52	2.11	2.11	-0.91	-0.91					1.17	0.90	8.96	2.22	-----	Vehicle	-3.52	-0.96	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**114.19**	**190.32**	**268.27**	**447.11**
	L_{21} - L_{22}	9.68	-4.49	3.51	3.51	-0.50	-0.50					1.17	0.90	9.68	3.70	-----	Vehicle	-4.49	-0.53	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**68.34**	**113.90**	**482.21**	**803.69**
	L_{22} - L_{23}	4.66	-10.03	1.03	1.03	-2.77	-2.77					1.17	0.90	4.66	1.08	-----	Vehicle	-10.03	-2.91	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**235.86**	**393.10**	**86.60**	**144.33**
	L_{23} - L_{24}	3.70	-6.40	1.24	1.24	-1.91	-1.91					1.17	0.90	3.70	1.31	-----	Vehicle	-6.40	-2.01	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**195.73**	**326.21**	**126.87**	**211.45**
	L_{24} - L_{25}	-0.87	-1.56	0.19	0.19	-1.99	-1.99					1.17	0.90	-0.87	0.20	-----	Vehicle	-1.56	-2.09	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**785.67**	**1309.44**	**75.50**	**125.83**
	L_{25} - L_{26}	-3.04	-3.58	0.67	0.67	-1.89	-1.89					1.17	0.90	-3.04	0.71	-----	Vehicle	-3.58	-1.99	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**227.48**	**379.13**	**78.88**	**131.47**
	L_{26} - L_{27}	-1.83	-2.61	0.24	0.24	-2.56	-2.56					1.17	0.90	-1.83	0.25	-----	Vehicle	-2.61	-2.70	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**900.99**	**1501.65**	**81.97**	**136.62**
	L_{27} - L_{28}	-4.05	-5.16	0.30	0.30	-2.37	-2.37					1.17	0.90	-4.05	0.32	-----	Vehicle	-5.16	-2.50	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1121.60**	**1869.34**	**141.00**	**235.00**
	L_{28} - L_{29}	3.03	1.87	1.65	1.65	-1.47	-1.47					1.17	0.90	3.03	1.73	-----	Vehicle	1.87	-1.55	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**258.34**	**430.57**	**290.58**	**484.30**
	L_{29} - L_{30}	-16.84	-17.95	0.26	0.26	-7.20	-7.20					1.17	0.90	-16.84	0.28	-----	Vehicle	-17.95	-7.57	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2019.09**	**3365.14**	**71.04**	**118.39**
	L_{30} - L_{31}	17.64	16.51	5.84	5.84	-0.23	-0.23					1.18	0.90	17.64	6.22	-----	Vehicle	16.51	-0.24	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**86.48**	**144.13**	**2290.61**	**3817.68**
	L_{31} - L_{32}	-0.36	-1.54	1.56	1.56	-1.97	-1.97					1.18	0.90	-0.36	1.66	-----	Vehicle	-1.54	-2.10	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**270.06**	**450.10**	**213.29**	**355.49**
	L_{32} - L_{33}	5.29	4.30	2.10	2.10	-0.11	-0.11					1.18	0.90	5.29	2.23	-----	Vehicle	4.30	-0.11	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**135.97**	**226.62**	**2690.16**	**4483.60**
	L_{33} - L_{34}	3.87	3.17	2.21	2.21	-0.30	-0.30					1.18	0.90	3.87	2.35	-----	Vehicle	3.17	-0.32	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**80.11**	**133.51**	**603.33**	**1005.56**
	L_{34} - L_{35}	4.21	3.54	2.25	2.25	-0.47	-0.47					1.18	0.90	4.21	2.40	-----	Vehicle	3.54	-0.50	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**91.75**	**152.92**	**447.20**	**745.34**
	L_{35} - L_{36}	4.37	3.40	2.27	2.27	-0.18	-0.18					1.18	0.90	4.37	2.42	-----	Vehicle	3.40	-0.19	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**125.18**	**208.63**	**1640.83**	**2734.72**
	L_{36} - L_{37}	2.06	0.88	3.31	3.31	-0.42	-0.42					1.18	0.90	2.06	3.53	-----	Vehicle	0.88	-0.44	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**54.85**	**91.42**	**439.92**	**733.20**
	L_{37} - L_{38}	3.79	2.22	3.12	3.12	-1.65	-1.65					1.18	0.90	3.79	3.32	-----	Vehicle	2.22	-1.76	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**166.45**	**277.42**	**316.99**	**528.32**
	L_{38} - L_{39}	-1.73	-3.35	0.97	0.97	-2.39	-2.39					1.18	0.90	-1.73	1.04	-----	Vehicle	-3.35	-2.55	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**528.63**	**881.05**	**213.92**	**356.54**
	L_{39} - L_{40}	1.42	-0.10	1.70	1.70	-1.76	-1.76					1.18	0.90	1.42	1.81	-----	Vehicle	-0.10	-1.88	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**273.42**	**455.70**	**264.54**	**440.90**
	L_{40} - L_{41}	-3.01	-4.16	0.22	0.22	-2.63	-2.63					1.18	0.90	-3.01	0.23	-----	Vehicle	-4.16	-2.80	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**1630.21**	**2717.02**	**134.42**	**224.03**
	L_{41} - L_{42}	-1.55	-2.29	0.38	0.38	-2.20	-2.20					1.18	0.90	-1.55	0.40	-----	Vehicle	-2.29	-2.35	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**654.22**	**1090.37**	**111.27**	**185.45**
	L_{42} - L_{43}	-3.17	-3.75	0.25	0.25	-2.25	-2.25					1.18	0.90	-3.17	0.27	-----	Vehicle	-3.75	-2.39	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**272.70**	**454.50**	**28.98**	**48.30**
	L_{43} - L_{44}	-3.25	-3.76	0.20	0.20	-2.09	-2.09					1.18	0.90	-3.25	0.21	-----	Vehicle	-3.76	-2.23	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**691.59**	**1152.65**	**63.21**	**105.35**
Structure 3	L_0 - L_1	6.90	-2.96	1.70	1.70	-0.10	-0.10					1.20	0.90	6.90	1.83	-----	Vehicle	-2.96	-0.11	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**55.64**	**92.74**	**957.14**	**1595.23**
	L_1 - L_2	10.33	-2.13	1.76	1.76	-0.12	-0.12					1.20	0.90	10.33	1.90	-----	Vehicle	-2.13	-0.13	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**52.66**	**87.76**	**823.16**	**1371.93**
	L_2 - L_3	8.48	-3.27	1.80	1.80	-0.15	-0.15					1.20	0.90	8.48	1.95	-----	Vehicle	-3.27	-0.16	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**120.01**	**200.01**	**1433.96**	**2389.93**
	L_3 - L_4	10.92	-0.17	2.21	2.21	-0.15	-0.15					1.20	0.90	10.92	2.38	-----	Vehicle	-0.17	-0.16	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**145.87**	**243.12**	**2235.75**	**3726.25**
	L_4 - L_5	3.28	-6.17	1.76	1.76	-1.24	-1.24					1.20	0.90	3.28	1.89	-----	Vehicle	-6.17	-1.34	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**252.11**	**420.18**	**355.23**	**592.05**
	L_5 - L_6	10.07	-2.62	3.12	3.12	-0.38	-0.38					1.20	0.90	10.07	3.36	-----	Vehicle	-2.62	-0.41	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**140.64**	**234.41**	**1162.24**	**1937.07**
	L_6 - L_7	-0.48	-11.65	0.57	0.57	-3.38	-3.38					1.20	0.90	-0.48	0.62	-----	Vehicle	-11.65	-3.64	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**624.59**	**1040.98**	**104.07**	**173.45**
	L_7 - L_8	3.36	-6.18	0.64	0.64	-1.27	-1.27					1.20	0.90	3.36	0.69	-----	Vehicle	-6.18	-1.37	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**388.20**	**647.01**	**194.70**	**324.50**
	L_8 - L_9	1.47	-11.13	0.22	0.22	-1.71	-1.71					1.20	0.90	1.47	0.24	-----	Vehicle	-11.13	-1.84	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**566.94**	**944.90**	**71.29**	**118.82**
	L_9 - L_{10}	-0.54	-9.03	0.28	0.28	-1.97	-1.97					1.20	0.90	-0.54	0.30	-----	Vehicle	-9.03	-2.13	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**455.93**	**759.88**	**62.23**	**103.72**
	L_{10} - L_{11}	2.22	-10.62	0.78	0.78	-2.02	-2.02					1.20	0.90	2.22	0.84	-----	Vehicle	-10.62	-2.18	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**381.60**	**636.00**	**144.90**	**241.49**
	L_{11} - L_{12}	-6.24	-14.06	0.07	0.07	-4.16	-4.16					1.20	0.90	-6.24	0.08	-----	Vehicle	-14.06	-4.48	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**5564.91**	**9274.84**	**93.62**	**156.04**
	L_{12} - L_{13}	12.41	3.95	3.67	3.67	-0.10	-0.10					1.24	0.90	12.41	4.09	-----	Vehicle	3.95	-0.11

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

		Member Forces from STAAD										Maximum Positive Shear				Minimum Negative Shear				Depth of Web	Thickness of Web	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P	V_U	Shear Force Rating: Positive Shear Member		Shear Force Rating: Negative Shear Member	
		D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &											Inventory	Operating	Inventory	Operating
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																				RF	RF	RF	RF
Structure 1	U_0 - L_0	-3.17	-3.17	0.33	0.33	-2.06	-2.06					1.24	0.90	-3.17	0.37	-----	Vehicle	-3.17	-2.30	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**315.59**	**525.99**	**48.85**	**81.42**
	U_1 - L_1	-0.96	-0.96	0.43	0.43	-2.10	-2.10					1.24	0.90	-0.96	0.48	-----	Vehicle	-0.96	-2.33	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**239.44**	**399.06**	**48.63**	**81.04**
	U_2 - L_2	0.27	0.27	0.48	0.48	-1.76	-1.76					1.24	0.90	0.27	0.53	-----	Vehicle	0.27	-1.96	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**214.91**	**358.18**	**58.19**	**96.98**
	U_3 - L_3	1.48	1.48	0.88	0.88	-1.22	-1.22					1.24	0.90	1.48	0.98	-----	Vehicle	1.48	-1.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**114.98**	**191.63**	**84.90**	**141.50**
	U_4 - L_4	2.22	2.22	1.33	1.33	-0.43	-0.43					1.24	0.90	2.22	1.49	-----	Vehicle	2.22	-0.48	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**75.99**	**126.49**	**238.79**	**397.98**
	U_5 - L_5	2.71	2.71	1.70	1.70	-0.06	-0.06					1.24	0.90	2.71	1.89	-----	Vehicle	2.71	-0.06	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**72.46**	**120.76**	**2251.69**	**3752.82**
	U_6 - L_6	2.52	2.52	1.75	1.75	-0.05	-0.05					1.24	0.90	2.52	1.95	-----	Vehicle	2.52	-0.05	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**62.74**	**104.57**	**2498.76**	**4164.60**
	U_7 - L_7	2.77	2.77	1.41	1.41	-0.04	-0.04					1.24	0.90	2.77	1.57	-----	Vehicle	2.77	-0.04	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**79.07**	**131.79**	**3266.13**	**5443.55**
	U_8 - L_8	-0.17	-0.17	1.34	1.34	-1.02	-1.02					1.24	0.90	-0.17	1.49	-----	Vehicle	-0.17	-1.13	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**148.39**	**247.31**	**195.43**	**325.72**
	U_9 - L_9	-4.89	-4.89	0.12	0.12	-1.57	-1.57					1.20	0.90	-4.89	0.13	-----	Vehicle	-4.89	-1.69	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1141.70**	**1902.83**	**83.23**	**138.71**
	U_{10} - L_{10}	-4.01	-4.01	0.11	0.11	-1.63	-1.63					1.20	0.90	-4.01	0.12	-----	Vehicle	-4.01	-1.75	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**2034.15**	**3390.25**	**133.53**	**222.55**
	U_{11} - L_{11}	-5.48	-5.48	0.13	0.13	-2.00	-2.00					1.20	0.90	-5.48	0.14	-----	Vehicle	-5.48	-2.16	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1265.79**	**2109.65**	**77.37**	**128.95**
	U_{12} - L_{12}	-3.87	-3.87	0.26	0.26	-1.71	-1.71					1.20	0.90	-3.87	0.28	-----	Vehicle	-3.87	-1.84	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**528.49**	**880.82**	**76.69**	**127.81**
	U_{13} - L_{13}	-2.32	-2.32	0.34	0.34	-1.34	-1.34					1.20	0.90	-2.32	0.37	-----	Vehicle	-2.32	-1.45	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**346.43**	**577.38**	**85.52**	**142.53**
	U_{14} - L_{14}	-1.13	-1.13	0.54	0.54	-0.87	-0.87					1.20	0.90	-1.13	0.58	-----	Vehicle	-1.13	-0.94	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**198.51**	**330.85**	**120.44**	**200.74**
	U_{15} - L_{15}	0.33	0.33	1.06	1.06	-0.50	-0.50					1.20	0.90	0.33	1.14	-----	Vehicle	0.33	-0.54	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**100.08**	**166.81**	**213.20**	**355.33**
	U_{16} - L_{16}	1.29	1.29	1.04	1.04	-0.26	-0.26					1.20	0.90	1.29	1.12	-----	Vehicle	1.29	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**101.21**	**168.68**	**417.62**	**696.03**
	U_{17} - L_{17}	1.86	1.86	1.11	1.11	-0.15	-0.15					1.20	0.90	1.86	1.20	-----	Vehicle	1.86	-0.17	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**114.80**	**191.34**	**842.38**	**1403.97**
	U_{18} - L_{18}	3.24	3.24	1.63	1.63	-0.19	-0.19					1.20	0.90	3.24	1.75	-----	Vehicle	3.24	-0.20	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**81.02**	**135.03**	**731.15**	**1218.59**
	U_{19} - L_{19}	2.88	2.88	1.37	1.37	-0.14	-0.14					1.20	0.90	2.88	1.48	-----	Vehicle	2.88	-0.15	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**113.61**	**189.35**	**1154.43**	**1924.05**
	U_{20} - L_{20}	2.24	2.24	0.79	0.79	-0.06	-0.06					1.20	0.90	2.24	0.86	-----	Vehicle	2.24	-0.06	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**197.30**	**328.84**	**2694.12**	**4490.21**
Structure 2	U_0 - L_0	-2.38	-2.38	0.10	0.10	-0.93	-0.93					1.18	0.90	-2.38	0.10	-----	Vehicle	-2.38	-0.99	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1810.07**	**3016.78**	**186.11**	**310.18**
	U_1 - L_1	-2.50	-2.50	0.14	0.14	-1.16	-1.16					1.18	0.90	-2.50	0.15	-----	Vehicle	-2.50	-1.24	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1219.74**	**2032.91**	**148.73**	**247.89**
	U_2 - L_2	-2.86	-2.86	0.21	0.21	-1.46	-1.46					1.18	0.90	-2.86	0.22	-----	Vehicle	-2.86	-1.56	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**697.60**	**1162.67**	**98.07**	**163.44**
	U_3 - L_3	-1.82	-1.82	0.16	0.16	-0.98	-0.98					1.18	0.90	-1.82	0.17	-----	Vehicle	-1.82	-1.04	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**896.19**	**1493.65**	**145.73**	**242.89**
	U_4 - L_4	-1.16	-1.16	0.22	0.22	-0.99	-0.99					1.18	0.90	-1.16	0.23	-----	Vehicle	-1.16	-1.05	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**489.84**	**816.41**	**107.54**	**179.23**
	U_5 - L_5	-0.32	-0.32	0.41	0.41	-0.89	-0.89					1.18	0.90	-0.32	0.44	-----	Vehicle	-0.32	-0.95	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**259.16**	**431.93**	**120.29**	**200.48**
	U_6 - L_6	0.40	0.40	0.54	0.54	-0.81	-0.81					1.18	0.90	0.40	0.58	-----	Vehicle	0.40	-0.86	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**197.58**	**329.30**	**133.17**	**221.96**
	U_7 - L_7	1.09	1.09	0.60	0.60	-0.33	-0.33					1.18	0.90	1.09	0.64	-----	Vehicle	1.09	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**176.33**	**293.88**	**327.44**	**545.74**
	U_8 - L_8	2.68	2.68	1.36	1.36	-0.32	-0.32					1.18	0.90	2.68	1.45	-----	Vehicle	2.68	-0.34	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**82.84**	**138.07**	**363.18**	**605.30**
	U_9 - L_9	4.62	4.62	1.90	1.90	-0.17	-0.17					1.18	0.90	4.62	2.02	-----	Vehicle	4.62	-0.18	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**90.43**	**150.71**	**1065.29**	**1775.49**
	U_{10} - L_{10}	4.05	4.05	1.70	1.70	-0.04	-0.04					1.18	0.90	4.05	1.81	-----	Vehicle	4.05	-0.04	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**129.51**	**215.85**	**5900.45**	**9834.08**
	U_{11} - L_{11}	3.61	3.61	1.39	1.39	-0.04	-0.04					1.18	0.90	3.61	1.48	-----	Vehicle	3.61	-0.05	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**158.09**	**263.48**	**5090.13**	**8483.55**
	U_{12} - L_{12}	2.81	2.81	1.18	1.18	-0.13	-0.13					1.18	0.90	2.81	1.25	-----	Vehicle	2.81	-0.14	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**208.19**	**346.98**	**1940.69**	**3234.48**
	U_{13} - L_{13}	2.75	2.75	1.02	1.02	-0.10	-0.10					1.18	0.90	2.75	1.08	-----	Vehicle	2.75	-0.10	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**213.95**	**356.58**	**2303.20**	**3838.66**
	U_{14} - L_{14}	0.70	0.70	0.71	0.71	-0.70	-0.70					1.17	0.90	0.70	0.76	-----	Vehicle	0.70	-0.74	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**299.70**	**499.50**	**309.03**	**515.05**
	U_{15} - L_{15}	-1.74	-1.74	0.08	0.08	-0.80	-0.80					1.17	0.90	-1.74	0.09	-----	Vehicle	-1.74	-0.84	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1757.32**	**2928.86**	**181.58**	**302.63**
	U_{16} - L_{16}	-1.62	-1.62	0.12	0.12	-1.10	-1.10					1.17	0.90	-1.62	0.13	-----	Vehicle	-1.62	-1.15	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1429.39**	**2382.32**	**160.03**	**266.72**
	U_{17} - L_{17}	-2.53	-2.53	0.13	0.13	-1.34	-1.34					1.17	0.90	-2.53	0.14	-----	Vehicle	-2.53	-1.40	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1235.33**	**2058.89**	**119.98**	**199.97**
	U_{18} - L_{18}	-2.65	-2.65	0.21	0.21	-1.64	-1.64					1.17	0.90	-2.65	0.22	-----	Vehicle	-2.65	-1.72	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**702.06**	**1170.10**	**88.64**	**147.74**
	U_{19} - L_{19}	-1.79	-1.79	0.18	0.18	-1.13	-1.13					1.17	0.90	-1.79	0.18	-----	Vehicle	-1.79	-1.19	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**761.50**	**1269.16**	**116.13**	**193.55**
	U_{20} - L_{20}	-1.24	-1.24	0.26	0.26	-1.08	-1.08					1.17	0.90	-1.24	0.27	-----	Vehicle	-1.24	-1.13	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**467.72**	**779.53**	**109.76**	**182.93**
	U_{21} - L_{21}	-0.83	-0.83	0.32	0.32	-1.03	-1.03					1.17	0.90	-0.83	0.34	-----	Vehicle	-0.83	-1.09	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**336.02**	**560.04**	**104.38**	**173.96**
	U_{22} - L_{22}	-0.04	-0.04	0.55	0.55	-0.61	-0.61					1.17	0.90	-0.04	0.58	-----	Vehicle	-0.04	-0.64	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**197.49**	**329.15**	**177.66**	**296.11**
	U_{23} - L_{23}	0.80	0.80	0.98	0.98	-0.46	-0.46					1.17	0.90	0.80	1.03	-----	Vehicle	0.80	-0.48	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**110.71**	**184.52**	**239.24**	**398.73**
	U_{24} - L_{24}	1.40	1.40	1.05	1.05	-0.29	-0.29					1.17	0.90	1.40	1.10	-----	Vehicle	1.40	-0.30	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**112.82**	**188.03**	**417.50**	**695.84**
	U_{25} - L_{25}	1.60	1.60	1.27	1.27	-0.22	-0.22					1.17	0.90	1.60	1.33	-----	Vehicle	1.60	-0.23	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**103.74**	**172.90**	**597.10**	**995.16**
	U_{26} - L_{26}	2.43	2.43	1.82	1.82	-0.28	-0.28					1.17	0.90	2.43	1.91	-----	Vehicle	2.43	-0.29	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**79.93**	**133.22**	**536.26**	**893.77**
	U_{27} - L_{27}	2.17	2.17	1.56	1.56	-0.19	-0.19					1.17	0.90	2.17	1.64	-----	Vehicle	2.17	-0.20	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**103.01**	**171.68**	**861.66**	**1436.10**
	U_{28} - L_{28}	1.53	1.53	1.34	1.34	-0.12	-0.12					1.17	0.90	1.53	1.41	-----	Vehicle	1.53	-0.12	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**131.03**	**218.38**	**1527.53**	**2545.88**
	U_{29} - L_{29}	1.55	1.55	0.99	0.99	-0.06	-0.06					1.17	0.90	1.55	1.04	-----	Vehicle	1.55	-0.06	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**147.06**	**245.11**	**2587.76**	**4312.93**
	U_{30} - L_{30}	-0.10	-0.10	0.74	0.74	-0.62	-0.62					1.18	0.90	-0.10	0.79	-----	Vehicle	-0.10	-0.66	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**290.17**	**483.62**	**345.69**	**576.15**
	U_{31} - L_{31}	-1.79	-1.79	0.10	0.10	-0.80	-0.80					1.18	0.90	-1.79	0.11	-----	Vehicle	-1.79	-0.85	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**2141.43**	**3569.05**	**273.53**	**455.88**
	U_{32} - L_{32}	-1.78	-1.78	0.14	0.14	-0.98	-0.98					1.18	0.90	-1.78	0.14	-----	Vehicle	-1.78	-1.05	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**1835.77**	**3059.62**	**250.33**	**417.21**
	U_{33} - L_{33}	-2.46	-2.46	0.08	0.08	-1.23	-1.23					1.18	0.90	-2.46	0.08	-----	Vehicle	-2.46	-1.31	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**2938.43**	**4897.38**	**178.73**	**297.88**
	U_{34} - L_{34}	-2.82	-2.82	0.06	0.06	-1.53	-1.53					1.18	0.90	-2.82	0.07	-----	Vehicle	-2.82	-1.63	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**3492.55**	**5820.92**	**144.02**	**240.03**
	U_{35} - L_{35}	-3.37	-3.37	0.16	0.16	-1.89	-1.89					1.18	0.90	-3.37	0.17	-----	Vehicle	-3.37	-2.01	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1087.26**	**1812.10**	**91.42**	**152.37**
	U_{36} - L_{36}	-1.93	-1.93	0.19	0.19	-1.45	-1.45					1.18	0.90	-1.93	0.20	-----	Vehicle	-1.93	-1.54	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**610.73**	**1017.89**	**78.22**	**130.36**
	U_{37} - L_{37}	-0.91	-0.91	0.25	0.25	-0.70	-0.70					1.18	0.90	-0.91	0.27	-----	Vehicle	-0.91	-0.74	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**425.41**	**709.02**	**153.16**	**255.27**
	U_{38} - L_{38}	-0.45	-0.45	0.66	0.66	-0.79	-0.79					1.18	0.90	-0.45	0.70	-----	Vehicle	-0.45	-0.84	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**162.43**	**270.72**	**135.78**	**226.31**
	U_{39} - L_{39}	0.16	0.16	0.79	0.79	-0.51	-0.51					1.18	0.90	0.16	0.84	-----	Vehicle	0.16	-0.55	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**135.30**	**225.50**	**209.39**	**348.98**
	U_{40} - L_{40}	0.80	0.80	1.03	1.03	-0.25	-0.25					1.18	0.90	0.80	1.10	-----	Vehicle	0.80	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**103.16**	**171.93**	**426.84**	**711.40**
	U_{41} - L_{41}	1.35	1.35	1.07	1.07	-0.19	-0.19					1.18	0.90	1.35	1.14	-----	Vehicle	1.35	-0.21	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**133.30**	**222.17**	**742.39**	**1237.32**
	U_{42} - L_{42}	2.23	2.23	1.61	1.61	-0.26	-0.26					1.18	0.90	2.23	1.71	-----	Vehicle	2.23	-0.28	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**89.43**	**149.05**	**564.26**	**940.43**
	U_{43} - L_{43}	2.14	2.14	1.50	1.50	-0.19	-0.19					1.18	0.90	2.14	1.60	-----	Vehicle	2.14	-0.20	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**115.43**	**192.38**	**918.53**	**1530.88**
	U_{44} - L_{44}	1.70	1.70	0.90	0.90	-0.09	-0.09					1.18	0.90	1.70	0.96	-----	Vehicle	1.70	-0.10	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**191.89**	**319.82**	**1883.77**	**3139.62**
Structure 3	U_0 - L_0	-1.87	-1.87	0.06	0.06	-0.88	-0.88					1.20	0.90	-1.87	0.07	-----	Vehicle	-1.87	-0.95	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2602.40**	**4337.33**	**178.64**	**297.73**
	U_1 - L_1	-2.09	-2.09	0.09	0.09	-1.10	-1.10					1.20	0.90	-2.09	0.10	-----	Vehicle	-2.09	-1.18	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1690.12**	**2816.86**	**142.70**	**237.83**
	U_2 - L_2	-2.61	-2.61	0.14	0.14	-1.41	-1.41					1.20	0.90	-2.61	0.15	-----	Vehicle	-2.61	-1.51	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**943.43**	**1572.38**	**93.96**	**156.60**
	U_3 - L_3	-1.48	-1.48	0.12	0.12	-0.99	-0.99					1.20	0.90	-1.48	0.13	-----	Vehicle	-1.48	-1.07	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1079.33**	**1798.89**	**129.03**	**215.05**
	U_4 - L_4	-1.08	-1.08	0.19	0.19	-1.03	-1.03					1.20	0.90	-1.08	0.21	-----	Vehicle	-1.08	-1.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**554.03**	**923.39**	**102.41**	**170.68**
	U_5 - L_5	-0.23	-0.23	0.39	0.39	-1.07	-1.07					1.20	0.90	-0.23	0.42	-----	Vehicle	-0.23	-1.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**271.55**	**452.58**	**98.55**	**164.25**
	U_6 - L_6	0.90	0.90	0.73	0.73	-0.69	-0.69					1.20	0.90	0.90	0.78	-----	Vehicle	0.90	-0.74	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**144.81**	**241.35**	**154.69**	**257.82**
	U_7 - L_7	1.97	1.97	1.30	1.30	-0.44	-0.44					1.20	0.90	1.97	1.40	-----	Vehicle	1.97	-0.47	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**88.50**	**147.50**	**267.67**	**446.12**
	U_8 - L_8	3.44	3.44	1.77	1.77	-0.30	-0.30					1.20	0.90	3.44	1.91	-----	Vehicle	3.44	-0.32	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**73.97**	**123.29**	**454.72**	**757.86**
	U_9 - L_9	4.72	4.72	2.18	2.18	-0.12	-0.12					1.20	0.90	4.72	2.35	-----	Vehicle	4.72	-0.12	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**71.14**	**118.56**	**1394.19**	**2323.66**
	U_{10} - L_{10}	3.92	3.92	1.92	1.92	-0.06	-0.06					1.20	0.90	3.92	2.07	-----	Vehicle	3.92	-0.06	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches)	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	U_0 - L_1	-0.26	-0.76	0.07	0.07	-0.47	-0.47					1.24	0.90	-0.26	0.08	-----	Vehicle	-0.76	-0.52	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**672.03**	**1120.05**	**105.09**	**175.15**
	U_1 - L_2	0.21	-0.09	0.06	0.06	-0.23	-0.23					1.24	0.90	0.21	0.07	-----	Vehicle	-0.09	-0.25	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1734.32**	**2890.53**	**455.08**	**758.46**
	U_2 - L_3	0.24	-0.07	0.07	0.07	-0.17	-0.17					1.24	0.90	0.24	0.08	-----	Vehicle	-0.07	-0.19	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1401.52**	**2335.87**	**591.93**	**986.55**
	U_3 - L_4	0.40	0.09	0.13	0.13	-0.03	-0.03					1.24	0.90	0.40	0.15	-----	Vehicle	0.09	-0.03	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**780.31**	**1300.52**	**3306.05**	**5510.08**
	U_4 - L_4	-0.25	-0.59	0.06	0.06	-0.23	-0.23					1.24	0.90	-0.25	0.07	-----	Vehicle	-0.59	-0.25	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2012.47**	**3354.12**	**552.52**	**920.87**
	U_5 - L_5	-1.06	-1.52	0.04	0.04	-0.65	-0.65					1.24	0.90	-1.06	0.05	-----	Vehicle	-1.52	-0.72	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2950.59**	**4917.66**	**198.82**	**331.36**
	U_6 - L_6	-1.31	-1.77	0.02	0.02	-0.89	-0.89					1.24	0.90	-1.31	0.02	-----	Vehicle	-1.77	-0.99	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**6839.90**	**11399.84**	**144.97**	**241.61**
	U_7 - L_7	-0.76	-1.25	0.02	0.02	-0.55	-0.55					1.24	0.90	-0.76	0.02	-----	Vehicle	-1.25	-0.62	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**5893.62**	**9822.69**	**232.52**	**387.53**
	U_8 - L_9	-0.94	-1.86	0.08	0.08	-0.47	-0.47					1.20	0.90	-0.94	0.08	-----	Vehicle	-1.86	-0.51	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2140.34**	**3567.23**	**350.40**	**584.00**
	U_9 - L_{10}	-1.58	-2.42	0.07	0.07	-0.67	-0.67					1.20	0.90	-1.58	0.07	-----	Vehicle	-2.42	-0.72	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2424.65**	**4041.08**	**247.12**	**411.87**
	U_{10} - L_{11}	-1.35	-2.21	0.04	0.04	-0.51	-0.51					1.20	0.90	-1.35	0.05	-----	Vehicle	-2.21	-0.55	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**3187.91**	**5313.18**	**259.16**	**431.93**
	U_{11} - L_{12}	-1.02	-1.50	0.05	0.05	-0.54	-0.54					1.20	0.90	-1.02	0.05	-----	Vehicle	-1.50	-0.58	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3165.51**	**5275.85**	**291.04**	**485.07**
	U_{12} - L_{13}	-0.89	-1.60	0.09	0.09	-0.48	-0.48					1.20	0.90	-0.89	0.10	-----	Vehicle	-1.60	-0.51	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1294.35**	**2157.26**	**239.10**	**398.50**
	U_{13} - L_{14}	-0.18	-0.51	0.11	0.11	-0.20	-0.20					1.20	0.90	-0.18	0.12	-----	Vehicle	-0.51	-0.21	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**936.94**	**1561.57**	**538.21**	**897.01**
	U_{14} - L_{15}	0.39	0.05	0.21	0.21	-0.15	-0.15					1.20	0.90	0.39	0.22	-----	Vehicle	0.05	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**514.92**	**858.20**	**705.36**	**1175.59**
	U_{15} - L_{16}	-0.16	-0.50	0.13	0.13	-0.31	-0.31					1.20	0.90	-0.16	0.14	-----	Vehicle	-0.50	-0.34	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**820.62**	**1367.70**	**338.12**	**563.54**
	U_{16} - L_{17}	-0.37	-0.76	0.07	0.07	-0.42	-0.42					1.20	0.90	-0.37	0.07	-----	Vehicle	-0.76	-0.45	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1868.13**	**3113.55**	**306.13**	**510.22**
	U_{18} - L_{17}	-1.43	-1.90	0.10	0.10	-0.78	-0.78					1.20	0.90	-1.43	0.10	-----	Vehicle	-1.90	-0.84	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1413.21**	**2355.35**	**169.53**	**282.55**
	U_{19} - L_{18}	-1.43	-1.96	0.08	0.08	-0.76	-0.76					1.20	0.90	-1.43	0.08	-----	Vehicle	-1.96	-0.82	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1893.00**	**3155.01**	**186.33**	**310.55**
	U_{20} - L_{19}	-0.81	-1.39	0.03	0.03	-0.53	-0.53					1.20	0.90	-0.81	0.03	-----	Vehicle	-1.39	-0.57	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**5315.59**	**8859.32**	**267.98**	**446.64**
Structure 2	U_0 - L_1	-1.46	-2.01	0.08	0.08	-0.74	-0.74					1.18	0.90	-1.46	0.08	-----	Vehicle	-2.01	-0.78	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2032.01**	**3386.68**	**215.16**	**358.60**
	U_1 - L_2	-1.39	-1.93	0.10	0.10	-0.74	-0.74					1.18	0.90	-1.39	0.11	-----	Vehicle	-1.93	-0.79	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1558.17**	**2596.95**	**214.06**	**356.76**
	U_2 - L_3	-1.30	-1.78	0.12	0.12	-0.75	-0.75					1.18	0.90	-1.30	0.13	-----	Vehicle	-1.78	-0.80	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1141.91**	**1903.19**	**178.87**	**298.11**
	U_3 - L_4	-0.57	-0.98	0.09	0.09	-0.45	-0.45					1.18	0.90	-0.57	0.10	-----	Vehicle	-0.98	-0.48	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1560.69**	**2601.15**	**318.55**	**530.91**
	U_4 - L_5	-0.10	-0.45	0.11	0.11	-0.33	-0.33					1.18	0.90	-0.10	0.12	-----	Vehicle	-0.45	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**940.10**	**1566.83**	**326.79**	**544.66**
	U_5 - L_6	0.26	-0.08	0.19	0.19	-0.26	-0.26					1.18	0.90	0.26	0.21	-----	Vehicle	-0.08	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**554.23**	**923.71**	**411.81**	**686.35**
	U_6 - L_7	0.47	0.08	0.21	0.21	-0.14	-0.14					1.18	0.90	0.47	0.22	-----	Vehicle	0.08	-0.15	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**566.93**	**944.88**	**828.61**	**1381.02**
	U_8 - L_7	-0.31	-1.10	0.15	0.15	-0.32	-0.32					1.18	0.90	-0.31	0.16	-----	Vehicle	-1.10	-0.34	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**663.39**	**1105.64**	**301.52**	**502.53**
	U_8 - L_8	-1.36	-1.87	0.13	0.13	-0.68	-0.68					1.18	0.90	-1.36	0.13	-----	Vehicle	-1.87	-0.72	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1165.20**	**1942.00**	**212.45**	**354.09**
	U_{10} - L_9	-1.34	-1.84	0.04	0.04	-0.67	-0.67					1.18	0.90	-1.34	0.04	-----	Vehicle	-1.84	-0.72	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4114.37**	**6857.29**	**235.76**	**392.94**
	U_{11} - L_{10}	-1.60	-2.16	0.02	0.02	-0.74	-0.74					1.18	0.90	-1.60	0.02	-----	Vehicle	-2.16	-0.79	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**7960.75**	**13267.92**	**233.18**	**388.63**
	U_{12} - L_{11}	-1.61	-2.20	0.03	0.03	-0.72	-0.72					1.18	0.90	-1.61	0.03	-----	Vehicle	-2.20	-0.77	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**5837.98**	**9729.97**	**239.93**	**399.89**
	U_{13} - L_{12}	-1.62	-2.23	0.08	0.08	-0.76	-0.76					1.18	0.90	-1.62	0.08	-----	Vehicle	-2.23	-0.81	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2033.17**	**3388.62**	**209.31**	**348.85**
	U_{14} - L_{13}	-0.88	-1.51	0.09	0.09	-0.52	-0.52					1.18	0.90	-0.88	0.09	-----	Vehicle	-1.51	-0.56	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1800.02**	**3000.03**	**303.74**	**506.24**
	U_{14} - L_{15}	-0.27	-0.82	0.06	0.06	-0.41	-0.41					1.17	0.90	-0.27	0.07	-----	Vehicle	-0.82	-0.43	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2173.39**	**3622.31**	**331.64**	**552.73**
	U_{15} - L_{16}	-0.82	-1.35	0.08	0.08	-0.62	-0.62					1.17	0.90	-0.82	0.09	-----	Vehicle	-1.35	-0.65	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1673.65**	**2789.42**	**219.35**	**365.59**
	U_{16} - L_{17}	-0.97	-1.52	0.06	0.06	-0.67	-0.67					1.17	0.90	-0.97	0.07	-----	Vehicle	-1.52	-0.70	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2336.14**	**3893.56**	**218.85**	**364.75**
	U_{17} - L_{18}	-1.04	-1.53	0.07	0.07	-0.68	-0.68					1.17	0.90	-1.04	0.08	-----	Vehicle	-1.53	-0.71	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1907.85**	**3179.76**	**201.03**	**335.05**
	U_{18} - L_{19}	-0.98	-1.46	0.09	0.09	-0.66	-0.66					1.17	0.90	-0.98	0.09	-----	Vehicle	-1.46	-0.69	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1596.85**	**2661.41**	**206.59**	**344.32**
	U_{19} - L_{20}	-0.28	-1.03	0.09	0.09	-0.48	-0.48					1.17	0.90	-0.28	0.09	-----	Vehicle	-1.03	-0.50	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1168.73**	**1947.88**	**206.27**	**343.78**
	U_{20} - L_{21}	-0.23	-0.57	0.11	0.11	-0.34	-0.34					1.17	0.90	-0.23	0.12	-----	Vehicle	-0.57	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**986.62**	**1644.37**	**320.69**	**534.49**
	U_{21} - L_{22}	0.04	-0.30	0.15	0.15	-0.20	-0.20					1.17	0.90	0.04	0.16	-----	Vehicle	-0.30	-0.21	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**703.75**	**1172.92**	**535.78**	**892.96**
	U_{23} - L_{22}	0.07	-0.27	0.19	0.19	-0.18	-0.18					1.17	0.90	0.07	0.20	-----	Vehicle	-0.27	-0.19	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**561.45**	**935.74**	**588.27**	**980.45**
	U_{24} - L_{23}	-0.17	-0.52	0.14	0.14	-0.31	-0.31					1.17	0.90	-0.17	0.14	-----	Vehicle	-0.52	-0.32	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**791.94**	**1319.89**	**353.27**	**588.79**
	U_{25} - L_{24}	-0.29	-1.06	0.10	0.10	-0.45	-0.45					1.17	0.90	-0.29	0.11	-----	Vehicle	-1.06	-0.48	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**983.66**	**1639.44**	**217.61**	**362.68**
	U_{26} - L_{25}	-0.69	-1.19	0.11	0.11	-0.67	-0.67					1.17	0.90	-0.69	0.11	-----	Vehicle	-1.19	-0.71	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1258.40**	**2097.34**	**201.92**	**336.54**
	U_{27} - L_{26}	-0.78	-1.29	0.09	0.09	-0.67	-0.67					1.17	0.90	-0.78	0.09	-----	Vehicle	-1.29	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1541.76**	**2569.60**	**204.57**	**340.95**
	U_{28} - L_{27}	-0.72	-1.28	0.08	0.08	-0.72	-0.72					1.17	0.90	-0.72	0.08	-----	Vehicle	-1.28	-0.76	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1960.40**	**3267.34**	**202.91**	**338.18**
	U_{29} - L_{28}	-0.68	-1.22	0.05	0.05	-0.69	-0.69					1.17	0.90	-0.68	0.05	-----	Vehicle	-1.22	-0.72	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2857.42**	**4762.37**	**197.78**	**329.64**
	U_{30} - L_{29}	-0.22	-0.79	0.05	0.05	-0.43	-0.43					1.17	0.90	-0.22	0.05	-----	Vehicle	-0.79	-0.45	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3042.19**	**5070.31**	**315.56**	**525.94**
	U_{30} - L_{31}	-0.49	-1.12	0.09	0.09	-0.44	-0.44					1.18	0.90	-0.49	0.09	-----	Vehicle	-1.12	-0.47	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1838.85**	**3064.75**	**359.90**	**599.83**
	U_{31} - L_{32}	-1.09	-1.69	0.11	0.11	-0.65	-0.65					1.18	0.90	-1.09	0.12	-----	Vehicle	-1.69	-0.69	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1470.85**	**2451.41**	**244.99**	**408.31**
	U_{32} - L_{33}	-1.17	-1.76	0.08	0.08	-0.68	-0.68					1.18	0.90	-1.17	0.08	-----	Vehicle	-1.76	-0.73	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2271.38**	**3785.63**	**254.40**	**424.00**
	U_{33} - L_{34}	-1.34	-1.87	0.06	0.06	-0.71	-0.71					1.18	0.90	-1.34	0.07	-----	Vehicle	-1.87	-0.76	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2822.42**	**4704.03**	**243.23**	**405.38**
	U_{34} - L_{35}	-1.13	-1.62	0.05	0.05	-0.69	-0.69					1.18	0.90	-1.13	0.05	-----	Vehicle	-1.62	-0.73	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3272.32**	**5453.87**	**231.82**	**386.36**
	U_{35} - L_{36}	-1.11	-1.61	0.10	0.10	-0.72	-0.72					1.18	0.90	-1.11	0.10	-----	Vehicle	-1.61	-0.76	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1515.73**	**2526.21**	**200.53**	**334.22**
	U_{36} - L_{37}	-0.27	-1.04	0.11	0.11	-0.37	-0.37					1.18	0.90	-0.27	0.11	-----	Vehicle	-1.04	-0.39	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**934.87**	**1558.12**	**264.01**	**440.02**
	U_{38} - L_{37}	0.40	0.00	0.25	0.25	-0.11	-0.11					1.18	0.90	0.40	0.27	-----	Vehicle	0.00	-0.12	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**469.57**	**782.61**	**1069.28**	**1782.13**
	U_{39} - L_{38}	0.27	-0.08	0.24	0.24	-0.22	-0.22					1.18	0.90	0.27	0.26	-----	Vehicle	-0.08	-0.23	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**443.82**	**739.71**	**493.41**	**822.35**
	U_{40} - L_{39}	0.01	-0.35	0.12	0.12	-0.29	-0.29					1.18	0.90	0.01	0.13	-----	Vehicle	-0.35	-0.31	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**885.22**	**1475.36**	**363.67**	**606.11**
	U_{41} - L_{40}	-0.30	-0.73	0.09	0.09	-0.45	-0.45					1.18	0.90	-0.30	0.10	-----	Vehicle	-0.73	-0.48	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1559.05**	**2598.41**	**316.05**	**526.74**
	U_{42} - L_{41}	-0.81	-1.29	0.12	0.12	-0.76	-0.76					1.18	0.90	-0.81	0.13	-----	Vehicle	-1.29	-0.80	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1102.49**	**1837.48**	**178.05**	**296.74**
	U_{43} - L_{42}	-0.95	-1.50	0.11	0.11	-0.84	-0.84					1.18	0.90	-0.95	0.12	-----	Vehicle	-1.50	-0.89	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1418.05**	**2363.42**	**189.80**	**316.33**
	U_{44} - L_{43}	-1.00	-1.57	0.05	0.05	-0.61	-0.61					1.18	0.90	-1.00	0.06	-----	Vehicle	-1.57	-0.65	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3023.97**	**5039.96**	**260.79**	**434.65**
Structure 3	U_0 - L_1	-1.06	-1.63	0.04	0.04	-0.70	-0.70					1.20	0.90	-1.06	0.04	-----	Vehicle	-1.63	-0.75	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3504.00**	**5840.00**	**203.96**	**339.94**
	U_1 - L_2	-1.16	-1.67	0.06	0.06	-0.67	-0.67					1.20	0.90	-1.16	0.06	-----	Vehicle	-1.67	-0.72	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2435.89**	**4059.81**	**213.42**	**355.71**
	U_2 - L_3	-1.32	-1.78	0.08	0.08	-0.75	-0.75					1.20	0.90	-1.32	0.09	-----	Vehicle	-1.78	-0.81	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1636.51**	**2727.52**	**176.86**	**294.77**
	U_3 - L_4	-0.36	-0.74	0.06	0.06	-0.43	-0.43					1.20	0.90	-0.36	0.07	-----	Vehicle	-0.74	-0.46	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2045.91**	**3409.84**	**297.64**	**496.07**
	U_4 - L_5	-0.13	-0.47	0.11	0.11	-0.33	-0.33					1.20	0.90	-0.13	0.12	-----	Vehicle	-0.47	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**989.23**	**1648.71**	**321.68**	**536.13**
	U_5 - L_6	0.35	0.02	0.18	0.18	-0.18	-0.18					1.20	0.90	0.35	0.19	-----	Vehicle	0.02	-0.19	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**586.56**	**977.60**	**590.99**	**984.98**
	U_7 - L_6	-0.07	-0.41	0.14	0.14	-0.17	-0.17					1.20	0.90	-0.07	0.15	-----	Vehicle	-0.41	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**772.37**	**1287.28**	**624.52**	**1040.87**
	U_8 - L_7	-0.58	-1.31	0.09	0.09	-0.44	-0.44					1.20	0.90	-0.58	0.10	-----	Vehicle	-1.31	-0.47	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1278.06**	**2130.09**	**259.03**	**431.72**
	U_8 - L_8	-0.75	-1.24	0.07	0.07	-0.53	-0.53					1.20	0.90	-0.75	0.07	-----	Vehicle	-1.24	-0.57	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2432.64**	**4054.40**	**295.70**	**492.83**
	U_{10} - L_9	-0.89	-1.77	0.03	0.03	-0.54	-0.54					1.20	0.90	-0.89	0.03	-----	Vehicle	-1.77	-0.58	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**4949.34**	**8248.90**	**244.27**	**407.12**
	U_{11} - L_{10}	-1.27	-2.15	0.02	0.02	-0.77	-0.77					1.20	0.90	-1.27	0.02	-----	Vehicle	-2.15	-0.83	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**8796.20**	**14660.33**	**215.42**	**359.04**
	U_{12} - L_{11}	-0.73	-1.69	0.09	0.09	-0.54	-0.54					1.20	0.90	-0.73	0.10	-----	Vehicle	-1.69	-0.59	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**1813.39**	**3022.31**	**304.76**	**507.93**
	U_{12} - L_{13}	-0.33	-0.81	0.05	0.05	-0.51	-0.51					1.24	0.90	-0.33	0.05

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Center Truss - Upper Chord	Structure 1	U_0 - U_1	4.56	-6.52	3.43	3.43	-1.84	-1.84					1.24	0.75	4.56	3.19	-----	Vehicle	-6.52	-1.71	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**28.26**	**47.09**	**51.93**	**86.55**
		U_1 - U_2	3.38	-4.04	2.44	2.44	-0.55	-0.55					1.24	0.75	3.38	2.26	-----	Vehicle	-4.04	-0.51	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**40.13**	**66.88**	**178.65**	**297.75**
		U_2 - U_3	2.36	-7.47	2.46	2.46	-1.13	-1.13					1.24	0.75	2.36	2.28	-----	Vehicle	-7.47	-1.05	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**40.02**	**66.70**	**83.98**	**139.96**
		U_3 - U_4	2.44	-4.45	1.99	1.99	-1.61	-1.61					1.24	0.75	2.44	1.84	-----	Vehicle	-4.45	-1.50	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**49.57**	**82.62**	**60.24**	**100.40**
		U_4 - U_5	2.34	-4.17	1.43	1.43	-2.13	-2.13					1.24	0.75	2.34	1.32	-----	Vehicle	-4.17	-1.97	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**69.05**	**115.09**	**45.71**	**76.19**
		U_5 - U_6	4.24	-6.30	0.73	0.73	-2.20	-2.20					1.24	0.75	4.24	0.68	-----	Vehicle	-6.30	-2.04	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**133.38**	**222.31**	**43.59**	**72.65**
		U_6 - U_7	6.32	-5.06	1.55	1.55	-1.37	-1.37					1.24	0.75	6.32	1.43	-----	Vehicle	-5.06	-1.27	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**126.69**	**211.16**	**144.09**	**240.15**
		U_7 - U_8	-0.91	-13.50	0.02	0.02	-5.63	-5.63					1.24	0.75	-0.91	0.02	-----	Vehicle	-13.50	-5.23	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**12723.75**	**21206.25**	**45.78**	**76.30**
		U_8 - U_9	14.68	2.06	4.90	4.90	-0.17	-0.17					1.20	0.75	14.68	4.40	-----	Vehicle	2.06	-0.15	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**22.59**	**37.65**	**729.43**	**1215.71**
		U_9 - U_{10}	6.72	-5.99	1.87	1.87	-0.51	-0.51					1.20	0.75	6.72	1.68	-----	Vehicle	-5.99	-0.46	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**52.72**	**87.87**	**194.58**	**324.30**
		U_{10} - U_{11}	8.58	-2.74	2.98	2.98	-0.25	-0.25					1.20	0.75	8.58	2.68	-----	Vehicle	-2.74	-0.22	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**32.69**	**54.48**	**410.54**	**684.23**
		U_{11} - U_{12}	6.93	-2.59	2.62	2.62	-0.76	-0.76					1.20	0.75	6.93	2.36	-----	Vehicle	-2.59	-0.68	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**50.69**	**84.49**	**179.55**	**299.24**
		U_{12} - U_{13}	8.34	-7.12	2.93	2.93	-0.99	-0.99					1.20	0.75	8.34	2.64	-----	Vehicle	-7.12	-0.89	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**123.39**	**205.65**	**364.90**	**608.17**
		U_{13} - U_{14}	6.26	-2.33	3.84	3.84	-1.08	-1.08					1.20	0.75	6.26	3.45	-----	Vehicle	-2.33	-0.97	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**110.84**	**184.73**	**398.68**	**664.47**
		U_{14} - U_{15}	3.31	-4.79	2.64	2.64	-2.26	-2.26					1.20	0.75	3.31	2.37	-----	Vehicle	-4.79	-2.03	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**162.09**	**270.16**	**189.33**	**315.55**
		U_{15} - U_{16}	9.98	-5.04	2.96	2.96	-2.32	-2.32					1.20	0.75	9.98	2.66	-----	Vehicle	-5.04	-2.08	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**143.02**	**238.36**	**184.19**	**306.99**
		U_{16} - U_{17}	2.83	-6.01	1.91	1.91	-2.81	-2.81					1.20	0.75	2.83	1.71	-----	Vehicle	-6.01	-2.52	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**224.68**	**374.47**	**151.86**	**253.11**
		U_{17} - U_{18}	6.87	-9.04	1.01	1.01	-2.70	-2.70					1.20	0.75	6.87	0.91	-----	Vehicle	-9.04	-2.42	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**308.17**	**513.62**	**114.87**	**191.45**
		U_{18} - U_{19}	2.90	-6.82	0.62	0.62	-2.23	-2.23					1.20	0.75	2.90	0.55	-----	Vehicle	-6.82	-2.00	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**192.68**	**321.14**	**52.04**	**86.73**
		U_{19} - U_{20}	1.99	-7.35	2.12	2.12	-2.67	-2.67					1.20	0.75	1.99	1.91	-----	Vehicle	-7.35	-2.40	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**56.13**	**93.55**	**43.20**	**72.01**
	Structure 2	U_0 - U_1	12.40	-3.78	3.40	3.40	-1.91	-1.91					1.18	0.75	12.40	3.01	-----	Vehicle	-3.78	-1.69	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**34.92**	**58.20**	**65.26**	**108.77**
		U_1 - U_2	8.38	-5.46	2.87	2.87	-0.29	-0.29					1.18	0.75	8.38	2.55	-----	Vehicle	-5.46	-0.25	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**86.43**	**144.05**	**874.81**	**1458.02**
		U_2 - U_3	8.24	-2.95	4.61	4.61	-0.54	-0.54					1.18	0.75	8.24	4.09	-----	Vehicle	-2.95	-0.48	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**40.13**	**66.88**	**350.23**	**583.71**
		U_3 - U_4	7.92	-7.97	3.68	3.68	-1.42	-1.42					1.18	0.75	7.92	3.26	-----	Vehicle	-7.97	-1.26	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**113.65**	**189.42**	**295.03**	**491.72**
		U_4 - U_5	5.54	-4.79	4.79	4.79	-1.63	-1.63					1.18	0.75	5.54	4.25	-----	Vehicle	-4.79	-1.44	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**105.23**	**175.38**	**310.10**	**516.84**
		U_5 - U_6	2.70	-7.57	2.74	2.74	-3.86	-3.86					1.18	0.75	2.70	2.43	-----	Vehicle	-7.57	-3.42	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**184.38**	**307.31**	**130.22**	**217.04**
		U_6 - U_7	5.85	-9.91	5.21	5.21	-1.04	-1.04					1.18	0.75	5.85	4.62	-----	Vehicle	-9.91	-0.92	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**80.52**	**134.20**	**399.66**	**666.10**
		U_7 - U_8	8.61	-6.86	2.05	2.05	-5.11	-5.11					1.18	0.75	8.61	1.82	-----	Vehicle	-6.86	-4.53	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**203.57**	**339.29**	**81.96**	**136.61**
		U_8 - U_9	3.73	-10.69	2.57	2.57	-2.49	-2.49					1.18	0.75	3.73	2.28	-----	Vehicle	-10.69	-2.21	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**139.24**	**232.07**	**141.77**	**236.29**
		U_9 - U_{10}	2.20	-9.32	1.41	1.41	-2.92	-2.92					1.18	0.75	2.20	1.25	-----	Vehicle	-9.32	-2.59	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**104.20**	**173.67**	**48.60**	**80.99**
		U_{10} - U_{11}	4.11	-10.14	1.46	1.46	-2.29	-2.29					1.18	0.75	4.11	1.30	-----	Vehicle	-10.14	-2.03	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**99.40**	**165.67**	**61.60**	**102.66**
		U_{11} - U_{12}	3.90	-11.48	1.07	1.07	-2.78	-2.78					1.18	0.75	3.90	0.95	-----	Vehicle	-11.48	-2.47	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**135.95**	**226.59**	**50.45**	**84.08**
		U_{12} - U_{13}	9.71	-7.93	2.68	2.68	-1.37	-1.37					1.18	0.75	9.71	2.38	-----	Vehicle	-7.93	-1.21	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**115.84**	**193.06**	**228.24**	**380.39**
		U_{13} - U_{14}	-10.77	-26.35	0.32	0.32	-7.33	-7.33					1.18	0.75	-10.77	0.28	-----	Vehicle	-26.35	-6.50	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1406.82**	**2344.70**	**58.21**	**97.01**
		U_{14} - U_{15}	23.41	7.84	8.38	8.38	-0.50	-0.50					1.17	0.75	23.41	7.35	-----	Vehicle	7.84	-0.44	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**51.76**	**86.26**	**906.36**	**1510.59**
		U_{15} - U_{16}	7.06	-9.43	2.66	2.66	-1.74	-1.74					1.17	0.75	7.06	2.33	-----	Vehicle	-9.43	-1.52	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**135.17**	**225.29**	**205.83**	**343.05**
		U_{16} - U_{17}	8.63	-3.17	3.61	3.61	-0.40	-0.40					1.17	0.75	8.63	3.16	-----	Vehicle	-3.17	-0.35	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**51.79**	**86.31**	**481.14**	**801.90**
		U_{17} - U_{18}	8.38	-5.41	3.16	3.16	-0.81	-0.81					1.17	0.75	8.38	2.77	-----	Vehicle	-5.41	-0.71	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**38.88**	**64.79**	**154.60**	**257.66**
		U_{18} - U_{19}	8.11	-4.42	3.51	3.51	-0.67	-0.67					1.17	0.75	8.11	3.08	-----	Vehicle	-4.42	-0.59	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**34.99**	**58.32**	**186.11**	**310.19**
		U_{19} - U_{20}	5.79	-4.35	2.57	2.57	-1.05	-1.05					1.17	0.75	5.79	2.25	-----	Vehicle	-4.35	-0.92	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**56.82**	**94.70**	**139.90**	**233.17**
		U_{20} - U_{21}	6.65	-6.59	3.53	3.53	-1.34	-1.34					1.17	0.75	6.65	3.09	-----	Vehicle	-6.59	-1.18	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**77.61**	**129.34**	**203.74**	**339.57**
		U_{21} - U_{22}	6.33	-6.69	3.26	3.26	-1.22	-1.22					1.17	0.75	6.33	2.85	-----	Vehicle	-6.69	-1.07	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**84.18**	**140.30**	**225.14**	**375.23**
		U_{22} - U_{23}	6.91	-6.27	2.64	2.64	-2.63	-2.63					1.17	0.75	6.91	2.31	-----	Vehicle	-6.27	-2.31	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**103.76**	**172.93**	**104.16**	**173.60**
		U_{23} - U_{24}	7.16	-6.08	2.78	2.78	-2.58	-2.58					1.17	0.75	7.16	2.44	-----	Vehicle	-6.08	-2.26	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**98.25**	**163.76**	**106.44**	**177.39**
		U_{24} - U_{25}	4.32	-5.83	1.98	1.98	-1.94	-1.94					1.17	0.75	4.32	1.73	-----	Vehicle	-5.83	-1.70	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**74.39**	**123.99**	**75.35**	**125.59**
		U_{25} - U_{26}	4.60	-7.93	1.40	1.40	-2.94	-2.94					1.17	0.75	4.60	1.23	-----	Vehicle	-7.93	-2.58	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**89.51**	**149.19**	**41.79**	**69.66**
		U_{26} - U_{27}	5.15	-8.64	1.82	1.82	-2.45	-2.45					1.17	0.75	5.15	1.59	-----	Vehicle	-8.64	-2.15	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**68.72**	**114.54**	**49.94**	**83.24**
		U_{27} - U_{28}	3.24	-8.55	1.41	1.41	-2.79	-2.79					1.17	0.75	3.24	1.24	-----	Vehicle	-8.55	-2.45	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**134.81**	**224.68**	**66.99**	**111.66**
		U_{28} - U_{29}	8.81	-7.68	2.71	2.71	-1.74	-1.74					1.17	0.75	8.81	2.38	-----	Vehicle	-7.68	-1.52	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**131.94**	**219.90**	**206.28**	**343.81**
		U_{29} - U_{30}	-7.76	-23.33	0.23	0.23	-7.84	-7.84					1.17	0.75	-7.76	0.20	-----	Vehicle	-23.33	-6.88	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1952.51**	**3254.18**	**55.29**	**92.14**
		U_{30} - U_{31}	24.20	8.63	7.66	7.66	-0.54	-0.54					1.18	0.75	24.20	6.80	-----	Vehicle	8.63	-0.48	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**55.85**	**93.09**	**828.99**	**1381.65**
		U_{31} - U_{32}	7.18	-10.46	2.10	2.10	-1.98	-1.98					1.18	0.75	7.18	1.86	-----	Vehicle	-10.46	-1.75	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**148.88**	**248.14**	**157.11**	**261.85**
		U_{32} - U_{33}	10.91	-4.46	3.53	3.53	-0.14	-0.14					1.18	0.75	10.91	3.13	-----	Vehicle	-4.46	-0.12	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**39.84**	**66.40**	**1059.01**	**1765.01**
		U_{33} - U_{34}	9.22	-5.03	2.85	2.85	-0.70	-0.70					1.18	0.75	9.22	2.53	-----	Vehicle	-5.03	-0.62	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**49.73**	**82.88**	**206.12**	**343.54**
		U_{34} - U_{35}	9.09	-2.43	3.66	3.66	-0.69	-0.69					1.18	0.75	9.09	3.25	-----	Vehicle	-2.43	-0.61	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**38.74**	**64.57**	**213.50**	**355.83**
		U_{35} - U_{36}	10.27	-4.15	3.12	3.12	-1.26	-1.26					1.18	0.75	10.27	2.76	-----	Vehicle	-4.15	-1.12	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**113.20**	**188.67**	**283.68**	**472.80**
		U_{36} - U_{37}	6.69	-8.78	5.48	5.48	-0.76	-0.76					1.18	0.75	6.69	4.86	-----	Vehicle	-8.78	-0.67	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**76.43**	**127.39**	**549.68**	**916.14**
		U_{37} - U_{38}	10.53	-5.24	3.01	3.01	-4.23	-4.23					1.18	0.75	10.53	2.67	-----	Vehicle	-5.24	-3.76	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**138.26**	**230.44**	**99.13**	**165.21**
		U_{38} - U_{39}	8.00	-2.27	5.29	5.29	-1.36	-1.36					1.18	0.75	8.00	4.69	-----	Vehicle	-2.27	-1.20	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**94.97**	**158.28**	**373.61**	**622.68**
		U_{39} - U_{40}	5.61	-4.72	3.47	3.47	-3.48	-3.48					1.18	0.75	5.61	3.08	-----	Vehicle	-4.72	-3.09	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**145.28**	**242.14**	**144.83**	**241.38**
		U_{40} - U_{41}	7.75	-8.14	2.75	2.75	-3.10	-3.10					1.18	0.75	7.75	2.44	-----	Vehicle	-8.14	-2.75	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**151.80**	**253.00**	**134.72**	**224.54**
		U_{41} - U_{42}	3.50	-7.70	1.52	1.52	-3.97	-3.97					1.18	0.75	3.50	1.35	-----	Vehicle	-7.70	-3.52	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**123.80**	**206.33**	**46.68**	**77.79**
		U_{42} - U_{43}	4.07	-9.77	0.80	0.80	-2.38	-2.38					1.18	0.75	4.07	0.71	-----	Vehicle	-9.77	-2.11	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**313.14**	**521.90**	**104.07**	**173.46**
		U_{43} - U_{44}	6.60	-9.58	2.68	2.68	-3.19	-3.19					1.18	0.75	6.60	2.38	-----	Vehicle	-9.58	-2.83	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**45.74**	**76.23**	**37.73**	**62.88**
	Structure 3	U_0 - U_1	8.84	-0.50	3.28	3.28	-1.93	-1.93					1.20	0.75	8.84	2.95	-----	Vehicle	-0.50	-1.73	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**34.92**	**58.20**	**62.39**	**103.98**
		U_1 - U_2	5.80	-3.92	2.38	2.38	-0.15	-0.15					1.20	0.75	5.80	2.14	-----	Vehicle	-3.92	-0.14	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**49.04**	**81.73**	**780.28**	**1300.47**
		U_2 - U_3	8.91	-7.00	3.22	3.22	-0.43	-0.43					1.20	0.75	8.91	2.89	-----	Vehicle	-7.00	-0.38	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**96.39**	**160.65**	**732.16**	**1220.27**
		U_3 - U_4	5.49	-3.35	3.22	3.22	-0.67	-0.67					1.20	0.75	5.49	2.90	-----	Vehicle	-3.35	-0.60	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**132.32**	**220.54**	**641.54**	**1069.23**
		U_4 - U_5	5.50	-9.53	3.08	3.08	-1.66	-1.66					1.20	0.75	5.50	2.77	-----	Vehicle	-9.53	-1.49	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**138.51**	**230.85**	**255.29**	**425.48**
		U_5 - U_6	4.95	-3.15	3.18	3.18	-1.05	-1.05					1.20	0.75	4.95	2.85	-----	Vehicle	-3.15	-0.94	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**134.39**	**223.99**	**408.82**	**681.37**
		U_6 - U_7	2.39	-6.20	2.71	2.71	-3.09	-3.09					1.20	0.75	2.39	2.43	-----	Vehicle	-6.20	-2.77	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**158.43**	**264.04**	**137.95**	**229.92**
		U_7 - U_8	7.38	-8.07	1.68	1.68	-2.30	-2.30					1.20	0.75	7.38	1.51	-----	Vehicle	-8.07	-2.07	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**215.41**	**359.01**	**157.15**	**261.92**
		U_8 - U_9	2.59	-6.93	1.38	1.38	-2.13	-2.13					1.20	0.75	2.59	1.24	-----	Vehicle	-6.93	-1.92	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**98.85**	**164.75**	**62.39**	**103.99**
		U_9 - U_{10}	2.81	-8.52	0.72	0.72	-2.46	-2.46					1.20	0.75	2.81	0.64	-----	Vehicle	-8.52	-2.21	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**141.76**	**236.27**	**39.59**	**65.98**
		U_{10} - U_{11}	5.83	-6.88	0.94	0.94	-1.59	-1.59					1.20	0.75	5.83	0.84	-----	Vehicle	-6.88	-1.42	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**106.14**	**176.89**	**62.23**	**103.72**
		U_{11} - U_{12}	-2.18	-14.80	0.05	0.05	-4.55	-4.55					1.20	0.75	-2.18	0.05	-----	Vehicle	-14.80	-4.08	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**2299.90**	**3833.17**	**24.32**	**40.54**
		U_{12} - U_{13}	12.98	0.39	5.93	5.93	-0.02	-0.02					1.24	0.75	12.98	5.50	-----	Vehicle	0.39	-0.02	-----	Vehicle	14.00	1.00	2	7.00	5	73.

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Center Truss - Lower Chord																																			
Structure 1	L_0 - L_1	4.20	-2.36	2.39	2.39	-0.30	-0.30					1.24	0.75	4.20	2.21	-----	Vehicle	-2.36	-0.28	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**46.73**	**77.88**	**379.57**	**632.62**
	L_1 - L_2	5.75	-2.53	2.29	2.29	-0.86	-0.86					1.24	0.75	5.75	2.13	-----	Vehicle	-2.53	-0.80	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**48.19**	**80.31**	**130.66**	**217.76**
	L_2 - L_3	2.73	-3.85	2.11	2.11	-0.97	-0.97					1.24	0.75	2.73	1.96	-----	Vehicle	-3.85	-0.90	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**82.91**	**138.18**	**178.69**	**297.82**
	L_3 - L_4	3.90	-4.48	2.17	2.17	-1.68	-1.68					1.24	0.75	3.90	2.01	-----	Vehicle	-4.48	-1.55	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**80.15**	**133.59**	**103.60**	**172.67**
	L_4 - L_5	1.53	-7.85	0.77	0.77	-2.62	-2.62					1.24	0.75	1.53	0.71	-----	Vehicle	-7.85	-2.43	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**192.88**	**321.47**	**54.82**	**91.37**
	L_5 - L_6	1.34	-7.19	0.57	0.57	-1.89	-1.89					1.24	0.75	1.34	0.53	-----	Vehicle	-7.19	-1.75	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**383.69**	**639.49**	**114.22**	**190.37**
	L_6 - L_7	3.62	-6.82	0.89	0.89	-2.03	-2.03					1.24	0.75	3.62	0.82	-----	Vehicle	-6.82	-1.88	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**388.09**	**646.82**	**169.10**	**281.84**
	L_7 - L_8	-6.36	-14.66	0.06	0.06	-5.47	-5.47					1.24	0.75	-6.36	0.05	-----	Vehicle	-14.66	-5.08	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**8170.66**	**13617.77**	**82.60**	**137.66**
	L_8 - L_9	15.52	7.55	5.04	5.04	-0.14	-0.14					1.20	0.75	15.52	4.52	-----	Vehicle	7.55	-0.12	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**92.61**	**154.35**	**3515.96**	**5859.93**
	L_9 - L_{10}	10.29	-2.64	2.05	2.05	-0.97	-0.97					1.20	0.75	10.29	1.85	-----	Vehicle	-2.64	-0.87	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**171.27**	**285.45**	**367.94**	**613.23**
	L_{10} - L_{11}	8.89	0.36	2.35	2.35	-0.33	-0.33					1.20	0.75	8.89	2.12	-----	Vehicle	0.36	-0.30	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**62.63**	**104.39**	**464.10**	**773.50**
	L_{11} - L_{12}	11.21	-1.42	2.03	2.03	-0.56	-0.56					1.20	0.75	11.21	1.82	-----	Vehicle	-1.42	-0.50	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**72.01**	**120.02**	**272.19**	**453.64**
	L_{12} - L_{13}	6.02	-3.53	2.03	2.03	-0.68	-0.68					1.20	0.75	6.02	1.83	-----	Vehicle	-3.53	-0.61	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**145.93**	**243.22**	**440.91**	**734.85**
	L_{13} - L_{14}	11.62	0.44	4.07	4.07	-1.00	-1.00					1.20	0.75	11.62	3.66	-----	Vehicle	0.44	-0.89	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**103.72**	**172.86**	**432.35**	**720.58**
	L_{14} - L_{15}	2.83	-9.85	1.66	1.66	-2.73	-2.73					1.20	0.75	2.83	1.49	-----	Vehicle	-9.85	-2.45	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**320.41**	**534.02**	**193.02**	**321.70**
	L_{15} - L_{16}	6.71	-2.72	1.87	1.87	-2.01	-2.01					1.20	0.75	6.71	1.68	-----	Vehicle	-2.72	-1.80	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**283.00**	**471.67**	**264.86**	**441.44**
	L_{16} - L_{17}	-0.07	-11.08	0.48	0.48	-2.70	-2.70					1.20	0.75	-0.07	0.43	-----	Vehicle	-11.08	-2.43	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**818.56**	**1364.27**	**143.27**	**238.78**
	L_{17} - L_{18}	3.82	-7.83	0.33	0.33	-2.10	-2.10					1.20	0.75	3.82	0.29	-----	Vehicle	-7.83	-1.89	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**801.55**	**1335.92**	**123.80**	**206.33**
	L_{18} - L_{19}	1.59	-10.77	0.16	0.16	-1.87	-1.87					1.20	0.75	1.59	0.14	-----	Vehicle	-10.77	-1.68	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**739.98**	**1233.31**	**59.37**	**98.96**
	L_{19} - L_{20}	2.58	-7.20	0.08	0.08	-1.94	-1.94					1.20	0.75	2.58	0.07	-----	Vehicle	-7.20	-1.74	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1435.30**	**2392.16**	**58.28**	**97.13**
Structure 2	L_0 - L_1	7.47	-2.52	2.24	2.24	-0.27	-0.27					1.18	0.75	7.47	1.99	-----	Vehicle	-2.52	-0.24	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**69.72**	**116.20**	**599.97**	**999.95**
	L_1 - L_2	11.63	-2.16	2.22	2.22	-0.28	-0.28					1.18	0.75	11.63	1.97	-----	Vehicle	-2.16	-0.24	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**69.27**	**115.45**	**579.10**	**965.17**
	L_2 - L_3	8.06	-2.93	2.70	2.70	-0.39	-0.39					1.18	0.75	8.06	2.39	-----	Vehicle	-2.93	-0.34	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**107.54**	**179.24**	**757.02**	**1261.70**
	L_3 - L_4	12.24	-1.94	2.68	2.68	-0.47	-0.47					1.18	0.75	12.24	2.38	-----	Vehicle	-1.94	-0.42	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**155.78**	**259.63**	**906.33**	**1510.55**
	L_4 - L_5	9.46	-8.43	2.94	2.94	-1.71	-1.71					1.18	0.75	9.46	2.61	-----	Vehicle	-8.43	-1.52	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**188.51**	**314.18**	**323.42**	**539.04**
	L_5 - L_6	11.40	-2.08	2.77	2.77	-1.31	-1.31					1.18	0.75	11.40	2.46	-----	Vehicle	-2.08	-1.16	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**219.46**	**365.77**	**470.28**	**783.79**
	L_6 - L_7	4.02	-9.79	3.59	3.59	-2.71	-2.71					1.18	0.75	4.02	3.19	-----	Vehicle	-9.79	-2.40	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**173.55**	**289.25**	**228.63**	**381.06**
	L_7 - L_8	4.78	-10.27	1.23	1.23	-3.88	-3.88					1.18	0.75	4.78	1.09	-----	Vehicle	-10.27	-3.45	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**354.92**	**591.54**	**111.26**	**185.43**
	L_8 - L_9	0.58	-13.59	0.76	0.76	-2.35	-2.35					1.18	0.75	0.58	0.67	-----	Vehicle	-13.59	-2.08	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**454.23**	**757.06**	**142.82**	**238.03**
	L_9 - L_{10}	-0.11	-10.43	0.89	0.89	-2.33	-2.33					1.18	0.75	-0.11	0.79	-----	Vehicle	-10.43	-2.06	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**282.31**	**470.52**	**104.79**	**174.65**
	L_{10} - L_{11}	-0.07	-12.28	0.46	0.46	-2.22	-2.22					1.18	0.75	-0.07	0.41	-----	Vehicle	-12.28	-1.97	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**469.66**	**782.76**	**93.17**	**155.29**
	L_{11} - L_{12}	1.07	-14.66	0.53	0.53	-2.13	-2.13					1.18	0.75	1.07	0.47	-----	Vehicle	-14.66	-1.89	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**646.10**	**1076.83**	**157.74**	**262.90**
	L_{12} - L_{13}	6.89	-6.84	2.31	2.31	-1.74	-1.74					1.18	0.75	6.89	2.05	-----	Vehicle	-6.84	-1.54	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**217.34**	**362.24**	**288.64**	**481.07**
	L_{13} - L_{14}	-19.00	-32.90	0.39	0.39	-8.67	-8.67					1.18	0.75	-19.00	0.34	-----	Vehicle	-32.90	-7.70	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**1639.34**	**2732.23**	**68.72**	**114.54**
	L_{14} - L_{15}	32.02	18.24	8.16	8.16	-0.46	-0.46					1.17	0.75	32.02	7.16	-----	Vehicle	18.24	-0.40	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**73.97**	**123.28**	**1399.52**	**2332.53**
	L_{15} - L_{16}	2.21	-10.14	1.81	1.81	-2.25	-2.25					1.17	0.75	2.21	1.59	-----	Vehicle	-10.14	-1.97	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**282.07**	**470.12**	**224.53**	**374.21**
	L_{16} - L_{17}	13.39	-0.69	2.79	2.79	-0.40	-0.40					1.17	0.75	13.39	2.44	-----	Vehicle	-0.69	-0.35	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**142.10**	**236.83**	**1003.90**	**1673.17**
	L_{17} - L_{18}	9.56	-2.17	2.71	2.71	-0.53	-0.53					1.17	0.75	9.56	2.37	-----	Vehicle	-2.17	-0.46	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**91.45**	**152.41**	**478.07**	**796.79**
	L_{18} - L_{19}	8.70	-1.33	2.43	2.43	-0.86	-0.86					1.17	0.75	8.70	2.13	-----	Vehicle	-1.33	-0.75	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**72.07**	**120.11**	**211.05**	**351.76**
	L_{19} - L_{20}	9.27	-3.28	2.06	2.06	-0.58	-0.58					1.17	0.75	9.27	1.80	-----	Vehicle	-3.28	-0.51	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**85.17**	**141.95**	**306.71**	**511.19**
	L_{20} - L_{21}	7.20	-3.21	2.84	2.84	-1.08	-1.08					1.17	0.75	7.20	2.49	-----	Vehicle	-3.21	-0.95	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**102.22**	**170.36**	**270.10**	**450.17**
	L_{21} - L_{22}	8.50	-2.78	3.60	3.60	-1.58	-1.58					1.17	0.75	8.50	3.16	-----	Vehicle	-2.78	-1.38	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**80.20**	**133.67**	**185.44**	**309.07**
	L_{22} - L_{23}	2.93	-8.09	2.18	2.18	-2.84	-2.84					1.17	0.75	2.93	1.91	-----	Vehicle	-8.09	-2.49	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**134.15**	**223.58**	**101.79**	**169.65**
	L_{23} - L_{24}	3.61	-6.79	1.41	1.41	-2.58	-2.58					1.17	0.75	3.61	1.23	-----	Vehicle	-6.79	-2.26	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**207.71**	**346.18**	**112.39**	**187.31**
	L_{24} - L_{25}	3.13	-9.39	0.65	0.65	-1.87	-1.87					1.17	0.75	3.13	0.57	-----	Vehicle	-9.39	-1.64	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**277.86**	**463.10**	**93.70**	**156.17**
	L_{25} - L_{26}	1.67	-8.33	0.94	0.94	-2.12	-2.12					1.17	0.75	1.67	0.82	-----	Vehicle	-8.33	-1.86	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**192.34**	**320.57**	**83.02**	**138.36**
	L_{26} - L_{27}	1.60	-10.07	0.69	0.69	-2.53	-2.53					1.17	0.75	1.60	0.61	-----	Vehicle	-10.07	-2.22	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**364.28**	**607.14**	**97.67**	**162.79**
	L_{27} - L_{28}	0.95	-13.04	0.44	0.44	-2.67	-2.67					1.17	0.75	0.95	0.39	-----	Vehicle	-13.04	-2.34	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**919.08**	**1531.80**	**148.14**	**246.89**
	L_{28} - L_{29}	8.62	-3.57	2.26	2.26	-1.51	-1.51					1.17	0.75	8.62	1.98	-----	Vehicle	-3.57	-1.32	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**224.09**	**373.49**	**337.69**	**562.81**
	L_{29} - L_{30}	-17.40	-30.90	0.54	0.54	-9.04	-9.04					1.17	0.75	-17.40	0.47	-----	Vehicle	-30.90	-7.93	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**1180.76**	**1967.93**	**66.85**	**111.41**
	L_{30} - L_{31}	30.59	16.41	7.92	7.92	-0.59	-0.59					1.18	0.75	30.59	7.02	-----	Vehicle	16.41	-0.53	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**75.50**	**125.84**	**1061.37**	**1768.94**
	L_{31} - L_{32}	5.57	-8.34	1.82	1.82	-2.32	-2.32					1.18	0.75	5.57	1.61	-----	Vehicle	-8.34	-2.06	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**276.41**	**460.69**	**215.61**	**359.35**
	L_{32} - L_{33}	14.28	-1.54	2.46	2.46	-0.35	-0.35					1.18	0.75	14.28	2.18	-----	Vehicle	-1.54	-0.31	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**136.62**	**227.70**	**982.03**	**1636.72**
	L_{33} - L_{34}	11.19	-1.33	2.36	2.36	-0.40	-0.40					1.18	0.75	11.19	2.10	-----	Vehicle	-1.33	-0.35	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**87.85**	**146.41**	**539.45**	**899.09**
	L_{34} - L_{35}	10.35	-0.01	2.63	2.63	-0.77	-0.77					1.18	0.75	10.35	2.33	-----	Vehicle	-0.01	-0.68	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**92.85**	**154.74**	**327.97**	**546.61**
	L_{35} - L_{36}	12.98	-1.23	2.38	2.38	-0.60	-0.60					1.18	0.75	12.98	2.11	-----	Vehicle	-1.23	-0.54	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**141.07**	**235.12**	**569.51**	**949.18**
	L_{36} - L_{37}	10.09	-4.97	4.26	4.26	-0.89	-0.89					1.18	0.75	10.09	3.78	-----	Vehicle	-4.97	-0.79	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**49.92**	**83.20**	**241.81**	**403.02**
	L_{37} - L_{38}	10.82	-3.01	3.49	3.49	-2.62	-2.62					1.18	0.75	10.82	3.10	-----	Vehicle	-3.01	-2.32	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**177.15**	**295.26**	**238.52**	**397.53**
	L_{38} - L_{39}	2.38	-11.08	1.85	1.85	-2.41	-2.41					1.18	0.75	2.38	1.64	-----	Vehicle	-11.08	-2.14	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**332.67**	**554.45**	**252.31**	**420.51**
	L_{39} - L_{40}	9.28	-8.60	1.91	1.91	-2.48	-2.48					1.18	0.75	9.28	1.70	-----	Vehicle	-8.60	-2.20	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**289.48**	**482.47**	**223.93**	**373.22**
	L_{40} - L_{41}	1.61	-12.52	0.53	0.53	-2.66	-2.66					1.18	0.75	1.61	0.47	-----	Vehicle	-12.52	-2.36	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**808.55**	**1347.58**	**156.99**	**261.66**
	L_{41} - L_{42}	3.29	-7.64	0.50	0.50	-2.54	-2.54					1.18	0.75	3.29	0.44	-----	Vehicle	-7.64	-2.25	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**588.14**	**980.24**	**114.52**	**190.87**
	L_{42} - L_{43}	1.35	-12.36	0.36	0.36	-2.16	-2.16					1.18	0.75	1.35	0.32	-----	Vehicle	-12.36	-1.91	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**223.35**	**372.25**	**33.54**	**55.91**
	L_{43} - L_{44}	1.52	-8.38	0.19	0.19	-2.28	-2.28					1.18	0.75	1.52	0.17	-----	Vehicle	-8.38	-2.02	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**834.72**	**1391.20**	**68.38**	**113.96**
Structure 3	L_0 - L_1	6.56	-3.30	1.92	1.92	-0.12	-0.12					1.20	0.75	6.56	1.73	-----	Vehicle	-3.30	-0.11	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**59.05**	**98.41**	**941.30**	**1568.83**
	L_1 - L_2	10.13	-2.33	1.90	1.90	-0.16	-0.16					1.20	0.75	10.13	1.71	-----	Vehicle	-2.33	-0.14	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**58.57**	**97.61**	**751.11**	**1251.86**
	L_2 - L_3	7.92	-3.84	2.13	2.13	-0.21	-0.21					1.20	0.75	7.92	1.91	-----	Vehicle	-3.84	-0.19	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**122.20**	**203.67**	**1240.07**	**2066.78**
	L_3 - L_4	10.42	-0.67	2.57	2.57	-0.29	-0.29					1.20	0.75	10.42	2.31	-----	Vehicle	-0.67	-0.26	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**151.03**	**251.72**	**1358.81**	**2264.68**
	L_4 - L_5	3.19	-6.26	2.28	2.28	-1.62	-1.62					1.20	0.75	3.19	2.04	-----	Vehicle	-6.26	-1.46	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**233.41**	**389.01**	**325.91**	**543.18**
	L_5 - L_6	10.01	-2.69	3.32	3.32	-1.13	-1.13					1.20	0.75	10.01	2.98	-----	Vehicle	-2.69	-1.02	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**158.81**	**264.68**	**468.55**	**780.91**
	L_6 - L_7	-0.14	-11.31	1.55	1.55	-3.54	-3.54					1.20	0.75	-0.14	1.40	-----	Vehicle	-11.31	-3.18	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**276.87**	**461.46**	**119.24**	**198.73**
	L_7 - L_8	3.69	-5.85	0.80	0.80	-1.77	-1.77					1.20	0.75	3.69	0.72	-----	Vehicle	-5.85	-1.59	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**373.92**	**623.20**	**167.96**	**279.93**
	L_8 - L_9	1.43	-11.17	0.75	0.75	-1.73	-1.73					1.20	0.75	1.43	0.67	-----	Vehicle	-11.17	-1.56	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**204.32**	**340.53**	**84.30**	**140.49**
	L_9 - L_{10}	-0.27	-8.76	0.60	0.60	-2.03	-2.03					1.20	0.75	-0.27	0.54	-----	Vehicle	-8.76	-1.83	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**255.50**	**425.84**	**72.60**	**121.00**
	L_{10} - L_{11}	2.24	-10.60	0.94	0.94	-2.03	-2.03					1.20	0.75	2.24	0.85	-----	Vehicle	-10.60	-1.82	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**378.35**	**630.59**	**173.54**	**289.23**
	L_{11} - L_{12}	-7.73	-15.55	0.05	0.05	-5.23	-5.23					1.20	0.75	-7.73	0.05	-----	Vehicle	-15.55	-4.70	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**9265.45**	**15442.42**	**89.08**	**148.47**
	L_{12} - L_{13}	14.02	5.56	5.02	5.02	-0.03	-0.03					1.24	0.75	14.02	4.65	-----	Vehicle	5.56	-0.03	-----	Vehicle	15.00	1.62	2	4.64	5	73.

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD																														Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$				Maximum Positive Shear				Minimum Negative Shear														Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
Structure 1	U_0 - L_0	-1.75	-1.75	0.36	0.36	-2.52	-2.52					1.24	0.75	-1.75	0.33	-----	Vehicle	-1.75	-2.34	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**343.66**	**572.76**	**48.31**	**80.52**
	U_1 - L_1	-0.62	-0.62	0.35	0.35	-2.29	-2.29					1.24	0.75	-0.62	0.33	-----	Vehicle	-0.62	-2.12	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**350.36**	**583.94**	**53.62**	**89.37**
	U_2 - L_2	0.44	0.44	0.51	0.51	-1.91	-1.91					1.24	0.75	0.44	0.48	-----	Vehicle	0.44	-1.77	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**239.07**	**398.45**	**64.51**	**107.51**
	U_3 - L_3	1.39	1.39	1.12	1.12	-1.49	-1.49					1.24	0.75	1.39	1.04	-----	Vehicle	1.39	-1.39	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**108.66**	**181.10**	**82.94**	**138.23**
	U_4 - L_4	1.88	1.88	1.44	1.44	-0.75	-0.75					1.24	0.75	1.88	1.34	-----	Vehicle	1.88	-0.69	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**84.58**	**140.96**	**165.75**	**276.25**
	U_5 - L_5	2.05	2.05	1.72	1.72	-0.32	-0.32					1.24	0.75	2.05	1.60	-----	Vehicle	2.05	-0.30	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**86.14**	**143.56**	**468.60**	**781.00**
	U_6 - L_6	2.06	2.06	1.71	1.71	-0.17	-0.17					1.24	0.75	2.06	1.59	-----	Vehicle	2.06	-0.16	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**77.04**	**128.40**	**801.42**	**1335.71**
	U_7 - L_7	2.38	2.38	1.48	1.48	-0.01	-0.01					1.24	0.75	2.38	1.37	-----	Vehicle	2.38	-0.01	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**90.56**	**150.93**	**17115.91**	**28526.51**
	U_8 - L_8	-0.39	-0.39	1.45	1.45	-1.22	-1.22					1.24	0.75	-0.39	1.34	-----	Vehicle	-0.39	-1.13	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**164.86**	**274.77**	**194.83**	**324.72**
	U_9 - L_9	-4.56	-4.56	0.10	0.10	-1.91	-1.91					1.20	0.75	-4.56	0.09	-----	Vehicle	-4.56	-1.72	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1628.09**	**2713.48**	**82.01**	**136.69**
	U_{10} - L_{10}	-3.59	-3.59	0.12	0.12	-1.81	-1.81					1.20	0.75	-3.59	0.11	-----	Vehicle	-3.59	-1.62	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**2271.62**	**3786.04**	**144.35**	**240.59**
	U_{11} - L_{11}	-4.40	-4.40	0.26	0.26	-2.11	-2.11					1.20	0.75	-4.40	0.23	-----	Vehicle	-4.40	-1.89	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**739.18**	**1231.96**	**88.42**	**147.37**
	U_{12} - L_{12}	-3.21	-3.21	0.48	0.48	-1.83	-1.83					1.20	0.75	-3.21	0.43	-----	Vehicle	-3.21	-1.64	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**336.62**	**561.03**	**86.27**	**143.79**
	U_{13} - L_{13}	-1.86	-1.86	0.52	0.52	-1.47	-1.47					1.20	0.75	-1.86	0.46	-----	Vehicle	-1.86	-1.32	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**271.98**	**453.30**	**93.71**	**156.19**
	U_{14} - L_{14}	-0.98	-0.98	0.68	0.68	-1.06	-1.06					1.20	0.75	-0.98	0.61	-----	Vehicle	-0.98	-0.95	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**187.63**	**312.71**	**119.69**	**199.48**
	U_{15} - L_{15}	0.02	0.02	1.09	1.09	-0.76	-0.76					1.20	0.75	0.02	0.98	-----	Vehicle	0.02	-0.68	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**116.54**	**194.24**	**167.03**	**278.38**
	U_{16} - L_{16}	0.93	0.93	1.02	1.02	-0.47	-0.47					1.20	0.75	0.93	0.92	-----	Vehicle	0.93	-0.42	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**123.35**	**205.58**	**271.96**	**453.27**
	U_{17} - L_{17}	1.41	1.41	1.09	1.09	-0.15	-0.15					1.20	0.75	1.41	0.97	-----	Vehicle	1.41	-0.14	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**141.47**	**235.78**	**1028.97**	**1714.95**
	U_{18} - L_{18}	2.69	2.69	1.61	1.61	-0.11	-0.11					1.20	0.75	2.69	1.44	-----	Vehicle	2.69	-0.10	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**98.54**	**164.24**	**1513.51**	**2522.51**
	U_{19} - L_{19}	2.33	2.33	1.28	1.28	-0.07	-0.07					1.20	0.75	2.33	1.15	-----	Vehicle	2.33	-0.07	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**146.29**	**243.82**	**2613.79**	**4356.32**
	U_{20} - L_{20}	2.00	2.00	0.95	0.95	-0.04	-0.04					1.20	0.75	2.00	0.85	-----	Vehicle	2.00	-0.04	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**198.64**	**331.07**	**4648.32**	**7747.20**
	U_0 - L_0	-1.99	-1.99	0.14	0.14	-1.04	-1.04					1.18	0.75	-1.99	0.12	-----	Vehicle	-1.99	-0.93	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1535.97**	**2559.95**	**199.17**	**331.95**
	U_1 - L_1	-2.54	-2.54	0.18	0.18	-1.29	-1.29					1.18	0.75	-2.54	0.16	-----	Vehicle	-2.54	-1.14	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1197.71**	**1996.19**	**161.25**	**268.75**
	U_2 - L_2	-2.56	-2.56	0.23	0.23	-1.58	-1.58					1.18	0.75	-2.56	0.21	-----	Vehicle	-2.56	-1.40	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**750.41**	**1250.68**	**109.29**	**182.15**
	U_3 - L_3	-1.64	-1.64	0.17	0.17	-1.03	-1.03					1.18	0.75	-1.64	0.15	-----	Vehicle	-1.64	-0.91	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1048.60**	**1747.67**	**165.83**	**276.39**
	U_4 - L_4	-1.05	-1.05	0.37	0.37	-1.05	-1.05					1.18	0.75	-1.05	0.33	-----	Vehicle	-1.05	-0.94	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**352.18**	**586.96**	**121.28**	**202.13**
	U_5 - L_5	-0.25	-0.25	0.56	0.56	-0.92	-0.92					1.18	0.75	-0.25	0.50	-----	Vehicle	-0.25	-0.81	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**230.65**	**384.42**	**140.14**	**233.57**
	U_6 - L_6	0.42	0.42	0.73	0.73	-0.91	-0.91					1.18	0.75	0.42	0.65	-----	Vehicle	0.42	-0.81	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**175.93**	**293.22**	**141.10**	**235.16**
	U_7 - L_7	1.07	1.07	0.68	0.68	-0.44	-0.44					1.18	0.75	1.07	0.60	-----	Vehicle	1.07	-0.39	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**189.35**	**315.59**	**292.45**	**487.41**
	U_8 - L_8	2.63	2.63	1.49	1.49	-0.56	-0.56					1.18	0.75	2.63	1.32	-----	Vehicle	2.63	-0.50	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**90.77**	**151.29**	**249.08**	**415.14**
	U_9 - L_9	4.75	4.75	1.91	1.91	-0.47	-0.47					1.18	0.75	4.75	1.70	-----	Vehicle	4.75	-0.42	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**107.62**	**179.36**	**450.73**	**751.21**
	U_{10} - L_{10}	4.10	4.10	1.64	1.64	-0.30	-0.30					1.18	0.75	4.10	1.46	-----	Vehicle	4.10	-0.27	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**160.41**	**267.34**	**885.18**	**1475.29**
	U_{11} - L_{11}	3.59	3.59	1.31	1.31	-0.12	-0.12					1.18	0.75	3.59	1.16	-----	Vehicle	3.59	-0.10	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**201.14**	**335.23**	**2336.96**	**3894.94**
	U_{12} - L_{12}	2.93	2.93	1.18	1.18	-0.13	-0.13					1.18	0.75	2.93	1.04	-----	Vehicle	2.93	-0.12	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**250.39**	**417.32**	**2225.17**	**3708.61**
	U_{13} - L_{13}	3.04	3.04	1.06	1.06	-0.07	-0.07					1.18	0.75	3.04	0.94	-----	Vehicle	3.04	-0.07	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**245.93**	**409.88**	**3588.16**	**5980.26**
	U_{14} - L_{14}	0.58	0.58	0.73	0.73	-0.86	-0.86					1.18	0.75	0.58	0.65	-----	Vehicle	0.58	-0.76	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**350.91**	**584.85**	**299.94**	**499.91**
	U_{15} - L_{15}	-2.18	-2.18	0.11	0.11	-1.01	-1.01					1.17	0.75	-2.18	0.09	-----	Vehicle	-2.18	-0.89	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1658.27**	**2763.78**	**172.05**	**286.75**
	U_{16} - L_{16}	-1.90	-1.90	0.10	0.10	-1.23	-1.23					1.17	0.75	-1.90	0.09	-----	Vehicle	-1.90	-1.08	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2107.75**	**3512.92**	**170.69**	**284.48**
	U_{17} - L_{17}	-2.63	-2.63	0.15	0.15	-1.43	-1.43					1.17	0.75	-2.63	0.13	-----	Vehicle	-2.63	-1.25	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1322.56**	**2204.27**	**134.56**	**224.26**
	U_{18} - L_{18}	-2.76	-2.76	0.25	0.25	-1.70	-1.70					1.17	0.75	-2.76	0.22	-----	Vehicle	-2.76	-1.49	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**700.15**	**1166.91**	**102.26**	**170.44**
	U_{19} - L_{19}	-1.74	-1.74	0.29	0.29	-1.14	-1.14					1.17	0.75	-1.74	0.25	-----	Vehicle	-1.74	-1.00	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**553.22**	**922.04**	**138.40**	**230.67**
	U_{20} - L_{20}	-1.31	-1.31	0.40	0.40	-1.11	-1.11					1.17	0.75	-1.31	0.35	-----	Vehicle	-1.31	-0.97	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**359.31**	**598.86**	**127.64**	**212.74**
	U_{21} - L_{21}	-0.84	-0.84	0.48	0.48	-1.06	-1.06					1.17	0.75	-0.84	0.42	-----	Vehicle	-0.84	-0.93	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**269.94**	**449.90**	**121.83**	**203.05**
	U_{22} - L_{22}	-0.11	-0.11	0.66	0.66	-0.75	-0.75					1.17	0.75	-0.11	0.58	-----	Vehicle	-0.11	-0.66	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**198.10**	**330.17**	**173.56**	**289.27**
	U_{23} - L_{23}	0.63	0.63	1.01	1.01	-0.63	-0.63					1.17	0.75	0.63	0.88	-----	Vehicle	0.63	-0.55	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**128.49**	**214.15**	**208.15**	**346.91**
	U_{24} - L_{24}	1.17	1.17	1.09	1.09	-0.49	-0.49					1.17	0.75	1.17	0.96	-----	Vehicle	1.17	-0.43	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**129.83**	**216.38**	**293.73**	**489.55**
	U_{25} - L_{25}	1.72	1.72	1.20	1.20	-0.34	-0.34					1.17	0.75	1.72	1.05	-----	Vehicle	1.72	-0.29	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**130.93**	**218.22**	**475.81**	**793.01**
	U_{26} - L_{26}	2.90	2.90	1.74	1.74	-0.31	-0.31					1.17	0.75	2.90	1.52	-----	Vehicle	2.90	-0.27	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**100.26**	**167.11**	**568.47**	**947.45**
	U_{27} - L_{27}	2.83	2.83	1.55	1.55	-0.14	-0.14					1.17	0.75	2.83	1.36	-----	Vehicle	2.83	-0.12	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**123.64**	**206.06**	**1409.18**	**2348.64**
	U_{28} - L_{28}	2.23	2.23	1.37	1.37	-0.11	-0.11					1.17	0.75	2.23	1.20	-----	Vehicle	2.23	-0.10	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**153.89**	**256.49**	**1885.92**	**3143.19**
	U_{29} - L_{29}	2.36	2.36	1.05	1.05	-0.05	-0.05					1.17	0.75	2.36	0.92	-----	Vehicle	2.36	-0.04	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**165.40**	**275.66**	**3623.68**	**6039.47**
	U_{30} - L_{30}	0.03	0.03	0.80	0.80	-0.76	-0.76					1.18	0.75	0.03	0.71	-----	Vehicle	0.03	-0.67	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**322.76**	**537.93**	**339.42**	**565.69**
	U_{31} - L_{31}	-2.50	-2.50	0.11	0.11	-0.99	-0.99					1.18	0.75	-2.50	0.10	-----	Vehicle	-2.50	-0.87	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**2410.53**	**4017.55**	**265.77**	**442.95**
	U_{32} - L_{32}	-2.25	-2.25	0.10	0.10	-1.12	-1.12					1.18	0.75	-2.25	0.09	-----	Vehicle	-2.25	-0.99	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**3037.88**	**5063.14**	**263.33**	**438.89**
	U_{33} - L_{33}	-2.93	-2.93	0.06	0.06	-1.31	-1.31					1.18	0.75	-2.93	0.05	-----	Vehicle	-2.93	-1.16	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**4547.51**	**7579.19**	**202.40**	**337.34**
	U_{34} - L_{34}	-3.45	-3.45	0.21	0.21	-1.56	-1.56					1.18	0.75	-3.45	0.19	-----	Vehicle	-3.45	-1.38	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**1267.22**	**2112.03**	**169.23**	**282.04**
	U_{35} - L_{35}	-4.24	-4.24	0.40	0.40	-1.86	-1.86					1.18	0.75	-4.24	0.35	-----	Vehicle	-4.24	-1.65	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**533.88**	**889.80**	**111.05**	**185.08**
	U_{36} - L_{36}	-2.42	-2.42	0.40	0.40	-1.53	-1.53					1.18	0.75	-2.42	0.35	-----	Vehicle	-2.42	-1.35	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**350.62**	**584.37**	**88.90**	**148.17**
	U_{37} - L_{37}	-1.22	-1.22	0.40	0.40	-0.74	-0.74					1.18	0.75	-1.22	0.35	-----	Vehicle	-1.22	-0.66	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**326.68**	**544.47**	**172.12**	**286.86**
	U_{38} - L_{38}	-0.80	-0.80	0.82	0.82	-0.91	-0.91					1.18	0.75	-0.80	0.72	-----	Vehicle	-0.80	-0.81	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**158.38**	**263.96**	**140.04**	**233.41**
	U_{39} - L_{39}	-0.09	-0.09	0.91	0.91	-0.68	-0.68					1.18	0.75	-0.09	0.81	-----	Vehicle	-0.09	-0.60	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**141.32**	**235.53**	**189.21**	**315.35**
	U_{40} - L_{40}	0.85	0.85	1.05	1.05	-0.47	-0.47					1.18	0.75	0.85	0.93	-----	Vehicle	0.85	-0.42	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**121.53**	**202.54**	**275.88**	**459.79**
	U_{41} - L_{41}	1.61	1.61	1.02	1.02	-0.18	-0.18					1.18	0.75	1.61	0.90	-----	Vehicle	1.61	-0.16	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**167.97**	**279.95**	**955.81**	**1593.02**
	U_{42} - L_{42}	2.80	2.80	1.59	1.59	-0.21	-0.21					1.18	0.75	2.80	1.41	-----	Vehicle	2.80	-0.18	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**108.50**	**180.83**	**853.18**	**1421.97**
	U_{43} - L_{43}	2.84	2.84	1.41	1.41	-0.15	-0.15					1.18	0.75	2.84	1.25	-----	Vehicle	2.84	-0.13	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**146.61**	**244.35**	**1435.37**	**2392.29**
	U_{44} - L_{44}	2.62	2.62	1.02	1.02	-0.09	-0.09					1.18	0.75	2.62	0.90	-----	Vehicle	2.62	-0.08	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**203.64**	**339.40**	**2369.17**	**3948.62**
Structure 3	U_0 - L_0	-1.54	-1.54	0.07	0.07	-0.97	-0.97					1.20	0.75	-1.54	0.06	-----	Vehicle	-1.54	-0.88	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2927.29**	**4878.82**	**193.25**	**322.08**
	U_1 - L_1	-2.02	-2.02	0.09	0.09	-1.23	-1.23					1.20	0.75	-2.02	0.08	-----	Vehicle	-2.02	-1.11	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2049.45**	**3415.76**	**152.27**	**253.78**
	U_2 - L_2	-2.23	-2.23	0.13	0.13	-1.47	-1.47					1.20	0.75	-2.23	0.12	-----	Vehicle	-2.23	-1.32	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1233.93**	**2056.54**	**108.15**	**180.26**
	U_3 - L_3	-1.20	-1.20	0.10	0.10	-1.06	-1.06					1.20	0.75	-1.20	0.09	-----	Vehicle	-1.20	-0.95	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1492.60**	**2487.67**	**145.63**	**242.71**
	U_4 - L_4	-0.86	-0.86	0.36	0.36	-1.05	-1.05					1.20	0.75	-0.86	0.32	-----	Vehicle	-0.86	-0.94	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**356.16**	**593.60**	**120.45**	**200.75**
	U_5 - L_5	-0.15	-0.15	0.62	0.62	-1.11	-1.11					1.20	0.75	-0.15	0.55	-----	Vehicle	-0.15	-0.99	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**205.88**	**343.14**	**114.67**	**191.12**
	U_6 - L_6	0.83	0.83	0.92	0.92	-0.82	-0.82					1.20	0.75	0.83	0.82	-----	Vehicle	0.83	-0.74	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**137.96**	**229.93**	**155.66**	**259.43**
	U_7 - L_7	1.75	1.75	1.47	1.47	-0.69	-0.69					1.20	0.75	1.75	1.32	-----	Vehicle	1.75	-0.62	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**94.21**	**157.02**	**203.09**	**338.49**
	U_8 - L_8	3.18	3.18	1.83	1.83	-0.66	-0.66					1.20	0.75	3.18	1.64	-----	Vehicle	3.18	-0.59	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**86.33**	**143.89**	**247.16**	**411.94**
	U_9 - L_9	4.50	4.50	2.08	2.08	-0.43	-0.43					1.20	0.75	4.50	1.87	-----	Vehicle	4.50	-0.39	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**89.45**	**149.09**	**446.07**	**743.45**
	U_{10} - L_{10}	3.82	3.82	1.91	1.91	-0.21	-0.21					1.20	0.75	3.82	1.71	-----	Vehicle	3.82	-0.18	-----	Vehicle	16.16	0.83	2	9.75	5	73.85

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD																										Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$				Maximum Positive Shear				Minimum Negative Shear												Positive Shear Member		Negative Shear Member	
Location		Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Inventory RF	Operating RF	Inventory RF	Operating RF
Center Truss - Diagonals	Structure 1	U_0 - L_1	-0.01	-0.51	0.10	0.10	-0.74	-0.74					1.24	0.75	-0.01	0.09	-----	Vehicle	-0.51	-0.68	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**607.32**	**1012.19**	**80.19**	**133.65**
		U_1 - L_2	0.22	-0.08	0.07	0.07	-0.26	-0.26					1.24	0.75	0.22	0.06	-----	Vehicle	-0.08	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1779.51**	**2965.86**	**481.86**	**803.10**
		U_2 - L_3	0.25	-0.05	0.10	0.10	-0.17	-0.17					1.24	0.75	0.25	0.10	-----	Vehicle	-0.05	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1191.88**	**1986.46**	**731.51**	**1219.19**
		U_3 - L_4	0.41	0.09	0.15	0.15	-0.05	-0.05					1.24	0.75	0.41	0.13	-----	Vehicle	0.09	-0.05	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**845.96**	**1409.93**	**2320.50**	**3867.49**
		U_4 - L_4	-0.19	-0.52	0.11	0.11	-0.23	-0.23					1.24	0.75	-0.19	0.10	-----	Vehicle	-0.52	-0.21	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1412.12**	**2353.53**	**648.80**	**1081.34**
		U_5 - L_5	-0.74	-1.19	0.14	0.14	-0.60	-0.60					1.24	0.75	-0.74	0.13	-----	Vehicle	-1.19	-0.55	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1095.63**	**1826.05**	**258.09**	**430.14**
		U_6 - L_6	-1.07	-1.54	0.00	0.00	-0.88	-0.88					1.24	0.75	-1.07	0.00	-----	Vehicle	-1.54	-0.81	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**77897.60**	**129829.33**	**175.72**	**292.87**
		U_7 - L_7	-0.62	-1.11	0.00	0.00	-0.59	-0.59					1.24	0.75	-0.62	0.00	-----	Vehicle	-1.11	-0.55	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**51834.29**	**86390.49**	**261.67**	**436.12**
		U_8 - L_9	-0.89	-1.81	0.06	0.06	-0.60	-0.60					1.20	0.75	-0.89	0.05	-----	Vehicle	-1.81	-0.54	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**3283.61**	**5472.68**	**333.06**	**555.10**
		U_9 - L_{10}	-1.43	-2.27	0.03	0.03	-0.78	-0.78					1.20	0.75	-1.43	0.03	-----	Vehicle	-2.27	-0.70	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**6919.36**	**11532.27**	**255.07**	**425.12**
		U_{10} - L_{11}	-1.02	-1.87	0.05	0.05	-0.55	-0.55					1.20	0.75	-1.02	0.05	-----	Vehicle	-1.87	-0.50	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2971.29**	**4952.14**	**287.16**	**478.61**
		U_{11} - L_{12}	-0.81	-1.29	0.09	0.09	-0.56	-0.56					1.20	0.75	-0.81	0.08	-----	Vehicle	-1.29	-0.50	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2108.75**	**3514.58**	**335.81**	**559.68**
		U_{12} - L_{13}	-0.67	-1.39	0.16	0.16	-0.49	-0.49					1.20	0.75	-0.67	0.14	-----	Vehicle	-1.39	-0.44	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**874.01**	**1456.68**	**281.89**	**469.82**
		U_{13} - L_{14}	-0.13	-0.46	0.15	0.15	-0.23	-0.23					1.20	0.75	-0.13	0.13	-----	Vehicle	-0.46	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**875.95**	**1459.92**	**557.81**	**929.68**
		U_{14} - L_{14}	0.38	0.05	0.26	0.26	-0.18	-0.18					1.20	0.75	0.38	0.23	-----	Vehicle	0.05	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**490.99**	**818.31**	**709.27**	**1182.12**
		U_{15} - L_{15}	-0.04	-0.39	0.20	0.20	-0.30	-0.30					1.20	0.75	-0.04	0.18	-----	Vehicle	-0.39	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**628.49**	**1047.49**	**418.05**	**696.74**
		U_{17} - L_{16}	-0.22	-0.61	0.14	0.14	-0.42	-0.42					1.20	0.75	-0.22	0.12	-----	Vehicle	-0.61	-0.38	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1128.31**	**1880.52**	**366.73**	**611.21**
		U_{18} - L_{17}	-1.16	-1.63	0.06	0.06	-0.75	-0.75					1.20	0.75	-1.16	0.05	-----	Vehicle	-1.63	-0.67	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2638.09**	**4396.82**	**212.94**	**354.89**
		U_{19} - L_{18}	-1.07	-1.60	0.07	0.07	-0.71	-0.71					1.20	0.75	-1.07	0.07	-----	Vehicle	-1.60	-0.64	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2361.69**	**3936.15**	**239.63**	**399.38**
		U_{20} - L_{19}	-1.08	-1.67	0.03	0.03	-0.68	-0.68					1.20	0.75	-1.08	0.03	-----	Vehicle	-1.67	-0.61	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**5070.89**	**8451.48**	**250.11**	**416.85**
	Structure 2	U_0 - L_1	-1.14	-1.70	0.12	0.12	-0.86	-0.86					1.18	0.75	-1.14	0.10	-----	Vehicle	-1.70	-0.76	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1630.68**	**2717.81**	**222.81**	**371.34**
		U_1 - L_2	-1.31	-1.85	0.12	0.12	-0.83	-0.83					1.18	0.75	-1.31	0.11	-----	Vehicle	-1.85	-0.74	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1591.17**	**2651.95**	**229.40**	**382.33**
		U_2 - L_3	-1.13	-1.60	0.13	0.13	-0.78	-0.78					1.18	0.75	-1.13	0.12	-----	Vehicle	-1.60	-0.69	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1225.17**	**2041.95**	**207.33**	**345.56**
		U_3 - L_4	-0.50	-0.90	0.11	0.11	-0.47	-0.47					1.18	0.75	-0.50	0.10	-----	Vehicle	-0.90	-0.42	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1551.78**	**2586.31**	**366.03**	**610.05**
		U_4 - L_5	-0.05	-0.40	0.17	0.17	-0.33	-0.33					1.18	0.75	-0.05	0.15	-----	Vehicle	-0.40	-0.30	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**756.29**	**1260.48**	**385.20**	**641.99**
		U_5 - L_6	0.27	-0.07	0.24	0.24	-0.28	-0.28					1.18	0.75	0.27	0.22	-----	Vehicle	-0.07	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**528.20**	**880.34**	**465.54**	**775.91**
		U_6 - L_7	0.48	0.08	0.26	0.26	-0.18	-0.18					1.18	0.75	0.48	0.23	-----	Vehicle	0.08	-0.16	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**541.62**	**902.70**	**806.85**	**1344.75**
		U_8 - L_7	-0.31	-1.10	0.21	0.21	-0.34	-0.34					1.18	0.75	-0.31	0.18	-----	Vehicle	-1.10	-0.30	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**574.73**	**957.89**	**344.74**	**574.56**
		U_9 - L_8	-1.34	-1.86	0.24	0.24	-0.68	-0.68					1.18	0.75	-1.34	0.21	-----	Vehicle	-1.86	-0.60	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**740.56**	**1234.27**	**255.71**	**426.19**
		U_{10} - L_9	-1.44	-1.94	0.16	0.16	-0.64	-0.64					1.18	0.75	-1.44	0.14	-----	Vehicle	-1.94	-0.57	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1196.40**	**1994.00**	**295.55**	**492.58**
		U_{11} - L_{10}	-1.67	-2.23	0.12	0.12	-0.71	-0.71					1.18	0.75	-1.67	0.10	-----	Vehicle	-2.23	-0.63	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1796.69**	**2994.49**	**294.43**	**490.72**
		U_{12} - L_{11}	-1.62	-2.22	0.10	0.10	-0.69	-0.69					1.18	0.75	-1.62	0.09	-----	Vehicle	-2.22	-0.61	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2189.36**	**3648.93**	**301.28**	**502.13**
		U_{13} - L_{12}	-1.77	-2.38	0.05	0.05	-0.74	-0.74					1.18	0.75	-1.77	0.04	-----	Vehicle	-2.38	-0.66	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4103.12**	**6838.54**	**256.80**	**428.01**
		U_{14} - L_{13}	-1.00	-1.63	0.06	0.06	-0.55	-0.55					1.18	0.75	-1.00	0.06	-----	Vehicle	-1.63	-0.49	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3052.74**	**5087.90**	**347.71**	**579.52**
		U_{15} - L_{15}	-0.47	-1.03	0.07	0.07	-0.52	-0.52					1.17	0.75	-0.47	0.06	-----	Vehicle	-1.03	-0.45	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2418.35**	**4030.58**	**316.10**	**526.83**
		U_{16} - L_{16}	-1.08	-1.61	0.07	0.07	-0.74	-0.74					1.17	0.75	-1.08	0.06	-----	Vehicle	-1.61	-0.65	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2289.77**	**3816.28**	**220.00**	**366.67**
		U_{18} - L_{17}	-1.08	-1.63	0.07	0.07	-0.75	-0.75					1.17	0.75	-1.08	0.06	-----	Vehicle	-1.63	-0.65	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2420.35**	**4033.92**	**234.36**	**390.59**
		U_{17} - L_{18}	-1.09	-1.58	0.09	0.09	-0.70	-0.70					1.17	0.75	-1.09	0.08	-----	Vehicle	-1.58	-0.61	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1873.54**	**3122.56**	**232.59**	**387.64**
		U_{19} - L_{19}	-0.94	-1.42	0.14	0.14	-0.67	-0.67					1.17	0.75	-0.94	0.12	-----	Vehicle	-1.42	-0.59	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1176.90**	**1961.51**	**243.52**	**405.86**
		U_{20} - L_{20}	-0.31	-1.06	0.15	0.15	-0.49	-0.49					1.17	0.75	-0.31	0.13	-----	Vehicle	-1.06	-0.43	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**816.66**	**1361.11**	**243.40**	**405.67**
		U_{21} - L_{21}	-0.23	-0.57	0.16	0.16	-0.34	-0.34					1.17	0.75	-0.23	0.14	-----	Vehicle	-0.57	-0.30	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**829.52**	**1382.54**	**381.43**	**635.72**
		U_{22} - L_{22}	0.03	-0.31	0.19	0.19	-0.22	-0.22					1.17	0.75	0.03	0.17	-----	Vehicle	-0.31	-0.19	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**673.88**	**1123.14**	**587.63**	**979.38**
		U_{23} - L_{22}	0.11	-0.23	0.22	0.22	-0.21	-0.21					1.17	0.75	0.11	0.19	-----	Vehicle	-0.23	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**593.61**	**989.36**	**633.76**	**1056.26**
		U_{24} - L_{23}	-0.12	-0.47	0.18	0.18	-0.31	-0.31					1.17	0.75	-0.12	0.16	-----	Vehicle	-0.47	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**707.39**	**1178.98**	**425.43**	**709.06**
		U_{25} - L_{24}	-0.19	-0.96	0.17	0.17	-0.46	-0.46					1.17	0.75	-0.19	0.15	-----	Vehicle	-0.96	-0.40	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**705.02**	**1175.03**	**257.31**	**428.86**
		U_{26} - L_{25}	-0.84	-1.33	0.19	0.19	-0.65	-0.65					1.17	0.75	-0.84	0.16	-----	Vehicle	-1.33	-0.57	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**876.05**	**1460.08**	**252.66**	**421.09**
		U_{27} - L_{26}	-1.01	-1.51	0.11	0.11	-0.66	-0.66					1.17	0.75	-1.01	0.10	-----	Vehicle	-1.51	-0.58	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1471.56**	**2452.61**	**247.86**	**413.10**
		U_{28} - L_{27}	-1.07	-1.63	0.08	0.08	-0.71	-0.71					1.17	0.75	-1.07	0.07	-----	Vehicle	-1.63	-0.62	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2128.65**	**3547.76**	**245.55**	**409.24**
		U_{29} - L_{28}	-1.12	-1.67	0.04	0.04	-0.71	-0.71					1.17	0.75	-1.12	0.04	-----	Vehicle	-1.67	-0.62	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3747.59**	**6245.98**	**229.88**	**383.13**
		U_{30} - L_{29}	-0.53	-1.09	0.04	0.04	-0.47	-0.47					1.17	0.75	-0.53	0.03	-----	Vehicle	-1.09	-0.42	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**4217.63**	**7029.38**	**344.68**	**574.46**
		U_{30} - L_{31}	-0.77	-1.41	0.08	0.08	-0.55	-0.55					1.18	0.75	-0.77	0.07	-----	Vehicle	-1.41	-0.49	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2463.72**	**4106.19**	**344.22**	**573.70**
		U_{31} - L_{32}	-1.50	-2.10	0.08	0.08	-0.78	-0.78					1.18	0.75	-1.50	0.07	-----	Vehicle	-2.10	-0.69	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2321.25**	**3868.75**	**244.51**	**407.51**
		U_{32} - L_{33}	-1.42	-2.00	0.04	0.04	-0.74	-0.74					1.18	0.75	-1.42	0.04	-----	Vehicle	-2.00	-0.66	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**4773.70**	**7956.17**	**279.20**	**465.34**
		U_{33} - L_{34}	-1.55	-2.08	0.06	0.06	-0.73	-0.73					1.18	0.75	-1.55	0.05	-----	Vehicle	-2.08	-0.65	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3561.53**	**5935.88**	**284.48**	**474.14**
		U_{34} - L_{35}	-1.39	-1.88	0.12	0.12	-0.68	-0.68					1.18	0.75	-1.39	0.11	-----	Vehicle	-1.88	-0.61	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1618.39**	**2697.32**	**278.33**	**463.88**
		U_{35} - L_{36}	-1.38	-1.88	0.18	0.18	-0.71	-0.71					1.18	0.75	-1.38	0.16	-----	Vehicle	-1.88	-0.63	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**960.40**	**1600.67**	**244.82**	**408.03**
		U_{36} - L_{37}	-0.43	-1.20	0.19	0.19	-0.36	-0.36					1.18	0.75	-0.43	0.17	-----	Vehicle	-1.20	-0.32	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**630.48**	**1050.79**	**321.76**	**536.27**
		U_{38} - L_{37}	0.53	0.13	0.28	0.28	-0.15	-0.15					1.18	0.75	0.53	0.25	-----	Vehicle	0.13	-0.13	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**508.25**	**847.08**	**941.54**	**1569.23**
		U_{39} - L_{38}	0.39	0.04	0.28	0.28	-0.25	-0.25					1.18	0.75	0.39	0.25	-----	Vehicle	0.04	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**461.41**	**769.02**	**508.16**	**846.94**
		U_{40} - L_{39}	0.07	-0.29	0.19	0.19	-0.31	-0.31					1.18	0.75	0.07	0.16	-----	Vehicle	-0.29	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**694.54**	**1157.57**	**412.68**	**687.80**
		U_{41} - L_{40}	-0.36	-0.78	0.14	0.14	-0.44	-0.44					1.18	0.75	-0.36	0.12	-----	Vehicle	-0.78	-0.39	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1265.87**	**2109.79**	**388.62**	**647.71**
		U_{42} - L_{41}	-1.06	-1.54	0.11	0.11	-0.71	-0.71					1.18	0.75	-1.06	0.09	-----	Vehicle	-1.54	-0.63	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1536.76**	**2561.27**	**226.00**	**376.67**
		U_{43} - L_{42}	-1.22	-1.77	0.09	0.09	-0.77	-0.77					1.18	0.75	-1.22	0.08	-----	Vehicle	-1.77	-0.68	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2069.57**	**3449.29**	**248.95**	**414.92**
		U_{44} - L_{43}	-1.57	-2.14	0.07	0.07	-0.73	-0.73					1.18	0.75	-1.57	0.06	-----	Vehicle	-2.14	-0.65	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2919.84**	**4866.40**	**261.27**	**435.44**
	Structure 3	U_0 - L_1	-0.75	-1.32	0.06	0.06	-0.80	-0.80					1.20	0.75	-0.75	0.05	-----	Vehicle	-1.32	-0.72	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2918.43**	**4864.04**	**214.04**	**356.73**
		U_1 - L_2	-1.05	-1.57	0.07	0.07	-0.74	-0.74					1.20	0.75	-1.05	0.06	-----	Vehicle	-1.57	-0.66	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2652.15**	**4420.24**	**231.53**	**385.89**
		U_2 - L_3	-1.08	-1.54	0.08	0.08	-0.81	-0.81					1.20	0.75	-1.08	0.08	-----	Vehicle	-1.54	-0.73	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1915.15**	**3191.92**	**195.96**	**326.61**
		U_3 - L_4	-0.22	-0.60	0.10	0.10	-0.45	-0.45					1.20	0.75	-0.22	0.09	-----	Vehicle	-0.60	-0.40	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1561.40**	**2602.34**	**343.82**	**573.04**
		U_4 - L_5	-0.08	-0.42	0.19	0.19	-0.33	-0.33					1.20	0.75	-0.08	0.17	-----	Vehicle	-0.42	-0.30	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**679.05**	**1131.75**	**383.78**	**639.64**
		U_5 - L_6	0.35	0.03	0.23	0.23	-0.20	-0.20					1.20	0.75	0.35	0.21	-----	Vehicle	0.03	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**541.42**	**902.37**	**651.02**	**1085.03**
		U_7 - L_6	-0.05	-0.39	0.16	0.16	-0.20	-0.20					1.20	0.75	-0.05	0.15	-----	Vehicle	-0.39	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**774.15**	**1290.25**	**636.53**	**1060.89**
		U_8 - L_7	-0.51	-1.25	0.18	0.18	-0.46	-0.46					1.20	0.75	-0.51	0.16	-----	Vehicle	-1.25	-0.42	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**788.50**	**1314.16**	**294.85**	**491.42**
		U_9 - L_8	-0.70	-1.19	0.14	0.14	-0.55	-0.55					1.20	0.75	-0.70	0.12	-----	Vehicle	-1.19	-0.49	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1374.74**	**2291.23**	**343.26**	**572.10**
		U_{10} - L_9	-0.88	-1.76	0.09	0.09	-0.52	-0.52					1.20	0.75	-0.88	0.08	-----	Vehicle	-1.76	-0.47	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1762.09**	**2936.82**	**306.16**	**510.26**
		U_{11} - L_{10}	-1.33	-2.21	0.01	0.01	-0.76	-0.76					1.20	0.75	-1.33	0.01	-----	Vehicle	-2.21	-0.69	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**14328.38**	**23880.63**	**259.46**	**432.44**
		U_{12} - L_{11}	-0.81	-1.77	0.09	0.09	-0.57	-0.57					1.20	0.75	-0.81	0.08	-----	Vehicle	-1.77	-0.51	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear													Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																						Inventory RF	Operating RF	Inventory RF	Operating RF
South Truss - Upper Chord	Structure 1	U_0 - U_1	8.19	-2.89	1.82	1.82	-1.24	-1.24	0.75	0.75	-0.19	-0.19	1.24	0.90	8.19	2.03	0.75	Pedestrian	-2.89	-1.38	-0.19	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**42.17**	**52.71**	**65.93**	**109.89**
		U_1 - U_2	2.96	-4.47	1.30	1.30	-0.25	-0.25	0.07	0.07	-0.06	-0.06	1.24	0.90	2.96	1.44	0.07	Vehicle	-4.47	-0.28	-0.06	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**63.11**	**105.18**	**321.07**	**535.11**
		U_2 - U_3	2.48	-7.36	0.64	0.64	-0.60	-0.60	0.07	0.07	-0.09	-0.09	1.24	0.90	2.48	0.71	0.07	Vehicle	-7.36	-0.66	-0.09	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**129.10**	**215.17**	**133.14**	**221.90**
		U_3 - U_4	1.94	-4.95	0.74	0.74	-0.48	-0.48	0.00	0.00	-0.05	-0.05	1.24	0.90	1.94	0.82	-----	Vehicle	-4.95	-0.53	-0.05	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**111.33**	**185.55**	**168.72**	**281.20**
		U_4 - U_5	1.94	-4.56	0.27	0.27	-0.82	-0.82	0.00	0.00	-0.15	-0.15	1.24	0.90	1.94	0.30	-----	Vehicle	-4.56	-0.91	-0.15	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**306.97**	**511.62**	**98.85**	**164.74**
		U_5 - U_6	3.13	-7.41	0.16	0.16	-1.02	-1.02	0.00	0.00	-0.25	-0.25	1.24	0.90	3.13	0.18	-----	Vehicle	-7.41	-1.13	-0.25	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**516.63**	**861.05**	**78.15**	**130.25**
		U_6 - U_7	6.57	-4.82	0.62	0.62	-0.50	-0.50	0.03	0.03	-0.09	-0.09	1.24	0.90	6.57	0.69	0.03	Vehicle	-4.82	-0.55	-0.09	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**264.33**	**440.55**	**330.72**	**551.19**
		U_7 - U_8	-2.87	-15.47	0.60	0.60	-1.86	-1.86	0.00	0.00	-0.80	-0.80	1.24	0.90	-2.87	0.67	-----	Vehicle	-15.47	-2.07	-0.80	Pedestrian	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**372.87**	**621.45**	**110.55**	**138.18**
		U_8 - U_9	17.77	5.14	2.31	2.31	-0.19	-0.19	0.85	0.85	0.00	0.00	1.20	0.90	17.77	2.49	0.85	Pedestrian	5.14	-0.20	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**38.95**	**48.69**	**549.09**	**915.15**
		U_9 - U_{10}	7.55	-5.15	1.14	1.14	-0.14	-0.14	0.20	0.20	-0.04	-0.04	1.20	0.90	7.55	1.23	0.20	Vehicle	-5.15	-0.16	-0.04	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**71.97**	**119.94**	**577.50**	**962.50**
		U_{10} - U_{11}	10.27	-1.06	1.52	1.52	-0.04	-0.04	0.37	0.37	0.00	0.00	1.20	0.90	10.27	1.64	0.37	Vehicle	-1.06	-0.05	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**52.70**	**87.83**	**1986.97**	**3311.62**
		U_{11} - U_{12}	8.07	-1.44	1.33	1.33	-0.03	-0.03	0.26	0.26	0.00	0.00	1.20	0.90	8.07	1.44	0.26	Vehicle	-1.44	-0.03	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**82.68**	**137.80**	**3927.62**	**6546.03**
		U_{12} - U_{13}	9.20	-6.26	1.11	1.11	-0.30	-0.30	0.20	0.20	0.00	0.00	1.20	0.90	9.20	1.19	0.20	Vehicle	-6.26	-0.33	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**272.00**	**453.33**	**999.13**	**1665.22**
		U_{13} - U_{14}	7.06	-1.54	1.87	1.87	-0.05	-0.05	0.17	0.17	0.00	0.00	1.20	0.90	7.06	2.02	0.17	Vehicle	-1.54	-0.06	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**189.18**	**315.30**	**6622.11**	**11036.86**
		U_{14} - U_{15}	2.68	-5.43	0.38	0.38	-1.44	-1.44	0.02	0.02	-0.11	-0.11	1.20	0.90	2.68	0.41	0.02	Vehicle	-5.43	-1.55	-0.11	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**934.45**	**1557.42**	**247.51**	**412.52**
		U_{15} - U_{16}	9.21	-5.82	1.16	1.16	-0.63	-0.63	0.06	0.06	-0.12	-0.12	1.20	0.90	9.21	1.25	0.06	Vehicle	-5.82	-0.67	-0.12	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**304.33**	**507.21**	**568.34**	**947.24**
		U_{16} - U_{17}	2.12	-6.72	0.41	0.41	-1.11	-1.11	0.01	0.01	-0.14	-0.14	1.20	0.90	2.12	0.44	0.01	Vehicle	-6.72	-1.19	-0.14	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**877.81**	**1463.02**	**321.01**	**535.01**
		U_{17} - U_{18}	5.43	-10.49	0.28	0.28	-1.18	-1.18	0.03	0.03	-0.26	-0.26	1.20	0.90	5.43	0.30	0.03	Vehicle	-10.49	-1.28	-0.26	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**935.92**	**1559.86**	**217.55**	**362.59**
		U_{18} - U_{19}	1.81	-7.91	0.11	0.11	-0.99	-0.99	0.02	0.02	-0.28	-0.28	1.20	0.90	1.81	0.12	0.02	Vehicle	-7.91	-1.07	-0.28	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**928.59**	**1547.65**	**97.03**	**161.72**
		U_{19} - U_{20}	1.62	-7.72	0.15	0.15	-0.91	-0.91	0.02	0.02	-0.22	-0.22	1.20	0.90	1.62	0.16	0.02	Vehicle	-7.72	-0.98	-0.22	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**654.37**	**1090.61**	**105.92**	**176.53**
	Structure 2	U_0 - U_1	18.71	2.53	2.14	2.14	-1.19	-1.19	0.86	0.86	-0.13	-0.13	1.18	0.90	18.71	2.28	0.86	Pedestrian	2.53	-1.26	-0.13	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**43.07**	**53.84**	**90.25**	**150.41**
		U_1 - U_2	9.39	-4.45	1.60	1.60	-0.16	-0.16	0.13	0.13	-0.03	-0.03	1.18	0.90	9.39	1.70	0.13	Vehicle	-4.45	-0.17	-0.03	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**129.25**	**215.42**	**1331.62**	**2219.37**
		U_2 - U_3	9.93	-1.26	1.98	1.98	-0.31	-0.31	0.32	0.32	-0.07	-0.07	1.18	0.90	9.93	2.11	0.32	Vehicle	-1.26	-0.33	-0.07	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**77.31**	**128.86**	**509.58**	**849.30**
		U_3 - U_4	8.70	-7.19	1.60	1.60	-0.17	-0.17	0.11	0.11	-0.03	-0.03	1.18	0.90	8.70	1.70	0.11	Vehicle	-7.19	-0.18	-0.03	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**218.01**	**363.34**	**2062.57**	**3437.61**
		U_4 - U_5	5.86	-4.47	1.81	1.81	-0.60	-0.60	0.14	0.14	-0.05	-0.05	1.18	0.90	5.86	1.93	0.14	Vehicle	-4.47	-0.64	-0.05	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**231.45**	**385.75**	**697.56**	**1162.60**
		U_5 - U_6	1.29	-8.98	0.98	0.98	-1.03	-1.03	0.00	0.00	-0.15	-0.15	1.18	0.90	1.29	1.04	-----	Vehicle	-8.98	-1.10	-0.15	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**431.04**	**718.40**	**405.13**	**675.21**
		U_6 - U_7	6.54	-9.22	1.15	1.15	-0.78	-0.78	0.09	0.09	0.00	0.00	1.18	0.90	6.54	1.22	0.09	Vehicle	-9.22	-0.83	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**304.75**	**507.92**	**444.85**	**741.41**
		U_7 - U_8	6.96	-8.51	0.79	0.79	-1.30	-1.30	0.00	0.00	-0.18	-0.18	1.18	0.90	6.96	0.84	-----	Vehicle	-8.51	-1.39	-0.18	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**439.72**	**732.87**	**266.74**	**444.57**
		U_8 - U_9	2.04	-12.38	0.31	0.31	-1.33	-1.33	0.00	0.00	-0.25	-0.25	1.18	0.90	2.04	0.33	-----	Vehicle	-12.38	-1.42	-0.25	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**953.93**	**1589.88**	**220.12**	**366.86**
		U_9 - U_{10}	-0.19	-11.71	0.35	0.35	-1.41	-1.41	0.00	0.00	-0.31	-0.31	1.18	0.90	-0.19	0.37	-----	Vehicle	-11.71	-1.50	-0.31	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**357.01**	**595.01**	**83.15**	**138.58**
		U_{10} - U_{11}	3.22	-11.03	0.36	0.36	-1.16	-1.16	0.00	0.00	-0.20	-0.20	1.18	0.90	3.22	0.38	-----	Vehicle	-11.03	-1.23	-0.20	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**338.73**	**564.54**	**101.21**	**168.69**
		U_{11} - U_{12}	1.81	-13.56	0.20	0.20	-1.36	-1.36	0.02	0.02	-0.32	-0.32	1.18	0.90	1.81	0.21	0.02	Vehicle	-13.56	-1.44	-0.32	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**615.06**	**1025.10**	**85.32**	**142.20**
		U_{12} - U_{13}	10.30	-7.34	0.90	0.90	-0.54	-0.54	0.06	0.06	-0.06	-0.06	1.18	0.90	10.30	0.96	0.06	Vehicle	-7.34	-0.57	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**287.72**	**479.54**	**485.69**	**809.49**
		U_{13} - U_{14}	-14.76	-30.33	0.98	0.98	-2.45	-2.45	0.00	0.00	-0.99	-0.99	1.18	0.90	-14.76	1.04	-----	Vehicle	-30.33	-2.61	-0.99	Pedestrian	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**387.09**	**645.14**	**139.21**	**174.01**
		U_{14} - U_{15}	28.72	13.15	3.64	3.64	-0.64	-0.64	0.97	0.97	0.00	0.00	1.17	0.90	28.72	3.83	0.97	Vehicle	13.15	-0.68	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**98.44**	**164.06**	**595.30**	**992.17**
		U_{15} - U_{16}	7.66	-8.84	1.32	1.32	-0.38	-0.38	0.10	0.10	-0.07	-0.07	1.17	0.90	7.66	1.38	0.10	Vehicle	-8.84	-0.40	-0.07	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**227.34**	**378.90**	**791.20**	**1318.66**
		U_{16} - U_{17}	10.20	-1.59	1.69	1.69	-0.16	-0.16	0.27	0.27	-0.02	-0.02	1.17	0.90	10.20	1.78	0.27	Vehicle	-1.59	-0.17	-0.02	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**91.58**	**152.63**	**1017.02**	**1695.04**
		U_{17} - U_{18}	9.53	-4.26	1.68	1.68	-0.16	-0.16	0.21	0.21	-0.04	-0.04	1.17	0.90	9.53	1.77	0.21	Vehicle	-4.26	-0.17	-0.04	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**60.49**	**100.81**	**637.97**	**1063.28**
		U_{18} - U_{19}	9.52	-3.01	1.45	1.45	-0.22	-0.22	0.25	0.25	-0.01	-0.01	1.17	0.90	9.52	1.53	0.25	Vehicle	-3.01	-0.24	-0.01	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**69.89**	**116.49**	**470.26**	**783.77**
		U_{19} - U_{20}	6.34	-3.80	1.43	1.43	-0.11	-0.11	0.11	0.11	0.00	0.00	1.17	0.90	6.34	1.50	0.11	Vehicle	-3.80	-0.11	0.00	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**84.81**	**141.35**	**1157.81**	**1929.68**
		U_{20} - U_{21}	7.04	-6.20	1.02	1.02	-0.83	-0.83	0.17	0.17	0.00	0.00	1.17	0.90	7.04	1.08	0.17	Vehicle	-6.20	-0.87	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**222.81**	**371.35**	**275.87**	**459.78**
		U_{21} - U_{22}	6.53	-6.48	1.26	1.26	-0.10	-0.10	0.06	0.06	-0.02	-0.02	1.17	0.90	6.53	1.32	0.06	Vehicle	-6.48	-0.10	-0.02	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**181.42**	**302.36**	**2377.67**	**3962.78**
		U_{22} - U_{23}	6.59	-6.58	0.63	0.63	-1.12	-1.12	0.03	0.03	-0.07	-0.07	1.17	0.90	6.59	0.66	0.03	Vehicle	-6.58	-1.18	-0.07	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**363.94**	**606.57**	**203.57**	**339.28**
		U_{23} - U_{24}	5.44	-7.80	0.92	0.92	-0.96	-0.96	0.02	0.02	-0.22	-0.22	1.17	0.90	5.44	0.96	0.02	Vehicle	-7.80	-1.00	-0.22	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**249.56**	**415.94**	**238.22**	**397.04**
		U_{24} - U_{25}	3.86	-6.29	0.39	0.39	-1.16	-1.16	0.01	0.01	-0.10	-0.10	1.17	0.90	3.86	0.41	0.01	Vehicle	-6.29	-1.22	-0.10	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**316.23**	**527.04**	**105.03**	**175.05**
		U_{25} - U_{26}	2.64	-9.89	0.39	0.39	-1.21	-1.21	0.03	0.03	-0.27	-0.27	1.17	0.90	2.64	0.41	0.03	Vehicle	-9.89	-1.27	-0.27	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**267.90**	**446.49**	**83.88**	**139.80**
		U_{26} - U_{27}	4.46	-9.33	0.30	0.30	-1.27	-1.27	0.03	0.03	-0.19	-0.19	1.17	0.90	4.46	0.31	0.03	Vehicle	-9.33	-1.34	-0.19	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**351.89**	**586.48**	**79.98**	**133.30**
		U_{27} - U_{28}	1.06	-10.73	0.37	0.37	-1.30	-1.30	0.03	0.03	-0.29	-0.29	1.17	0.90	1.06	0.39	0.03	Vehicle	-10.73	-1.37	-0.29	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**432.37**	**720.61**	**119.00**	**198.33**
		U_{28} - U_{29}	9.64	-6.86	1.11	1.11	-0.59	-0.59	0.04	0.04	-0.06	-0.06	1.17	0.90	9.64	1.17	0.04	Vehicle	-6.86	-0.62	-0.06	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**267.59**	**445.98**	**511.81**	**853.02**
		U_{29} - U_{30}	-12.69	-28.27	0.96	0.96	-2.54	-2.54	0.00	0.00	-0.96	-0.96	1.17	0.90	-12.69	1.01	-----	Vehicle	-28.27	-2.68	-0.96	Pedestrian	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**398.67**	**664.45**	**138.24**	**172.80**
		U_{30} - U_{31}	31.65	16.08	3.47	3.47	-0.42	-0.42	1.05	1.05	0.00	0.00	1.18	0.90	31.65	3.70	1.05	Vehicle	16.08	-0.45	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**101.50**	**169.17**	**898.85**	**1498.08**
		U_{31} - U_{32}	8.09	-9.55	1.10	1.10	-0.34	-0.34	0.09	0.09	-0.06	-0.06	1.18	0.90	8.09	1.17	0.09	Vehicle	-9.55	-0.37	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**236.28**	**393.80**	**753.16**	**1255.26**
		U_{32} - U_{33}	13.14	-2.23	1.56	1.56	-0.12	-0.12	0.30	0.30	-0.01	-0.01	1.18	0.90	13.14	1.66	0.30	Vehicle	-2.23	-0.13	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**74.32**	**123.86**	**1018.01**	**1696.69**
		U_{33} - U_{34}	11.33	-2.92	1.56	1.56	-0.09	-0.09	0.22	0.22	-0.01	-0.01	1.18	0.90	11.33	1.66	0.22	Vehicle	-2.92	-0.09	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**75.07**	**125.11**	**1383.79**	**2306.32**
		U_{34} - U_{35}	11.30	-0.22	1.79	1.79	-0.06	-0.06	0.29	0.29	0.00	0.00	1.18	0.90	11.30	1.90	0.29	Vehicle	-0.22	-0.06	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**65.54**	**109.23**	**2054.90**	**3424.83**
		U_{35} - U_{36}	12.24	-2.18	1.71	1.71	-0.18	-0.18	0.25	0.25	0.00	0.00	1.18	0.90	12.24	1.82	0.25	Vehicle	-2.18	-0.19	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**171.65**	**286.08**	**1705.72**	**2842.86**
		U_{36} - U_{37}	7.78	-7.69	1.33	1.33	-0.28	-0.28	0.13	0.13	0.00	0.00	1.18	0.90	7.78	1.41	0.13	Vehicle	-7.69	-0.30	0.00	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**262.43**	**437.38**	**1235.07**	**2058.45**
		U_{37} - U_{38}	9.81	-5.96	1.45	1.45	-0.90	-0.90	0.03	0.03	-0.09	-0.09	1.18	0.90	9.81	1.55	0.03	Vehicle	-5.96	-0.95	-0.09	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**238.88**	**398.14**	**389.81**	**649.68**
		U_{38} - U_{39}	8.20	-2.06	1.52	1.52	-0.66	-0.66	0.13	0.13	0.00	0.00	1.18	0.90	8.20	1.62	0.13	Vehicle	-2.06	-0.70	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**274.98**	**458.31**	**642.29**	**1070.49**
		U_{39} - U_{40}	3.71	-6.62	1.10	1.10	-1.42	-1.42	0.06	0.06	-0.20	-0.20	1.18	0.90	3.71	1.17	0.06	Vehicle	-6.62	-1.52	-0.20	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**384.18**	**640.30**	**294.74**	**491.23**
		U_{40} - U_{41}	7.22	-8.66	0.84	0.84	-1.19	-1.19	0.02	0.02	-0.07	-0.07	1.18	0.90	7.22	0.90	0.02	Vehicle	-8.66	-1.27	-0.07	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**413.96**	**689.93**	**291.49**	**485.81**
		U_{41} - U_{42}	1.01	-10.18	0.31	0.31	-1.47	-1.47	0.06	0.06	-0.30	-0.30	1.18	0.90	1.01	0.33	0.06	Vehicle	-10.18	-1.57	-0.30	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**508.39**	**847.32**	**103.83**	**173.05**
		U_{42} - U_{43}	3.31	-10.54	0.16	0.16	-1.25	-1.25	0.02	0.02	-0.20	-0.20	1.18	0.90	3.31	0.17	0.02	Vehicle	-10.54	-1.33	-0.20	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**1344.30**	**2240.50**	**164.11**	**273.52**
		U_{43} - U_{44}	4.39	-11.79	0.31	0.31	-1.22	-1.22	0.08	0.08	-0.37	-0.37	1.18	0.90	4.39	0.33	0.08	Vehicle	-11.79	-1.29	-0.37	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**337.62**	**562.70**	**81.53**	**135.89**
	Structure 3	U_0 - U_1	14.18	4.83	1.67	1.67	-0.98	-0.98	0.84	0.84	-0.05	-0.05	1.20	0.90	14.18	1.80	0.84	Pedestrian	4.83	-1.06	-0.05	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**50.27**	**62.83**	**105.05**	**175.08**
		U_1 - U_2	6.82	-2.91	1.33	1.33	-0.12	-0.12	0.18	0.18	-0.02	-0.02	1.20	0.90	6.82	1.44	0.18	Vehicle	-2.91	-0.13	-0.02	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**72.39**	**120.66**	**829.83**	**1383.04**
		U_2 - U_3	10.42	-5.49	1.49	1.49	-0.16	-0.16	0.29	0.29	-0.03	-0.03	1.20	0.90	10.42	1.61	0.29	Vehicle	-5.49	-0.18	-0.03	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**172.76**	**287.93**	**1596.00**	**2660.00**
		U_3 - U_4	6.43	-2.41	1.54	1.54	-0.13	-0.13	0.16	0.16	-0.02	-0.02	1.20	0.90	6.43	1.66	0.16	Vehicle	-2.41	-0.13	-0.02	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**230.44**	**384.06**	**2856.88**	**4761.47**
		U_4 - U_5	5.41	-9.62	0.88	0.88	-0.91	-0.91	0.07	0.07	-0.06

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

Location	Member	Member Forces from STAAD: D Start (kips)	D End (kips)	LL_{max} Start (kips)	LL_{max} End (kips)	LL_{min} Start (kips)	LL_{min} End (kips)	Pedestrian $Load_{max}$ Start (kips)	Pedestrian $Load_{max}$ End (kips)	Pedestrian $Load_{min}$ Start (kips)	Pedestrian $Load_{min}$ End (kips)	Impact (1+I)	Lane Reduction	Maximum Positive Shear: Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Minimum Negative Shear: Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Shear Force Rating: Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Structure 1	L_0 - L_1	4.43	-2.13	1.36	1.36	-0.21	-0.21	0.18	0.18	-0.05	-0.05	1.24	0.90	4.43	1.51	0.18	Vehicle	-2.13	-0.23	-0.05	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**68.31**	**113.84**	**454.43**	**757.39**
	L_1 - L_2	6.00	-2.28	1.36	1.36	-0.34	-0.34	0.19	0.19	-0.09	-0.09	1.24	0.90	6.00	1.52	0.19	Vehicle	-2.28	-0.38	-0.09	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**67.49**	**112.48**	**274.02**	**456.69**
	L_2 - L_3	2.92	-3.66	0.52	0.52	-0.47	-0.47	0.04	0.04	-0.05	-0.05	1.24	0.90	2.92	0.58	0.04	Vehicle	-3.66	-0.52	-0.05	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**281.50**	**469.17**	**311.46**	**519.11**
	L_3 - L_4	3.19	-5.19	0.89	0.89	-0.49	-0.49	0.02	0.02	-0.10	-0.10	1.24	0.90	3.19	0.99	0.02	Vehicle	-5.19	-0.55	-0.10	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**164.10**	**273.50**	**292.72**	**487.87**
	L_4 - L_5	1.06	-8.32	0.15	0.15	-1.28	-1.28	0.00	0.00	-0.22	-0.22	1.24	0.90	1.06	0.16	-----	Vehicle	-8.32	-1.43	-0.22	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**838.17**	**1396.95**	**92.99**	**154.98**
	L_5 - L_6	-0.11	-8.64	0.17	0.17	-0.77	-0.77	0.00	0.00	-0.28	-0.28	1.24	0.90	-0.11	0.19	-----	Vehicle	-8.64	-0.86	-0.28	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**1053.76**	**1756.26**	**232.00**	**386.67**
	L_6 - L_7	4.46	-5.99	0.62	0.62	-0.82	-0.82	0.18	0.18	-0.20	-0.20	1.24	0.90	4.46	0.69	0.18	Vehicle	-5.99	-0.91	-0.20	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**465.25**	**775.42**	**350.78**	**584.63**
	L_7 - L_8	-9.36	-17.66	0.57	0.57	-1.90	-1.90	0.00	0.00	-1.06	-1.06	1.24	0.90	-9.36	0.63	-----	Vehicle	-17.66	-2.12	-1.06	Pedestrian	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**689.78**	**1149.63**	**174.98**	**218.72**
	L_8 - L_9	18.84	10.87	2.31	2.31	-0.41	-0.41	1.10	1.10	0.00	0.00	1.20	0.90	18.84	2.49	1.10	Pedestrian	10.87	-0.44	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**154.88**	**193.60**	**983.55**	**1639.25**
	L_9 - L_{10}	11.17	-1.76	1.29	1.29	-0.38	-0.38	0.27	0.27	-0.14	-0.14	1.20	0.90	11.17	1.39	0.27	Vehicle	-1.76	-0.41	-0.14	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**226.35**	**377.25**	**779.86**	**1299.77**
	L_{10} - L_{11}	10.70	2.17	1.19	1.19	-0.03	-0.03	0.41	0.41	0.00	0.00	1.20	0.90	10.70	1.29	0.41	Vehicle	2.17	-0.03	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**102.14**	**170.24**	**5160.82**	**8601.37**
	L_{11} - L_{12}	12.21	-0.42	1.18	1.18	-0.03	-0.03	0.26	0.26	0.00	0.00	1.20	0.90	12.21	1.27	0.26	Vehicle	-0.42	-0.04	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**102.64**	**171.07**	**3752.35**	**6253.91**
	L_{12} - L_{13}	6.63	-2.92	0.64	0.64	-0.28	-0.28	0.13	0.13	0.00	0.00	1.20	0.90	6.63	0.69	0.13	Vehicle	-2.92	-0.30	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**383.57**	**639.28**	**886.43**	**1477.38**
	L_{13} - L_{14}	12.80	1.62	2.20	2.20	-0.08	-0.08	0.31	0.31	0.00	0.00	1.20	0.90	12.80	2.37	0.31	Vehicle	1.62	-0.08	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**159.82**	**266.36**	**4664.25**	**7773.75**
	L_{14} - L_{15}	1.98	-10.69	0.23	0.23	-1.61	-1.61	0.05	0.05	-0.21	-0.21	1.20	0.90	1.98	0.25	0.05	Vehicle	-10.69	-1.74	-0.21	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**1918.48**	**3197.47**	**271.75**	**452.91**
	L_{15} - L_{16}	5.99	-3.43	0.76	0.76	-0.47	-0.47	0.03	0.03	-0.07	-0.07	1.20	0.90	5.99	0.82	0.03	Vehicle	-3.43	-0.50	-0.07	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**577.90**	**963.17**	**951.32**	**1585.54**
	L_{16} - L_{17}	-0.84	-11.84	0.15	0.15	-1.31	-1.31	0.02	0.02	-0.20	-0.20	1.20	0.90	-0.84	0.16	0.02	Vehicle	-11.84	-1.41	-0.20	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**2270.44**	**3784.07**	**246.30**	**410.50**
	L_{17} - L_{18}	2.19	-9.46	0.11	0.11	-0.87	-0.87	0.03	0.03	-0.24	-0.24	1.20	0.90	2.19	0.12	0.03	Vehicle	-9.46	-0.94	-0.24	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**1964.25**	**3273.75**	**247.37**	**412.28**
	L_{18} - L_{19}	0.84	-11.52	0.09	0.09	-0.87	-0.87	0.02	0.02	-0.26	-0.26	1.20	0.90	0.84	0.10	0.02	Vehicle	-11.52	-0.94	-0.26	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1052.13**	**1753.55**	**105.89**	**176.48**
	L_{19} - L_{20}	1.28	-8.50	0.08	0.08	-0.77	-0.77	0.02	0.02	-0.32	-0.32	1.20	0.90	1.28	0.08	0.02	Vehicle	-8.50	-0.82	-0.32	Pedestrian	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1301.44**	**2169.06**	**118.04**	**147.54**
Structure 2	L_0 - L_1	8.88	-1.10	1.35	1.35	-0.16	-0.16	0.23	0.23	-0.03	-0.03	1.18	0.90	8.88	1.44	0.23	Vehicle	-1.10	-0.17	-0.03	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**95.57**	**159.29**	**825.87**	**1376.44**
	L_1 - L_2	13.41	-0.38	1.41	1.41	-0.21	-0.21	0.25	0.25	-0.04	-0.04	1.18	0.90	13.41	1.50	0.25	Vehicle	-0.38	-0.22	-0.04	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**90.03**	**150.05**	**651.44**	**1085.73**
	L_2 - L_3	9.63	-1.36	1.25	1.25	-0.24	-0.24	0.25	0.25	-0.05	-0.05	1.18	0.90	9.63	1.33	0.25	Vehicle	-1.36	-0.26	-0.05	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**193.10**	**321.84**	**1019.31**	**1698.85**
	L_3 - L_4	13.25	-0.94	1.55	1.55	-0.24	-0.24	0.21	0.21	-0.05	-0.05	1.18	0.90	13.25	1.65	0.21	Vehicle	-0.94	-0.26	-0.05	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**223.99**	**373.31**	**1478.30**	**2463.83**
	L_4 - L_5	9.60	-8.29	0.91	0.91	-0.82	-0.82	0.07	0.07	-0.04	-0.04	1.18	0.90	9.60	0.97	0.07	Vehicle	-8.29	-0.88	-0.04	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**506.37**	**843.94**	**562.09**	**936.81**
	L_5 - L_6	11.25	-2.22	1.56	1.56	-0.32	-0.32	0.12	0.12	-0.06	-0.06	1.18	0.90	11.25	1.66	0.12	Vehicle	-2.22	-0.34	-0.06	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**324.40**	**540.67**	**1585.53**	**2642.55**
	L_6 - L_7	3.51	-10.30	0.71	0.71	-1.51	-1.51	0.00	0.00	-0.07	-0.07	1.18	0.90	3.51	0.76	-----	Vehicle	-10.30	-1.61	-0.07	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**730.64**	**1217.74**	**341.05**	**568.41**
	L_7 - L_8	2.60	-12.44	0.45	0.45	-1.27	-1.27	0.00	0.00	-0.24	-0.24	1.18	0.90	2.60	0.48	-----	Vehicle	-12.44	-1.35	-0.24	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**813.46**	**1355.77**	**282.14**	**470.24**
	L_8 - L_9	-0.35	-14.52	0.14	0.14	-1.34	-1.34	0.00	0.00	-0.19	-0.19	1.18	0.90	-0.35	0.15	0.00	Vehicle	-14.52	-1.43	-0.19	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**2065.24**	**3442.06**	**208.13**	**346.88**
	L_9 - L_{10}	-2.85	-13.17	0.24	0.24	-1.12	-1.12	0.00	0.00	-0.34	-0.34	1.18	0.90	-2.85	0.26	-----	Vehicle	-13.17	-1.19	-0.34	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**867.05**	**1445.08**	**180.22**	**300.36**
	L_{10} - L_{11}	-0.58	-12.80	0.30	0.30	-1.28	-1.28	0.05	0.05	-0.23	-0.23	1.18	0.90	-0.58	0.32	0.05	Vehicle	-12.80	-1.37	-0.23	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**590.60**	**984.33**	**134.06**	**223.44**
	L_{11} - L_{12}	-1.75	-17.48	0.15	0.15	-1.01	-1.01	0.00	0.00	-0.37	-0.37	1.18	0.90	-1.75	0.16	-----	Vehicle	-17.48	-1.08	-0.37	Pedestrian	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**1953.39**	**3255.65**	**273.88**	**342.34**
	L_{12} - L_{13}	8.95	-4.77	1.31	1.31	-0.77	-0.77	0.30	0.30	-0.17	-0.17	1.18	0.90	8.95	1.40	0.30	Vehicle	-4.77	-0.82	-0.17	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**317.49**	**529.14**	**541.62**	**902.70**
	L_{13} - L_{14}	-25.08	-38.97	1.20	1.20	-3.16	-3.16	0.00	0.00	-1.43	-1.43	1.18	0.90	-25.08	1.28	-----	Vehicle	-38.97	-3.36	-1.43	Pedestrian	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**440.41**	**734.02**	**146.06**	**182.57**
	L_{14} - L_{15}	38.11	24.33	3.68	3.68	-1.18	-1.18	1.40	1.40	0.00	0.00	1.17	0.90	38.11	3.87	1.40	Pedestrian	24.33	-1.24	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**133.10**	**166.37**	**455.57**	**759.28**
	L_{15} - L_{16}	2.20	-10.15	1.12	1.12	-0.83	-0.83	0.09	0.09	-0.29	-0.29	1.17	0.90	2.20	1.18	0.09	Vehicle	-10.15	-0.87	-0.29	Pedestrian	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**379.08**	**631.79**	**508.89**	**636.11**
	L_{16} - L_{17}	15.46	1.39	1.36	1.36	-0.18	-0.18	0.38	0.38	0.00	0.00	1.17	0.90	15.46	1.43	0.38	Vehicle	1.39	-0.18	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**242.06**	**403.44**	**1933.29**	**3222.14**
	L_{17} - L_{18}	10.48	-1.25	1.68	1.68	-0.23	-0.23	0.22	0.22	-0.08	-0.08	1.17	0.90	10.48	1.77	0.22	Vehicle	-1.25	-0.25	-0.08	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**122.24**	**203.74**	**901.18**	**1501.96**
	L_{18} - L_{19}	10.20	0.17	1.06	1.06	-0.28	-0.28	0.27	0.27	0.00	0.00	1.17	0.90	10.20	1.11	0.27	Vehicle	0.17	-0.30	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**137.74**	**229.57**	**532.50**	**887.51**
	L_{19} - L_{20}	9.84	-2.71	1.27	1.27	-0.13	-0.13	0.12	0.12	-0.03	-0.03	1.17	0.90	9.84	1.34	0.12	Vehicle	-2.71	-0.14	-0.03	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**114.68**	**191.13**	**1133.28**	**1888.79**
	L_{20} - L_{21}	7.95	-2.45	0.93	0.93	-0.63	-0.63	0.16	0.16	0.00	0.00	1.17	0.90	7.95	0.98	0.16	Vehicle	-2.45	-0.66	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**258.37**	**430.62**	**389.47**	**649.11**
	L_{21} - L_{22}	8.88	-2.40	1.74	1.74	-0.28	-0.28	0.16	0.16	-0.05	-0.05	1.17	0.90	8.88	1.83	0.16	Vehicle	-2.40	-0.29	-0.05	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**138.47**	**230.79**	**884.87**	**1474.78**
	L_{22} - L_{23}	2.01	-9.01	0.32	0.32	-1.67	-1.67	0.06	0.06	-0.18	-0.18	1.17	0.90	2.01	0.33	0.06	Vehicle	-9.01	-1.75	-0.18	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**768.71**	**1281.18**	**144.33**	**240.55**
	L_{23} - L_{24}	1.86	-8.53	0.55	0.55	-0.90	-0.90	0.00	0.00	-0.20	-0.20	1.17	0.90	1.86	0.57	-----	Vehicle	-8.53	-0.95	-0.20	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**448.68**	**747.80**	**267.48**	**445.79**
	L_{24} - L_{25}	2.80	-9.72	0.12	0.12	-1.17	-1.17	0.03	0.03	-0.11	-0.11	1.17	0.90	2.80	0.12	0.03	Vehicle	-9.72	-1.24	-0.11	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**1267.27**	**2112.11**	**124.01**	**206.69**
	L_{25} - L_{26}	-0.70	-10.70	0.27	0.27	-0.94	-0.94	0.00	0.00	-0.30	-0.30	1.17	0.90	-0.70	0.28	-----	Vehicle	-10.70	-0.99	-0.30	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**571.83**	**953.05**	**153.64**	**256.07**
	L_{26} - L_{27}	1.32	-10.35	0.31	0.31	-1.41	-1.41	0.05	0.05	-0.19	-0.19	1.17	0.90	1.32	0.32	0.05	Vehicle	-10.35	-1.48	-0.19	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**689.01**	**1148.36**	**145.88**	**243.13**
	L_{27} - L_{28}	-2.21	-16.20	0.18	0.18	-1.14	-1.14	0.00	0.00	-0.41	-0.41	1.17	0.90	-2.21	0.19	-----	Vehicle	-16.20	-1.20	-0.41	Pedestrian	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1861.51**	**3102.52**	**286.15**	**357.68**
	L_{28} - L_{29}	11.79	-0.40	1.23	1.23	-0.64	-0.64	0.27	0.27	-0.04	-0.04	1.17	0.90	11.79	1.29	0.27	Vehicle	-0.40	-0.67	-0.04	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**341.66**	**569.43**	**667.80**	**1113.01**
	L_{29} - L_{30}	-25.96	-39.46	1.05	1.05	-3.34	-3.34	0.00	0.00	-1.47	-1.47	1.17	0.90	-25.96	1.10	-----	Vehicle	-39.46	-3.51	-1.47	Pedestrian	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**511.17**	**851.96**	**140.42**	**175.53**
	L_{30} - L_{31}	38.82	24.63	3.39	3.39	-0.95	-0.95	1.43	1.43	0.00	0.00	1.18	0.90	38.82	3.61	1.43	Pedestrian	24.63	-1.01	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**139.02**	**173.77**	**555.22**	**925.37**
	L_{31} - L_{32}	6.18	-7.73	1.19	1.19	-0.82	-0.82	0.15	0.15	-0.25	-0.25	1.18	0.90	6.18	1.27	0.15	Vehicle	-7.73	-0.87	-0.25	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**350.44**	**584.06**	**510.45**	**850.75**
	L_{32} - L_{33}	16.95	1.13	1.15	1.15	-0.14	-0.14	0.34	0.34	0.00	0.00	1.18	0.90	16.95	1.22	0.34	Vehicle	1.13	-0.15	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**242.65**	**404.42**	**2047.86**	**3413.10**
	L_{33} - L_{34}	12.91	0.40	1.40	1.40	-0.22	-0.22	0.24	0.24	-0.04	-0.04	1.18	0.90	12.91	1.49	0.24	Vehicle	0.40	-0.23	-0.04	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**123.08**	**205.13**	**815.64**	**1359.40**
	L_{34} - L_{35}	12.86	2.50	1.36	1.36	-0.14	-0.14	0.31	0.31	0.00	0.00	1.18	0.90	12.86	1.45	0.31	Vehicle	2.50	-0.15	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**148.52**	**247.53**	**1514.33**	**2523.89**
	L_{35} - L_{36}	14.48	0.27	1.48	1.48	-0.10	-0.10	0.19	0.19	0.00	0.00	1.18	0.90	14.48	1.58	0.19	Vehicle	0.27	-0.11	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**188.06**	**313.44**	**2899.22**	**4832.03**
	L_{36} - L_{37}	11.87	-3.19	1.35	1.35	-0.29	-0.29	0.19	0.19	0.00	0.00	1.18	0.90	11.87	1.44	0.19	Vehicle	-3.19	-0.31	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**130.56**	**217.61**	**622.51**	**1037.52**
	L_{37} - L_{38}	10.52	-3.30	1.68	1.68	-0.62	-0.62	0.10	0.10	0.00	0.00	1.18	0.90	10.52	1.79	0.10	Vehicle	-3.30	-0.66	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**306.14**	**510.23**	**832.71**	**1387.84**
	L_{38} - L_{39}	1.68	-11.78	0.26	0.26	-1.35	-1.35	0.05	0.05	-0.12	-0.12	1.18	0.90	1.68	0.27	0.05	Vehicle	-11.78	-1.44	-0.12	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**2001.69**	**3336.16**	**374.81**	**624.68**
	L_{39} - L_{40}	7.67	-10.20	0.81	0.81	-0.78	-0.78	0.05	0.05	-0.12	-0.12	1.18	0.90	7.67	0.86	0.05	Vehicle	-10.20	-0.83	-0.12	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**571.55**	**952.58**	**594.79**	**991.31**
	L_{40} - L_{41}	0.89	-13.24	0.19	0.19	-1.37	-1.37	0.03	0.03	-0.16	-0.16	1.18	0.90	0.89	0.21	0.03	Vehicle	-13.24	-1.46	-0.16	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**1838.44**	**3064.07**	**253.91**	**423.19**
	L_{41} - L_{42}	1.02	-9.90	0.23	0.23	-1.02	-1.02	0.05	0.05	-0.24	-0.24	1.18	0.90	1.02	0.24	0.05	Vehicle	-9.90	-1.09	-0.24	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**1083.02**	**1805.03**	**235.20**	**391.99**
	L_{42} - L_{43}	0.59	-13.12	0.15	0.15	-0.93	-0.93	0.03	0.03	-0.22	-0.22	1.18	0.90	0.59	0.16	0.03	Vehicle	-13.12	-0.99	-0.22	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**439.98**	**733.29**	**64.17**	**106.96**
	L_{43} - L_{44}	-0.09	-9.99	0.15	0.15	-0.88	-0.88	0.03	0.03	-0.29	-0.29	1.18	0.90	-0.09	0.16	0.03	Vehicle	-9.99	-0.94	-0.29	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**908.53**	**1514.22**	**145.68**	**242.80**
Structure 3	L_0 - L_1	7.56	-2.30	1.11	1.11	-0.09	-0.09	0.22	0.22	-0.01	-0.01	1.20	0.90	7.56	1.20	0.22	Vehicle	-2.30	-0.09	-0.01	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**84.63**	**141.06**	**1128.35**	**1880.59**
	L_1 - L_2	11.66	-0.81	1.20	1.20	-0.13	-0.13	0.27	0.27	-0.02	-0.02	1.20	0.90	11.66	1.30	0.27	Vehicle	-0.81	-0.14	-0.02	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**76.33**	**127.22**	**752.84**	**1254.73**
	L_2 - L_3	9.44	-2.32	1.05	1.05	-0.13	-0.13	0.25	0.25	-0.03	-0.03	1.20	0.90	9.44	1.13	0.25	Vehicle	-2.32	-0.14	-0.03	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**205.29**	**342.15**	**1641.24**	**2735.41**
	L_3 - L_4	11.46	0.38	1.56	1.56	-0.18	-0.18	0.24	0.24	-0.02	-0.02	1.20	0.90	11.46	1.68	0.24	Vehicle	0.38	-0.20	-0.02	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**206.78**	**344.64**	**1807.46**	**3012.44**
	L_4 - L_5	3.42	-6.02	0.60	0.60	-0.76	-0.76	0.04	0.04	-0.03	-0.03	1.20	0.90	3.42	0.64	0.04	Vehicle	-6.

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD												Maximum Positive Shear				Minimum Negative Shear												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &	Depth of Web (inches)	Thickness of Web (inches	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(Fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member Inventory RF	Positive Shear Member Operating RF	Negative Shear Member Inventory RF	Negative Shear Member Operating RF
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)																						
Structure 1	U_0 - L_0	-1.56	-1.56	0.21	0.21	-1.52	-1.52	0.04	0.04	-0.12	-0.12	1.24	0.90	-1.56	0.24	0.04	Vehicle	-1.56	-1.69	-0.12	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**487.17**	**811.95**	**66.97**	**111.62**
	U_1 - L_1	-1.45	-1.45	0.44	0.44	-1.47	-1.47	0.12	0.12	-0.33	-0.33	1.24	0.90	-1.45	0.49	0.12	Vehicle	-1.45	-1.64	-0.33	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**234.60**	**390.99**	**69.11**	**115.18**
	U_2 - L_2	0.31	0.31	0.40	0.40	-0.86	-0.86	0.11	0.11	-0.16	-0.16	1.24	0.90	0.31	0.45	0.11	Vehicle	0.31	-0.96	-0.16	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**255.68**	**426.14**	**119.45**	**199.08**
	U_3 - L_3	1.69	1.69	0.47	0.47	-0.52	-0.52	0.09	0.09	-0.04	-0.04	1.24	0.90	1.69	0.52	0.09	Vehicle	1.69	-0.58	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**218.34**	**363.90**	**198.75**	**331.25**
	U_4 - L_4	2.57	2.57	0.73	0.73	-0.15	-0.15	0.16	0.16	0.00	0.00	1.24	0.90	2.57	0.81	0.16	Vehicle	2.57	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**138.43**	**230.72**	**706.28**	**1177.13**
	U_5 - L_5	2.90	2.90	0.85	0.85	-0.07	-0.07	0.23	0.23	0.00	0.00	1.24	0.90	2.90	0.95	0.23	Vehicle	2.90	-0.08	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**144.28**	**240.47**	**1752.77**	**2921.28**
	U_6 - L_6	2.64	2.64	0.77	0.77	-0.13	-0.13	0.22	0.22	0.00	0.00	1.24	0.90	2.64	0.85	0.22	Vehicle	2.64	-0.15	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**142.98**	**238.30**	**845.93**	**1409.88**
	U_7 - L_7	2.84	2.84	0.57	0.57	-0.19	-0.19	0.23	0.23	0.00	0.00	1.24	0.90	2.84	0.63	0.23	Pedestrian	2.84	-0.21	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**191.08**	**238.85**	**618.13**	**1030.21**
	U_8 - L_8	-0.84	-0.84	0.56	0.56	-0.68	-0.68	0.19	0.19	-0.19	-0.19	1.24	0.90	-0.84	0.63	0.19	Vehicle	-0.84	-0.76	-0.19	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**353.92**	**589.87**	**290.74**	**484.57**
	U_9 - L_9	-6.05	-6.05	0.05	0.05	-1.14	-1.14	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.05	0.05	-----	Vehicle	-6.05	-1.23	-0.38	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2730.14**	**4550.23**	**113.73**	**189.56**
	U_{10} - L_{10}	-5.08	-5.08	0.05	0.05	-1.15	-1.15	0.00	0.00	-0.32	-0.32	1.20	0.90	-5.08	0.06	0.00	Vehicle	-5.08	-1.24	-0.32	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**4275.27**	**7125.46**	**188.08**	**313.46**
	U_{11} - L_{11}	-6.10	-6.10	0.01	0.01	-1.29	-1.29	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.10	0.01	-----	Vehicle	-6.10	-1.39	-0.38	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**14645.58**	**24409.30**	**119.44**	**199.06**
	U_{12} - L_{12}	-4.35	-4.35	0.06	0.06	-1.00	-1.00	0.00	0.00	-0.26	-0.26	1.20	0.90	-4.35	0.06	-----	Vehicle	-4.35	-1.08	-0.26	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2420.73**	**4034.55**	**130.85**	**218.08**
	U_{13} - L_{13}	-2.49	-2.49	0.11	0.11	-0.76	-0.76	0.00	0.00	-0.15	-0.15	1.20	0.90	-2.49	0.12	-----	Vehicle	-2.49	-0.82	-0.15	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**1040.08**	**1733.47**	**150.41**	**250.68**
	U_{14} - L_{14}	-1.05	-1.05	0.29	0.29	-0.41	-0.41	0.00	0.00	-0.05	-0.05	1.20	0.90	-1.05	0.31	-----	Vehicle	-1.05	-0.44	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**365.49**	**609.14**	**259.09**	**431.82**
	U_{15} - L_{15}	0.56	0.56	0.55	0.55	-0.22	-0.22	0.09	0.09	-0.04	-0.04	1.20	0.90	0.56	0.60	0.09	Vehicle	0.56	-0.23	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**190.36**	**317.27**	**488.88**	**814.79**
	U_{16} - L_{16}	1.64	1.64	0.57	0.57	-0.12	-0.12	0.13	0.13	-0.03	-0.03	1.20	0.90	1.64	0.62	0.13	Vehicle	1.64	-0.13	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**182.68**	**304.47**	**889.05**	**1481.76**
	U_{17} - L_{17}	2.21	2.21	0.60	0.60	-0.10	-0.10	0.15	0.15	-0.02	-0.02	1.20	0.90	2.21	0.64	0.15	Vehicle	2.21	-0.10	-0.02	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**213.87**	**356.45**	**1367.59**	**2279.32**
	U_{18} - L_{18}	3.83	3.83	0.79	0.79	-0.11	-0.11	0.24	0.24	-0.02	-0.02	1.20	0.90	3.83	0.85	0.24	Vehicle	3.83	-0.12	-0.02	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**166.66**	**277.77**	**1232.63**	**2054.39**
	U_{19} - L_{19}	3.13	3.13	0.59	0.59	-0.07	-0.07	0.21	0.21	-0.02	-0.02	1.20	0.90	3.13	0.64	0.21	Vehicle	3.13	-0.08	-0.02	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**264.35**	**440.58**	**2184.21**	**3640.34**
	U_{20} - L_{20}	2.80	2.80	0.40	0.40	-0.04	-0.04	0.17	0.17	-0.01	-0.01	1.20	0.90	2.80	0.43	0.17	Pedestrian	2.80	-0.04	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**374.21**	**467.76**	**3981.56**	**6635.93**
	U_0 - L_0	-2.52	-2.52	0.07	0.07	-0.62	-0.62	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.52	0.08	0.01	Vehicle	-2.52	-0.65	-0.09	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2474.01**	**4123.36**	**281.00**	**468.33**
	U_1 - L_1	-4.00	-4.00	0.16	0.16	-0.87	-0.87	0.03	0.03	-0.21	-0.21	1.18	0.90	-4.00	0.17	0.03	Vehicle	-4.00	-0.92	-0.21	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1103.06**	**1838.43**	**198.13**	**330.22**
	U_2 - L_2	-3.87	-3.87	0.21	0.21	-0.96	-0.96	0.04	0.04	-0.21	-0.21	1.18	0.90	-3.87	0.22	0.04	Vehicle	-3.87	-1.02	-0.21	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**710.46**	**1184.10**	**148.34**	**247.24**
	U_3 - L_3	-2.33	-2.33	0.16	0.16	-0.63	-0.63	0.03	0.03	-0.13	-0.13	1.18	0.90	-2.33	0.17	0.03	Vehicle	-2.33	-0.67	-0.13	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**920.85**	**1534.75**	**224.60**	**374.34**
	U_4 - L_4	-1.45	-1.45	0.18	0.18	-0.60	-0.60	0.04	0.04	-0.11	-0.11	1.18	0.90	-1.45	0.19	0.04	Vehicle	-1.45	-0.63	-0.11	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**599.61**	**999.35**	**178.36**	**297.26**
	U_5 - L_5	-0.22	-0.22	0.21	0.21	-0.45	-0.45	0.04	0.04	-0.06	-0.06	1.18	0.90	-0.22	0.22	0.04	Vehicle	-0.22	-0.48	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**510.65**	**851.08**	**238.82**	**398.04**
	U_6 - L_6	0.74	0.74	0.35	0.35	-0.34	-0.34	0.04	0.04	-0.01	-0.01	1.18	0.90	0.74	0.37	0.04	Vehicle	0.74	-0.36	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**305.73**	**509.55**	**320.03**	**533.39**
	U_7 - L_7	1.65	1.65	0.39	0.39	-0.12	-0.12	0.07	0.07	0.00	0.00	1.18	0.90	1.65	0.41	0.07	Vehicle	1.65	-0.12	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**272.97**	**454.94**	**923.47**	**1539.12**
	U_8 - L_8	3.91	3.91	0.81	0.81	-0.08	-0.08	0.17	0.17	0.00	0.00	1.18	0.90	3.91	0.86	0.17	Vehicle	3.91	-0.08	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**139.31**	**232.18**	**1475.26**	**2458.77**
	U_9 - L_9	6.62	6.62	1.16	1.16	-0.05	-0.05	0.26	0.26	0.00	0.00	1.18	0.90	6.62	1.23	0.26	Vehicle	6.62	-0.05	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**147.11**	**245.19**	**3954.77**	**6591.28**
	U_{10} - L_{10}	5.55	5.55	0.95	0.95	-0.08	-0.08	0.23	0.23	0.00	0.00	1.18	0.90	5.55	1.01	0.23	Vehicle	5.55	-0.09	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**231.54**	**385.90**	**2813.27**	**4688.78**
	U_{11} - L_{11}	4.64	4.64	0.75	0.75	-0.11	-0.11	0.19	0.19	0.00	0.00	1.18	0.90	4.64	0.80	0.19	Vehicle	4.64	-0.12	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**293.21**	**488.68**	**2060.09**	**3433.48**
	U_{12} - L_{12}	3.46	3.46	0.59	0.59	-0.15	-0.15	0.16	0.16	-0.01	-0.01	1.18	0.90	3.46	0.62	0.16	Vehicle	3.46	-0.16	-0.01	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**417.17**	**695.28**	**1669.63**	**2782.71**
	U_{13} - L_{13}	3.45	3.45	0.42	0.42	-0.17	-0.17	0.14	0.14	0.00	0.00	1.18	0.90	3.45	0.45	0.14	Vehicle	3.45	-0.18	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**520.61**	**867.68**	**1295.34**	**2158.90**
	U_{14} - L_{14}	0.27	0.27	0.31	0.31	-0.45	-0.45	0.11	0.11	-0.10	-0.10	1.18	0.90	0.27	0.32	0.11	Vehicle	0.27	-0.48	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**702.39**	**1170.65**	**472.54**	**787.57**
	U_{15} - L_{15}	-2.96	-2.96	0.05	0.05	-0.57	-0.57	0.00	0.00	-0.13	-0.13	1.17	0.90	-2.96	0.06	-----	Vehicle	-2.96	-0.60	-0.13	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2746.51**	**4577.52**	**254.26**	**423.77**
	U_{16} - L_{16}	-2.84	-2.84	0.08	0.08	-0.77	-0.77	0.03	0.03	-0.16	-0.16	1.17	0.90	-2.84	0.08	0.03	Pedestrian	-2.84	-0.81	-0.16	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2207.77**	**2759.71**	**226.88**	**378.14**
	U_{17} - L_{17}	-3.71	-3.71	0.12	0.12	-0.91	-0.91	0.02	0.02	-0.19	-0.19	1.17	0.90	-3.71	0.13	0.02	Vehicle	-3.71	-0.96	-0.19	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1342.10**	**2236.84**	**174.70**	**291.17**
	U_{18} - L_{18}	-3.92	-3.92	0.18	0.18	-1.03	-1.03	0.02	0.02	-0.22	-0.22	1.17	0.90	-3.92	0.19	0.02	Vehicle	-3.92	-1.08	-0.22	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**831.61**	**1386.02**	**140.59**	**234.31**
	U_{19} - L_{19}	-2.44	-2.44	0.14	0.14	-0.69	-0.69	0.01	0.01	-0.14	-0.14	1.17	0.90	-2.44	0.15	0.01	Vehicle	-2.44	-0.73	-0.14	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**934.50**	**1557.50**	**188.82**	**314.70**
	U_{20} - L_{20}	-1.76	-1.76	0.16	0.16	-0.57	-0.57	0.00	0.00	-0.12	-0.12	1.17	0.90	-1.76	0.17	0.00	Vehicle	-1.76	-0.60	-0.12	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**750.18**	**1250.29**	**205.98**	**343.30**
	U_{21} - L_{21}	-1.05	-1.05	0.21	0.21	-0.51	-0.51	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.05	0.22	-----	Vehicle	-1.05	-0.54	-0.09	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**516.58**	**860.97**	**211.37**	**352.28**
	U_{22} - L_{22}	0.13	0.13	0.35	0.35	-0.29	-0.29	0.05	0.05	-0.03	-0.03	1.17	0.90	0.13	0.37	0.05	Vehicle	0.13	-0.31	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**309.49**	**515.82**	**374.05**	**623.41**
	U_{23} - L_{23}	1.36	1.36	0.59	0.59	-0.18	-0.18	0.11	0.11	-0.02	-0.02	1.17	0.90	1.36	0.62	0.11	Vehicle	1.36	-0.19	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**181.80**	**303.00**	**599.84**	**999.74**
	U_{24} - L_{24}	2.07	2.07	0.64	0.64	-0.18	-0.18	0.14	0.14	-0.02	-0.02	1.17	0.90	2.07	0.68	0.14	Vehicle	2.07	-0.19	-0.02	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**183.28**	**305.46**	**660.48**	**1100.80**
	U_{25} - L_{25}	2.70	2.70	0.68	0.68	-0.15	-0.15	0.16	0.16	-0.02	-0.02	1.17	0.90	2.70	0.72	0.16	Vehicle	2.70	-0.16	-0.02	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**191.37**	**318.95**	**885.97**	**1476.61**
	U_{26} - L_{26}	4.21	4.21	1.00	1.00	-0.18	-0.18	0.23	0.23	-0.03	-0.03	1.17	0.90	4.21	1.05	0.23	Vehicle	4.21	-0.19	-0.03	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**144.51**	**240.85**	**809.89**	**1349.81**
	U_{27} - L_{27}	3.88	3.88	0.84	0.84	-0.12	-0.12	0.20	0.20	-0.01	-0.01	1.17	0.90	3.88	0.89	0.20	Vehicle	3.88	-0.13	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**189.09**	**315.16**	**1365.26**	**2275.43**
	U_{28} - L_{28}	2.75	2.75	0.63	0.63	-0.15	-0.15	0.14	0.14	-0.02	-0.02	1.17	0.90	2.75	0.66	0.14	Vehicle	2.75	-0.16	-0.02	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**278.27**	**463.79**	**1185.92**	**1976.53**
	U_{29} - L_{29}	2.82	2.82	0.42	0.42	-0.16	-0.16	0.13	0.13	0.00	0.00	1.17	0.90	2.82	0.44	0.13	Vehicle	2.82	-0.17	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**346.10**	**576.83**	**909.37**	**1515.62**
	U_{30} - L_{30}	-0.53	-0.53	0.33	0.33	-0.43	-0.43	0.09	0.09	-0.10	-0.10	1.18	0.90	-0.53	0.35	0.09	Vehicle	-0.53	-0.46	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**658.53**	**1097.56**	**500.19**	**833.65**
	U_{31} - L_{31}	-3.70	-3.70	0.06	0.06	-0.56	-0.56	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.70	0.06	-----	Vehicle	-3.70	-0.60	-0.15	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**3888.54**	**6480.90**	**385.59**	**642.65**
	U_{32} - L_{32}	-3.62	-3.62	0.09	0.09	-0.69	-0.69	0.02	0.02	-0.16	-0.16	1.18	0.90	-3.62	0.10	0.02	Vehicle	-3.62	-0.73	-0.16	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**2705.06**	**4508.44**	**355.28**	**592.13**
	U_{33} - L_{33}	-4.59	-4.59	0.04	0.04	-0.82	-0.82	0.00	0.00	-0.18	-0.18	1.18	0.90	-4.59	0.04	-----	Vehicle	-4.59	-0.88	-0.18	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**6414.83**	**10691.39**	**266.20**	**443.67**
	U_{34} - L_{34}	-5.33	-5.33	0.01	0.01	-1.00	-1.00	0.00	0.00	-0.22	-0.22	1.18	0.90	-5.33	0.01	-----	Vehicle	-5.33	-1.07	-0.22	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**17302.78**	**28837.97**	**218.06**	**363.43**
	U_{35} - L_{35}	-6.23	-6.23	0.03	0.03	-1.16	-1.16	0.00	0.00	-0.25	-0.25	1.18	0.90	-6.23	0.03	-----	Vehicle	-6.23	-1.23	-0.25	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**7109.92**	**11849.87**	**147.30**	**245.50**
	U_{36} - L_{36}	-3.53	-3.53	0.07	0.07	-0.76	-0.76	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.53	0.07	-----	Vehicle	-3.53	-0.81	-0.15	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**1736.31**	**2893.85**	**147.64**	**246.07**
	U_{37} - L_{37}	-1.47	-1.47	0.14	0.14	-0.38	-0.38	0.00	0.00	-0.06	-0.06	1.18	0.90	-1.47	0.15	-----	Vehicle	-1.47	-0.40	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**776.58**	**1294.31**	**282.67**	**471.12**
	U_{38} - L_{38}	-0.52	-0.52	0.39	0.39	-0.32	-0.32	0.03	0.03	-0.04	-0.04	1.18	0.90	-0.52	0.42	0.03	Vehicle	-0.52	-0.34	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**275.41**	**459.01**	**332.78**	**554.63**
	U_{39} - L_{39}	0.56	0.56	0.51	0.51	-0.22	-0.22	0.07	0.07	-0.04	-0.04	1.18	0.90	0.56	0.54	0.07	Vehicle	0.56	-0.23	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**211.48**	**352.47**	**499.69**	**832.81**
	U_{40} - L_{40}	1.79	1.79	0.60	0.60	-0.18	-0.18	0.11	0.11	-0.04	-0.04	1.18	0.90	1.79	0.64	0.11	Vehicle	1.79	-0.19	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**177.44**	**295.73**	**600.68**	**1001.13**
	U_{41} - L_{41}	2.59	2.59	0.60	0.60	-0.15	-0.15	0.13	0.13	-0.03	-0.03	1.18	0.90	2.59	0.63	0.13	Vehicle	2.59	-0.16	-0.03	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**238.32**	**397.21**	**971.27**	**1618.78**
	U_{42} - L_{42}	4.23	4.23	0.85	0.85	-0.19	-0.19	0.21	0.21	-0.04	-0.04	1.18	0.90	4.23	0.91	0.21	Vehicle	4.23	-0.20	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**167.26**	**278.76**	**771.04**	**1285.07**
	U_{43} - L_{43}	3.86	3.86	0.64	0.64	-0.13	-0.13	0.19	0.19	-0.03	-0.03	1.18	0.90	3.86	0.69	0.19	Vehicle	3.86	-0.14	-0.03	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**267.17**	**445.29**	**1378.21**	**2297.02**
	U_{44} - L_{44}	3.42	3.42	0.43	0.43	-0.07	-0.07	0.14	0.14	-0.01	-0.01	1.18	0.90	3.42	0.45	0.14	Vehicle	3.42	-0.07	-0.01	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**404.48**	**674.14**	**2553.04**	**4255.06**
Structure 3	U_0 - L_0	-1.97	-1.97	0.04	0.04	-0.58	-0.58	0.01	0.01	-0.09	-0.09	1.20	0.90	-1.97	0.05	0.01	Vehicle	-1.97	-0.62	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3781.03**	**6301.71**	**271.42**	**452.37**
	U_1 - L_1	-3.42	-3.42	0.10	0.10	-0.78	-0.78	0.02	0.02	-0.24	-0.24	1.20	0.90	-3.42	0.11	0.02	Vehicle	-3.42	-0.84	-0.24	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1580.27**	**2633.78**	**198.99**	**331.64**
	U_2 - L_2	-3.56	-3.56	0.13	0.13	-0.92	-0.92	0.03	0.03	-0.23

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 4F1
Condition: As-Built

Fy = 33.0 ksi
Fu = 60.0 ksi
E = 29000.0 ksi

(+) Positive Stresses / Forces Indicate Tension
(-) Negative Stresses / Forces Indicate Compression
& Guide Specifications for Strength Design of Truss Bridges (LDF) 1985 rev 1986

Calculated: BKC Date: 10/28/2009
Checked: NRF Date: 11/2/2009

* MCEB Table 6.6.2.1-1, A-36 Steel
** Area deducted for rivet holes (see separate calculations)
*** K = 0.75 per MCEB 6.6.2.1
**** Per AASHTO Std. Specs. For Highway Bridges, Article 3.22.1
(Case I considered in Max. Tension/Compression Load)

			Member Forces from STAAD																												Shear Force Rating			
			D		LL_{max}		LL_{min}		Pedestrian $Load_{max}$		Pedestrian $Load_{min}$		Impact (1+I)	Lane Reduction	Maximum Positive Shear				Minimum Negative Shear				Depth of Web (inches)	Thickness of Web (inches)	Number of Webs	D/t_W	k	6000 sqrt(k) sqrt(fy)	7500 sqrt(k) sqrt(Fy)	C	V_P (kips)	V_U (kips)	Positive Shear Member		Negative Shear Member	
Location	Member	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)	Start (kips)	End (kips)			Dead (kips)	LL & Impact & Lane Reduct. (kips)	Pedestrian Load & Impact	Load Factor Groups &	Dead (kips)	LL & Impact & Lane Reduct.	Pedestrian Load & Impact	Load Factor Groups &											Inventory RF	Operating RF	Inventory RF	Operating RF
Structure 1	U_0 - L_1	0.34	-0.17	0.05	0.05	-0.39	-0.39	0.03	0.03	0.00	0.00	1.24	0.90	0.34	0.06	0.03	Pedestrian	-0.17	-0.44	0.00	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**864.00**	**1080.00**	**125.64**	**209.40**
	U_1 - L_2	0.05	-0.25	0.06	0.06	-0.15	-0.15	0.02	0.02	-0.05	-0.05	1.24	0.90	0.05	0.07	0.02	Vehicle	-0.25	-0.16	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1600.22**	**2667.04**	**695.94**	**1159.91**
	U_2 - L_3	0.29	-0.01	0.06	0.06	-0.09	-0.09	0.02	0.02	-0.01	-0.01	1.24	0.90	0.29	0.07	0.02	Vehicle	-0.01	-0.09	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1676.74**	**2794.56**	**1205.11**	**2008.51**
	U_3 - L_4	0.44	0.13	0.08	0.08	-0.01	-0.01	0.01	0.01	0.00	0.00	1.24	0.90	0.44	0.09	0.01	Vehicle	0.13	-0.01	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1277.50**	**2129.16**	**7885.35**	**13142.25**
	U_4 - L_4	-0.36	-0.70	0.02	0.02	-0.13	-0.13	0.00	0.00	-0.04	-0.04	1.24	0.90	-0.36	0.03	-----	Vehicle	-0.70	-0.15	-0.04	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**5201.23**	**8668.71**	**934.30**	**1557.17**
	U_5 - L_5	-1.05	-1.50	0.05	0.05	-0.33	-0.33	0.00	0.00	-0.10	-0.10	1.24	0.90	-1.05	0.06	-----	Vehicle	-1.50	-0.36	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2545.46**	**4242.44**	**394.00**	**656.67**
	U_6 - L_6	-1.37	-1.84	0.10	0.10	-0.38	-0.38	0.00	0.00	-0.13	-0.13	1.24	0.90	-1.37	0.11	-----	Vehicle	-1.84	-0.43	-0.13	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1326.44**	**2210.73**	**334.02**	**556.70**
	U_7 - L_7	-0.71	-1.20	0.08	0.08	-0.23	-0.23	0.00	0.00	-0.08	-0.08	1.24	0.90	-0.71	0.09	-----	Vehicle	-1.20	-0.26	-0.08	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1683.55**	**2805.92**	**559.16**	**931.94**
	U_8 - L_8	-1.25	-2.17	0.04	0.04	-0.35	-0.35	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.25	0.05	0.01	Vehicle	-2.17	-0.37	-0.11	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**3979.03**	**6631.72**	**476.13**	**793.54**
	U_9 - L_{10}	-2.11	-2.95	0.02	0.02	-0.50	-0.50	0.00	0.00	-0.16	-0.16	1.20	0.90	-2.11	0.02	-----	Vehicle	-2.95	-0.53	-0.16	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**9310.81**	**15518.02**	**332.22**	**553.71**
	U_{10} - L_{11}	-1.43	-2.28	0.01	0.01	-0.36	-0.36	0.00	0.00	-0.10	-0.10	1.20	0.90	-1.43	0.02	-----	Vehicle	-2.28	-0.39	-0.10	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**9566.86**	**15944.76**	**364.28**	**607.13**
	U_{11} - L_{12}	-1.21	-1.69	0.01	0.01	-0.33	-0.33	0.00	0.00	-0.09	-0.09	1.20	0.90	-1.21	0.01	-----	Vehicle	-1.69	-0.36	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**13198.40**	**21997.33**	**470.77**	**784.62**
	U_{12} - L_{13}	-0.93	-1.64	0.02	0.02	-0.28	-0.28	0.00	0.00	-0.07	-0.07	1.20	0.90	-0.93	0.02	-----	Vehicle	-1.64	-0.31	-0.07	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**7681.36**	**12802.27**	**402.08**	**670.14**
	U_{13} - L_{14}	-0.18	-0.52	0.06	0.06	-0.10	-0.10	0.00	0.00	-0.02	-0.02	1.20	0.90	-0.18	0.06	-----	Vehicle	-0.52	-0.11	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1925.01**	**3208.35**	**1034.19**	**1723.65**
	U_{14} - L_{14}	0.33	0.00	0.10	0.10	-0.09	-0.09	0.01	0.01	-0.01	-0.01	1.20	0.90	0.33	0.10	0.01	Vehicle	0.00	-0.10	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1099.87**	**1833.12**	**1188.48**	**1980.79**
	U_{15} - L_{15}	-0.23	-0.58	0.06	0.06	-0.18	-0.18	0.01	0.01	-0.03	-0.03	1.20	0.90	-0.23	0.06	0.01	Vehicle	-0.58	-0.19	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1857.97**	**3096.61**	**599.15**	**998.58**
	U_{16} - L_{16}	-0.54	-0.93	0.04	0.04	-0.24	-0.24	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.54	0.05	0.01	Vehicle	-0.93	-0.26	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2999.87**	**4999.78**	**538.56**	**897.59**
	U_{17} - L_{17}	-1.69	-2.17	0.06	0.06	-0.42	-0.42	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.69	0.06	0.01	Vehicle	-2.17	-0.45	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2240.01**	**3733.36**	**317.92**	**529.87**
	U_{18} - L_{18}	-1.52	-2.05	0.05	0.05	-0.35	-0.35	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.52	0.05	0.01	Vehicle	-2.05	-0.38	-0.11	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3198.15**	**5330.25**	**402.08**	**670.13**
	U_{19} - L_{19}	-1.60	-2.18	0.03	0.03	-0.30	-0.30	0.01	0.01	-0.12	-0.12	1.20	0.90	-1.60	0.03	0.01	Vehicle	-2.18	-0.33	-0.12	Pedestrian	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**5536.93**	**9228.21**	**458.68**	**573.35**
	U_0 - L_1	-1.42	-1.97	0.06	0.06	-0.49	-0.49	0.01	0.01	-0.05	-0.05	1.18	0.90	-1.42	0.06	0.01	Vehicle	-1.97	-0.52	-0.05	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2866.18**	**4776.97**	**327.00**	**545.00**
	U_1 - L_2	-2.23	-2.78	0.11	0.11	-0.54	-0.54	0.02	0.02	-0.14	-0.14	1.18	0.90	-2.23	0.12	0.02	Vehicle	-2.78	-0.57	-0.14	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1424.47**	**2374.12**	**295.59**	**492.66**
	U_2 - L_3	-1.76	-2.23	0.12	0.12	-0.51	-0.51	0.03	0.03	-0.11	-0.11	1.18	0.90	-1.76	0.13	0.03	Vehicle	-2.23	-0.54	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1144.06**	**1906.76**	**265.14**	**441.90**
	U_3 - L_4	-0.78	-1.19	0.09	0.09	-0.29	-0.29	0.02	0.02	-0.06	-0.06	1.18	0.90	-0.78	0.09	0.02	Vehicle	-1.19	-0.31	-0.06	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1690.58**	**2817.64**	**491.70**	**819.50**
	U_4 - L_5	-0.13	-0.47	0.07	0.07	-0.19	-0.19	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.13	0.07	0.01	Vehicle	-0.47	-0.20	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1624.02**	**2706.70**	**577.56**	**962.59**
	U_5 - L_6	0.36	0.01	0.12	0.12	-0.12	-0.12	0.01	0.01	-0.01	-0.01	1.18	0.90	0.36	0.12	0.01	Vehicle	0.01	-0.13	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**929.68**	**1549.47**	**878.06**	**1463.43**
	U_6 - L_7	0.65	0.25	0.13	0.13	-0.06	-0.06	0.02	0.02	0.00	0.00	1.18	0.90	0.65	0.14	0.02	Vehicle	0.25	-0.06	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**881.62**	**1469.36**	**2030.37**	**3383.94**
	U_8 - L_7	-0.66	-1.45	0.04	0.04	-0.21	-0.21	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.04	-----	Vehicle	-1.45	-0.22	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**2399.53**	**3999.21**	**460.62**	**767.71**
	U_8 - L_8	-2.06	-2.57	0.03	0.03	-0.43	-0.43	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.04	-----	Vehicle	-2.57	-0.45	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4425.58**	**7375.96**	**337.50**	**562.50**
	U_{10} - L_9	-2.06	-2.56	0.03	0.03	-0.41	-0.41	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.03	-----	Vehicle	-2.56	-0.43	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**5745.20**	**9575.34**	**390.77**	**651.29**
	U_{11} - L_{10}	-2.31	-2.86	0.05	0.05	-0.43	-0.43	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.31	0.05	-----	Vehicle	-2.86	-0.45	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3441.84**	**5736.40**	**405.21**	**675.36**
	U_{12} - L_{11}	-2.13	-2.73	0.08	0.08	-0.39	-0.39	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.13	0.08	-----	Vehicle	-2.73	-0.42	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2308.33**	**3847.22**	**441.69**	**736.14**
	U_{13} - L_{12}	-2.09	-2.70	0.11	0.11	-0.35	-0.35	0.01	0.01	-0.10	-0.10	1.18	0.90	-2.09	0.12	0.01	Vehicle	-2.70	-0.37	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1411.25**	**2352.08**	**458.51**	**764.19**
	U_{14} - L_{13}	-1.09	-1.71	0.09	0.09	-0.22	-0.22	0.01	0.01	-0.07	-0.07	1.18	0.90	-1.09	0.09	0.01	Vehicle	-1.71	-0.23	-0.07	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1842.74**	**3071.23**	**731.52**	**1219.21**
	U_{14} - L_{15}	-0.80	-1.36	0.05	0.05	-0.28	-0.28	0.02	0.02	-0.06	-0.06	1.17	0.90	-0.80	0.05	0.02	Vehicle	-1.36	-0.30	-0.06	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2983.24**	**4972.07**	**478.86**	**798.10**
	U_{15} - L_{16}	-1.69	-2.23	0.04	0.04	-0.45	-0.45	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.69	0.04	0.01	Pedestrian	-2.23	-0.47	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3579.45**	**4474.31**	**300.45**	**500.74**
	U_{16} - L_{17}	-1.71	-2.26	0.05	0.05	-0.46	-0.46	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.71	0.06	0.01	Vehicle	-2.26	-0.48	-0.10	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2784.85**	**4641.41**	**316.63**	**527.72**
	U_{17} - L_{18}	-1.67	-2.16	0.06	0.06	-0.44	-0.44	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.67	0.07	0.00	Vehicle	-2.16	-0.46	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2151.89**	**3586.48**	**310.16**	**516.94**
	U_{18} - L_{19}	-1.45	-1.93	0.08	0.08	-0.43	-0.43	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.45	0.08	0.00	Vehicle	-1.93	-0.45	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1786.98**	**2978.30**	**316.99**	**528.31**
	U_{19} - L_{20}	-0.63	-1.37	0.07	0.07	-0.28	-0.28	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.63	0.07	-----	Vehicle	-1.37	-0.29	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1508.16**	**2513.61**	**356.52**	**594.20**
	U_{20} - L_{21}	-0.36	-0.70	0.06	0.06	-0.18	-0.18	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.36	0.07	-----	Vehicle	-0.70	-0.19	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1751.68**	**2919.47**	**586.94**	**978.24**
	U_{21} - L_{22}	0.02	-0.31	0.10	0.10	-0.10	-0.10	0.01	0.01	-0.02	-0.02	1.17	0.90	0.02	0.11	0.01	Vehicle	-0.31	-0.10	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1062.59**	**1770.99**	**1093.13**	**1821.88**
	U_{23} - L_{22}	-0.05	-0.39	0.08	0.08	-0.12	-0.12	0.00	0.00	-0.02	-0.02	1.17	0.90	-0.05	0.08	0.00	Vehicle	-0.39	-0.13	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1390.10**	**2316.83**	**879.46**	**1465.76**
	U_{24} - L_{23}	-0.39	-0.74	0.06	0.06	-0.19	-0.19	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.39	0.06	0.00	Vehicle	-0.74	-0.20	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1841.02**	**3068.37**	**559.47**	**932.44**
	U_{25} - L_{24}	-0.62	-1.39	0.07	0.07	-0.28	-0.28	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.62	0.07	0.00	Vehicle	-1.39	-0.29	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1485.62**	**2476.03**	**356.49**	**594.15**
	U_{26} - L_{25}	-1.40	-1.89	0.08	0.08	-0.39	-0.39	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.40	0.08	0.00	Vehicle	-1.89	-0.41	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1834.26**	**3057.10**	**346.15**	**576.92**
	U_{27} - L_{26}	-1.57	-2.07	0.06	0.06	-0.39	-0.39	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.57	0.07	0.00	Vehicle	-2.07	-0.41	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2220.38**	**3700.64**	**350.36**	**583.94**
	U_{28} - L_{27}	-1.53	-2.09	0.07	0.07	-0.37	-0.37	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.53	0.08	-----	Vehicle	-2.09	-0.39	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1993.19**	**3321.98**	**388.84**	**648.07**
	U_{29} - L_{28}	-1.40	-1.95	0.11	0.11	-0.31	-0.31	0.00	0.00	-0.08	-0.08	1.17	0.90	-1.40	0.12	-----	Vehicle	-1.95	-0.33	-0.08	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1250.64**	**2084.41**	**436.21**	**727.02**
	U_{30} - L_{29}	-0.59	-1.15	0.08	0.08	-0.19	-0.19	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.59	0.09	0.00	Vehicle	-1.15	-0.20	-0.04	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1692.67**	**2821.11**	**727.89**	**1213.14**
	U_{30} - L_{31}	-1.35	-1.98	0.06	0.06	-0.31	-0.31	0.01	0.01	-0.08	-0.08	1.18	0.90	-1.35	0.07	0.01	Vehicle	-1.98	-0.33	-0.08	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2588.15**	**4313.59**	**508.30**	**847.17**
	U_{31} - L_{32}	-2.47	-3.07	0.06	0.06	-0.46	-0.46	0.01	0.01	-0.12	-0.12	1.18	0.90	-2.47	0.06	0.01	Vehicle	-3.07	-0.49	-0.12	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2777.57**	**4629.28**	**340.46**	**567.44**
	U_{32} - L_{33}	-2.33	-2.91	0.04	0.04	-0.46	-0.46	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.33	0.04	-----	Vehicle	-2.91	-0.49	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**5015.64**	**8359.40**	**378.50**	**630.83**
	U_{33} - L_{34}	-2.44	-2.97	0.03	0.03	-0.47	-0.47	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.44	0.03	-----	Vehicle	-2.97	-0.50	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**5664.86**	**9441.43**	**368.72**	**614.53**
	U_{34} - L_{35}	-2.15	-2.63	0.02	0.02	-0.43	-0.43	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.15	0.02	-----	Vehicle	-2.63	-0.45	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**10727.72**	**17879.54**	**372.29**	**620.48**
	U_{35} - L_{36}	-2.05	-2.55	0.02	0.02	-0.42	-0.42	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.05	0.03	-----	Vehicle	-2.55	-0.45	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**6085.05**	**10141.76**	**339.93**	**566.54**
	U_{36} - L_{37}	-0.66	-1.43	0.06	0.06	-0.21	-0.21	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.06	-----	Vehicle	-1.43	-0.22	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1788.70**	**2981.16**	**474.17**	**790.28**
	U_{38} - L_{37}	0.55	0.15	0.12	0.12	-0.07	-0.07	0.02	0.02	0.00	0.00	1.18	0.90	0.55	0.12	0.02	Vehicle	0.15	-0.07	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**1002.64**	**1671.07**	**1810.81**	**3018.02**
	U_{39} - L_{38}	0.25	-0.10	0.10	0.10	-0.14	-0.14	0.01	0.01	-0.01	-0.01	1.18	0.90	0.25	0.11	0.01	Vehicle	-0.10	-0.14	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1080.53**	**1800.88**	**793.03**	**1321.72**
	U_{40} - L_{39}	-0.19	-0.54	0.06	0.06	-0.18	-0.18	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.19	0.06	0.01	Vehicle	-0.54	-0.19	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1848.61**	**3081.01**	**600.05**	**1000.09**
	U_{41} - L_{40}	-0.79	-1.21	0.07	0.07	-0.26	-0.26	0.02	0.02	-0.05	-0.05	1.18	0.90	-0.79	0.08	0.02	Vehicle	-1.21	-0.27	-0.05	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1995.92**	**3326.54**	**554.78**	**924.63**
	U_{42} - L_{41}	-1.71	-2.19	0.10	0.10	-0.42	-0.42	0.02	0.02	-0.09	-0.09	1.18	0.90	-1.71	0.10	0.02	Vehicle	-2.19	-0.45	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1403.25**	**2338.75**	**318.09**	**530.15**
	U_{43} - L_{42}	-1.87	-2.42	0.08	0.08	-0.40	-0.40	0.02	0.02	-0.11	-0.11	1.18	0.90	-1.87	0.09	0.02	Vehicle	-2.42	-0.43	-0.11	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1936.84**	**3228.07**	**395.85**	**659.75**
	U_{44} - L_{43}	-2.06	-2.63	0.06	0.06	-0.32	-0.32	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.06	0.06	0.01	Vehicle	-2.63	-0.34	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2637.21**	**4395.35**	**500.70**	**834.51**
Structure 3	U_0 - L_1	-0.86	-1.43	0.03	0.03	-0.51	-0.51	0.00	0.00	-0.04	-0.04	1.20	0.90	-0.86	0.03	0.00	Vehicle	-1.43	-0.55	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4630.59**	**7717.65**	**281.18**	**468.64**
	U_1 - L_2	-1.89	-2.41	0.07	0.07	-0.48	-0.48	0.01	0.01	-0.14	-0.14	1.20	0.90	-1.89	0.07	0.01	Vehicle	-2.41	-0.52	-0.14	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2183.71**	**3639.52**	**294.05**	**490.09**
	U_2 - L_3	-1.74	-2.20	0.08	0.08	-0.50	-0.50	0.02	0.02	-0.12	-0.12	1.20	0.90	-1.74	0.09	0.02	Vehicle	-2.20	-0.54	-0.12	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1659.61**	**2766.01**	**262.37**	**437.29**
	U_3 - L_4	-0.53	-0.91	0.05	0.05	-0.26	-0.26	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.53	0.06	0.01	Vehicle	-0.91	-0.28	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2388.72**	**3981.21**	**485.55**	**809.25**
	U_4 - L_5	-0.22	-

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating 4F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.52
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.77
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss		Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Upper Chord	Structure 1	U_0 - U_1	3.81	4.50	6.34	4.48	5.27	9.50	3.95	4.81	6.37	137.29	66.04	2377
		U_1 - U_2	2.44	3.15	3.62	3.62	4.77	4.32	2.45	3.15	3.60	87.78	59.96	2159
		U_2 - U_3	2.30	3.08	4.22	3.21	3.80	4.66	2.29	3.09	4.20	82.60	75.12	2704
		U_3 - U_4	2.81	3.92	6.35	3.33	4.93	6.79	2.83	3.94	6.92	101.16	89.32	3216
		U_4 - U_5	2.97	4.07	6.35	2.96	4.07	6.44	3.71	7.00	7.65	106.72	68.93	2481
		U_5 - U_6	4.59	5.89	6.41	4.56	5.49	6.27	7.87	8.60	6.93	164.02	66.56	2396
		U_6 - U_7	4.53	5.69	6.43	4.55	5.77	6.35	4.88	16.20	5.88	163.20	201.09	7239
		U_7 - U_8	4.34	5.50	4.30	4.56	6.46	8.71	8.86	12.77	7.13	154.72	77.01	2772
		U_8 - U_9	4.05	6.11	5.25	13.83	15.46	7.29	12.72	8.64	6.86	145.66	40.90	1473
		U_9 - U_{10}	4.79	7.50	8.46	11.28	11.95	14.82	4.80	7.80	8.44	172.52	88.33	3180
		U_{10} - U_{11}	3.72	4.06	4.26	5.13	5.94	5.53	3.74	4.05	4.29	133.82	53.94	1942
		U_{11} - U_{12}	2.62	3.47	3.21	3.60	5.09	3.55	2.60	3.47	3.21	93.49	79.55	2864
		U_{12} - U_{13}	2.66	3.82	3.71	3.15	4.42	4.21	2.66	3.79	3.62	95.75	223.02	8029
		U_{13} - U_{14}	2.49	3.76	3.52	2.94	4.61	3.71	2.49	3.73	3.43	89.60	196.65	7080
		U_{14} - U_{15}	2.48	3.69	3.45	2.48	3.63	3.37	3.16	4.55	4.15	89.28	275.22	9908
		U_{15} - U_{16}	2.60	3.49	3.91	2.60	3.78	3.93	3.05	4.37	4.65	93.76	256.47	9233
		U_{16} - U_{17}	2.81	3.71	4.50	2.81	3.71	4.66	3.47	4.88	5.31	101.23	228.00	8208
		U_{17} - U_{18}	2.77	3.32	4.84	2.76	3.48	3.47	3.69	4.20	5.11	99.45	185.82	6690
		U_{18} - U_{19}	2.97	3.41	5.20	3.18	3.47	3.39	3.74	6.83	5.34	106.83	91.42	3291
		U_{19} - U_{20}	7.23	8.42	9.49	7.00	7.94	9.49	7.15	10.03	12.71	251.91	45.21	1627
	Structure 2	U_0 - U_1	6.67	6.53	8.48	7.86	9.36	13.27	7.32	7.41	8.51	234.91	61.86	2227
		U_1 - U_2	3.79	3.82	4.10	4.47	5.06	4.87	3.84	3.86	4.10	130.37	142.09	5115
		U_2 - U_3	3.50	3.89	3.89	4.04	5.21	4.70	3.52	3.88	3.89	125.87	70.55	2540
		U_3 - U_4	2.80	3.64	3.46	3.67	4.16	4.07	2.90	3.67	3.40	100.78	185.87	6691
		U_4 - U_5	2.84	3.74	3.59	3.24	4.14	4.03	2.85	3.74	3.59	102.36	192.11	6916
		U_5 - U_6	3.10	4.30	4.04	3.23	4.36	4.01	3.12	4.48	4.00	111.76	262.53	9451
		U_6 - U_7	2.73	3.48	4.18	2.95	4.11	4.28	2.72	3.48	4.05	97.93	152.18	5478
		U_7 - U_8	2.76	3.50	4.17	2.76	3.50	4.07	3.44	4.80	5.23	99.44	168.24	6057
		U_8 - U_9	2.82	3.88	4.79	2.83	3.88	4.64	3.33	5.46	6.12	101.68	197.50	7110
		U_9 - U_{10}	3.16	4.22	5.98	3.19	4.31	5.98	4.70	6.14	7.59	113.90	75.20	2707
		U_{10} - U_{11}	4.58	5.76	8.43	4.34	5.76	8.24	6.11	8.10	9.23	156.29	90.07	3242
		U_{11} - U_{12}	5.51	6.88	6.92	5.51	7.05	6.91	10.31	19.04	36.64	198.42	80.04	2882
		U_{12} - U_{13}	6.38	7.69	8.65	6.39	15.15	7.65	6.83	12.29	13.66	229.54	229.31	8255
		U_{13} - U_{14}	8.75	8.63	4.81	6.85	8.47	10.44	12.73	14.94	7.42	172.99	101.72	3662
		U_{14} - U_{15}	7.19	9.99	5.56	14.43	16.85	6.74	12.14	8.22	6.23	200.31	97.78	3520
		U_{15} - U_{16}	6.82	8.12	8.77	10.64	10.22	10.48	6.80	9.36	8.89	244.77	228.92	8241
		U_{16} - U_{17}	6.05	8.00	8.01	16.62	18.19	20.60	6.08	8.11	7.44	217.91	93.34	3360
		U_{17} - U_{18}	4.69	7.43	6.18	8.59	10.50	6.66	4.71	7.25	6.20	169.02	61.71	2222
		U_{18} - U_{19}	4.75	5.53	6.70	6.32	6.87	7.55	4.76	5.56	6.71	170.91	57.22	2060
		U_{19} - U_{20}	3.49	4.76	4.88	3.87	5.12	5.54	3.52	4.75	4.88	125.56	91.28	3286
		U_{20} - U_{21}	3.55	4.75	4.66	3.95	5.34	4.98	3.76	4.80	4.66	127.80	141.09	5079
		U_{21} - U_{22}	3.01	4.11	4.31	3.13	4.57	4.59	3.01	4.11	4.31	108.36	127.41	4587
		U_{22} - U_{23}	2.98	4.00	4.27	2.98	3.96	4.32	3.67	5.24	5.63	107.14	174.29	6274
		U_{23} - U_{24}	3.33	4.19	5.46	3.32	4.09	5.17	4.73	6.14	6.19	119.68	160.27	5770
		U_{24} - U_{25}	3.40	4.31	5.87	3.49	4.28	5.64	4.40	5.37	6.98	122.45	100.80	3629
		U_{25} - U_{26}	4.33	5.13	8.81	4.33	5.12	8.15	5.80	7.43	10.40	155.84	77.58	2793
		U_{26} - U_{27}	5.00	7.14	6.42	5.02	7.07	6.52	9.97	11.64	20.47	179.85	70.35	2532
		U_{27} - U_{28}	6.68	8.55	8.34	6.69	8.50	8.48	18.56	19.24	21.27	240.63	107.55	3872
		U_{28} - U_{29}	7.38	8.67	7.91	7.44	16.76	18.25	10.80	11.34	8.68	265.53	292.03	10513
		U_{29} - U_{30}	9.75	10.00	4.96	7.68	9.06	15.88	12.62	12.53	6.95	178.52	95.75	3447
		U_{30} - U_{31}	8.48	9.64	5.50	23.61	10.39	8.31	14.13	9.16	6.62	198.17	99.95	3598
		U_{31} - U_{32}	6.42	7.67	8.20	10.54	8.66	8.15	6.49	8.35	7.64	231.10	317.26	11421
		U_{32} - U_{33}	5.70	6.49	6.64	13.89	14.61	15.69	5.55	7.17	6.69	199.85	65.74	2367
		U_{33} - U_{34}	5.28	6.13	7.03	7.25	7.45	7.71	5.31	6.12	7.03	190.11	76.63	2759
		U_{34} - U_{35}	4.00	4.70	4.57	4.71	5.87	5.51	3.99	4.64	4.52	143.68	66.52	2395
		U_{35} - U_{36}	3.66	4.58	3.67	4.36	5.34	4.03	3.82	4.61	3.68	131.71	167.97	6047
		U_{36} - U_{37}	3.47	3.93	3.60	4.35	4.53	3.95	3.47	3.93	3.62	125.02	143.40	5163
		U_{37} - U_{38}	3.33	3.73	3.64	3.32	3.74	3.67	4.08	5.19	4.37	119.44	240.58	8661
		U_{38} - U_{39}	3.50	4.54	4.03	3.48	4.56	3.90	3.77	5.38	4.40	125.21	185.56	6680
		U_{39} - U_{40}	3.39	3.73	3.84	3.41	3.72	3.87	4.33	4.69	4.82	122.19	249.79	8992
		U_{40} - U_{41}	3.61	4.06	4.06	3.32	3.57	4.23	4.27	4.63	4.53	119.51	221.27	7966
		U_{41} - U_{42}	4.09	3.83	5.06	3.65	3.83	5.97	4.74	5.71	6.17	131.48	76.96	2771
		U_{42} - U_{43}	4.30	3.97	6.17	3.91	4.48	5.07	8.13	9.13	6.39	140.70	165.99	5976
		U_{43} - U_{44}	7.01	7.46	13.00	7.89	7.35	13.00	8.08	9.31	12.54	252.29	39.66	1428
	Structure 3	U_0 - U_1	7.28	7.86	10.04	7.27	8.66	13.12	7.56	7.53	10.03	261.71	67.12	2416
		U_1 - U_2	3.20	3.38	3.81	3.66	3.92	5.16	3.20	3.30	3.86	115.06	71.34	2568
		U_2 - U_3	3.06	3.60	3.73	3.45	4.41	5.18	3.04	3.57	3.74	109.50	176.91	6369
		U_3 - U_4	3.20	4.20	3.97	3.94	5.16	4.62	3.30	4.22	3.98	115.21	222.60	8014
		U_4 - U_5	2.76	3.65	3.94	3.46	4.15	4.04	2.75	4.13	4.10	99.04	246.42	8871
		U_5 - U_6	2.64	3.76	3.92	2.97	4.21	3.92	2.64	3.74	3.84	94.86	218.70	7873
		U_6 - U_7	2.68	3.87	3.95	2.67	3.74	3.94	3.83	5.29	3.63	96.14	208.24	7497
		U_7 - U_8	2.81	3.89	4.34	2.86	3.75	4.29	3.70	4.42	3.90	101.21	304.38	10958
		U_8 - U_9	2.63	3.54	4.38	2.52	3.54	4.41	3.44	5.07	5.02	90.77	92.43	3327
		U_9 - U_{10}	2.99	3.91	6.71	2.99	3.92	6.73	6.63	7.96	13.16	107.55	59.29	2135
		U_{10} - U_{11}	5.62	7.62	8.57	5.64	7.63	8.70	15.47	15.38	29.48	202.25	87.39	3146
		U_{11} - U_{12}	5.44	6.29	4.44	5.61	7.79	11.73	14.30	16.28	6.90	160.00	40.43	1455
		U_{12} - U_{13}	5.18	5.38	4.58	12.70	13.32	8.41	5.19	6.53	5.72	164.73	79.17	2850
		U_{13} - U_{14}	4.60	5.88	6.60	5.28	11.22	6.56	4.63	6.39	6.66	165.59	173.68	6252
		U_{14} - U_{15}	4.52	6.13	6.45	7.23	7.62	7.10	4.50	5.49	6.33	161.86	63.94	2302
		U_{15} - U_{16}	3.62	4.37	4.97	4.41	5.44	5.31	3.82	4.29	5.07	130.14	68.22	2456
		U_{16} - U_{17}	3.65	4.50	5.03	3.66	4.48	5.16	4.76	5.62	6.34	131.24	67.62	2434
		U_{17} - U_{18}	2.75	3.21	4.13	2.75	3.22	4.37	3.64	4.51	4.98	99.14	102.54	3691
		U_{18} - U_{19}	2.58	3.09	4.43	2.58	3.11	5.19	3.69	4.53	5.64	93.04	78.85	2838
		U_{19} - U_{20}	4.81	4.34	9.24	4.42	4.34	9.27	5.82	7.21	7.36	156.19	35.11	1264

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating 4F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.52
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.77
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss		Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Lower Chord	Structure 1	L_2 - L_1	24.32	13.33	26.36	23.73	14.21	12.98	22.35	20.44	13.71	467.17	73.07	2630
		L_1 - L_2	3.16	3.72	3.93	3.67	4.55	5.25	3.51	5.33	5.23	113.75	71.40	2570
		L_2 - L_3	3.14	4.17	4.31	3.33	4.11	4.31	3.67	5.37	4.92	113.20	152.84	5502
		L_3 - L_4	2.97	3.95	4.27	2.98	3.97	4.29	3.42	5.49	6.07	106.90	131.05	4718
		L_4 - L_5	3.63	5.25	3.93	3.33	4.58	3.94	5.11	7.09	4.00	119.90	72.69	2617
		L_5 - L_6	3.79	5.76	3.93	3.76	5.42	3.90	3.82	13.45	3.92	135.39	182.06	6554
		L_6 - L_7	5.30	6.86	4.56	4.92	6.57	5.96	11.18	14.08	9.77	164.30	242.60	8734
		L_8 - L_9	4.81	7.09	3.62	5.89	10.54	6.50	5.28	8.37	4.32	130.19	141.93	5109
		L_9 - L_8	5.56	7.06	2.65	6.51	7.99	4.00	6.25	10.33	4.75	95.35	175.75	6327
		L_9 - L_{10}	6.32	8.97	6.31	11.95	18.18	9.91	6.20	9.98	10.88	223.18	266.95	9610
		L_{10} - L_{11}	4.50	6.85	7.47	4.50	6.83	7.47	4.29	6.87	6.96	154.48	100.34	3612
		L_{11} - L_{12}	3.99	4.02	3.89	4.72	4.39	4.91	4.90	5.40	4.89	140.02	103.05	3710
		L_{12} - L_{13}	4.08	4.80	4.78	4.69	4.75	4.78	4.77	5.50	4.74	147.01	268.92	9681
		L_{13} - L_{14}	3.51	4.75	4.27	3.88	5.24	4.60	3.69	4.89	5.07	126.51	158.31	5699
		L_{14} - L_{15}	4.35	5.08	4.93	4.13	5.28	5.01	4.34	5.08	5.01	148.82	265.42	9555
		L_{15} - L_{16}	4.60	5.37	6.58	4.96	6.01	6.81	4.63	5.36	6.94	165.50	479.80	17273
		L_{16} - L_{17}	4.57	5.01	6.54	4.64	5.10	6.57	5.42	5.88	6.65	164.39	201.25	7245
		L_{17} - L_{18}	5.85	5.54	10.20	5.85	5.88	9.01	6.62	6.45	9.65	199.52	187.49	6750
		L_{18} - L_{19}	7.04	5.09	6.86	6.37	5.44	9.99	8.18	6.95	9.62	183.12	78.51	2826
		L_{19} - L_{20}	5.71	15.82	10.16	11.03	15.59	12.84	7.76	10.63	13.56	205.68	86.43	3112
	Structure 2	L_2 - L_1	24.56	17.53	18.14	22.31	21.57	17.83	22.25	22.96	17.48	629.16	107.58	3873
		L_1 - L_2	5.77	5.44	6.65	7.85	8.40	7.98	6.78	6.50	7.93	195.93	112.12	4036
		L_2 - L_3	5.77	5.51	5.87	5.88	6.10	7.18	5.68	6.18	6.59	198.27	185.89	6692
		L_3 - L_4	4.60	5.19	4.92	4.78	6.12	5.71	4.65	5.49	5.65	165.56	240.39	8654
		L_4 - L_5	5.04	6.02	5.78	5.41	6.62	5.80	5.37	6.52	5.76	181.48	363.27	13078
		L_5 - L_6	4.55	5.96	5.39	4.57	5.87	5.39	4.77	5.99	5.21	163.77	327.31	11783
		L_6 - L_7	4.26	5.67	5.15	4.27	5.67	5.15	5.11	6.65	5.86	153.32	348.16	12534
		L_7 - L_8	4.18	5.50	5.40	3.93	5.23	5.45	4.20	6.10	6.34	141.43	223.69	8053
		L_8 - L_9	4.39	5.97	6.16	4.75	6.26	6.43	4.98	6.60	6.19	157.90	194.18	6991
		L_9 - L_{10}	6.05	7.66	7.69	6.05	7.46	7.54	6.07	7.45	8.07	217.69	160.17	5766
		L_{10} - L_{11}	4.64	6.21	4.51	4.34	5.74	4.53	8.56	12.58	16.27	156.36	126.40	4822
		L_{11} - L_{12}	5.82	7.37	4.96	5.53	6.96	5.01	10.87	21.44	4.93	177.52	249.64	8987
		L_{12} - L_{13}	8.87	9.18	5.09	6.98	8.65	7.34	6.75	11.09	7.60	183.17	372.97	13427
		L_{13} - L_{14}	5.78	8.03	4.26	8.53	12.15	7.63	7.42	8.90	6.71	153.34	121.51	4374
		L_{14} - L_{15}	7.56	7.23	2.52	10.45	9.64	5.16	7.45	10.34	3.86	90.86	138.43	4984
		L_{15} - L_{16}	7.35	10.32	5.43	7.19	9.31	10.63	7.03	10.83	10.29	195.45	358.28	12898
		L_{16} - L_{17}	6.09	8.74	4.14	11.82	19.98	5.77	6.09	8.66	7.53	148.88	240.96	8675
		L_{17} - L_{18}	4.40	6.16	3.77	15.36	18.23	12.94	4.26	6.10	5.76	135.60	138.06	4970
		L_{18} - L_{19}	4.34	6.18	6.31	4.28	10.66	6.31	4.18	5.95	6.25	150.56	117.72	4238
		L_{19} - L_{20}	5.44	6.46	6.12	6.02	7.55	7.26	5.43	7.39	6.62	195.54	120.48	4337
		L_{20} - L_{21}	5.87	6.95	7.32	5.82	6.89	7.32	6.33	7.06	7.30	209.67	190.32	6851
		L_{21} - L_{22}	4.53	5.63	4.97	4.54	5.61	5.17	5.12	5.89	5.58	162.97	113.90	4100
		L_{22} - L_{23}	4.71	5.36	5.40	4.47	5.44	5.76	4.69	5.37	5.91	160.93	144.33	5196
		L_{23} - L_{24}	5.85	6.61	8.00	6.16	6.83	7.72	6.21	6.80	8.32	210.69	211.45	7612
		L_{24} - L_{25}	6.07	6.63	8.69	5.89	6.52	8.38	6.06	6.91	9.13	212.08	125.83	4530
		L_{25} - L_{26}	6.46	6.86	6.24	5.81	6.15	6.31	9.38	10.68	6.30	209.31	131.47	4733
		L_{26} - L_{27}	5.95	6.69	4.80	6.29	6.25	6.13	9.43	18.39	9.99	172.96	136.82	4918
		L_{27} - L_{28}	5.96	9.87	5.29	9.31	8.68	8.24	6.63	15.11	7.07	190.56	235.00	8460
		L_{28} - L_{29}	6.38	11.14	6.77	10.00	9.19	8.21	5.33	11.16	6.10	191.73	430.57	15500
		L_{29} - L_{30}	5.43	7.34	4.73	12.92	12.11	7.08	7.11	9.21	6.51	170.33	118.39	4262
		L_{30} - L_{31}	8.41	8.23	1.72	16.86	9.97	3.66	9.95	10.30	2.89	61.82	144.13	5189
		L_{31} - L_{32}	11.00	10.70	4.88	8.59	10.30	10.43	13.94	9.01	5.72	175.59	355.49	12797
		L_{32} - L_{33}	8.50	7.74	3.29	18.19	25.68	4.71	7.90	7.52	5.56	118.57	226.62	8158
		L_{33} - L_{34}	6.57	6.10	5.50	12.42	14.40	15.86	6.16	5.82	4.96	178.44	133.51	4806
		L_{34} - L_{35}	6.57	7.97	9.14	7.94	8.65	9.86	7.67	8.51	8.94	236.65	152.92	5505
		L_{35} - L_{36}	5.23	6.51	6.47	6.16	7.94	8.00	5.78	6.57	8.35	188.41	208.63	7511
		L_{36} - L_{37}	4.89	5.54	5.64	4.89	6.18	6.17	4.67	6.26	5.83	168.24	91.42	3291
		L_{37} - L_{38}	4.59	5.54	5.72	5.22	6.29	6.24	4.63	5.52	5.92	165.11	277.42	9987
		L_{38} - L_{39}	4.85	5.93	6.05	5.11	6.05	6.21	5.30	6.19	6.22	174.47	356.54	12835
		L_{39} - L_{40}	5.09	5.97	7.14	5.09	6.08	7.08	4.93	5.90	8.05	177.62	440.90	15873
		L_{40} - L_{41}	4.83	5.54	6.83	4.72	5.35	6.86	4.84	6.93	7.59	169.95	224.03	8065
		L_{41} - L_{42}	5.67	5.96	9.42	5.59	5.88	8.68	7.25	7.38	10.29	201.10	185.45	6676
		L_{42} - L_{43}	6.23	6.24	10.41	6.12	6.19	11.21	7.38	7.57	10.75	220.21	48.30	1739
		L_{43} - L_{44}	21.09	34.23	27.97	13.71	20.93	17.73	13.78	20.93	31.77	493.69	105.35	3793
	Structure 3	L_2 - L_1	10.10	15.48	5.88	12.39	17.45	9.19	12.30	17.36	9.88	211.73	92.74	3339
		L_1 - L_2	7.83	4.49	6.80	8.38	5.68	8.94	8.55	6.51	7.81	161.54	87.76	3159
		L_2 - L_3	5.96	5.39	7.23	7.80	6.25	8.17	6.62	6.62	6.83	194.06	200.01	7200
		L_3 - L_4	4.78	5.10	5.89	6.15	7.17	6.61	5.14	5.41	5.73	172.00	243.12	8752
		L_4 - L_5	5.30	6.03	6.24	5.28	6.18	6.26	5.27	7.18	6.99	189.64	420.18	15126
		L_5 - L_6	3.99	5.17	5.13	3.99	4.99	5.10	4.31	5.67	6.54	143.59	234.41	8439
		L_6 - L_7	3.56	4.81	4.96	3.67	4.88	5.02	4.01	5.25	4.90	128.11	173.45	6244
		L_7 - L_8	4.00	5.04	5.99	3.73	4.90	6.01	4.00	4.94	7.35	134.19	324.50	11682
		L_8 - L_9	3.23	4.34	6.14	3.41	4.33	6.44	3.93	4.95	6.64	116.14	118.82	4277
		L_9 - L_{10}	5.26	6.89	5.96	5.04	6.45	5.83	5.74	7.48	6.05	181.30	103.72	3734
		L_{10} - L_{11}	8.18	9.58	7.24	7.58	9.01	9.50	9.98	17.43	9.88	260.56	241.49	8694
		L_{11} - L_{12}	4.87	7.26	4.70	8.51	9.78	8.92	6.26	8.06	5.28	169.24	156.04	5617
		L_{12} - L_{13}	5.20	6.98	3.27	9.41	9.30	4.95	7.39	9.21	3.34	117.88	171.47	6173
		L_{13} - L_{14}	4.82	6.70	4.50	18.59	15.05	10.21	4.94	7.94	5.29	161.92	249.06	8967
		L_{14} - L_{15}	3.61	5.87	5.16	3.59	13.30	5.16	3.60	6.07	5.01	129.42	181.50	6534
		L_{15} - L_{16}	3.23	5.43	5.19	5.91	6.13	5.81	3.07	4.84	5.15	110.66	79.80	2873
		L_{16} - L_{17}	3.10	3.91	4.56	4.03	5.28	5.10	3.09	3.93	4.86	111.09	129.85	4674
		L_{17} - L_{18}	3.31	4.03	5.15	3.42	4.35	5.30	3.31	3.85	6.54	119.28	212.46	7648
		L_{18} - L_{19}	3.45	4.19	5.92	3.45	4.12	5.37	4.68	5.23	5.75	124.08	74.17	2670
		L_{19} - L_{20}	17.94	22.31	39.44	14.06	17.30	27.70	15.11	17.65	43.52	506.21	71.57	2577

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating 4F1

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.52
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.77
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force Operating	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss			
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Vehicals													
Structure 1	$U_0 - L_0$	1.79	1.52	1.89	2.00	1.92	1.88	1.77	1.85	1.88	54.69	81.42	2931
	$U_1 - L_1$	3.27	3.78	3.27	3.71	4.41	4.83	3.37	4.43	4.82	117.72	81.04	2918
	$U_2 - L_2$	4.74	5.62	4.02	5.23	5.95	5.80	5.22	5.95	5.80	144.69	96.98	3491
	$U_3 - L_3$	6.86	7.31	6.51	7.91	8.24	9.20	7.91	8.22	9.20	234.37	141.50	5094
	$U_4 - L_4$	3.80	4.74	4.68	8.28	7.91	7.81	8.20	10.39	10.01	136.73	126.49	4554
	$U_5 - L_5$	2.79	3.62	4.10	2.78	3.62	4.10	2.78	3.62	3.85	100.10	120.76	4347
	$U_6 - L_6$	2.70	3.71	3.68	2.70	3.70	4.04	2.71	3.67	4.00	97.22	104.57	3764
	$U_1 - L_7$	2.00	2.49	3.50	2.01	2.52	3.45	2.00	2.49	3.47	72.10	131.79	4744
	$U_8 - L_8$	4.31	5.15	4.62	5.04	5.52	7.62	4.99	5.52	7.73	154.98	247.31	8903
	$U_9 - L_9$	3.15	3.18	3.04	3.30	3.25	3.59	3.30	3.22	3.59	109.31	138.71	4994
	$U_{10} - L_{10}$	4.29	4.93	3.45	4.17	5.66	5.19	4.57	5.71	5.27	124.38	222.55	8012
	$U_{11} - L_{11}$	3.71	4.57	4.58	3.98	4.91	5.41	3.97	4.89	4.56	133.52	128.95	4642
	$U_{12} - L_{12}$	3.66	4.48	3.52	3.49	4.43	5.27	3.50	4.43	5.28	125.68	127.81	4601
	$U_{13} - L_{13}$	2.71	3.29	2.98	2.98	3.69	4.53	2.98	3.69	4.50	97.64	142.53	5131
	$U_{14} - L_{14}$	4.44	4.74	3.96	10.87	8.31	12.56	10.82	16.20	16.89	142.49	200.74	7227
	$U_{15} - L_{15}$	4.45	5.29	6.78	4.45	5.29	7.86	4.43	5.29	7.86	159.35	166.81	6005
	$U_{16} - L_{16}$	3.18	4.29	5.24	3.21	4.31	5.26	3.21	4.29	5.26	114.54	168.68	6073
	$U_{17} - L_{17}$	2.52	3.35	3.60	2.52	3.37	3.59	2.52	3.37	3.59	90.56	191.34	6888
	$U_{18} - L_{18}$	2.68	3.71	5.07	2.68	3.70	5.07	2.67	3.70	5.07	96.01	135.03	4861
	$U_{19} - L_{19}$	3.12	4.18	3.04	3.11	4.19	4.56	3.11	4.21	3.04	109.30	189.35	6817
	$U_{20} - L_{20}$	2.21	2.84	2.14	2.21	2.84	3.52	2.41	2.85	2.14	77.19	328.84	11838
Structure 2	$U_0 - L_0$	2.85	2.72	2.70	2.85	3.48	2.71	2.85	3.27	2.71	97.25	310.18	11166
	$U_1 - L_1$	4.04	3.92	3.69	4.34	5.18	4.61	4.32	4.66	4.63	132.86	247.89	8924
	$U_2 - L_2$	3.61	4.12	3.15	3.91	4.59	4.23	3.90	4.59	4.23	113.26	163.44	5884
	$U_3 - L_3$	3.06	3.79	3.40	3.29	3.95	3.64	3.27	3.95	3.64	110.17	242.89	8744
	$U_4 - L_4$	3.31	4.09	3.36	3.27	3.98	4.66	3.29	3.98	4.69	117.78	179.23	6452
	$U_5 - L_5$	4.30	4.95	4.42	4.57	5.51	6.75	4.58	5.51	6.75	154.62	200.48	7217
	$U_6 - L_6$	5.05	6.29	5.82	6.75	6.37	8.97	6.45	6.38	8.97	181.73	221.96	7990
	$U_7 - L_7$	3.93	4.93	4.80	7.73	10.36	12.99	14.34	18.39	12.07	141.62	293.88	10580
	$U_8 - L_8$	3.61	4.16	4.38	3.58	4.18	4.42	3.58	4.18	4.38	128.82	138.07	4971
	$U_9 - L_9$	4.40	5.10	5.71	4.39	5.08	5.63	4.40	5.08	5.71	158.17	150.71	5426
	$U_{10} - L_{10}$	4.43	5.38	5.68	4.44	5.40	5.68	4.42	5.40	5.68	158.96	215.85	7771
	$U_{11} - L_{11}$	3.99	4.90	4.66	4.04	5.00	4.80	3.98	4.95	4.66	143.46	263.48	9485
	$U_{12} - L_{12}$	4.16	4.92	4.58	4.29	4.90	4.58	4.15	4.90	4.58	149.26	346.98	12491
	$U_{13} - L_{13}$	3.45	3.68	4.43	3.46	3.67	4.83	3.46	3.67	4.88	124.34	356.58	12831
	$U_{14} - L_{14}$	4.75	5.34	4.60	6.64	6.57	9.35	6.63	6.57	9.34	165.43	499.50	17982
	$U_{15} - L_{15}$	5.01	4.51	4.59	5.57	4.85	5.33	5.59	4.85	4.61	162.43	302.63	10895
	$U_{16} - L_{16}$	4.53	4.79	3.82	4.56	4.92	5.07	4.58	4.58	4.85	137.70	266.72	9602
	$U_{17} - L_{17}$	4.03	4.21	3.64	4.40	4.79	4.72	4.40	4.76	4.72	130.94	199.97	7199
	$U_{18} - L_{18}$	3.75	4.21	4.35	3.95	4.44	4.84	3.96	4.44	4.84	134.84	147.74	5319
	$U_{19} - L_{19}$	3.54	4.03	3.77	3.37	4.05	4.50	3.39	4.05	4.47	121.49	193.55	6968
	$U_{20} - L_{20}$	3.36	3.73	3.13	3.60	4.17	4.71	3.59	4.17	4.71	112.51	182.93	6585
	$U_{21} - L_{21}$	3.60	4.03	5.17	3.82	4.32	6.93	3.82	4.32	6.98	129.76	173.96	6263
	$U_{22} - L_{22}$	4.12	4.93	4.57	9.24	12.81	18.02	18.14	17.47	16.77	148.38	296.11	10660
	$U_{23} - L_{23}$	3.99	4.77	5.41	3.98	4.77	5.41	4.01	4.77	5.41	143.18	184.52	6643
	$U_{24} - L_{24}$	3.42	4.05	4.33	3.52	4.06	4.32	3.53	4.06	4.32	122.99	188.03	6769
	$U_{25} - L_{25}$	3.26	3.91	4.44	3.26	3.96	4.44	3.26	3.96	4.44	117.24	172.90	6224
	$U_{26} - L_{26}$	3.76	4.37	4.91	3.75	4.45	4.91	3.76	4.35	4.91	135.05	133.22	4796
	$U_{27} - L_{27}$	3.94	4.23	4.86	3.97	4.23	5.45	3.94	4.23	5.45	141.84	171.68	6181
	$U_{28} - L_{28}$	4.12	4.32	5.17	4.13	4.33	5.15	4.12	4.33	5.15	148.27	218.38	7862
	$U_{29} - L_{29}$	4.70	4.55	6.33	4.71	4.55	6.88	4.68	4.51	6.98	162.48	245.11	8824
	$U_{30} - L_{30}$	5.51	5.52	4.28	8.19	6.08	8.28	8.09	6.27	8.28	154.06	483.62	17410
	$U_{31} - L_{31}$	4.55	4.33	3.10	5.03	4.26	4.08	5.07	4.26	4.07	111.43	455.88	16412
	$U_{32} - L_{32}$	5.04	5.17	4.74	4.98	5.81	4.78	5.05	5.77	4.75	170.82	417.21	15020
	$U_{33} - L_{33}$	4.72	5.09	4.28	5.03	5.34	5.30	5.08	5.37	5.30	154.07	297.88	10724
	$U_{34} - L_{34}$	5.52	5.92	3.89	5.30	6.53	5.97	5.25	6.03	5.88	140.13	240.03	8641
	$U_{35} - L_{35}$	4.70	5.07	3.77	5.03	5.70	5.57	5.02	5.70	5.57	135.77	152.37	5485
	$U_{36} - L_{36}$	3.71	4.01	4.53	3.80	4.14	4.92	3.79	4.14	4.92	133.47	130.36	4693
	$U_{37} - L_{37}$	3.99	4.16	4.29	8.49	9.80	9.20	13.20	17.06	12.37	143.65	255.27	9190
	$U_{38} - L_{38}$	5.23	4.98	7.43	5.20	4.97	8.01	5.20	5.02	7.43	179.06	226.31	8147
	$U_{39} - L_{39}$	4.95	5.42	7.11	5.11	5.46	7.08	5.08	5.46	7.08	178.26	225.50	8118
	$U_{40} - L_{40}$	3.44	4.17	4.69	3.43	4.18	4.69	3.44	4.18	4.69	123.53	171.93	6190
	$U_{41} - L_{41}$	3.42	4.09	3.90	3.41	4.05	3.90	3.41	4.06	3.90	122.70	222.17	7998
	$U_{42} - L_{42}$	3.69	4.24	5.24	3.82	4.25	5.24	3.69	4.25	5.24	132.78	149.05	5366
	$U_{43} - L_{43}$	3.94	4.30	6.39	3.93	4.35	6.52	3.89	4.35	6.39	139.99	192.38	6926
	$U_{44} - L_{44}$	3.43	3.48	5.44	3.30	3.21	5.10	3.32	3.44	5.44	115.72	319.82	11514
Structure 3	$U_0 - L_0$	2.86	2.56	2.35	2.86	2.57	2.35	2.86	2.55	2.87	84.48	297.73	10718
	$U_1 - L_1$	3.75	4.14	3.99	4.13	4.52	4.60	4.13	4.52	4.60	134.98	237.83	8562
	$U_2 - L_2$	3.48	3.90	3.01	3.36	4.62	4.02	3.38	3.90	4.01	108.46	156.60	5637
	$U_3 - L_3$	2.77	3.32	2.45	3.09	3.86	3.05	3.10	3.87	3.05	88.33	215.05	7742
	$U_4 - L_4$	3.30	3.98	3.91	3.42	4.48	5.37	3.44	4.21	5.37	118.89	170.68	6144
	$U_5 - L_5$	4.14	5.36	4.53	4.30	5.23	7.79	4.29	5.23	7.79	149.16	164.25	5913
	$U_6 - L_6$	4.04	4.67	4.28	10.81	14.73	10.48	10.80	14.73	14.45	145.31	241.35	8689
	$U_7 - L_7$	3.17	3.54	4.09	3.18	3.57	4.08	3.17	3.57	4.08	114.13	147.50	5310
	$U_8 - L_8$	3.65	4.45	5.12	3.67	4.47	5.33	3.66	4.47	5.12	131.58	123.29	4438
	$U_9 - L_9$	4.00	4.90	5.28	4.45	4.90	5.59	4.00	4.90	5.27	143.93	118.56	4268
	$U_{10} - L_{10}$	4.24	5.16	2.56	4.42	5.18	4.46	4.25	5.18	4.75	92.33	188.24	6777
	$U_{11} - L_{11}$	2.91	3.13	1.82	2.90	3.13	2.69	2.91	3.17	1.85	65.58	108.63	3911
	$U_{12} - L_{12}$	4.81	5.30	4.02	5.91	5.72	6.22	5.92	5.72	7.93	144.88	262.31	9443
	$U_{13} - L_{13}$	2.88	2.49	2.67	3.22	2.75	2.68	3.21	2.75	2.65	89.70	166.29	5986
	$U_{14} - L_{14}$	3.51	3.86	2.86	3.65	4.14	4.32	3.63	3.81	4.11	103.00	127.06	4574
	$U_{15} - L_{15}$	3.26	3.47	2.90	3.70	4.25	4.59	3.26	3.70	4.37	104.37	140.31	5051
	$U_{16} - L_{16}$	4.60	4.26	3.74	10.53	8.10	7.40	10.49	14.00	11.18	134.53	114.97	4139
	$U_{17} - L_{17}$	7.95	6.44	9.39	7.17	7.25	9.36	7.17	7.25	9.36	231.93	149.00	5364
	$U_{18} - L_{18}$	5.02	5.73	8.58	5.14	5.76	8.65	5.15	5.76	8.65	180.70	103.06	3710
	$U_{19} - L_{19}$	3.10	4.14	5.98	3.08	3.97	5.99	3.08	3.90	5.98	110.84	64.37	2317
	$U_{20} - L_{20}$	1.93	1.71	3.55	1.87	1.96	3.59	1.93	1.98	3.52	60.14	86.53	3115

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Controlling As-Built Rating

	Operating
Maximum Axial Force	1.52
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.77
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss		Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Diagonals													
Structure 1	U_0 - L_1	3.73	4.71	5.32	4.21	4.85	5.60	4.21	5.87	5.43	134.15	175.15	6306
	U_1 - L_2	3.73	4.63	5.23	3.97	7.11	5.22	4.18	5.20	5.69	134.40	758.46	27305
	U_2 - L_3	5.81	6.28	10.74	9.21	6.99	8.53	9.22	6.69	7.53	209.01	986.55	35516
	U_3 - L_4	3.14	3.55	4.34	5.28	6.05	6.12	3.36	3.58	4.19	113.00	1300.52	46819
	U_3 - L_4	3.13	4.61	5.53	3.70	5.24	5.70	8.09	6.74	7.33	112.53	920.87	33151
	U_4 - L_5	3.34	4.76	5.47	3.63	5.06	5.89	3.33	4.72	5.47	120.05	331.36	11929
	U_5 - L_6	2.79	3.81	6.00	2.85	4.16	5.95	2.85	3.84	5.43	100.53	241.61	8698
	U_5 - L_7	2.95	3.72	6.71	2.95	3.71	7.14	3.02	3.72	6.66	106.24	387.53	13951
	U_6 - L_8	4.88	5.14	5.82	4.88	5.07	5.85	5.19	5.18	5.85	175.60	584.00	21024
	U_6 - L_{10}	4.95	5.34	5.35	4.93	6.18	5.39	5.74	6.35	5.99	177.55	411.87	14827
	U_{10} - L_{11}	4.44	5.52	5.75	5.63	5.51	5.45	4.90	6.29	5.71	159.97	431.93	15549
	U_{11} - L_{12}	4.00	4.97	4.97	3.95	5.15	5.07	4.23	5.44	4.50	142.35	485.07	17463
	U_{12} - L_{13}	3.47	3.95	4.60	3.80	4.38	4.62	3.90	4.69	5.02	125.05	398.50	14346
	U_{13} - L_{14}	3.01	3.33	4.42	3.02	3.41	4.72	3.99	3.79	4.39	108.49	897.01	32293
	U_{15} - L_{14}	3.81	3.99	6.65	4.11	4.33	11.49	4.32	4.40	9.30	137.09	858.20	30895
	U_{15} - L_{15}	3.44	4.82	5.10	4.11	5.73	6.68	3.68	5.01	6.81	123.74	563.54	20287
	U_{17} - L_{16}	2.76	3.99	4.28	2.71	4.89	4.71	2.77	4.05	4.34	97.65	510.22	18368
	U_{18} - L_{17}	2.90	4.14	4.92	3.12	4.76	5.21	2.90	4.37	4.92	104.35	282.55	10172
	U_{19} - L_{19}	2.81	4.35	5.52	2.91	4.45	5.87	2.82	4.33	5.32	101.15	310.55	11180
	U_{20} - L_{19}	3.17	4.46	4.44	3.28	4.21	4.92	3.06	4.24	4.49	110.26	446.64	16079
Structure 2	U_0 - L_1	4.29	4.67	4.43	4.24	4.68	4.07	4.24	4.49	4.48	146.62	358.60	12909
	U_1 - L_2	4.26	4.76	3.90	4.20	4.76	3.90	4.26	4.76	4.39	140.25	356.76	12843
	U_2 - L_3	3.46	4.18	4.01	3.46	4.12	3.91	3.96	4.55	4.02	124.68	298.11	10732
	U_3 - L_4	3.66	4.10	4.05	3.68	4.39	4.05	3.66	4.35	4.67	131.58	530.91	19113
	U_4 - L_5	3.86	4.18	6.43	3.86	4.21	5.68	4.32	4.32	6.27	138.96	544.66	19608
	U_5 - L_6	5.07	5.29	7.80	4.94	5.39	9.53	5.53	5.33	8.17	177.96	686.35	24708
	U_5 - L_7	3.38	3.22	3.93	3.56	3.20	4.73	3.39	3.24	4.11	115.13	944.88	34016
	U_6 - L_7	3.83	4.66	5.42	4.61	7.10	6.25	4.47	5.70	5.40	137.80	502.53	18091
	U_6 - L_8	3.25	4.52	4.46	3.62	5.63	4.44	3.65	4.79	4.60	117.10	354.09	12747
	U_8 - L_9	3.73	4.73	5.15	4.12	5.62	5.10	3.73	4.73	5.17	134.43	392.94	14146
	U_{11} - L_{10}	3.61	4.86	5.15	3.78	5.34	5.32	3.61	4.87	5.29	130.12	388.63	13991
	U_{12} - L_{11}	3.65	4.19	4.95	3.69	4.99	4.89	3.65	4.61	4.97	131.24	399.89	14396
	U_{13} - L_{12}	3.03	3.56	5.20	3.34	3.86	5.46	3.03	3.42	5.20	109.22	348.85	12559
	U_{14} - L_{13}	3.71	3.93	7.52	3.89	4.13	7.82	3.77	4.14	8.18	133.64	506.24	18224
	U_{14} - L_{15}	4.81	4.33	4.44	4.81	4.27	4.53	4.80	4.33	4.26	153.37	552.73	19898
	U_{15} - L_{16}	4.16	3.80	3.37	4.18	3.98	3.37	4.36	4.05	3.62	121.18	365.59	13161
	U_{16} - L_{17}	4.10	4.42	4.66	4.42	4.49	4.36	4.10	4.49	4.66	147.59	364.75	13131
	U_{17} - L_{19}	3.55	4.33	4.29	3.56	4.35	4.17	4.08	4.78	4.29	127.63	335.05	12062
	U_{19} - L_{19}	3.89	4.62	4.62	3.89	4.84	4.61	4.10	4.69	5.36	139.96	344.32	12396
	U_{19} - L_{20}	4.02	4.49	4.87	4.34	4.50	4.87	4.56	5.34	5.44	144.61	343.78	12376
	U_{20} - L_{21}	3.45	3.76	4.97	3.47	3.94	5.48	3.86	4.22	5.31	124.36	534.49	19242
	U_{21} - L_{22}	5.15	5.41	7.64	5.15	6.09	7.93	5.88	6.33	9.27	185.42	892.96	32147
	U_{21} - L_{22}	4.77	5.46	7.07	5.79	6.43	8.85	6.05	6.87	7.86	171.61	935.74	33687
	U_{24} - L_{23}	3.28	4.57	4.89	3.77	4.64	4.94	3.69	4.82	5.07	117.99	588.79	21196
	U_{25} - L_{24}	3.87	5.02	5.24	3.85	5.71	5.35	4.12	5.03	5.24	138.55	362.68	13057
	U_{26} - L_{25}	3.86	4.79	5.31	4.15	5.30	5.32	3.85	4.76	5.51	138.77	336.54	12115
	U_{27} - L_{26}	3.87	4.43	4.71	3.82	5.00	4.84	3.87	4.43	4.67	137.69	340.95	12274
	U_{28} - L_{27}	4.03	3.81	4.96	4.44	4.68	5.18	4.04	4.35	4.94	137.31	338.18	12175
	U_{29} - L_{28}	3.68	3.52	5.55	3.86	3.73	5.55	3.68	3.52	5.55	126.83	329.64	11867
	U_{30} - L_{29}	4.35	3.83	8.19	4.45	4.25	7.87	4.51	4.22	8.19	137.79	525.94	18934
	U_{30} - L_{31}	5.60	4.92	4.76	5.59	5.00	4.80	5.76	4.92	5.09	171.28	599.83	21594
	U_{31} - L_{32}	4.86	4.24	3.53	5.05	5.05	3.48	4.86	4.24	3.61	125.29	408.31	14699
	U_{32} - L_{33}	4.60	4.85	4.42	4.59	4.84	4.35	5.15	5.37	4.40	156.64	424.00	15264
	U_{33} - L_{34}	4.60	5.24	4.33	4.58	5.33	4.39	4.87	5.60	4.97	155.89	405.38	14594
	U_{34} - L_{35}	4.53	4.63	4.73	4.92	5.21	4.21	4.94	5.45	4.72	151.59	386.36	13909
	U_{35} - L_{36}	4.04	4.25	4.49	4.04	4.36	4.29	4.49	4.61	4.19	145.39	334.22	12032
	U_{36} - L_{37}	4.35	4.38	4.92	4.49	4.94	4.94	4.89	5.29	5.80	156.60	440.02	15841
	U_{38} - L_{37}	2.83	2.95	3.32	3.28	3.47	4.76	3.43	3.48	4.67	101.78	782.61	28174
	U_{39} - L_{38}	4.15	4.40	7.63	5.32	5.34	9.70	5.34	5.08	8.06	149.47	739.71	26629
	U_{40} - L_{39}	4.20	4.90	5.11	4.32	4.90	6.19	4.23	4.89	6.03	151.17	606.11	21820
	U_{41} - L_{40}	3.54	4.51	4.50	3.77	5.15	4.51	3.54	4.55	4.60	127.41	526.74	18963
	U_{42} - L_{41}	3.70	4.37	4.59	3.68	5.26	4.60	3.73	4.63	4.59	132.56	296.74	10683
	U_{43} - L_{42}	3.89	4.97	5.85	4.11	5.01	5.87	3.89	4.89	5.85	140.01	316.33	11388
	U_{44} - L_{43}	4.04	4.60	6.68	4.04	4.76	6.72	4.07	4.57	6.68	145.34	434.65	15647
Structure 3	U_0 - L_1	3.93	4.62	4.52	3.66	5.04	3.47	3.66	4.24	3.50	125.01	339.94	12238
	U_1 - L_2	3.89	4.68	3.75	4.04	4.76	3.75	4.07	4.68	4.45	134.90	355.71	12805
	U_2 - L_3	3.64	4.10	3.99	4.10	4.12	3.97	3.64	4.55	4.45	130.89	294.77	10612
	U_3 - L_4	3.16	3.73	4.10	3.15	3.84	3.97	3.57	4.17	4.09	113.53	496.07	17859
	U_4 - L_5	4.11	4.41	5.75	4.06	4.41	5.76	4.09	4.65	6.21	146.28	536.13	19301
	U_5 - L_6	5.13	4.27	8.29	6.02	5.74	9.19	5.13	4.31	5.48	153.55	977.60	35194
	U_7 - L_8	3.24	3.94	4.32	4.79	5.05	5.52	4.40	4.28	4.69	116.65	1040.87	37471
	U_8 - L_7	3.57	4.42	4.28	3.67	5.44	5.38	3.82	4.43	5.46	128.37	431.72	15542
	U_8 - L_9	3.70	5.38	6.20	4.08	6.75	6.60	4.18	5.34	6.33	133.19	492.83	17742
	U_{10} - L_9	4.48	5.97	6.38	5.02	6.31	7.35	4.57	6.24	6.70	161.26	407.12	14656
	U_{11} - L_{10}	4.28	4.43	5.80	4.43	5.51	7.20	4.56	4.95	5.70	154.11	359.04	12925
	U_{12} - L_{11}	4.48	4.84	6.22	4.79	5.19	7.17	4.44	4.89	6.17	159.72	507.93	18286
	U_{12} - L_{13}	4.13	3.75	4.09	4.14	3.73	4.04	4.62	4.20	4.12	134.39	420.14	15125
	U_{13} - L_{14}	3.99	4.05	3.66	3.98	4.09	4.02	4.40	4.26	4.57	131.80	270.96	9755
	U_{14} - L_{15}	4.15	4.49	5.15	4.57	5.84	5.01	4.88	5.52	5.10	149.40	344.83	12414
	U_{15} - L_{16}	3.61	4.05	4.91	4.88	8.95	5.14	4.56	5.13	6.54	130.14	842.46	30329
	U_{17} - L_{16}	3.00	3.17	4.50	7.80	5.39	10.69	7.20	8.63	7.99	107.84	1253.05	45110
	U_{18} - L_{17}	5.33	5.05	8.13	7.15	10.60	12.81	5.63	5.93	13.49	181.76	1066.93	38410
	U_{19} - L_{18}	3.68	4.75	6.82	3.99	5.53	7.45	4.10	6.72	7.54	132.62	605.07	21783
	U_{20} - L_{19}	3.74	4.80	7.51	10.63	8.06	5.97	3.72	9.48	5.97	134.08	290.93	10474

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating 4F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.42
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.38
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss		Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Upper Chord													
Structure 1	$U_0 - U_1$	3.81	4.50	6.40	4.48	5.24	9.52	3.96	4.77	6.38	137.20	66.04	2377
	$U_1 - U_2$	2.44	3.13	3.63	3.62	4.76	4.32	2.45	3.13	3.60	88.00	59.96	2159
	$U_2 - U_3$	2.30	3.08	4.23	3.21	3.80	4.66	2.30	3.09	4.23	82.67	75.12	2704
	$U_3 - U_4$	2.82	3.92	6.35	3.33	4.94	6.78	2.83	3.91	6.92	101.42	89.32	3216
	$U_4 - U_5$	2.96	4.04	6.35	2.96	4.04	6.44	3.72	7.01	7.61	106.65	68.93	2481
	$U_5 - U_6$	4.56	5.91	6.44	4.56	5.52	6.25	7.87	8.58	6.91	164.02	66.56	2396
	$U_6 - U_7$	4.53	5.68	6.43	4.57	5.77	6.33	4.84	16.29	5.88	163.20	201.09	7239
	$U_7 - U_8$	4.26	5.46	4.24	4.50	6.46	8.72	8.70	12.76	7.22	152.74	77.01	2772
	$U_8 - U_9$	4.01	6.11	5.26	13.76	15.52	7.38	12.63	8.63	6.88	144.43	40.90	1473
	$U_9 - U_{10}$	4.78	7.50	8.46	11.30	11.90	14.85	4.78	7.85	8.46	172.04	88.33	3180
	$U_{10} - U_{11}$	3.72	4.06	4.26	5.13	5.90	5.52	3.74	4.05	4.28	133.82	53.94	1942
	$U_{11} - U_{12}$	2.62	3.47	3.21	3.60	5.07	3.57	2.61	3.47	3.21	93.84	79.55	2864
	$U_{12} - U_{13}$	2.65	3.82	3.71	3.12	4.42	4.17	2.66	3.79	3.62	95.52	223.02	8029
	$U_{13} - U_{14}$	2.49	3.76	3.53	2.98	4.61	3.71	2.48	3.77	3.43	89.46	196.65	7080
	$U_{14} - U_{15}$	2.48	3.69	3.44	2.48	3.63	3.37	3.20	4.55	4.13	89.28	275.22	9908
	$U_{15} - U_{16}$	2.60	3.49	3.91	2.60	3.78	3.93	3.05	4.37	4.69	93.61	256.47	9233
	$U_{16} - U_{17}$	2.80	3.71	4.51	2.80	3.71	4.67	3.48	4.88	5.31	100.72	228.00	8208
	$U_{17} - U_{18}$	2.76	3.31	4.86	2.76	3.51	3.48	3.68	4.22	5.11	99.23	185.82	6690
	$U_{18} - U_{19}$	2.97	3.41	5.23	3.15	3.46	3.42	3.78	6.76	5.34	106.78	91.42	3291
	$U_{19} - U_{20}$	7.21	8.45	9.49	7.00	7.94	9.49	7.16	9.96	13.06	251.91	45.21	1627
Structure 2	$U_0 - U_1$	6.67	6.53	8.49	7.85	9.35	13.18	7.32	7.41	8.51	234.96	61.86	2227
	$U_1 - U_2$	3.81	3.64	4.12	4.46	5.07	4.89	3.81	3.86	4.12	131.20	142.09	5115
	$U_2 - U_3$	3.52	3.89	3.89	4.01	5.21	4.68	3.52	3.88	3.89	126.63	70.55	2540
	$U_3 - U_4$	2.80	3.64	3.46	3.68	4.16	4.07	2.90	3.68	3.40	100.78	185.87	6691
	$U_4 - U_5$	2.84	3.75	3.60	3.27	4.14	4.03	2.85	3.74	3.60	102.36	192.11	6916
	$U_5 - U_6$	3.10	4.30	4.02	3.23	4.36	4.00	3.12	4.48	4.00	111.76	262.53	9451
	$U_6 - U_7$	2.74	3.47	4.22	2.95	4.16	4.30	2.72	3.47	4.05	97.93	152.18	5478
	$U_7 - U_8$	2.76	3.50	4.19	2.76	3.50	4.06	3.44	4.80	5.24	99.44	168.24	6057
	$U_8 - U_9$	2.84	3.88	4.81	2.84	3.88	4.62	3.33	5.48	6.14	102.09	197.50	7110
	$U_9 - U_{10}$	3.16	4.22	5.98	3.19	4.31	5.98	4.74	6.14	7.59	113.90	75.20	2707
	$U_{10} - U_{11}$	4.58	5.76	8.43	4.34	5.78	8.25	6.11	8.10	9.21	156.29	90.07	3242
	$U_{11} - U_{12}$	5.51	6.88	6.91	5.51	6.98	6.85	10.31	19.00	36.64	198.42	80.04	2882
	$U_{12} - U_{13}$	6.38	7.69	8.65	6.39	15.15	7.57	6.84	12.17	13.63	229.54	229.31	8255
	$U_{13} - U_{14}$	8.70	8.61	4.80	6.85	8.42	10.49	12.65	14.94	7.40	172.93	101.72	3662
	$U_{14} - U_{15}$	7.19	9.99	5.55	14.66	16.85	6.74	12.01	8.33	6.23	199.78	97.78	3520
	$U_{15} - U_{16}$	6.82	8.16	8.76	10.57	10.20	10.48	6.86	9.36	8.89	245.64	228.92	8241
	$U_{16} - U_{17}$	6.05	8.06	7.94	16.57	18.13	20.91	6.08	8.11	7.45	217.91	93.34	3360
	$U_{17} - U_{18}$	4.69	7.43	6.23	8.57	10.50	6.73	4.69	7.22	6.18	168.92	61.71	2222
	$U_{18} - U_{19}$	4.75	5.53	6.68	6.32	6.87	7.55	4.74	5.53	6.67	170.70	57.22	2060
	$U_{19} - U_{20}$	3.51	4.76	4.88	3.91	5.12	5.54	3.50	4.74	4.88	126.17	91.28	3286
	$U_{20} - U_{21}$	3.55	4.75	4.68	3.96	5.36	4.99	3.76	4.80	4.64	127.67	141.09	5079
	$U_{21} - U_{22}$	3.01	4.09	4.31	3.13	4.57	4.59	3.01	4.09	4.31	108.36	127.41	4587
	$U_{22} - U_{23}$	2.98	4.00	4.27	2.98	3.96	4.32	3.67	5.24	5.63	107.14	174.29	6274
	$U_{23} - U_{24}$	3.33	4.18	5.47	3.32	4.11	5.17	4.75	6.09	6.20	119.68	160.27	5770
	$U_{24} - U_{25}$	3.44	4.31	5.87	3.49	4.28	5.64	4.40	5.37	6.98	123.69	100.80	3629
	$U_{25} - U_{26}$	4.33	5.11	8.81	4.33	5.13	8.17	5.79	7.43	10.33	155.77	77.58	2793
	$U_{26} - U_{27}$	5.00	7.14	6.44	5.04	7.06	6.52	9.97	11.72	20.40	179.85	70.35	2532
	$U_{27} - U_{28}$	6.66	8.55	8.34	6.69	8.52	8.50	18.45	19.32	21.25	239.84	107.55	3872
	$U_{28} - U_{29}$	7.38	8.67	7.92	7.44	16.76	18.10	10.80	11.34	8.69	265.53	292.03	10513
	$U_{29} - U_{30}$	9.69	10.01	4.98	7.69	8.95	15.95	12.64	12.52	6.91	179.31	95.75	3447
	$U_{30} - U_{31}$	8.48	9.55	5.50	23.59	10.28	8.30	14.22	9.07	6.62	198.02	99.95	3598
	$U_{31} - U_{32}$	6.34	7.67	8.19	10.74	8.67	8.22	6.45	8.35	7.61	228.37	317.26	11421
	$U_{32} - U_{33}$	5.70	6.49	6.65	13.94	14.61	15.75	5.55	7.14	6.64	199.85	65.74	2367
	$U_{33} - U_{34}$	5.30	6.13	7.02	7.25	7.45	7.71	5.33	6.12	7.03	190.91	76.63	2759
	$U_{34} - U_{35}$	4.00	4.70	4.55	4.68	5.87	5.49	3.99	4.64	4.52	143.68	66.52	2395
	$U_{35} - U_{36}$	3.67	4.63	3.67	4.36	5.34	4.04	3.82	4.61	3.67	131.95	167.97	6047
	$U_{36} - U_{37}$	3.47	3.93	3.59	4.35	4.53	3.95	3.50	3.93	3.62	125.02	143.40	5163
	$U_{37} - U_{38}$	3.33	3.73	3.66	3.32	3.74	3.67	4.08	5.15	4.35	119.40	240.58	8661
	$U_{38} - U_{39}$	3.50	4.54	4.02	3.48	4.56	3.90	3.77	5.38	4.40	125.21	185.56	6680
	$U_{39} - U_{40}$	3.39	3.73	3.84	3.42	3.72	3.88	4.34	4.69	4.78	122.19	249.79	8992
	$U_{40} - U_{41}$	3.61	4.09	4.04	3.32	3.57	4.22	4.30	4.57	4.48	119.51	221.27	7966
	$U_{41} - U_{42}$	4.11	3.81	5.07	3.65	3.81	5.97	4.74	5.71	6.17	131.43	76.96	2771
	$U_{42} - U_{43}$	4.31	3.99	6.17	3.92	4.48	5.05	8.13	9.13	6.37	140.95	165.99	5976
	$U_{43} - U_{44}$	7.01	7.45	13.00	7.86	7.35	13.00	8.08	9.31	12.54	252.29	39.66	1428
Structure 3	$U_0 - U_1$	7.28	7.86	10.07	7.27	8.70	13.39	7.56	7.53	10.06	261.71	67.12	2416
	$U_1 - U_2$	3.21	3.38	3.82	3.65	3.92	5.19	3.21	3.25	3.85	115.38	71.34	2568
	$U_2 - U_3$	3.07	3.60	3.73	3.44	4.41	5.18	3.08	3.57	3.74	110.68	176.91	6369
	$U_3 - U_4$	3.20	4.22	3.99	3.94	5.15	4.62	3.28	4.19	3.99	115.21	222.60	8014
	$U_4 - U_5$	2.75	3.65	3.93	3.47	4.15	4.04	2.75	4.18	4.06	99.04	246.42	8871
	$U_5 - U_6$	2.64	3.76	3.92	2.97	4.21	3.92	2.64	3.74	3.81	94.94	218.70	7873
	$U_6 - U_7$	2.68	3.89	3.95	2.67	3.74	3.94	3.83	5.25	3.63	96.14	208.24	7497
	$U_7 - U_8$	2.83	3.87	4.34	2.85	3.75	4.32	3.70	4.42	3.90	102.03	304.38	10958
	$U_8 - U_9$	2.63	3.54	4.38	2.52	3.54	4.41	3.45	5.09	5.06	90.76	92.43	3327
	$U_9 - U_{10}$	2.99	3.92	6.71	2.99	3.89	6.73	6.62	7.96	13.20	107.55	59.29	2135
	$U_{10} - U_{11}$	5.62	7.62	8.55	5.63	7.63	8.64	15.46	15.47	29.43	202.25	87.39	3146
	$U_{11} - U_{12}$	5.45	6.29	4.49	5.61	7.69	11.76	14.33	16.30	6.87	161.71	40.43	1455
	$U_{12} - U_{13}$	5.18	5.38	4.58	12.67	13.38	8.42	5.21	6.58	5.68	164.71	79.17	2850
	$U_{13} - U_{14}$	4.63	5.89	6.60	5.26	11.22	6.54	4.63	6.39	6.66	166.58	173.68	6252
	$U_{14} - U_{15}$	4.52	6.13	6.46	7.23	7.62	7.11	4.50	5.49	6.31	161.86	63.94	2302
	$U_{15} - U_{16}$	3.62	4.37	4.97	4.42	5.43	5.30	3.82	4.27	5.09	130.14	68.22	2456
	$U_{16} - U_{17}$	3.65	4.50	5.04	3.66	4.48	5.17	4.73	5.62	6.35	131.46	67.62	2434
	$U_{17} - U_{18}$	2.75	3.21	4.12	2.75	3.24	4.36	3.63	4.51	4.97	99.01	102.54	3691
	$U_{18} - U_{19}$	2.57	3.09	4.44	2.57	3.11	5.13	3.72	4.53	5.61	92.65	78.85	2838
	$U_{19} - U_{20}$	4.81	4.37	9.24	4.42	4.34	9.20	5.81	7.22	7.31	156.22	35.11	1264

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating 4F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.42
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.38
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss		Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Lower Chord	Structure 1	L_2 - L_1	23.95	13.36	26.28	22.56	14.09	12.98	21.92	20.36	13.58	467.34	73.07	2630
		L_1 - L_2	3.17	3.72	3.93	3.64	4.57	5.27	3.50	5.33	5.22	114.17	71.40	2570
		L_2 - L_3	3.15	4.18	4.31	3.31	4.11	4.29	3.68	5.32	4.96	113.42	152.84	5502
		L_3 - L_4	2.97	3.95	4.27	2.97	3.97	4.29	3.44	5.49	6.11	106.85	131.05	4718
		L_4 - L_5	3.66	5.27	3.94	3.30	4.58	3.94	5.11	7.11	4.02	118.71	72.69	2617
		L_5 - L_6	3.81	5.73	3.89	3.75	5.40	3.91	3.83	13.48	3.89	134.85	182.06	6554
		L_6 - L_7	5.28	6.94	4.55	4.90	6.61	6.02	11.24	14.06	9.79	163.84	242.60	8734
		L_7 - L_8	4.76	7.09	3.67	5.91	10.54	6.51	5.26	8.38	4.30	132.25	141.93	5109
		L_8 - L_9	5.49	7.03	2.66	6.54	7.91	3.98	6.24	10.29	4.82	95.65	175.75	6327
		L_9 - L_{10}	6.30	8.98	6.33	12.09	18.18	9.86	6.18	10.01	10.88	222.49	266.95	9610
		L_{10} - L_{11}	4.49	6.81	7.48	4.44	6.82	7.48	4.32	6.83	6.97	155.44	100.34	3612
		L_{11} - L_{12}	3.98	4.04	3.92	4.68	4.39	4.90	4.89	5.46	4.93	141.25	103.05	3710
		L_{12} - L_{13}	4.09	4.85	4.75	4.70	4.75	4.76	4.76	5.50	4.73	147.27	268.92	9681
		L_{13} - L_{14}	3.52	4.70	4.27	3.86	5.25	4.56	3.74	4.89	5.06	126.83	158.31	5699
		L_{14} - L_{15}	4.38	5.12	4.94	4.11	5.28	5.02	4.36	5.12	4.99	147.83	265.42	9555
		L_{15} - L_{16}	4.57	5.37	6.61	4.96	6.01	6.83	4.64	5.35	6.96	164.58	479.80	17273
		L_{16} - L_{17}	4.57	5.00	6.55	4.65	5.10	6.60	5.46	5.89	6.65	164.59	201.25	7245
		L_{17} - L_{18}	5.84	5.54	10.37	5.84	5.88	9.01	6.68	6.45	9.67	199.52	187.49	6750
		L_{18} - L_{19}	7.01	5.02	6.93	6.42	5.44	9.99	8.16	6.93	9.70	180.78	78.51	2826
		L_{19} - L_{20}	5.70	15.69	9.14	10.92	15.61	11.18	7.68	10.64	12.15	205.09	86.43	3112
	Structure 2	L_2 - L_1	24.23	14.50	18.16	21.85	18.14	17.78	21.66	19.58	17.42	522.01	107.58	3873
		L_1 - L_2	5.74	5.43	6.62	7.80	8.40	8.03	6.83	6.48	7.99	195.48	112.12	4036
		L_2 - L_3	5.66	5.52	5.89	5.80	6.12	7.19	5.57	6.18	6.55	198.80	185.89	6692
		L_3 - L_4	4.53	5.18	4.90	4.75	6.19	5.69	4.54	5.48	5.62	163.12	240.39	8654
		L_4 - L_5	5.05	5.99	5.78	5.43	6.62	5.79	5.35	6.52	5.72	181.76	363.27	13078
		L_5 - L_6	4.56	6.01	5.43	4.58	5.87	5.43	4.76	5.98	5.21	164.08	327.31	11783
		L_6 - L_7	4.28	5.70	5.14	4.28	5.70	5.14	5.13	6.64	5.86	153.93	348.16	12534
		L_7 - L_8	4.18	5.50	5.41	3.97	5.23	5.44	4.17	6.10	6.34	143.02	223.69	8053
		L_8 - L_9	4.38	5.97	6.13	4.74	6.26	6.45	5.00	6.60	6.19	157.83	194.18	6991
		L_9 - L_{10}	6.04	7.66	7.72	6.04	7.46	7.58	6.06	7.45	8.04	217.28	160.17	5766
		L_{10} - L_{11}	4.63	6.21	4.51	4.34	5.74	4.53	8.60	12.49	16.36	156.10	126.40	4822
		L_{11} - L_{12}	5.81	7.35	4.90	5.54	6.96	5.01	10.87	21.44	4.95	176.35	249.64	8987
		L_{12} - L_{13}	8.87	9.10	5.03	6.96	8.60	7.20	6.75	10.98	7.46	180.90	372.97	13427
		L_{13} - L_{14}	5.79	8.03	4.22	8.51	12.14	7.61	7.40	8.90	6.78	151.88	121.51	4374
		L_{14} - L_{15}	7.55	7.31	2.33	10.44	9.82	5.16	7.38	10.23	3.88	91.12	138.43	4984
		L_{15} - L_{16}	7.36	10.32	5.42	7.08	9.31	10.64	7.05	10.83	10.19	195.22	358.28	12898
		L_{16} - L_{17}	6.10	8.74	4.18	11.81	19.98	5.78	6.00	8.63	7.52	150.46	240.96	8675
		L_{17} - L_{18}	4.43	6.20	3.77	15.40	18.27	12.97	4.26	6.09	5.78	135.73	138.06	4970
		L_{18} - L_{19}	4.30	6.18	6.32	4.28	10.66	6.40	4.20	5.95	6.21	151.24	117.72	4238
		L_{19} - L_{20}	5.45	6.46	6.09	6.02	7.56	7.26	5.44	7.39	6.60	195.94	120.48	4337
		L_{20} - L_{21}	5.78	6.95	7.32	5.77	6.88	7.32	6.27	7.09	7.30	207.81	190.32	6851
		L_{21} - L_{22}	4.50	5.63	4.96	4.49	5.61	5.16	5.09	5.89	5.56	161.70	113.90	4100
		L_{22} - L_{23}	4.63	5.38	5.40	4.42	5.44	5.74	4.62	5.37	5.84	159.21	144.33	5196
		L_{23} - L_{24}	5.82	6.61	8.00	6.08	6.83	7.71	6.16	6.80	8.38	209.53	211.45	7612
		L_{24} - L_{25}	6.11	6.63	8.62	5.91	6.53	8.38	6.08	6.93	9.10	212.73	125.83	4530
		L_{25} - L_{26}	6.47	6.87	6.29	5.89	6.16	6.30	9.41	10.63	6.23	212.14	131.47	4733
		L_{26} - L_{27}	5.93	6.64	4.76	6.32	6.25	6.12	9.41	18.39	10.09	171.50	136.62	4918
		L_{27} - L_{28}	5.94	9.93	5.30	9.34	8.70	8.24	6.65	15.14	7.06	190.90	235.00	8460
		L_{28} - L_{29}	6.39	11.14	6.83	10.02	9.15	8.13	5.29	11.18	6.00	190.61	430.57	15500
		L_{29} - L_{30}	5.42	7.37	4.70	12.86	12.14	7.09	7.07	9.19	6.82	169.04	118.39	4262
		L_2 - L_{31}	8.45	8.18	1.69	16.77	10.07	3.61	9.86	10.21	2.82	60.83	144.13	5189
		L_{31} - L_{32}	10.88	10.70	4.87	8.40	10.30	10.25	13.81	9.01	5.69	175.35	355.49	12797
		L_{32} - L_{33}	8.48	7.75	3.26	11.43	25.74	4.60	7.91	7.59	5.52	117.20	226.62	8158
		L_{33} - L_{34}	6.54	6.10	5.49	12.48	14.33	15.87	6.19	5.83	4.96	178.42	133.51	4806
		L_{34} - L_{35}	6.59	7.92	9.22	7.94	8.64	9.82	7.66	8.53	8.97	237.34	152.92	5505
		L_{35} - L_{36}	5.27	6.51	6.47	6.18	7.93	8.02	5.77	6.57	8.36	189.61	208.63	7511
		L_{36} - L_{37}	4.88	5.54	5.65	4.88	6.09	6.20	4.69	6.21	5.86	168.86	91.42	3291
		L_{37} - L_{38}	4.62	5.57	5.69	5.22	6.29	6.24	4.64	5.52	5.89	166.22	277.42	9987
		L_{38} - L_{39}	4.84	5.93	6.08	5.11	6.05	6.18	5.29	6.14	6.16	174.24	356.54	12835
		L_{39} - L_{40}	5.06	5.99	7.14	5.09	6.08	7.08	4.94	5.88	8.07	177.98	440.90	15873
		L_{40} - L_{41}	4.83	5.53	6.71	4.73	5.34	6.76	4.87	6.89	7.53	170.17	224.03	8065
		L_{41} - L_{42}	5.68	5.95	9.25	5.60	5.90	8.52	7.21	7.40	10.09	201.63	185.45	6676
		L_{42} - L_{43}	5.82	6.17	10.36	5.71	6.18	11.20	6.88	7.59	10.80	205.47	48.30	1739
		L_{43} - L_{44}	21.12	34.20	27.89	13.89	20.87	17.62	13.79	20.92	31.65	496.58	105.35	3793
	Structure 3	L_2 - L_1	9.81	15.42	5.83	11.99	17.31	8.95	11.99	17.42	9.66	209.84	92.74	3339
		L_1 - L_2	7.86	4.46	6.76	8.38	5.66	8.94	8.44	6.46	7.82	160.67	87.76	3159
		L_2 - L_3	5.96	5.39	7.32	7.81	6.23	8.11	6.61	6.60	6.87	194.06	200.01	7200
		L_3 - L_4	4.76	5.08	5.88	6.08	7.15	6.59	5.13	5.44	5.72	171.33	243.12	8752
		L_4 - L_5	5.33	6.03	6.26	5.25	6.18	6.23	5.31	7.18	6.98	189.03	420.18	15126
		L_5 - L_6	4.04	5.14	5.11	4.03	4.96	5.06	4.28	5.63	6.59	145.00	234.41	8439
		L_6 - L_7	3.52	4.81	4.97	3.67	4.88	5.00	3.95	5.26	4.95	126.72	173.45	6244
		L_7 - L_8	4.00	5.04	5.99	3.73	4.90	6.05	4.03	4.94	7.35	134.15	324.50	11682
		L_8 - L_9	3.26	4.29	6.12	3.39	4.32	6.42	3.96	4.95	6.59	117.26	118.82	4277
		L_9 - L_{10}	5.27	6.88	5.96	5.02	6.48	5.84	5.73	7.48	6.05	180.67	103.72	3734
		L_{10} - L_{11}	8.15	9.47	7.23	7.53	8.95	9.46	10.00	17.30	9.89	260.10	241.49	8694
		L_{11} - L_{12}	4.83	7.26	4.77	8.49	9.77	8.89	6.28	8.11	5.24	171.63	156.04	5617
		L_{12} - L_{13}	5.20	6.98	3.26	9.40	9.29	4.94	7.48	9.20	3.32	117.52	171.47	6173
		L_{13} - L_{14}	4.82	6.70	4.48	18.59	15.15	10.21	4.95	7.91	5.32	161.42	249.06	8967
		L_{14} - L_{15}	3.60	5.80	4.96	3.62	13.31	5.01	3.63	5.98	4.83	129.68	181.50	6534
		L_{15} - L_{16}	3.24	5.39	5.16	5.90	6.14	5.82	3.07	4.84	5.14	110.63	79.80	2873
		L_{16} - L_{17}	3.10	3.93	4.60	4.03	5.27	5.10	3.10	3.93	4.85	111.74	129.85	4674
		L_{17} - L_{18}	3.31	4.01	5.15	3.43	4.36	5.32	3.32	3.87	6.54	119.34	212.46	7648
		L_{18} - L_{19}	3.46	4.17	5.90	3.45	4.15	5.36	4.65	5.22	5.79	124.09	74.17	2670
		L_{19} - L_{20}	17.96	22.31	39.36	14.09	17.36	27.70	15.17	17.70	43.52	507.18	71.57	2577

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As-Built Load Rating 4F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.42
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.38
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss		Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Tonnage	Rating	Tonnage
Truss - Verticals													
Structure 1	U_0 - L_0	1.51	1.52	1.88	1.70	1.92	1.88	1.50	1.85	1.88	53.99	81.42	2931
	U_1 - L_1	3.27	3.78	3.26	3.70	4.42	4.82	3.37	4.42	4.83	117.51	81.04	2918
	U_2 - L_2	4.74	5.62	4.02	5.23	5.95	5.82	5.23	5.95	5.82	144.77	96.98	3491
	U_3 - L_3	6.79	7.31	6.49	7.95	8.24	9.22	7.95	8.22	9.22	233.66	141.50	5094
	U_4 - L_4	3.80	4.75	4.69	8.24	7.90	7.83	8.22	10.37	9.96	136.89	126.49	4554
	U_5 - L_5	2.78	3.63	4.10	2.78	3.61	4.10	2.78	3.61	3.85	100.10	120.76	4347
	U_6 - L_6	2.48	3.71	3.67	2.45	3.69	4.01	2.46	3.66	4.02	88.31	104.57	3764
	U_7 - L_7	1.80	2.51	3.50	1.79	2.51	3.50	1.79	2.51	3.47	64.35	131.79	4744
	U_8 - L_8	4.29	5.15	4.60	5.05	5.52	7.55	5.04	5.52	7.70	154.54	247.31	8903
	U_9 - L_9	2.99	3.18	3.04	3.12	3.25	3.59	3.11	3.23	3.58	107.70	138.71	4994
	U_{10} - L_{10}	3.97	4.93	3.47	3.83	5.66	5.19	4.13	5.63	5.27	124.79	222.55	8012
	U_{11} - L_{11}	3.71	4.57	4.57	4.01	4.91	5.38	3.97	4.88	4.58	133.52	128.95	4642
	U_{12} - L_{12}	3.66	4.48	3.52	3.49	4.42	5.30	3.50	4.42	5.25	125.57	127.81	4601
	U_{13} - L_{13}	2.74	3.28	3.01	2.98	3.64	4.51	2.97	3.64	4.53	98.52	142.53	5131
	U_{14} - L_{14}	4.43	4.74	3.96	10.87	8.28	12.57	10.83	16.21	16.91	142.49	200.74	7227
	U_{15} - L_{15}	4.45	5.30	6.79	4.45	5.33	7.91	4.45	5.33	7.91	160.16	166.81	6005
	U_{16} - L_{16}	3.20	4.27	5.20	3.21	4.31	5.22	3.20	4.30	5.22	115.11	168.68	6073
	U_{17} - L_{17}	2.52	3.35	3.61	2.52	3.37	3.59	2.52	3.37	3.59	90.59	191.34	6888
	U_{18} - L_{18}	2.68	3.68	5.04	2.69	3.70	5.04	2.69	3.70	5.04	96.47	135.03	4861
	U_{19} - L_{19}	3.13	4.18	3.02	3.11	4.19	4.58	3.11	4.21	3.05	108.71	189.35	6817
	U_{20} - L_{20}	2.05	2.84	1.42	2.05	2.84	2.60	2.24	2.85	1.38	49.52	328.84	11838
Structure 2	U_0 - L_0	2.62	2.71	2.69	2.62	3.46	2.69	2.61	3.25	2.69	93.86	310.18	11166
	U_1 - L_1	4.06	3.94	3.67	4.35	5.18	4.61	4.32	4.66	4.67	132.21	247.89	8924
	U_2 - L_2	3.61	4.11	3.14	3.91	4.63	4.18	3.91	4.63	4.18	113.08	163.44	5884
	U_3 - L_3	3.06	3.79	3.42	3.28	3.92	3.64	3.29	3.92	3.64	110.17	242.89	8744
	U_4 - L_4	3.30	4.06	3.37	3.27	3.98	4.67	3.29	3.98	4.66	117.87	179.23	6452
	U_5 - L_5	4.28	4.95	4.42	4.58	5.51	6.76	4.60	5.51	6.72	154.22	200.48	7217
	U_6 - L_6	5.06	6.33	5.82	6.72	6.40	9.05	6.49	6.38	9.05	182.08	221.96	7990
	U_7 - L_7	3.93	4.95	4.80	7.74	10.28	13.04	14.32	18.39	12.08	141.61	293.88	10580
	U_8 - L_8	3.62	4.16	4.38	3.58	4.18	4.38	3.58	4.18	4.38	128.73	138.07	4971
	U_9 - L_9	4.41	5.10	5.65	4.41	5.08	5.63	4.41	5.08	5.65	158.68	150.71	5426
	U_{10} - L_{10}	4.43	5.38	5.75	4.45	5.38	5.68	4.44	5.38	5.68	159.46	215.85	7771
	U_{11} - L_{11}	3.99	4.90	4.66	4.00	4.99	4.80	4.03	4.95	4.66	143.62	263.48	9485
	U_{12} - L_{12}	4.14	4.92	4.64	4.29	4.90	4.64	4.15	4.94	4.64	149.10	346.98	12491
	U_{13} - L_{13}	3.46	3.68	4.41	3.46	3.87	4.88	3.46	3.87	4.88	124.47	356.58	12831
	U_{14} - L_{14}	4.75	5.39	4.58	6.65	6.57	9.31	6.61	6.57	9.31	165.04	499.50	17982
	U_{15} - L_{15}	5.02	4.51	4.59	5.58	4.84	5.33	5.58	4.84	4.61	162.43	302.63	10895
	U_{16} - L_{16}	4.54	4.80	3.80	4.59	4.92	5.06	4.56	4.57	4.85	136.74	266.72	9602
	U_{17} - L_{17}	4.03	4.18	3.63	4.36	4.79	4.73	4.40	4.75	4.73	130.81	199.97	7199
	U_{18} - L_{18}	3.74	4.23	4.33	3.93	4.44	4.84	3.95	4.44	4.84	134.77	147.74	5319
	U_{19} - L_{19}	3.54	4.03	3.75	3.40	4.05	4.49	3.39	4.05	4.49	122.03	193.55	6968
	U_{20} - L_{20}	3.34	3.73	3.13	3.59	4.17	4.72	3.57	4.17	4.72	117.60	182.93	6585
	U_{21} - L_{21}	3.61	4.03	5.17	3.82	4.32	6.94	3.81	4.32	6.96	129.99	173.96	6263
	U_{22} - L_{22}	4.12	4.92	4.57	9.23	12.81	18.12	18.12	17.47	16.73	148.34	296.11	10660
	U_{23} - L_{23}	4.01	4.76	5.37	4.02	4.75	5.37	3.99	4.75	5.37	143.53	184.52	6643
	U_{24} - L_{24}	3.42	4.05	4.32	3.52	4.06	4.33	3.53	4.06	4.33	122.97	188.03	6769
	U_{25} - L_{25}	3.27	3.91	4.44	3.28	3.96	4.44	3.26	3.96	4.44	117.42	172.90	6224
	U_{26} - L_{26}	3.73	4.38	4.94	3.77	4.43	4.94	3.74	4.39	4.94	134.36	133.22	4796
	U_{27} - L_{27}	3.96	4.23	4.86	3.94	4.23	5.42	3.97	4.23	5.42	141.79	171.68	6181
	U_{28} - L_{28}	4.16	4.32	5.17	4.12	4.33	5.15	4.13	4.33	5.15	148.43	218.38	7862
	U_{29} - L_{29}	4.70	4.56	6.32	4.71	4.55	6.90	4.68	4.51	6.90	162.48	245.11	8824
	U_{30} - L_{30}	5.44	5.52	4.04	8.03	6.09	7.82	7.98	6.23	7.82	145.57	483.62	17410
	U_{31} - L_{31}	4.54	4.32	3.10	5.07	4.28	4.07	5.06	4.25	4.05	111.43	455.88	16412
	U_{32} - L_{32}	5.04	5.17	4.77	4.96	5.82	4.75	5.06	5.76	4.75	170.85	417.21	15020
	U_{33} - L_{33}	4.66	5.09	4.28	4.98	5.37	5.34	5.01	5.37	5.36	153.99	297.88	10724
	U_{34} - L_{34}	5.51	5.93	3.91	5.31	6.52	5.90	5.25	6.03	5.96	140.67	240.03	8641
	U_{35} - L_{35}	4.68	5.07	3.75	5.01	5.70	5.61	5.01	5.70	5.61	134.97	152.37	5485
	U_{36} - L_{36}	3.71	4.01	4.55	3.79	4.14	4.92	3.79	4.14	4.91	133.64	130.36	4693
	U_{37} - L_{37}	4.00	4.16	4.29	8.48	9.80	9.13	13.20	17.06	12.45	143.93	255.27	9190
	U_{38} - L_{38}	5.18	5.00	7.43	5.19	4.96	8.00	5.19	5.02	7.43	178.71	226.31	8147
	U_{39} - L_{39}	4.99	5.42	7.08	5.11	5.46	7.07	5.09	5.46	7.07	179.54	225.50	8118
	U_{40} - L_{40}	3.43	4.19	4.65	3.43	4.18	4.65	3.44	4.18	4.65	123.37	171.93	6190
	U_{41} - L_{41}	3.42	4.09	3.90	3.41	4.05	3.90	3.41	4.06	3.90	122.70	222.17	7998
	U_{42} - L_{42}	3.68	4.24	5.25	3.84	4.21	5.25	3.70	4.21	5.25	132.30	149.05	5366
	U_{43} - L_{43}	3.91	4.30	6.42	3.90	4.31	6.59	3.90	4.31	6.42	140.34	192.38	6926
	U_{44} - L_{44}	3.44	3.43	5.36	3.29	3.20	5.05	3.31	3.43	5.36	115.29	319.82	11514
Structure 3	U_0 - L_0	2.77	2.56	1.97	2.77	2.56	1.98	2.74	2.56	2.43	71.08	297.73	10718
	U_1 - L_1	3.73	4.12	3.97	4.13	4.52	4.56	4.12	4.52	4.56	134.21	237.83	8562
	U_2 - L_2	3.46	3.90	3.01	3.36	4.61	4.06	3.38	3.90	4.05	108.20	156.60	5637
	U_3 - L_3	2.78	3.29	2.46	3.13	3.86	3.05	3.09	3.85	3.05	88.64	215.05	7742
	U_4 - L_4	3.33	3.98	3.90	3.43	4.48	5.43	3.45	4.21	5.43	119.86	170.68	6144
	U_5 - L_5	4.14	5.36	4.56	4.30	5.23	7.84	4.29	5.23	7.78	149.10	164.25	5913
	U_6 - L_6	4.02	4.68	4.28	10.86	14.73	10.48	10.83	14.73	14.44	144.55	241.35	8689
	U_7 - L_7	3.16	3.55	4.07	3.18	3.55	4.07	3.17	3.55	4.07	113.88	147.50	5310
	U_8 - L_8	3.65	4.47	5.12	3.66	4.47	5.35	3.66	4.47	5.13	131.58	123.29	4438
	U_9 - L_9	3.99	4.88	5.28	4.47	4.92	5.56	4.00	4.92	5.32	143.81	118.56	4268
	U_{10} - L_{10}	4.24	5.16	2.57	4.41	5.18	4.46	4.24	5.18	4.75	92.61	188.24	6777
	U_{11} - L_{11}	2.91	3.13	1.81	2.90	3.13	2.69	2.91	3.17	1.85	65.25	108.63	3911
	U_{12} - L_{12}	4.80	5.30	4.03	5.92	5.70	6.21	5.91	5.70	7.84	145.01	262.31	9443
	U_{13} - L_{13}	2.88	2.50	2.68	3.22	2.76	2.67	3.21	2.76	2.66	89.97	166.29	5986
	U_{14} - L_{14}	3.52	3.86	2.86	3.64	4.14	4.33	3.65	3.81	4.11	103.00	127.06	4574
	U_{15} - L_{15}	3.26	3.47	2.91	3.68	4.25	4.56	3.27	3.70	4.37	104.80	140.31	5051
	U_{16} - L_{16}	4.59	4.24	3.73	10.54	8.13	7.40	10.51	13.90	11.10	134.43	114.97	4139
	U_{17} - L_{17}	7.96	6.44	9.39	7.17	7.24	9.42	7.17	7.24	9.42	231.95	149.00	5364
	U_{18} - L_{18}	5.02	5.76	8.62	5.13	5.73	8.59	5.13	5.73	8.59	180.59	103.06	3710
	U_{19} - L_{19}	3.09	4.14	6.01	3.09	3.97	6.00	3.09	3.90	6.03	111.13	64.37	2317
	U_{20} - L_{20}	1.93	1.71	3.53	1.67	1.96	3.59	1.92	1.98	3.52	60.18	86.53	3115

Columbia Parkway (HAM-471-0025)

AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition

Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating 4F1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.42
Maximum Moment (Start)	1.67
Maximum Moment (End)	1.38
	Operating
Maximum Shear Force	35.11

Location	Member	Axial Load Case			Moment (Start)			Moment (End)			Controlling Tonnages	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	Operating	Operating	
		Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Operating Rating	Tonnage	Rating	Tonnage
Truss - Diagonals	Structure 1	U_0 - L_1	3.73	4.71	5.33	4.19	4.85	5.64	4.19	5.87	5.42	134.15	175.15	6306
		U_1 - L_2	3.72	4.62	5.24	4.00	7.13	5.24	4.18	5.18	5.71	134.10	758.46	27305
		U_2 - L_3	5.82	6.28	10.73	9.18	7.00	8.55	9.20	6.69	7.54	209.63	986.55	35516
		U_3 - L_4	3.13	3.55	4.36	7.79	6.05	6.10	3.36	3.56	4.22	112.54	1300.52	46819
		U_3 - L_4	3.09	4.61	5.53	3.67	5.24	5.69	8.16	6.74	7.38	111.20	920.87	33151
		U_4 - L_5	3.30	4.76	5.49	3.61	5.05	5.85	3.30	4.71	5.45	118.88	331.36	11929
		U_7 - L_6	2.74	3.81	5.99	2.83	4.18	5.95	2.83	3.81	5.43	98.51	241.61	8698
		U_8 - L_7	2.94	3.72	6.71	2.94	3.71	7.14	3.01	3.66	6.70	105.81	387.53	13951
		U_8 - L_8	4.92	5.13	5.85	4.91	5.07	5.87	5.19	5.16	5.91	176.64	584.00	21024
		U_9 - L_{10}	4.95	5.27	5.37	4.92	6.12	5.39	5.74	6.34	5.99	177.09	411.87	14827
		U_{10} - L_{11}	4.42	5.52	5.74	5.66	5.51	5.42	4.92	6.29	5.71	159.14	431.93	15549
		U_{11} - L_{12}	3.95	4.99	4.98	3.97	5.15	5.11	4.24	5.44	4.52	142.12	485.07	17463
		U_{12} - L_{13}	3.48	3.95	4.63	3.80	4.38	4.64	3.91	4.67	5.02	125.22	398.50	14346
		U_{13} - L_{14}	2.98	3.33	4.42	3.02	3.41	4.67	3.99	3.79	4.39	107.34	897.01	32293
		U_{15} - L_{14}	3.79	3.99	6.66	4.09	4.30	11.49	4.34	4.40	9.32	136.58	858.20	30895
		U_{16} - L_{15}	3.42	4.82	5.08	4.13	5.73	6.66	3.68	4.99	6.77	123.08	563.54	20287
		U_{17} - L_{16}	2.76	4.01	4.29	2.71	4.84	4.71	2.77	4.05	4.33	97.65	510.22	18368
		U_{18} - L_{17}	2.90	4.14	4.92	3.12	4.76	5.21	2.90	4.37	4.92	104.35	282.55	10172
		U_{19} - L_{18}	2.82	4.31	5.59	2.90	4.44	5.57	2.82	4.34	5.59	101.39	310.55	11180
		U_{20} - L_{19}	3.14	4.45	4.37	3.27	4.21	4.93	3.07	4.21	4.46	110.52	446.64	16079
	Structure 2	U_0 - L_1	4.30	4.65	4.42	4.20	4.73	4.05	4.20	4.48	4.44	145.94	358.60	12909
		U_1 - L_2	4.29	4.76	3.97	4.20	4.76	3.97	4.29	4.76	4.38	142.76	356.76	12843
		U_2 - L_3	3.45	4.18	4.01	3.45	4.12	3.93	3.92	4.55	3.99	124.25	298.11	10732
		U_3 - L_4	3.65	4.11	4.05	3.64	4.45	4.05	3.64	4.35	4.67	131.06	530.91	19113
		U_4 - L_5	3.86	4.18	6.44	3.86	4.21	5.70	4.32	4.34	6.28	138.96	544.66	19608
		U_5 - L_6	5.07	5.29	7.78	4.92	5.37	9.50	5.55	5.33	8.18	177.20	686.35	24708
		U_6 - L_7	3.40	3.22	3.95	3.56	3.21	4.72	3.40	3.23	4.14	115.44	944.88	34016
		U_9 - L_7	3.83	4.66	5.39	4.61	7.10	6.25	4.54	5.70	5.40	137.80	502.53	18091
		U_9 - L_8	3.25	4.52	4.45	3.62	5.68	4.42	3.65	4.76	4.63	117.10	354.09	12747
		U_{10} - L_9	3.73	4.73	5.15	4.12	5.62	5.10	3.73	4.73	5.17	134.43	392.94	14146
		U_{11} - L_{10}	3.61	4.86	5.15	3.79	5.35	5.37	3.61	4.85	5.29	130.12	388.63	13991
		U_{12} - L_{11}	3.68	4.19	4.95	3.69	4.99	4.89	3.65	4.61	4.97	131.26	399.89	14396
		U_{13} - L_{12}	3.04	3.56	5.13	3.32	3.86	5.46	3.04	3.39	5.13	109.33	348.85	12559
		U_{14} - L_{13}	3.75	3.93	7.51	3.88	4.13	7.80	3.77	4.14	8.18	134.96	506.24	18224
		U_{15} - L_{15}	4.81	4.33	4.44	4.82	4.27	4.53	4.84	4.33	4.25	153.05	552.73	19898
		U_{15} - L_{16}	4.16	3.80	3.38	4.17	3.98	3.38	4.34	4.05	3.59	121.79	365.59	13161
		U_{16} - L_{17}	4.10	4.42	4.62	4.42	4.49	4.34	4.10	4.49	4.62	147.72	364.75	13131
		U_{17} - L_{18}	3.55	4.35	4.25	3.55	4.35	4.13	4.07	4.79	4.31	127.74	335.05	12062
		U_{19} - L_{18}	3.89	4.62	4.64	3.90	4.84	4.65	4.10	4.69	5.34	140.04	344.32	12396
		U_{19} - L_{20}	4.01	4.49	4.90	4.39	4.50	4.90	4.57	5.34	5.47	144.31	343.78	12376
		U_{20} - L_{21}	3.45	3.76	4.99	3.43	3.94	5.47	3.88	4.22	5.28	123.60	534.49	19242
		U_{21} - L_{22}	5.15	5.41	7.59	5.16	6.09	7.92	5.92	6.33	9.25	185.54	892.96	32147
		U_{23} - L_{22}	4.77	5.44	7.09	5.79	6.42	8.85	6.05	6.89	7.86	171.61	935.74	33687
		U_{24} - L_{23}	3.28	4.57	4.89	3.80	4.68	4.91	3.70	4.82	5.07	118.16	588.79	21196
		U_{25} - L_{24}	3.87	5.02	5.24	3.85	5.71	5.36	4.09	5.03	5.24	138.55	362.68	13057
		U_{26} - L_{25}	3.88	4.79	5.31	4.15	5.30	5.32	3.85	4.76	5.51	138.77	336.54	12115
		U_{27} - L_{26}	3.87	4.43	4.71	3.83	4.95	4.84	3.87	4.43	4.67	137.77	340.95	12274
		U_{28} - L_{27}	4.05	3.84	4.96	4.44	4.68	5.22	4.04	4.35	4.95	138.30	338.18	12175
		U_{29} - L_{28}	3.69	3.49	5.55	3.85	3.73	5.55	3.69	3.49	5.55	125.69	329.64	11867
		U_{30} - L_{29}	4.36	3.83	8.13	4.46	4.25	7.79	4.49	4.22	8.13	137.79	525.94	18934
		U_0 - L_{31}	5.59	4.92	4.84	5.58	5.00	4.76	5.70	4.92	5.07	171.37	599.83	21594
		U_1 - L_{32}	4.57	4.21	3.55	4.76	5.05	3.51	4.57	4.21	3.65	126.39	408.31	14699
		U_2 - L_{33}	4.56	4.85	4.43	4.56	4.84	4.35	5.14	5.37	4.47	156.64	424.00	15264
		U_3 - L_{34}	4.60	5.20	4.33	4.61	5.33	4.38	4.87	5.60	4.94	155.75	405.38	14594
		U_4 - L_{35}	4.50	4.63	4.78	4.94	5.21	4.22	4.95	5.45	4.71	151.76	386.36	13909
		U_5 - L_{36}	4.04	4.25	4.49	4.03	4.36	4.26	4.49	4.61	4.25	145.17	334.22	12032
		U_6 - L_{37}	4.39	4.38	4.91	4.52	4.91	4.94	4.89	5.26	5.80	157.85	440.02	15841
		U_8 - L_{37}	2.82	2.95	3.33	3.27	3.47	4.73	3.41	3.49	4.65	101.38	782.61	28174
		U_9 - L_{38}	4.15	4.38	7.62	5.33	5.36	9.67	5.35	5.08	8.06	149.46	739.71	26629
		U_{30} - L_{39}	4.24	4.93	5.09	4.32	4.90	6.17	4.22	4.89	6.05	151.75	606.11	21820
		U_{41} - L_{40}	3.54	4.51	4.50	3.77	5.15	4.50	3.54	4.55	4.60	127.41	526.74	18963
		U_{42} - L_{41}	3.73	4.37	4.59	3.68	5.26	4.60	3.72	4.63	4.59	132.49	296.74	10683
		U_{43} - L_{42}	3.89	4.97	5.85	4.11	5.01	5.87	3.89	4.89	5.85	140.01	316.33	11388
		U_{44} - L_{43}	4.04	4.59	6.99	4.07	4.76	6.69	4.04	4.57	6.68	145.34	434.65	15647
	Structure 3	U_0 - L_1	3.92	4.61	4.51	3.63	5.06	3.43	3.63	4.25	3.43	123.35	339.94	12238
		U_1 - L_2	3.88	4.68	3.74	4.03	4.70	3.74	4.07	4.68	4.46	134.76	355.71	12805
		U_2 - L_3	3.64	4.10	3.99	4.10	4.11	3.96	3.65	4.51	4.45	131.14	294.77	10612
		U_3 - L_4	3.16	3.73	4.11	3.15	3.82	3.97	3.58	4.17	4.09	113.44	496.07	17859
		U_4 - L_5	4.08	4.41	5.75	4.05	4.41	5.78	4.08	4.68	6.21	145.70	536.13	19301
		U_5 - L_6	5.11	4.27	8.27	6.02	5.73	9.19	5.11	4.30	5.43	153.55	977.60	35194
		U_7 - L_6	3.23	3.96	4.32	4.79	5.05	5.54	4.41	4.30	4.72	116.31	1040.87	37471
		U_8 - L_7	3.57	4.42	4.33	3.69	5.44	5.38	3.83	4.43	5.44	128.37	431.72	15542
		U_8 - L_8	3.71	5.38	6.22	4.15	6.77	6.59	4.19	5.33	6.33	133.59	492.83	17742
		U_{10} - L_9	4.48	5.97	6.38	5.02	6.31	7.31	4.57	6.24	6.68	161.26	407.12	14666
		U_{11} - L_{10}	4.25	4.44	5.85	4.43	5.51	7.18	4.58	4.95	5.70	152.91	359.04	12925
		U_{12} - L_{11}	4.48	4.84	6.22	4.77	5.17	7.15	4.45	4.85	6.17	160.05	507.93	18286
		U_{12} - L_{13}	4.11	3.74	4.10	4.14	3.73	3.98	4.60	4.20	4.09	134.29	420.14	15125
		U_{13} - L_{14}	3.98	4.04	3.65	3.97	4.11	4.01	4.37	4.25	4.55	131.54	270.96	9755
		U_{14} - L_{15}	4.13	4.50	5.16	4.55	5.87	5.02	4.84	5.52	5.07	148.57	344.83	12414
		U_{15} - L_{16}	3.62	4.05	4.91	4.85	8.92	5.15	4.57	5.13	6.52	130.20	842.46	30329
		U_{17} - L_{16}	2.98	3.15	4.55	7.81	5.41	10.65	7.21	8.55	7.96	107.13	1253.05	45110
		U_{18} - L_{17}	5.33	5.05	8.11	7.15	10.60	12.81	5.63	5.93	13.50	181.69	1066.93	38410
		U_{19} - L_{18}	3.70	4.75	6.81	4.01	5.55	7.44	4.09	6.72	7.54	133.33	605.07	21783
		U_{20} - L_{19}	3.72	4.79	7.51	10.63	8.03	5.96	3.72	9.55	5.97	133.90	290.93	10474