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: 5C1 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
Structure 1	U_1 - U_2	-71.64	19.48	-76.91			0.90	1.24	21.68	-85.63	0.00	0.00	Vehicle	Vehicle	-----	-204.44	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	-----	-----	5.77	5.77
	U_2 - U_3	-90.83	39.29	-128.85			0.90	1.24	43.74	-143.45	0.00	0.00	Vehicle	Vehicle	-----	-304.56	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	-----	-----	3.31	3.31
	U_3 - U_4	-61.13	58.34	-138.01			0.90	1.24	64.94	-153.64	0.00	0.00	Vehicle	Vehicle	4.96	-279.20	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	11.27	11.27	3.28	3.28
	U_4 - U_5	10.71	76.41	-127.27			0.90	1.24	85.06	-142.25	0.00	0.00	Vehicle	Vehicle	124.50	-171.01	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	7.76	7.76	4.05	4.05
	U_5 - U_6	12.86	76.81	-127.25			0.90	1.24	85.52	-141.66	0.00	0.00	Vehicle	Vehicle	127.89	-167.44	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	7.70	7.70	4.08	4.08
	U_6 - U_7	121.37	88.82	-96.69			0.90	1.24	98.89	-107.64	0.00	0.00	Vehicle	Vehicle	286.34	-----	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	-----	-----	5.56	5.56	-----	-----
	U_7 - U_8	249.49	98.21	-50.22			0.90	1.24	109.33	-55.91	0.00	0.00	Vehicle	Vehicle	466.47	-----	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	-----	-----	5.08	5.08	-----	-----
	U_8 - U_9	376.92	100.06	-9.20			0.90	1.24	111.39	-10.24	0.00	0.00	Vehicle	Vehicle	634.80	-----	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	-----	-----	6.58	6.58	-----	-----
	U_9 - U_{10}	319.74	90.93	-0.31			0.90	1.20	98.05	-0.33	0.00	0.00	Vehicle	Vehicle	543.11	-----	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	-----	-----	6.31	6.31	-----	-----
	U_{10} - U_{11}	128.77	84.69	-41.85			0.90	1.20	91.32	-45.12	0.00	0.00	Vehicle	Vehicle	286.11	-----	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	-----	-----	6.36	6.36	-----	-----
	U_{10} - U_{11}	-70.90	76.66	-101.63			0.90	1.20	82.65	-109.57	0.00	0.00	Vehicle	Vehicle	15.28	-234.62	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	9.44	9.44	4.81	4.81
	U_{11} - U_{12}	-252.96	68.52	-155.77			0.90	1.20	73.87	-167.95	0.00	0.00	Vehicle	Vehicle	-----	-547.19	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	-----	-----	3.33	3.33
	U_{12} - U_{13}	-391.95	59.18	-192.43			0.90	1.20	63.81	-207.48	0.00	0.00	Vehicle	Vehicle	-----	-779.25	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	-----	-----	3.59	3.59
	U_{13} - U_{14}	-482.99	49.74	-212.57			0.90	1.20	53.63	-229.19	0.00	0.00	Vehicle	Vehicle	-----	-925.84	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	-----	-----	3.68	3.68
	U_{14} - U_{15}	-454.44	49.56	-212.94			0.90	1.20	53.43	-229.59	0.00	0.00	Vehicle	Vehicle	-----	-928.25	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	-----	-----	3.67	3.67
	U_{15} - U_{16}	-502.02	38.09	-222.56			0.90	1.20	41.07	-239.96	0.00	0.00	Vehicle	Vehicle	-----	-964.58	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	-----	-----	3.44	3.44
	U_{16} - U_{17}	-467.99	27.71	-208.34			0.90	1.20	29.88	-224.64	0.00	0.00	Vehicle	Vehicle	-----	-900.41	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	-----	-----	3.83	3.83
	U_{17} - U_{18}	-368.86	17.10	-164.16			0.90	1.20	18.44	-177.00	0.00	0.00	Vehicle	Vehicle	-----	-709.61	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	-----	-----	3.40	3.40
	U_{18} - U_{19}	-251.56	8.48	-107.99			0.90	1.20	9.14	-116.43	0.00	0.00	Vehicle	Vehicle	-----	-478.39	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	-----	-----	3.66	3.66
	U_{19} - U_{20}	-117.89	2.11	-46.67			0.90	1.20	2.28	-50.32	0.00	0.00	Vehicle	Vehicle	-----	-218.67	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	-----	-----	11.12	11.12
Structure 2	U_1 - U_1	-118.23	7.84	-57.23			0.90	1.18	8.35	-60.93	0.00	0.00	Vehicle	Vehicle	-----	-232.91	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	-----	-----	8.68	8.68
	U_1 - U_2	-239.56	17.96	-114.37			0.90	1.18	19.12	-121.77	0.00	0.00	Vehicle	Vehicle	-----	-469.73	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	-----	-----	4.53	4.53
	U_2 - U_3	-350.44	29.93	-165.74			0.90	1.18	31.87	-176.46	0.00	0.00	Vehicle	Vehicle	-----	-684.98	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	-----	-----	4.12	4.12
	U_3 - U_4	-449.15	44.60	-206.00			0.90	1.18	47.49	-219.32	0.00	0.00	Vehicle	Vehicle	-----	-869.01	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	-----	-----	4.07	4.07
	U_4 - U_5	-483.26	54.10	-225.17			0.90	1.18	53.21	-239.74	0.00	0.00	Vehicle	Vehicle	-----	-939.90	15.50	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	-----	-----	4.19	4.19
	U_5 - U_6	-485.85	75.04	-242.47			0.90	1.18	79.89	-258.15	0.00	0.00	Vehicle	Vehicle	-----	-967.21	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	-----	-----	3.88	3.88
	U_6 - U_7	-428.85	88.80	-239.09			0.90	1.18	94.55	-254.56	0.00	0.00	Vehicle	Vehicle	-----	-888.43	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	-----	-----	3.58	3.58
	U_7 - U_8	-428.37	89.01	-238.67			0.90	1.18	94.77	-254.12	0.00	0.00	Vehicle	Vehicle	-----	-887.23	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	-----	-----	3.59	3.59
	U_8 - U_9	-335.42	101.96	-219.28			0.90	1.18	108.56	-233.47	0.00	0.00	Vehicle	Vehicle	-----	-739.55	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	-----	-----	3.39	3.39
	U_9 - U_{10}	-200.29	110.17	-175.39			0.90	1.18	117.30	-186.74	0.00	0.00	Vehicle	Vehicle	-----	-503.13	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	-----	-----	3.67	3.67
	U_{10} - U_{11}	-52.14	116.87	-131.62			0.90	1.18	124.43	-140.13	0.00	0.00	Vehicle	Vehicle	93.97	-249.95	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	7.74	7.74	5.12	5.12
	U_{11} - U_{12}	107.02	116.64	-77.14			0.90	1.18	124.18	-82.14	0.00	0.00	Vehicle	Vehicle	300.56	-----	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	-----	-----	6.47	6.47	-----	-----
	U_{12} - U_{13}	259.33	115.52	-25.00			0.90	1.18	122.99	-26.61	0.00	0.00	Vehicle	Vehicle	497.02	-----	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	-----	-----	7.15	7.15	-----	-----
	U_{13} - U_{14}	391.98	108.88	-22.31			0.90	1.18	115.93	-23.75	0.00	0.00	Vehicle	Vehicle	660.27	-----	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	-----	-----	10.11	10.11	-----	-----
	U_{14} - U_{15}	439.40	110.59	-19.35			0.90	1.17	116.35	-20.36	0.00	0.00	Vehicle	Vehicle	722.48	-----	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	-----	-----	9.67	9.67	-----	-----
	U_{15} - U_{16}	369.66	108.85	-16.37			0.90	1.17	114.52	-17.22	0.00	0.00	Vehicle	Vehicle	629.44	-----	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	-----	-----	7.88	7.88	-----	-----
	U_{16} - U_{17}	271.39	104.98	-41.59			0.90	1.17	110.45	-43.75	0.00	0.00	Vehicle	Vehicle	496.39	-----	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	-----	-----	6.99	6.99	-----	-----
	U_{17} - U_{18}	171.75	100.10	-76.85			0.90	1.17	105.31	-80.85	0.00	0.00	Vehicle	Vehicle	360.18	-----	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	-----	-----	5.65	5.65	-----	-----
	U_{18} - U_{19}	72.78	91.33	-115.91			0.90	1.17	96.08	-121.95	0.00	0.00	Vehicle	Vehicle	219.52	-63.92	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	7.22	7.22	5.91	5.91
	U_{19} - U_{20}	-8.11	81.42	-148.91			0.90	1.17	85.66	-156.66	0.00	0.00	Vehicle	Vehicle	100.82	-214.21	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	9.67	9.67	4.37	4.37
	U_{20} - U_{21}	-60.13	68.83	-173.44			0.90	1.17	72.42	-182.48	0.00	0.00	Vehicle	Vehicle	15.98	-315.39	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	14.52	14.52	4.26	4.26
	U_{21} - U_{22}	-82.18	54.76	-188.02			0.90	1.17	57.61	-197.81	0.00	0.00	Vehicle	Vehicle	-----	-364.00	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	-----	-----	3.81	3.81
	U_{22} - U_{23}	-82.40	54.56	-187.92			0.90	1.17	57.40	-197.71	0.00	0.00	Vehicle	Vehicle	-----	-364.15	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	-----	-----	3.82	3.82
	U_{23} - U_{24}	-65.94	67.57	-184.43			0.90	1.17	71.09	-194.03	0.00	0.00	Vehicle	Vehicle	6.69	-337.97	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	14.88	14.88	3.97	3.97
	U_{24} - U_{25}	-61.51	80.57	-195.75			0.90	1.17	84.71	-174.39	0.00	0.00	Vehicle	Vehicle	86.85	-250.05	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	9.89	9.89	3.87	3.87
	U_{25} - U_{26}	55.02	91.51	-136.26			0.90	1.17	96.28	-143.35	0.00	0.00	Vehicle	Vehicle	196.69	-114.83	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	7.39	7.39	4.90	4.90
	U_{26} - U_{27}	136.02	100.58	-96.33			0.90	1.17	105.82	-101.35	0.00	0.00	Vehicle	Vehicle	314.39	-----	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	-----	-----	5.96	5.96	-----	-----
	U_{27} - U_{28}	216.87	104.84	-52.03			0.90	1.17	110.30	-54.74	0.00	0.00	Vehicle	Vehicle	425.32	-----	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	-----	-----	7.50	7.50	-----	-----
	U_{28} - U_{29}	293.76	107.24	-22.34			0.90	1.17	112.83	-23.50	0.00	0.00	Vehicle	Vehicle	528.56	-----	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	-----	-----	8.67	8.67	-----	-----
	U_{29} - U_{30}	358.11	105.88	-26.74			0.90	1.17	111.39	-28.13	0.00	0.00	Vehicle	Vehicle	610.36	-----	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	-----	-----	10.83	10.83	-----	-----
	U_{30} - U_{31}	339.33	120.24	-30.54			0.90	1.18	128.02	-32.51	0.00	0.00	Vehicle	Vehicle	607.55	-----	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	-----	-----	9.57	9.57	-----	-----
	U_{31} - U_{32}	261.17	120.03	-31.14			0.90	1.18	127.79	-33.15	0.00	0.00	Vehicle	Vehicle	492.65	-----	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	----

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: 5C1
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

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 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	L_0 - L_1	4.85	5.89	-4.12			0.90	1.24	6.56	-4.59	0.00	0.00	Vehicle	Vehicle	14.84	-----	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	-----	-----	**75.86**	**75.86**	-----	-----
	L_1 - L_2	74.27	73.61	-22.84			0.90	1.24	81.95	-25.43	0.00	0.00	Vehicle	Vehicle	203.09	-----	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	-----	-----	**5.23**	**5.23**	-----	-----
	L_2 - L_3	97.77	121.90	-42.78			0.90	1.24	135.71	-47.62	0.00	0.00	Vehicle	Vehicle	303.52	-----	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	-----	-----	**4.21**	**4.21**	-----	-----
	L_3 - L_4	66.93	131.60	-61.54			0.90	1.24	146.51	-68.52	0.00	0.00	Vehicle	Vehicle	277.47	-2.06	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	**4.11**	**4.11**	**9.19**	**9.19**
	L_4 - L_5	-108.46	91.08	-92.42			0.90	1.24	101.40	-102.89	0.00	0.00	Vehicle	Vehicle	-----	-274.76	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	-----	-----	**3.81**	**3.81**
	L_5 - L_6	-237.28	44.75	-102.00			0.90	1.24	49.82	-113.56	0.00	0.00	Vehicle	Vehicle	-----	-456.09	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	-----	-----	**3.72**	**3.72**
	L_6 - L_7	-362.27	2.89	-106.91			0.90	1.24	3.22	-119.03	0.00	0.00	Vehicle	Vehicle	-----	-625.68	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	-----	-----	**4.90**	**4.90**
	L_7 - L_8	-478.66	0.27	-105.49			0.90	1.24	0.30	-117.44	0.00	0.00	Vehicle	Vehicle	-----	-774.92	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	-----	-----	**6.14**	**6.14**
	L_8 - L_9	-477.02	0.19	-118.54			0.90	1.20	0.21	-127.81	0.00	0.00	Vehicle	Vehicle	-----	-786.28	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	-----	-----	**5.65**	**5.65**
	L_9 - L_{10}	-301.43	1.85	-86.80			0.90	1.20	2.00	-93.59	0.00	0.00	Vehicle	Vehicle	-----	-513.52	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	-----	-----	**6.88**	**6.88**
	L_{10} - L_{11}	-104.46	19.39	-77.27			0.90	1.20	20.91	-83.31	0.00	0.00	Vehicle	Vehicle	-----	-244.10	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	-----	-----	**4.75**	**4.75**
	L_{11} - L_{12}	97.11	75.26	-69.18			0.90	1.20	81.14	-74.59	0.00	0.00	Vehicle	Vehicle	231.72	-----	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	-----	-----	**6.12**	**6.12**	-----	-----
	L_{12} - L_{13}	268.74	120.30	-60.04			0.90	1.20	129.71	-64.73	0.00	0.00	Vehicle	Vehicle	517.99	-----	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	-----	-----	**5.44**	**5.44**	-----	-----
	L_{13} - L_{14}	405.66	155.76	-50.75			0.90	1.20	167.94	-54.71	0.00	0.00	Vehicle	Vehicle	745.67	-----	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	-----	-----	**5.37**	**5.37**	-----	-----
	L_{14} - L_{15}	502.77	178.61	-28.66			0.90	1.20	192.58	-30.90	0.00	0.00	Vehicle	Vehicle	903.96	-----	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	-----	-----	**5.56**	**5.56**	-----	-----
	L_{15} - L_{16}	469.25	163.42	-22.27			0.90	1.20	176.20	-24.01	0.00	0.00	Vehicle	Vehicle	839.07	-----	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	-----	-----	**6.27**	**6.27**	-----	-----
	L_{16} - L_{17}	365.43	113.48	-14.89			0.90	1.20	122.35	-16.06	0.00	0.00	Vehicle	Vehicle	634.11	-----	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	-----	-----	**6.96**	**6.96**	-----	-----
	L_{17} - L_{18}	248.67	66.17	-10.74			0.90	1.20	71.35	-11.58	0.00	0.00	Vehicle	Vehicle	416.03	-----	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	-----	-----	**8.90**	**8.90**	-----	-----
	L_{18} - L_{19}	112.99	41.27	-35.88			0.90	1.20	44.50	-38.68	0.00	0.00	Vehicle	Vehicle	204.73	-----	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	-----	-----	**8.76**	**8.76**	-----	-----
	L_{19} - L_{20}	-14.26	30.57	-75.27			0.90	1.20	32.96	-81.16	0.00	0.00	Vehicle	Vehicle	24.32	-124.04	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	**15.68**	**15.68**	**5.04**	**5.04**
Structure 2	L_0 - L_1	15.26	12.12	-12.23			0.90	1.18	12.90	-13.02	0.00	0.00	Vehicle	Vehicle	36.61	-----	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	-----	-----	**47.91**	**47.91**	-----	-----
	L_1 - L_2	136.12	47.91	-8.30			0.90	1.18	51.01	-8.84	0.00	0.00	Vehicle	Vehicle	243.26	-----	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	-----	-----	**9.75**	**9.75**	-----	-----
	L_2 - L_3	262.92	94.95	-16.57			0.90	1.18	101.09	-17.64	0.00	0.00	Vehicle	Vehicle	473.21	-----	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	-----	-----	**7.05**	**7.05**	-----	-----
	L_3 - L_4	373.32	145.76	-28.21			0.90	1.18	155.19	-30.03	0.00	0.00	Vehicle	Vehicle	687.07	-----	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	-----	-----	**6.03**	**6.03**	-----	-----
	L_4 - L_5	456.80	183.94	-42.43			0.90	1.18	195.84	-45.17	0.00	0.00	Vehicle	Vehicle	849.43	-----	11.08	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	-----	-----	**6.09**	**6.09**	-----	-----
	L_5 - L_6	489.63	203.22	-57.23			0.90	1.18	216.36	-60.94	0.00	0.00	Vehicle	Vehicle	917.79	-----	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	-----	-----	**6.02**	**6.02**	-----	-----
	L_6 - L_7	479.27	219.15	-72.51			0.90	1.18	233.33	-77.20	0.00	0.00	Vehicle	Vehicle	926.38	-----	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	-----	-----	**5.74**	**5.74**	-----	-----
	L_7 - L_8	330.30	195.82	-98.88			0.90	1.18	208.49	-105.28	0.00	0.00	Vehicle	Vehicle	700.42	-----	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	-----	-----	**4.85**	**4.85**	-----	-----
	L_8 - L_9	189.19	151.33	-106.89			0.90	1.18	161.12	-113.81	0.00	0.00	Vehicle	Vehicle	455.40	-----	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	-----	-----	**5.65**	**5.65**	-----	-----
	L_9 - L_{10}	39.95	109.68	-113.67			0.90	1.18	116.78	-121.02	0.00	0.00	Vehicle	Vehicle	203.75	-105.39	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	**7.04**	**7.04**	**6.34**	**6.34**
	L_{10} - L_{11}	-127.23	54.65	-114.59			0.90	1.18	58.19	-122.00	0.00	0.00	Vehicle	Vehicle	-----	-324.00	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	-----	-----	**4.29**	**4.29**
	L_{11} - L_{12}	-282.51	27.73	-113.46			0.90	1.18	29.52	-120.80	0.00	0.00	Vehicle	Vehicle	-----	-524.31	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	-----	-----	**5.37**	**5.37**
	L_{12} - L_{13}	-426.62	26.98	-109.72			0.90	1.18	28.73	-116.82	0.00	0.00	Vehicle	Vehicle	-----	-706.48	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	-----	-----	**7.27**	**7.27**
	L_{13} - L_{14}	-536.34	25.10	-140.76			0.90	1.18	26.72	-149.87	0.00	0.00	Vehicle	Vehicle	-----	-892.07	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	-----	-----	**6.53**	**6.53**
	L_{14} - L_{15}	-537.64	29.92	-121.77			0.90	1.17	31.48	-128.12	0.00	0.00	Vehicle	Vehicle	-----	-865.49	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	-----	-----	**7.63**	**7.63**
	L_{15} - L_{16}	-475.53	27.62	-120.03			0.90	1.17	29.06	-126.28	0.00	0.00	Vehicle	Vehicle	-----	-782.35	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	-----	-----	**6.33**	**6.33**
	L_{16} - L_{17}	-384.21	27.95	-108.68			0.90	1.17	29.40	-114.34	0.00	0.00	Vehicle	Vehicle	-----	-648.11	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	-----	-----	**5.80**	**5.80**
	L_{17} - L_{18}	-281.70	31.06	-104.48			0.90	1.17	32.68	-109.92	0.00	0.00	Vehicle	Vehicle	-----	-509.11	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	-----	-----	**4.06**	**4.06**
	L_{18} - L_{19}	-174.99	59.49	-95.42			0.90	1.17	62.59	-100.39	0.00	0.00	Vehicle	Vehicle	-----	-357.99	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	-----	-----	**3.97**	**3.97**
	L_{19} - L_{20}	-76.34	94.86	-86.52			0.90	1.17	99.80	-91.03	0.00	0.00	Vehicle	Vehicle	30.50	-217.58	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**	**5.46**	**5.46**
	L_{20} - L_{21}	4.59	119.24	-73.76			0.90	1.17	125.45	-77.60	0.00	0.00	Vehicle	Vehicle	169.05	-94.91	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	**7.65**	**7.65**	**10.55**	**10.55**
	L_{21} - L_{22}	56.15	138.47	-61.25			0.90	1.17	145.68	-64.44	0.00	0.00	Vehicle	Vehicle	262.37	-10.78	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**6.24**	**6.24**	**13.51**	**13.51**
	L_{22} - L_{23}	63.16	135.64	-38.98			0.90	1.17	142.70	-41.02	0.00	0.00	Vehicle	Vehicle	267.63	-----	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	-----	-----	**6.32**	**6.32**	-----	-----
	L_{23} - L_{24}	15.68	114.07	-51.95			0.90	1.17	120.01	-54.65	0.00	0.00	Vehicle	Vehicle	176.40	-50.66	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**7.91**	**7.91**	**15.19**	**15.19**
	L_{24} - L_{25}	-55.90	77.11	-58.78			0.90	1.17	81.13	-61.84	0.00	0.00	Vehicle	Vehicle	32.79	-153.07	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	**9.06**	**9.06**	**8.37**	**8.37**
	L_{25} - L_{26}	-136.32	48.67	-67.85			0.90	1.17	51.21	-71.38	0.00	0.00	Vehicle	Vehicle	-----	-270.01	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	-----	-----	**6.13**	**6.13**
	L_{26} - L_{27}	-217.71	37.58	-88.97			0.90	1.17	39.54	-93.60	0.00	0.00	Vehicle	Vehicle	-----	-404.70	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	-----	-----	**5.45**	**5.45**
	L_{27} - L_{28}	-296.28	39.15	-130.41			0.90	1.17	41.19	-137.20	0.00	0.00	Vehicle	Vehicle	-----	-563.52	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	-----	-----	**5.48**	**5.48**
	L_{28} - L_{29}	-364.24	47.28	-173.19			0.90	1.17	49.74	-182.21	0.00	0.00	Vehicle	Vehicle	-----	-710.38	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	-----	-----	**5.00**	**5.00**
	L_{29} - L_{30}	-418.31	50.57	-200.24			0.90	1.17	53.21	-210.67	0.00	0.00	Vehicle	Vehicle	-----	-817.67	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	-----	-----	**5.21**	**5.21**
	L_{30} - L_{31}	-350.66	25.28	-133.30			0.90	1.18	26.92	-141.92	0.00	0.00	Vehicle	Vehicle	-----	-640.37	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	-----	-----	**8.20**	**8.20**
	L_{31} - L_{32}	-275.63	25.91	-107.07			0.90	1.18	27.58	-114.00	0.00	0.00	Vehicle	Vehicle	-----	-506.52	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	-----	-----	**8.77**	**8.77**
	L_{32} - L_{33}	-178.96	29.04	-94.41			0.90	1.18	30.92	-100.52	0.00	0.00	Vehicle	Vehicle	-----	-363.33

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: 5C1 **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$_{MIN}$	(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	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	17.55	-89.90			0.90	1.24	19.54	-100.08	0.00	0.00	Vehicle	Vehicle	------	-230.47	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	------	------	------	------	------	2.67	2.67
	U_1 - L_1	-33.88	15.73	-61.37			0.90	1.24	17.52	-68.32	0.00	0.00	Vehicle	Vehicle	------	-132.86	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	------	------	------	------	------	4.66	4.66
	U_2 - L_2	10.41	14.78	-49.54			0.90	1.24	16.46	-55.15	0.00	0.00	Vehicle	Vehicle	34.92	-58.17	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	------	------	------	25.36	25.36	6.57	6.57
	U_3 - L_3	44.37	14.75	-33.17			0.90	1.24	16.42	-36.92	0.00	0.00	Vehicle	Vehicle	79.03	------	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	------	------	------	23.34	23.34	------	------
	U_4 - L_4	-16.71	1.38	-51.62			0.90	1.24	1.54	-57.47	0.00	0.00	Vehicle	Vehicle	------	-96.43	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	------	------	------	------	------	5.80	5.80
	U_5 - L_5	-109.52	0.16	-65.57			0.90	1.24	0.18	-73.00	0.00	0.00	Vehicle	Vehicle	------	-237.27	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	------	------	------	------	------	4.32	4.32
	U_6 - L_6	-143.61	0.15	-86.86			0.90	1.24	0.17	-96.71	0.00	0.00	Vehicle	Vehicle	------	-312.41	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	------	------	------	------	------	3.77	3.77
	U_7 - L_7	-142.76	2.87	-97.18			0.90	1.24	3.19	-108.19	0.00	0.00	Vehicle	Vehicle	------	-326.23	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	------	------	------	------	------	2.93	2.93
	U_8 - L_8	-391.96	0.10	-131.18			0.90	1.24	0.11	-146.04	0.00	0.00	Vehicle	Vehicle	------	-699.40	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	------	------	------	------	------	4.61	4.61
	U_9 - L_9	-223.26	9.86	-97.55			0.90	1.20	10.63	-105.18	0.00	0.00	Vehicle	Vehicle	------	-426.97	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	------	------	------	------	------	4.01	4.01
	U_{10} - L_{10}	-225.85	7.02	-96.43			0.90	1.20	7.56	-103.97	0.00	0.00	Vehicle	Vehicle	------	-428.78	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	------	------	------	------	------	4.97	4.97
	U_{11} - L_{11}	-198.80	4.04	-93.67			0.90	1.20	4.36	-100.99	0.00	0.00	Vehicle	Vehicle	------	-389.73	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	------	------	------	------	------	4.38	4.38
	U_{12} - L_{12}	-154.81	3.83	-76.78			0.90	1.20	4.13	-82.78	0.00	0.00	Vehicle	Vehicle	------	-308.86	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	------	------	------	------	------	4.56	4.56
	U_{13} - L_{13}	-109.06	13.30	-67.14			0.90	1.20	14.34	-72.39	0.00	0.00	Vehicle	Vehicle	------	-235.88	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	------	------	------	------	------	3.75	3.75
	U_{14} - L_{14}	-12.31	1.32	-48.59			0.90	1.20	1.42	-52.39	0.00	0.00	Vehicle	Vehicle	------	-84.11	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	------	------	------	------	------	6.35	6.35
	U_{15} - L_{15}	-5.62	19.79	-49.42			0.90	1.20	21.33	-53.28	0.00	0.00	Vehicle	Vehicle	20.43	-76.57	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	------	------	------	20.31	20.31	6.34	6.34
	U_{16} - L_{16}	-51.73	11.61	-60.34			0.90	1.20	12.52	-65.06	0.00	0.00	Vehicle	Vehicle	------	-151.83	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	------	------	------	------	------	4.45	4.45
	U_{17} - L_{17}	-127.32	11.45	-86.82			0.90	1.20	12.34	-93.60	0.00	0.00	Vehicle	Vehicle	------	-287.19	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	------	------	------	------	------	3.03	3.03
	U_{18} - L_{18}	-159.94	10.56	-100.79			0.90	1.20	11.39	-108.67	0.00	0.00	Vehicle	Vehicle	------	-349.20	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	------	------	------	------	------	3.36	3.36
	U_{19} - L_{19}	-191.17	8.98	-106.44			0.90	1.20	9.68	-114.76	0.00	0.00	Vehicle	Vehicle	------	-397.71	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	------	------	------	------	------	3.70	3.70
	U_{20} - L_{20}	-212.33	9.04	-119.96			0.90	1.20	9.75	-129.34	0.00	0.00	Vehicle	Vehicle	------	-444.17	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	------	------	------	------	------	2.86	2.86
Structure 2	U_0 - L_0	-206.69	13.36	-101.00			0.90	1.18	14.22	-107.53	0.00	0.00	Vehicle	Vehicle	------	-408.49	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	------	------	------	------	------	4.05	4.05
	U_1 - L_1	-188.76	13.70	-98.89			0.90	1.18	14.59	-105.29	0.00	0.00	Vehicle	Vehicle	------	-382.26	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	------	------	------	------	------	4.59	4.59
	U_2 - L_2	-155.92	14.42	-93.49			0.90	1.18	15.35	-99.54	0.00	0.00	Vehicle	Vehicle	------	-332.10	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	------	------	------	------	------	4.20	4.20
	U_3 - L_3	-134.58	16.32	-88.53			0.90	1.18	17.37	-94.26	0.00	0.00	Vehicle	Vehicle	------	-297.49	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	------	------	------	------	------	3.37	3.37
	U_4 - L_4	-64.49	15.33	-65.45			0.90	1.18	16.53	-69.69	0.00	0.00	Vehicle	Vehicle	------	-174.43	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	------	------	------	------	------	3.94	3.94
	U_5 - L_5	-19.94	20.56	-60.16			0.90	1.18	21.89	-64.05	0.00	0.00	Vehicle	Vehicle	2.54	-109.18	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	------	------	------	20.45	20.45	5.01	5.01
	U_6 - L_6	40.08	29.92	-41.67			0.90	1.18	31.85	-44.36	0.00	0.00	Vehicle	Vehicle	93.51	-5.57	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	------	------	------	12.17	12.17	8.61	8.61
	U_7 - L_7	-26.04	0.41	-49.04			0.90	1.18	0.44	-52.21	0.00	0.00	Vehicle	Vehicle	------	-101.72	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	------	------	------	------	------	6.02	6.02
	U_8 - L_8	-125.25	14.24	-69.09			0.90	1.18	15.16	-73.56	0.00	0.00	Vehicle	Vehicle	------	-258.45	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	------	------	------	------	------	5.51	5.51
	U_9 - L_9	-174.53	4.59	-91.79			0.90	1.18	4.89	-97.73	0.00	0.00	Vehicle	Vehicle	------	-353.94	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	------	------	------	------	------	5.29	5.29
	U_{10} - L_{10}	-202.66	1.48	-104.86			0.90	1.18	1.57	-111.64	0.00	0.00	Vehicle	Vehicle	------	-408.59	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	------	------	------	------	------	5.16	5.16
	U_{11} - L_{11}	-229.53	2.96	-113.50			0.90	1.18	3.15	-120.85	0.00	0.00	Vehicle	Vehicle	------	-455.49	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	------	------	------	------	------	4.43	4.43
	U_{12} - L_{12}	-250.85	4.18	-122.78			0.90	1.18	4.45	-130.72	0.00	0.00	Vehicle	Vehicle	------	-496.04	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	------	------	------	------	------	4.21	4.21
	U_{13} - L_{13}	-223.32	13.80	-118.44			0.90	1.18	14.70	-126.11	0.00	0.00	Vehicle	Vehicle	------	-454.26	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	------	------	------	------	------	3.70	3.70
	U_{14} - L_{14}	-343.31	2.69	-127.59			0.90	1.18	2.87	-135.84	0.00	0.00	Vehicle	Vehicle	------	-822.90	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	------	------	------	------	------	5.22	5.22
	U_{15} - L_{15}	-123.14	13.58	-93.28			0.90	1.17	14.28	-98.14	0.00	0.00	Vehicle	Vehicle	------	-287.67	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	------	------	------	------	------	5.78	5.78
	U_{16} - L_{16}	-156.70	9.86	-94.06			0.90	1.17	10.37	-98.96	0.00	0.00	Vehicle	Vehicle	------	-332.36	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	------	------	------	------	------	5.15	5.15
	U_{17} - L_{17}	-147.91	10.04	-98.11			0.90	1.17	10.56	-103.22	0.00	0.00	Vehicle	Vehicle	------	-326.47	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	------	------	------	------	------	4.61	4.61
	U_{18} - L_{18}	-142.22	12.59	-93.85			0.90	1.17	13.25	-98.73	0.00	0.00	Vehicle	Vehicle	------	-313.24	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	------	------	------	------	------	4.41	4.41
	U_{19} - L_{19}	-111.48	14.07	-83.50			0.90	1.17	14.81	-87.85	0.00	0.00	Vehicle	Vehicle	------	-259.13	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	------	------	------	------	------	4.55	4.55
	U_{20} - L_{20}	-76.55	15.64	-73.38			0.90	1.17	16.45	-77.20	0.00	0.00	Vehicle	Vehicle	------	-199.87	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	------	------	------	------	------	3.87	3.87
	U_{21} - L_{21}	-44.31	20.32	-62.58			0.90	1.17	21.38	-65.84	0.00	0.00	Vehicle	Vehicle	------	-143.19	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	------	------	------	------	------	4.50	4.50
	U_{22} - L_{22}	-21.25	1.41	-49.49			0.90	1.17	1.49	-52.07	0.00	0.00	Vehicle	Vehicle	------	-95.31	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	------	------	------	------	------	6.16	6.16
	U_{23} - L_{23}	-39.07	24.13	-53.20			0.90	1.17	25.38	-55.98	0.00	0.00	Vehicle	Vehicle	------	-123.56	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	------	------	------	------	------	5.39	5.39
	U_{24} - L_{24}	-74.84	17.32	-69.44			0.90	1.17	18.22	-73.05	0.00	0.00	Vehicle	Vehicle	------	-192.26	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	------	------	------	------	------	4.11	4.11
	U_{25} - L_{25}	-103.27	17.25	-87.88			0.90	1.17	18.14	-92.46	0.00	0.00	Vehicle	Vehicle	------	-254.44	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	------	------	------	------	------	4.41	4.41
	U_{26} - L_{26}	-120.22	16.27	-95.32			0.90	1.17	17.11	-100.29	0.00	0.00	Vehicle	Vehicle	------	-286.66	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	------	------	------	------	------	4.56	4.56
	U_{27} - L_{27}	-123.93	13.46	-105.65			0.90	1.17	14.16	-111.16	0.00	0.00	Vehicle	Vehicle	------	-305.62	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	------	------	------	------	------	4.49	4.49
	U_{28} - L_{28}	-135.60	12.24	-114.87			0.90	1.17	12.88	-120.86	0.00	0.00	Vehicle	Vehicle	------	-333.39	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	------	------	------	------	------	4.39	4.39
	U_{29} - L_{29}	-116.87	7.20	-105.39			0.90	1.17	7.58	-110.88	0.00	0.00	Vehicle	Vehicle	------	-296.08	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	------	------	------	------	------	5.17	5.17
	U_{30} - L_{30}	-262.02	5.22	-120.15			0.90	1.18	5.56	-127.92	0.00	0.00	Vehicle	Vehicle	------	-506.93	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	------	------	------	------	------	6.17	6.17
	U_{31} - L_{31}	-156.38	16.72	-94.22			0.90	1.18	17.80	-100.32	0.00	0.00	Vehicle	Vehicle	------	-333.70	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	------	------	------	------	------	5.32	5.32
	U_{32} - L_{32}	-185.51	11.50	-106.59			0.90	1.18	12.24	-113.49	0.00	0.00	Vehicle	Vehicle	------	-388.70	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	------	------	------	------	------	5.43	5.43
	$U_{33}

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: 5C1
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

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
North Truss - Diagonals Structure 1	U_1 - L_1	87.33	94.13	-24.56			0.90	1.24	104.80	-27.34	0.00	0.00	Vehicle	Vehicle	249.76	-----	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	-----	-----	-----	-----	-----	**4.76**	**4.76**	-----	-----
	U_1 - L_2	23.35	77.21	-24.48			0.90	1.24	85.96	-27.25	0.00	0.00	Vehicle	Vehicle	142.10	-5.08	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	-----	-----	-----	**4.70**	**4.70**	**13.16**	**13.16**
	U_3 - L_3	-37.85	49.15	-23.79			0.90	1.24	54.72	-26.48	0.00	0.00	Vehicle	Vehicle	21.92	-83.63	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	-----	-----	-----	**8.51**	**8.51**	**11.19**	**11.19**
	U_3 - L_4	-92.19	25.91	-49.02			0.90	1.24	28.85	-54.58	0.00	0.00	Vehicle	Vehicle	-----	-190.80	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	-----	-----	-----	**----**	**----**	**4.47**	**4.47**
	U_3 - L_4	143.37	67.24	-7.85			0.90	1.24	74.86	-8.74	0.00	0.00	Vehicle	Vehicle	283.70	-----	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	-----	-----	-----	-----	-----	**5.09**	**5.09**	-----	-----
	U_5 - L_5	177.90	87.27	-0.20			0.90	1.24	97.16	-0.22	0.00	0.00	Vehicle	Vehicle	357.57	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.87**	**4.87**	-----	-----
	U_5 - L_6	184.42	106.06	-2.45			0.90	1.24	118.07	-2.72	0.00	0.00	Vehicle	Vehicle	393.24	-----	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	-----	-----	-----	-----	-----	**3.95**	**3.95**	-----	-----
	U_7 - L_7	180.02	107.93	-4.22			0.90	1.24	120.16	-4.70	0.00	0.00	Vehicle	Vehicle	390.22	-----	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	-----	-----	-----	-----	-----	**3.92**	**3.92**	-----	-----
	U_9 - L_9	268.98	105.77	-11.69			0.90	1.20	114.04	-12.60	0.00	0.00	Vehicle	Vehicle	497.92	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
	U_9 - L_{10}	278.85	110.80	-11.21			0.90	1.20	119.47	-12.08	0.00	0.00	Vehicle	Vehicle	517.81	-----	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	-----	-----	-----	-----	-----	**5.72**	**5.72**	-----	-----
	U_{10} - L_{11}	285.04	117.36	-5.31			0.90	1.20	126.53	-5.72	0.00	0.00	Vehicle	Vehicle	535.04	-----	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	-----	-----	-----	-----	-----	**4.94**	**4.94**	-----	-----
	U_{11} - L_{12}	250.60	102.44	-5.65			0.90	1.20	110.45	-6.10	0.00	0.00	Vehicle	Vehicle	469.36	-----	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	-----	-----	-----	-----	-----	**4.77**	**4.77**	-----	-----
	U_{12} - L_{13}	189.65	90.95	-18.30			0.90	1.20	98.06	-19.73	0.00	0.00	Vehicle	Vehicle	374.02	-----	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	-----	-----	-----	-----	-----	**4.50**	**4.50**	-----	-----
	U_{13} - L_{14}	123.32	71.80	-27.15			0.90	1.20	77.41	-29.27	0.00	0.00	Vehicle	Vehicle	260.95	-----	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	-----	-----	-----	-----	-----	**3.93**	**3.93**	-----	-----
	U_{13} - L_{14}	-24.41	47.45	-42.43			0.90	1.20	51.16	-45.74	0.00	0.00	Vehicle	Vehicle	34.78	-91.20	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	-----	-----	-----	**8.84**	**8.84**	**6.64**	**6.64**
	U_{15} - L_{15}	48.53	67.53	-26.38			0.90	1.20	72.81	-28.44	0.00	0.00	Vehicle	Vehicle	157.74	-----	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	-----	-----	-----	-----	-----	**5.21**	**5.21**	-----	-----
	U_{15} - L_{16}	146.59	91.09	-15.65			0.90	1.20	98.21	-16.88	0.00	0.00	Vehicle	Vehicle	318.24	-----	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	-----	-----	-----	-----	-----	**3.85**	**3.85**	-----	-----
	U_{16} - L_{17}	182.46	103.48	-13.49			0.90	1.20	111.57	-14.54	0.00	0.00	Vehicle	Vehicle	382.23	-----	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	-----	-----	-----	-----	-----	**4.20**	**4.20**	-----	-----
	U_{18} - L_{18}	223.82	113.82	-11.35			0.90	1.20	122.73	-12.24	0.00	0.00	Vehicle	Vehicle	450.51	-----	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	-----	-----	-----	-----	-----	**3.96**	**3.96**	-----	-----
	U_{20} - L_{19}	232.72	112.24	-9.48			0.90	1.20	121.02	-10.22	0.00	0.00	Vehicle	Vehicle	459.86	-----	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	-----	-----	-----	-----	-----	**3.95**	**3.95**	-----	-----
Structure 2	U_0 - L_1	213.54	102.23	-14.24			0.90	1.18	108.84	-15.17	0.00	0.00	Vehicle	Vehicle	419.09	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
	U_1 - L_2	200.48	105.51	-16.71			0.90	1.18	112.34	-17.79	0.00	0.00	Vehicle	Vehicle	406.67	-----	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	-----	-----	-----	-----	-----	**5.14**	**5.14**	-----	-----
	U_3 - L_3	172.81	99.97	-18.65			0.90	1.18	106.44	-19.85	0.00	0.00	Vehicle	Vehicle	363.03	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
	U_3 - L_4	147.16	91.13	-21.92			0.90	1.18	97.02	-23.34	0.00	0.00	Vehicle	Vehicle	317.44	-----	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	-----	-----	-----	-----	-----	**4.43**	**4.43**	-----	-----
	U_5 - L_5	49.10	75.32	-24.82			0.90	1.18	80.20	-26.42	0.00	0.00	Vehicle	Vehicle	168.09	-----	0.00	16.85	16.8486	556.00	131.71	13.3954	1.9682	61.41	28.29	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U_5 - L_6	2.96	62.52	-33.09			0.90	1.18	66.56	-35.23	0.00	0.00	Vehicle	Vehicle	90.38	-41.95	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	-----	-----	-----	**6.38**	**6.38**	**9.33**	**9.33**
	U_7 - L_7	-85.74	39.18	-59.66			0.90	1.18	41.71	-63.52	0.00	0.00	Vehicle	Vehicle	-----	-194.04	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	-----	-----	-----	**----**	**----**	**4.31**	**4.31**
	U_7 - L_7	140.30	79.39	-31.59			0.90	1.18	84.53	-33.63	0.00	0.00	Vehicle	Vehicle	292.27	-----	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	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
	U_9 - L_8	204.22	99.12	-11.39			0.90	1.18	105.54	-12.12	0.00	0.00	Vehicle	Vehicle	402.68	-----	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	-----	-----	-----	-----	-----	**4.79**	**4.79**	-----	-----
	U_{10} - L_9	234.87	112.35	-5.06			0.90	1.18	119.62	-5.39	0.00	0.00	Vehicle	Vehicle	460.83	-----	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	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U_{11} - L_{10}	263.10	126.36	-3.07			0.90	1.18	134.54	-3.27	0.00	0.00	Vehicle	Vehicle	516.93	-----	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	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
	U_{11} - L_{11}	274.02	124.35	-3.75			0.90	1.18	132.39	-3.99	0.00	0.00	Vehicle	Vehicle	528.33	-----	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	-----	-----	-----	-----	-----	**4.31**	**4.31**	-----	-----
	U_{13} - L_{12}	254.94	123.89	-14.31			0.90	1.18	131.91	-15.23	0.00	0.00	Vehicle	Vehicle	502.90	-----	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	-----	-----	-----	-----	-----	**3.96**	**3.96**	-----	-----
	U_{13} - L_{13}	217.71	111.83	-17.19			0.90	1.18	119.07	-18.30	0.00	0.00	Vehicle	Vehicle	437.80	-----	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	-----	-----	-----	-----	-----	**4.70**	**4.70**	-----	-----
	U_{15} - L_{15}	110.05	84.14	-14.14			0.90	1.17	88.53	-14.88	0.00	0.00	Vehicle	Vehicle	258.15	-----	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	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
	U_{15} - L_{16}	132.30	85.32	-14.70			0.90	1.17	89.76	-15.46	0.00	0.00	Vehicle	Vehicle	288.68	-----	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	-----	-----	-----	-----	-----	**5.77**	**5.77**	-----	-----
	U_{17} - L_{17}	172.89	103.02	-10.54			0.90	1.17	108.39	-11.08	0.00	0.00	Vehicle	Vehicle	365.66	-----	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	-----	-----	-----	-----	-----	**4.96**	**4.96**	-----	-----
	U_{17} - L_{18}	160.19	102.80	-12.55			0.90	1.17	108.16	-13.20	0.00	0.00	Vehicle	Vehicle	348.85	-----	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	-----	-----	-----	-----	-----	**4.53**	**4.53**	-----	-----
	U_{19} - L_{19}	152.35	98.22	-16.40			0.90	1.17	103.34	-17.25	0.00	0.00	Vehicle	Vehicle	332.39	-----	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	-----	-----	-----	-----	-----	**4.82**	**4.82**	-----	-----
	U_{20} - L_{20}	120.69	94.29	-18.76			0.90	1.17	99.20	-19.74	0.00	0.00	Vehicle	Vehicle	285.85	-----	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	-----	-----	-----	-----	-----	**4.86**	**4.86**	-----	-----
	U_{20} - L_{21}	76.08	77.41	-25.09			0.90	1.17	81.44	-26.39	0.00	0.00	Vehicle	Vehicle	204.78	-----	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	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
	U_{21} - L_{22}	31.46	61.00	-39.02			0.90	1.17	64.17	-41.05	0.00	0.00	Vehicle	Vehicle	124.32	-12.47	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**6.17**	**6.17**	**8.70**	**8.70**
	U_{23} - L_{23}	24.30	60.07	-48.26			0.90	1.17	63.20	-50.78	0.00	0.00	Vehicle	Vehicle	113.74	-34.42	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	-----	-----	-----	**6.38**	**6.38**	**6.84**	**6.84**
	U_{23} - L_{24}	72.26	71.59	-31.31			0.90	1.17	75.31	-32.94	0.00	0.00	Vehicle	Vehicle	191.85	-----	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	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U_{24} - L_{25}	112.13	94.69	-22.98			0.90	1.17	99.63	-24.17	0.00	0.00	Vehicle	Vehicle	275.28	-----	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	-----	-----	-----	-----	-----	**4.93**	**4.93**	-----	-----
	U_{25} - L_{26}	132.67	108.98	-16.85			0.90	1.17	114.66	-17.73	0.00	0.00	Vehicle	Vehicle	321.53	-----	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	-----	-----	-----	-----	-----	**4.52**	**4.52**	-----	-----
	U_{26} - L_{27}	137.94	115.52	-14.52			0.90	1.17	121.54	-15.28	0.00	0.00	Vehicle	Vehicle	337.32	-----	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	-----	-----	-----	-----	-----	**4.71**	**4.71**	-----	-----
	U_{26} - L_{28}	122.80	109.83	-8.62			0.90	1.17	115.55	-9.07	0.00	0.00	Vehicle	Vehicle	309.85	-----	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	-----	-----	-----	-----	-----	**4.57**	**4.57**	-----	-----
	U_{28} - L_{29}	102.75	98.38	-10.49			0.90	1.17	103.51	-11.03	0.00	0.00	Vehicle	Vehicle	268.14	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U_{30} - L_{31}	140.07	85.52	-17.18			0.90	1.18	91.05	-18.29	0.00	0.00	Vehicle	Vehicle	300.46	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
	U_{31} - L_{32}	167.39	96.94	-18.84			0.90	1.18	103.21	-20.06	0.00	0.00	Vehicle	Vehicle	351.78	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
	U_{32} - L_{33}	202.10	114.02	-10.75			0.90	1.18	121.40	-11.45	0.00	0.00	Vehicle	Vehicle	420.55	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U_{33} - L_{34}	201.91	111.93	-10.85			0.90	1.18	119.17	-11.55	0.00	0.00	Vehicle	Vehicle	417.41	-----	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	-----	-----	-----	-----	-----	**5.39**	**5.39**	-----	-----
	U_{35} - L_{35}	180.76	113.23	-7.70			0.90	1.18	120.55	-8.19	0.00	0.00	Vehicle	Vehicle	391.71	-----	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	-----	-----	-----	-----	-----	**4.95**	**4.95**	-----	-----
	U_{35} - L_{36}	162.94	105.24	-11.24			0.90	1.18	112.04	-11.96	0.00	0.00	Vehicle	Vehicle	357.48	-----	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	-----	-----

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: 5C1 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$_{MIN}$	(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	20.50	-74.13			0.75	1.24	19.01	-68.77	0.00	0.00	Vehicle	Vehicle	-----	-157.83	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	-----	-----	7.45	7.45
		U_1 - U_2	-61.57	36.58	-111.10			0.75	1.24	33.94	-103.07	0.00	0.00	Vehicle	Vehicle	-----	-214.03	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	-----	-----	4.89	4.89
		U_2 - U_3	-26.99	50.51	-122.43			0.75	1.24	46.86	-113.59	0.00	0.00	Vehicle	Vehicle	25.84	-182.75	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	14.90	14.90	4.74	4.74
		U_3 - U_4	32.92	64.11	-110.66			0.75	1.24	59.48	-102.66	0.00	0.00	Vehicle	Vehicle	120.12	-90.66	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	10.73	10.73	5.83	5.83
		U_4 - U_5	34.77	64.40	-110.24			0.75	1.24	59.75	-102.28	0.00	0.00	Vehicle	Vehicle	122.88	-87.75	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	10.65	10.65	5.87	5.87
		U_5 - U_6	124.13	76.39	-87.61			0.75	1.24	70.87	-81.28	0.00	0.00	Vehicle	Vehicle	253.50	-----	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	-----	-----	7.72	7.72	-----	-----
		U_6 - U_7	223.19	90.26	-46.83			0.75	1.24	83.74	-43.45	0.00	0.00	Vehicle	Vehicle	399.00	-----	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	-----	-----	6.94	6.94	-----	-----
		U_7 - U_8	331.76	100.79	0.00			0.75	1.24	93.51	0.00	0.00	0.00	Vehicle	Vehicle	552.85	-----	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	-----	-----	8.32	8.32	-----	-----
		U_8 - U_9	267.61	75.50	0.00			0.75	1.20	67.83	0.00	0.00	0.00	Vehicle	Vehicle	436.08	-----	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	-----	-----	9.90	9.90	-----	-----
		U_9 - U_{10}	89.12	66.53	-39.53			0.75	1.20	59.78	-35.51	0.00	0.00	Vehicle	Vehicle	193.56	-----	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	-----	-----	10.37	10.37	-----	-----
		U_{10} - U_{11}	-76.81	57.24	-90.88			0.75	1.20	51.43	-81.66	0.00	0.00	Vehicle	Vehicle	-----	-206.00	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	-----	-----	6.38	6.38
		U_{11} - U_{12}	-230.69	48.71	-131.12			0.75	1.20	43.77	-117.81	0.00	0.00	Vehicle	Vehicle	-----	-453.04	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	-----	-----	4.94	4.94
		U_{12} - U_{13}	-341.88	41.27	-162.78			0.75	1.20	37.08	-146.26	0.00	0.00	Vehicle	Vehicle	-----	-634.57	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	-----	-----	5.44	5.44
		U_{13} - U_{14}	-421.62	34.62	-182.64			0.75	1.20	31.10	-164.10	0.00	0.00	Vehicle	Vehicle	-----	-761.44	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}	-422.51	34.47	-182.69			0.75	1.20	30.97	-164.15	0.00	0.00	Vehicle	Vehicle	-----	-762.65	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	-----	-----	5.51	5.51
		U_{15} - U_{16}	-439.94	26.97	-194.59			0.75	1.20	24.23	-174.83	0.00	0.00	Vehicle	Vehicle	-----	-799.21	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	-----	-----	5.08	5.08
		U_{16} - U_{17}	-422.43	20.54	-186.74			0.75	1.20	18.45	-167.79	0.00	0.00	Vehicle	Vehicle	-----	-767.28	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_{17} - U_{18}	-340.94	13.76	-155.93			0.75	1.20	12.36	-140.10	0.00	0.00	Vehicle	Vehicle	-----	-625.35	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	-----	-----	4.50	4.50
		U_{18} - U_{19}	-247.15	8.35	-106.58			0.75	1.20	7.50	-95.77	0.00	0.00	Vehicle	Vehicle	-----	-445.79	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	-----	-----	4.49	4.49
		U_{19} - U_{20}	-131.71	4.10	-52.35			0.75	1.20	3.69	-47.04	0.00	0.00	Vehicle	Vehicle	-----	-232.37	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	-----	-----	11.60	11.60
	Structure 2	U_0 - U_1	-131.51	10.90	-64.29			0.75	1.18	9.67	-57.04	0.00	0.00	Vehicle	Vehicle	-----	-245.12	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	-----	-----	9.04	9.04
		U_1 - U_2	-247.03	23.32	-119.12			0.75	1.18	20.69	-105.69	0.00	0.00	Vehicle	Vehicle	-----	-458.53	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	-----	-----	5.15	5.15
		U_2 - U_3	-347.15	36.20	-154.82			0.75	1.18	32.12	-137.37	0.00	0.00	Vehicle	Vehicle	-----	-629.87	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	-----	-----	5.32	5.32
		U_3 - U_4	-437.07	50.77	-181.11			0.75	1.18	45.05	-160.69	0.00	0.00	Vehicle	Vehicle	-----	-777.08	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	-----	-----	5.63	5.63
		U_4 - U_5	-468.70	62.27	-200.48			0.75	1.18	55.25	-177.88	0.00	0.00	Vehicle	Vehicle	-----	-840.55	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	-----	-----	5.73	5.73
		U_5 - U_6	-471.03	73.62	-210.05			0.75	1.18	65.32	-186.37	0.00	0.00	Vehicle	Vehicle	-----	-854.62	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	-----	-----	5.45	5.45
		U_6 - U_7	-414.41	82.03	-199.02			0.75	1.18	72.78	-176.58	0.00	0.00	Vehicle	Vehicle	-----	-768.29	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	-----	-----	5.25	5.25
		U_7 - U_8	-413.45	82.14	-198.47			0.75	1.18	72.88	-176.09	0.00	0.00	Vehicle	Vehicle	-----	-766.40	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	-----	-----	5.27	5.27
		U_8 - U_9	-321.98	89.76	-179.17			0.75	1.18	79.64	-158.97	0.00	0.00	Vehicle	Vehicle	-----	-625.23	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	-----	-----	5.06	5.06
		U_9 - U_{10}	-182.11	94.05	-146.93			0.75	1.18	83.44	-130.36	0.00	0.00	Vehicle	Vehicle	-----	-406.21	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	-----	-----	5.40	5.40
		U_{10} - U_{11}	-32.58	99.44	-110.34			0.75	1.18	88.23	-97.90	0.00	0.00	Vehicle	Vehicle	72.34	-169.62	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	10.69	10.69	7.53	7.53
		U_{11} - U_{12}	133.59	102.28	-70.48			0.75	1.18	90.74	-62.53	0.00	0.00	Vehicle	Vehicle	291.63	-----	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	-----	-----	8.56	8.56	-----	-----
		U_{12} - U_{13}	289.99	105.16	-28.85			0.75	1.18	93.30	-25.60	0.00	0.00	Vehicle	Vehicle	498.28	-----	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	-----	-----	9.10	9.10	-----	-----
		U_{13} - U_{14}	434.76	106.50	-27.96			0.75	1.18	94.50	-24.80	0.00	0.00	Vehicle	Vehicle	688.03	-----	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	-----	-----	11.95	11.95	-----	-----
		U_{14} - U_{15}	474.45	90.77	-23.57			0.75	1.17	79.58	-20.66	0.00	0.00	Vehicle	Vehicle	720.24	-----	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	-----	-----	13.70	13.70	-----	-----
		U_{15} - U_{16}	383.28	88.30	-18.70			0.75	1.17	77.42	-16.39	0.00	0.00	Vehicle	Vehicle	598.91	-----	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	-----	-----	11.48	11.48	-----	-----
		U_{16} - U_{17}	279.57	83.39	-51.36			0.75	1.17	73.11	-45.03	0.00	0.00	Vehicle	Vehicle	458.49	-----	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	-----	-----	7.11	-----	-----	10.46	10.46	-----	-----
		U_{17} - U_{18}	172.63	77.46	-82.30			0.75	1.17	67.91	-72.15	0.00	0.00	Vehicle	Vehicle	312.70	-----	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	-----	-----	8.74	8.74	-----	-----
		U_{18} - U_{19}	74.36	69.09	-110.86			0.75	1.17	60.57	-97.19	0.00	0.00	Vehicle	Vehicle	175.41	-29.68	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	11.42	11.42	7.43	7.43
		U_{19} - U_{20}	-10.01	60.55	-128.67			0.75	1.17	53.08	-112.81	0.00	0.00	Vehicle	Vehicle	55.99	-159.67	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	15.64	15.64	6.05	6.05
	Structure 3	U_0 - U_1	-62.06	50.76	-148.75			0.75	1.17	44.51	-130.42	0.00	0.00	Vehicle	Vehicle	-----	-250.22	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	-----	-----	5.94	5.94
		U_1 - U_2	-88.74	43.81	-150.20			0.75	1.17	38.41	-131.68	0.00	0.00	Vehicle	Vehicle	-----	-286.54	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	-----	-----	5.68	5.68
		U_2 - U_3	-88.92	44.00	-150.04			0.75	1.17	38.57	-131.55	0.00	0.00	Vehicle	Vehicle	-----	-286.61	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	-----	-----	5.68	5.68
		U_3 - U_4	-76.67	53.86	-150.24			0.75	1.17	47.22	-131.72	0.00	0.00	Vehicle	Vehicle	-----	-270.91	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	-----	-----	5.77	5.77
		U_4 - U_5	-37.64	62.78	-134.15			0.75	1.17	55.04	-117.62	0.00	0.00	Vehicle	Vehicle	22.62	-201.84	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	15.59	15.59	5.57	5.57
		U_5 - U_6	37.23	70.52	-113.76			0.75	1.17	61.83	-99.74	0.00	0.00	Vehicle	Vehicle	128.77	-81.26	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	11.79	11.79	6.86	6.86
		U_6 - U_7	128.02	78.43	-82.13			0.75	1.17	68.77	-72.00	0.00	0.00	Vehicle	Vehicle	255.81	-----	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	-----	-----	9.28	9.28	-----	-----
		U_7 - U_8	233.68	83.83	-49.13			0.75	1.17	73.50	-43.08	0.00	0.00	Vehicle	Vehicle	399.33	-----	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	-----	-----	7.11	-----	-----	11.02	11.02	-----	-----
		U_8 - U_9	337.65	88.11	-18.04			0.75	1.17	77.25	-15.82	0.00	0.00	Vehicle	Vehicle	539.38	-----	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	-----	-----	12.10	12.10	-----	-----
		U_9 - U_{10}	437.10	91.42	-22.08			0.75	1.17	80.16	-19.36	0.00	0.00	Vehicle	Vehicle	672.43	-----	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	-----	-----	14.06	14.06	-----	-----
		U_{10} - U_{11}	420.53	108.27	-25.97			0.75	1.18	96.06	-23.04	0.00	0.00	Vehicle	Vehicle	671.57	-----	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	-----	-----	11.91	11.91	-----	-----
		U_{11} - U_{12}	300.69	107.19	-27.11			0.75	1.18	95.11	-24.05	0.00	0.00	Vehicle	Vehicle	514.54	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76	-1249.64	17.00	0.94

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: 5C1 **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$_{deduct}$ (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	10.40	-8.82			0.75	1.24	9.65	-8.18	0.00	0.00	Vehicle	Vehicle	23.58	-----	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	-----	-----	**51.22**	**51.22**	-----	-----
		L$_1$ - L$_2$	50.81	73.40	-21.55			0.75	1.24	68.10	-20.00	0.00	0.00	Vehicle	Vehicle	154.58	-----	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	-----	-----	**6.63**	**6.63**	-----	-----
		L$_2$ - L$_3$	61.22	104.28	-36.66			0.75	1.24	96.75	-34.01	0.00	0.00	Vehicle	Vehicle	205.36	-----	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	-----	-----	**6.28**	**6.28**	-----	-----
		L$_3$ - L$_4$	25.70	113.08	-50.50			0.75	1.24	104.91	-46.85	0.00	0.00	Vehicle	Vehicle	169.79	-27.49	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	**6.13**	**6.13**	**12.57**	**12.57**
		L$_4$ - L$_5$	-118.45	76.34	-74.00			0.75	1.24	70.82	-68.65	0.00	0.00	Vehicle	Vehicle	-----	-243.23	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	-----	-----	**5.56**	**5.56**
		L$_5$ - L$_6$	-217.80	35.42	-88.07			0.75	1.24	32.86	-81.71	0.00	0.00	Vehicle	Vehicle	-----	-389.36	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	-----	-----	**5.41**	**5.41**
		L$_6$ - L$_7$	-320.36	0.15	-99.99			0.75	1.24	0.14	-92.76	0.00	0.00	Vehicle	Vehicle	-----	-537.05	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	-----	-----	**6.73**	**6.73**
		L$_7$ - L$_8$	-417.18	0.22	-106.31			0.75	1.24	0.20	-98.63	0.00	0.00	Vehicle	Vehicle	-----	-670.55	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	-----	-----	**7.93**	**7.93**
		L$_8$ - L$_9$	-410.79	0.00	-111.98			0.75	1.20	0.00	-100.61	0.00	0.00	Vehicle	Vehicle	-----	-664.82	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	-----	-----	**7.84**	**7.84**
		L$_9$ - L$_{10}$	-247.75	0.01	-74.03			0.75	1.20	0.01	-66.52	0.00	0.00	Vehicle	Vehicle	-----	-408.55	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	-----	-----	**10.49**	**10.49**
		L$_{10}$ - L$_{11}$	-65.21	44.76	-63.88			0.75	1.20	40.22	-57.40	0.00	0.00	Vehicle	Vehicle	-----	-159.39	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	-----	-----	**7.58**	**7.58**
		L$_{11}$ - L$_{12}$	101.88	90.31	-54.85			0.75	1.20	81.15	-49.29	0.00	0.00	Vehicle	Vehicle	237.93	-----	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	-----	-----	**6.06**	**6.06**	-----	-----
		L$_{12}$ - L$_{13}$	264.09	128.58	-47.18			0.75	1.20	115.53	-42.39	0.00	0.00	Vehicle	Vehicle	493.50	-----	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	-----	-----	**6.15**	**6.15**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	155.23	-40.00			0.75	1.20	139.48	-35.94	0.00	0.00	Vehicle	Vehicle	667.17	-----	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	-----	-----	**6.70**	**6.70**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	173.91	-26.42			0.75	1.20	156.26	-23.74	0.00	0.00	Vehicle	Vehicle	822.38	-----	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	-----	-----	**7.03**	**7.03**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	164.85	-19.98			0.75	1.20	148.12	-17.95	0.00	0.00	Vehicle	Vehicle	790.52	-----	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	-----	-----	**7.52**	**7.52**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	134.34	-13.38			0.75	1.20	120.70	-12.02	0.00	0.00	Vehicle	Vehicle	652.70	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	87.69	-8.09			0.75	1.20	78.79	-7.27	0.00	0.00	Vehicle	Vehicle	478.09	-----	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	-----	-----	**7.54**	**7.54**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	37.30	-6.69			0.75	1.20	33.51	-6.01	0.00	0.00	Vehicle	Vehicle	272.62	-----	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	-----	-----	**9.74**	**9.74**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	18.31	-21.62			0.75	1.20	16.45	-19.42	0.00	0.00	Vehicle	Vehicle	112.05	-----	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	-----	-----	**26.32**	**26.32**	-----	-----
		L$_0$ - L$_1$	24.59	7.22	-9.34			0.75	1.18	6.40	-8.28	0.00	0.00	Vehicle	Vehicle	40.29	-----	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	-----	-----	**95.07**	**95.07**	-----	-----
		L$_1$ - L$_2$	138.59	63.30	-12.10			0.75	1.18	56.16	-10.74	0.00	0.00	Vehicle	Vehicle	253.17	-----	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	-----	-----	**8.81**	**8.81**	-----	-----
		L$_2$ - L$_3$	252.83	121.20	-25.15			0.75	1.18	107.53	-22.31	0.00	0.00	Vehicle	Vehicle	468.47	-----	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	-----	-----	**6.73**	**6.73**	-----	-----
		L$_3$ - L$_4$	352.30	156.02	-38.05			0.75	1.18	138.43	-33.76	0.00	0.00	Vehicle	Vehicle	637.95	-----	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	-----	-----	**6.91**	**6.91**	-----	-----
		L$_4$ - L$_5$	447.17	182.33	-52.69			0.75	1.18	161.77	-46.75	0.00	0.00	Vehicle	Vehicle	791.62	-----	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	-----	-----	**7.44**	**7.44**	-----	-----
		L$_5$ - L$_6$	477.93	200.72	-64.17			0.75	1.18	178.09	-56.93	0.00	0.00	Vehicle	Vehicle	852.83	-----	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	-----	-----	**7.38**	**7.38**	-----	-----
		L$_6$ - L$_7$	482.68	200.99	-75.53			0.75	1.18	178.33	-67.02	0.00	0.00	Vehicle	Vehicle	859.31	-----	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	-----	-----	**7.49**	**7.49**	-----	-----
		L$_7$ - L$_8$	336.61	163.99	-91.37			0.75	1.18	145.50	-81.07	0.00	0.00	Vehicle	Vehicle	626.75	-----	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	-----	-----	**6.91**	**6.91**	-----	-----
		L$_8$ - L$_9$	196.05	133.43	-95.14			0.75	1.18	118.39	-84.42	0.00	0.00	Vehicle	Vehicle	408.76	-----	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	-----	-----	**7.63**	**7.63**	-----	-----
		L$_9$ - L$_{10}$	45.60	97.53	-99.41			0.75	1.18	86.53	-88.20	0.00	0.00	Vehicle	Vehicle	171.76	-55.39	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	**9.43**	**9.43**	**8.77**	**8.77**
		L$_{10}$ - L$_{11}$	-126.26	59.03	-101.78			0.75	1.18	52.37	-90.30	0.00	0.00	Vehicle	Vehicle	-----	-281.53	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	-----	-----	**5.81**	**5.81**
		L$_{11}$ - L$_{12}$	-284.87	29.91	-104.49			0.75	1.18	26.53	-92.71	0.00	0.00	Vehicle	Vehicle	-----	-490.85	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	-----	-----	**6.97**	**6.97**
		L$_{12}$ - L$_{13}$	-433.79	30.01	-110.21			0.75	1.18	26.62	-97.78	0.00	0.00	Vehicle	Vehicle	-----	-691.04	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	-----	-----	**8.61**	**8.61**
		L$_{13}$ - L$_{14}$	-552.65	29.21	-111.58			0.75	1.18	25.92	-99.00	0.00	0.00	Vehicle	Vehicle	-----	-847.14	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	-----	-----	**9.72**	**9.72**
		L$_{14}$ - L$_{15}$	-573.48	28.97	-116.58			0.75	1.17	25.40	-102.21	0.00	0.00	Vehicle	Vehicle	-----	-878.39	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	-----	-----	**9.21**	**9.21**
		L$_{15}$ - L$_{16}$	-492.94	25.24	-95.09			0.75	1.17	22.12	-83.37	0.00	0.00	Vehicle	Vehicle	-----	-749.21	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	-----	-----	**9.39**	**9.39**
		L$_{16}$ - L$_{17}$	-395.30	19.37	-90.00			0.75	1.17	16.99	-78.91	0.00	0.00	Vehicle	Vehicle	-----	-616.48	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	-----	-----	**8.26**	**8.26**
		L$_{17}$ - L$_{18}$	-288.04	52.40	-84.85			0.75	1.17	45.94	-74.39	0.00	0.00	Vehicle	Vehicle	-----	-471.16	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	-----	-----	**5.91**	**5.91**
		L$_{18}$ - L$_{19}$	-175.85	83.71	-78.78			0.75	1.17	73.40	-69.07	0.00	0.00	Vehicle	Vehicle	-----	-318.39	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	-----	-----	**5.76**	**5.76**
		L$_{19}$ - L$_{20}$	-78.08	104.47	-70.67			0.75	1.17	91.59	-61.96	0.00	0.00	Vehicle	Vehicle	17.57	-182.04	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	**8.27**	**8.27**	**8.00**	**8.00**
	Structure 2	L$_{20}$ - L$_{21}$	7.55	131.24	-62.20			0.75	1.17	115.06	-54.53	0.00	0.00	Vehicle	Vehicle	159.40	-61.07	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.32**	**8.32**	**15.07**	**15.07**
		L$_{21}$ - L$_{22}$	59.07	140.56	-52.38			0.75	1.17	123.24	-45.93	0.00	0.00	Vehicle	Vehicle	237.00	-----	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	-----	-----	**7.35**	**7.35**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	140.46	-55.74			0.75	1.17	123.15	-48.87	0.00	0.00	Vehicle	Vehicle	253.67	-----	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	-----	-----	**7.25**	**7.25**	-----	-----
		L$_{23}$ - L$_{24}$	33.55	122.58	-64.57			0.75	1.17	107.47	-56.61	0.00	0.00	Vehicle	Vehicle	183.33	-29.99	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	**8.66**	**8.66**	**14.98**	**14.98**
		L$_{24}$ - L$_{25}$	-45.09	99.75	-71.75			0.75	1.17	87.46	-62.90	0.00	0.00	Vehicle	Vehicle	55.09	-140.38	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	**8.28**	**8.28**	**8.40**	**8.40**
		L$_{25}$ - L$_{26}$	-134.94	66.58	-78.62			0.75	1.17	58.37	-68.93	0.00	0.00	Vehicle	Vehicle	-----	-265.03	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	-----	-----	**6.36**	**6.36**
		L$_{26}$ - L$_{27}$	-245.90	31.01	-82.69			0.75	1.17	27.18	-72.50	0.00	0.00	Vehicle	Vehicle	-----	-413.92	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	-----	-----	**6.64**	**6.64**
		L$_{27}$ - L$_{28}$	-351.78	16.81	-87.04			0.75	1.17	14.73	-76.31	0.00	0.00	Vehicle	Vehicle	-----	-556.52	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	-----	-----	**9.12**	**9.12**
		L$_{28}$ - L$_{29}$	-458.29	20.73	-94.69			0.75	1.17	18.17	-83.02	0.00	0.00	Vehicle	Vehicle	-----	-703.70	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	-----	-----	**9.84**	**9.84**
		L$_{29}$ - L$_{30}$	-542.18	23.74	-122.87			0.75	1.17	20.82	-107.72	0.00	0.00	Vehicle	Vehicle	-----	-844.87	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	-----	-----	**9.03**	**9.03**
		L$_{30}$ - L$_{31}$	-514.03	28.56	-107.37			0.75	1.18	25.34	-95.26	0.00	0.00	Vehicle	Vehicle	-----	-792.08	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	-----	-----	**10.50**	**10.50**
		L$_{31}$ - L$_{32}$	-411.21	29.55	-105.44			0.75	1.18	26.22	-93.55	0.00	0.00	Vehicle	Vehicle	-----	-656.20	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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	14.34	-170.95			0.75	1.24	13.30	-158.60	0.00	0.00	Vehicle	Vehicle	-----	-294.06	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	43.15	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.75	1.75
		U_1 - L_1	-24.06	13.93	-62.86			0.75	1.24	12.92	-58.32	0.00	0.00	Vehicle	Vehicle	-----	-107.09	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	-----	-----	-----	-----	-----	5.62	5.62
		U_2 - L_2	12.88	11.57	-50.03			0.75	1.24	10.73	-46.41	0.00	0.00	Vehicle	Vehicle	30.69	-43.60	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	-----	-----	-----	-----	-----	38.66	38.66	7.86	7.86
		U_3 - L_3	37.35	20.98	-37.65			0.75	1.24	19.47	-34.93	0.00	0.00	Vehicle	Vehicle	73.86	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	-----	-----	20.05	20.05	-----	-----
		U_4 - L_4	-15.53	12.67	-61.02			0.75	1.24	11.75	-56.61	0.00	0.00	Vehicle	Vehicle	-----	-93.78	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	-----	-----	-----	-----	-----	5.91	5.91
		U_5 - L_5	-92.52	4.03	-64.53			0.75	1.24	3.74	-59.87	0.00	0.00	Vehicle	Vehicle	-----	-198.10	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	-----	-----	-----	-----	-----	5.56	5.56
		U_6 - L_6	-117.01	0.10	-78.71			0.75	1.24	0.10	-73.02	0.00	0.00	Vehicle	Vehicle	-----	-247.04	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	-----	-----	-----	-----	-----	5.35	5.35
		U_7 - L_7	-127.49	0.25	-95.60			0.75	1.24	0.23	-88.69	0.00	0.00	Vehicle	Vehicle	-----	-281.03	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	-----	-----	-----	-----	-----	3.75	3.75
		U_8 - L_8	-368.60	3.01	-159.72			0.75	1.24	2.79	-148.18	0.00	0.00	Vehicle	Vehicle	-----	-671.82	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	-----	-----	-----	-----	-----	4.70	4.70
		U_9 - L_9	-214.45	4.44	-111.82			0.75	1.20	3.99	-100.47	0.00	0.00	Vehicle	Vehicle	-----	-409.40	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	-----	-----	-----	-----	-----	4.29	4.29
		U_{10} - L_{10}	-198.57	1.35	-105.65			0.75	1.20	1.21	-94.93	0.00	0.00	Vehicle	Vehicle	-----	-381.55	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	-----	-----	-----	-----	-----	5.73	5.73
		U_{11} - L_{11}	-171.30	2.96	-93.93			0.75	1.20	2.66	-84.40	0.00	0.00	Vehicle	Vehicle	-----	-332.41	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	-----	-----	-----	-----	-----	5.57	5.57
		U_{12} - L_{12}	-128.27	13.32	-78.51			0.75	1.20	11.96	-70.54	0.00	0.00	Vehicle	Vehicle	-----	-258.46	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	-----	-----	-----	-----	-----	5.73	5.73
		U_{13} - L_{13}	-96.55	20.89	-73.26			0.75	1.20	18.77	-65.83	0.00	0.00	Vehicle	Vehicle	-----	-211.09	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	-----	-----	-----	-----	-----	4.31	4.31
		U_{14} - L_{14}	-11.04	11.58	-56.96			0.75	1.20	10.40	-51.17	0.00	0.00	Vehicle	Vehicle	-----	-80.88	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	-----	-----	-----	-----	-----	6.52	6.52
		U_{15} - L_{15}	-2.54	29.90	-49.28			0.75	1.20	26.86	-44.28	0.00	0.00	Vehicle	Vehicle	31.62	-60.86	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	-----	-----	-----	-----	-----	16.02	16.02	7.69	7.69
		U_{16} - L_{16}	-31.31	22.85	-57.43			0.75	1.20	20.53	-51.60	0.00	0.00	Vehicle	Vehicle	-----	-107.79	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	-----	-----	-----	-----	-----	6.01	6.01
		U_{17} - L_{17}	-105.02	10.42	-79.29			0.75	1.20	9.36	-71.25	0.00	0.00	Vehicle	Vehicle	-----	-229.14	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	-----	-----	-----	-----	-----	4.30	4.30
		U_{18} - L_{18}	-126.66	5.83	-88.89			0.75	1.20	5.24	-79.87	0.00	0.00	Vehicle	Vehicle	-----	-268.49	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	-----	-----	-----	-----	-----	4.99	4.99
		U_{19} - L_{19}	-166.54	5.46	-95.17			0.75	1.20	4.91	-85.51	0.00	0.00	Vehicle	Vehicle	-----	-327.66	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	-----	-----	-----	-----	-----	5.26	5.26
		U_{20} - L_{20}	-184.30	5.06	-114.69			0.75	1.20	4.55	-103.05	0.00	0.00	Vehicle	Vehicle	-----	-373.55	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	-----	-----	-----	-----	-----	3.86	3.86
	Structure 2	U_0 - L_0	-203.39	16.14	-111.44			0.75	1.18	14.32	-98.88	0.00	0.00	Vehicle	Vehicle	-----	-392.95	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	-----	-----	-----	-----	-----	4.44	4.44
		U_1 - L_1	-176.11	17.56	-107.35			0.75	1.18	15.58	-95.24	0.00	0.00	Vehicle	Vehicle	-----	-352.76	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	-----	-----	-----	-----	-----	5.21	5.21
		U_2 - L_2	-137.45	16.67	-97.10			0.75	1.18	14.79	-86.15	0.00	0.00	Vehicle	Vehicle	-----	-290.69	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	-----	-----	-----	-----	-----	5.07	5.07
		U_3 - L_3	-117.61	17.36	-86.70			0.75	1.18	15.41	-76.93	0.00	0.00	Vehicle	Vehicle	-----	-252.89	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	-----	-----	-----	-----	-----	4.35	4.35
		U_4 - L_4	-50.97	22.21	-67.21			0.75	1.18	19.71	-59.63	0.00	0.00	Vehicle	Vehicle	-----	-143.78	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	-----	-----	-----	-----	-----	4.83	4.83
		U_5 - L_5	-13.79	28.65	-61.58			0.75	1.18	25.42	-54.64	0.00	0.00	Vehicle	Vehicle	15.13	-88.95	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	-----	-----	-----	-----	-----	17.37	17.37	5.98	5.98
		U_6 - L_6	45.46	39.10	-47.29			0.75	1.18	34.69	-41.96	0.00	0.00	Vehicle	Vehicle	104.19	-----	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	-----	-----	-----	-----	-----	-----	-----	11.02	11.02	-----	-----
		U_7 - L_7	-22.33	6.43	-59.02			0.75	1.18	5.70	-52.36	0.00	0.00	Vehicle	Vehicle	-----	-97.10	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	-----	-----	-----	-----	-----	6.08	6.08
		U_8 - L_8	-120.06	25.26	-71.04			0.75	1.18	22.41	-63.03	0.00	0.00	Vehicle	Vehicle	-----	-238.01	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	-----	-----	-----	-----	-----	6.51	6.51
		U_9 - L_9	-177.00	16.14	-88.00			0.75	1.18	14.32	-78.08	0.00	0.00	Vehicle	Vehicle	-----	-331.60	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	-----	-----	-----	-----	-----	6.59	6.59
		U_{10} - L_{10}	-205.85	10.64	-95.22			0.75	1.18	9.44	-84.48	0.00	0.00	Vehicle	Vehicle	-----	-377.44	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	-----	-----	-----	-----	-----	6.78	6.78
		U_{11} - L_{11}	-239.21	6.82	-101.32			0.75	1.18	6.05	-89.90	0.00	0.00	Vehicle	Vehicle	-----	-427.84	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	-----	-----	-----	-----	-----	5.85	5.85
		U_{12} - L_{12}	-257.92	1.68	-109.92			0.75	1.18	1.49	-97.53	0.00	0.00	Vehicle	Vehicle	-----	-462.09	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	-----	-----	-----	-----	-----	5.58	5.58
		U_{13} - L_{13}	-243.80	7.94	-112.98			0.75	1.18	7.04	-100.24	0.00	0.00	Vehicle	Vehicle	-----	-447.25	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	-----	-----	-----	-----	-----	4.45	4.45
		U_{14} - L_{14}	-420.84	7.11	-151.90			0.75	1.18	6.30	-134.77	0.00	0.00	Vehicle	Vehicle	-----	-722.30	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	-----	-----	-----	-----	-----	4.68	4.68
		U_{15} - L_{15}	-158.85	13.45	-108.04			0.75	1.17	11.79	-94.72	0.00	0.00	Vehicle	Vehicle	-----	-329.64	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	-----	-----	-----	-----	-----	5.61	5.61
		U_{16} - L_{16}	-174.03	10.74	-104.21			0.75	1.17	9.42	-91.36	0.00	0.00	Vehicle	Vehicle	-----	-345.01	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	-----	-----	-----	-----	-----	5.39	5.39
		U_{17} - L_{17}	-156.46	12.34	-103.24			0.75	1.17	10.81	-90.51	0.00	0.00	Vehicle	Vehicle	-----	-321.07	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	-----	-----	-----	-----	-----	5.16	5.16
		U_{18} - L_{18}	-142.20	13.05	-91.78			0.75	1.17	11.44	-80.47	0.00	0.00	Vehicle	Vehicle	-----	-289.47	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	-----	-----	-----	-----	-----	5.41	5.41
		U_{19} - L_{19}	-113.66	17.27	-82.81			0.75	1.17	15.14	-72.61	0.00	0.00	Vehicle	Vehicle	-----	-242.15	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	-----	-----	-----	-----	-----	5.48	5.48
		U_{20} - L_{20}	-76.52	24.37	-74.55			0.75	1.17	21.37	-65.36	0.00	0.00	Vehicle	Vehicle	-----	-184.44	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	-----	-----	-----	-----	-----	4.57	4.57
		U_{21} - L_{21}	-45.78	26.60	-64.08			0.75	1.17	23.32	-56.19	0.00	0.00	Vehicle	Vehicle	-----	-132.56	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	-----	-----	-----	-----	-----	5.25	5.25
		U_{22} - L_{22}	-17.71	11.03	-56.79			0.75	1.17	9.67	-49.79	0.00	0.00	Vehicle	Vehicle	-----	-87.76	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	-----	-----	-----	-----	-----	6.51	6.51
		U_{23} - L_{23}	-30.66	31.01	-54.59			0.75	1.17	27.19	-47.86	0.00	0.00	Vehicle	Vehicle	-----	-102.08	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	-----	-----	-----	-----	-----	6.47	6.47
		U_{24} - L_{24}	-62.03	24.34	-68.37			0.75	1.17	21.34	-59.94	0.00	0.00	Vehicle	Vehicle	-----	-158.56	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	-----	-----	-----	-----	-----	5.22	5.22
		U_{25} - L_{25}	-103.10	16.69	-81.46			0.75	1.17	14.64	-71.42	0.00	0.00	Vehicle	Vehicle	-----	-226.87	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	-----	-----	-----	-----	-----	5.72	5.72
		U_{26} - L_{26}	-134.31	11.69	-86.93			0.75	1.17	10.25	-76.22	0.00	0.00	Vehicle	Vehicle	-----	-273.68	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	-----	-----	-----	-----	-----	5.81	5.81
		U_{27} - L_{27}	-155.93	10.72	-97.97			0.75	1.17	9.40	-85.89	0.00	0.00	Vehicle	Vehicle	-----	-314.36	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}	-179.28	9.21	-107.82			0.75	1.17	8.08	-94.53	0.00	0.00	Vehicle	Vehicle	-----	-355.96	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	-----	-----	-----	-----	-----	5.15	5.15
		U_{29} - L_{29}	-171.45	6.51	-107.07			0.75	1.17	5.71	-93.87	0.00	0.00	Vehicle	Vehicle	-----	-344.91	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	-----	-----	-----	-----	-----	5.53	5.53
		U_{30} - L_{30}	-392.76	10.71	-149.94			0.75	1.18	9.50	-133.04	0.00	0.00	Vehicle	Vehicle	-----	-683.53	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	-----	-----	-----	-----	-----	4.95	4.95
		U_{31} - L_{31}	-203.21	13.85	-113.13			0.75	1.18	12.29	-100.37	0.00	0.00	Vehicle	Vehicle	-----	-394.66	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	-----	-----	-----	-----	-----	4.85	4.85
		U_{32} - L_{32}	-222.46	5.22	-115.95			0.75	1.18	4.63	-102.88	0.00	0.00	Vehicle	Vehicle	-----	-422.93	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

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: 5C1
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

Center Truss - Diagonals

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
Structure 1	U_0 - L_1	53.25	94.40	-21.69			0.75	1.24	87.58	-20.12	0.00	0.00	Vehicle	Vehicle	183.08	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
	U_1 - L_2	10.78	70.88	-19.91			0.75	1.24	65.76	-18.47	0.00	0.00	Vehicle	Vehicle	99.50	-10.01	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	-----	-----	-----	**6.34**	**6.34**	**18.74**	**18.74**
	U_2 - L_3	-44.02	55.01	-32.79			0.75	1.24	51.03	-30.42	0.00	0.00	Vehicle	Vehicle	9.12	-96.78	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	-----	-----	-----	**9.24**	**9.24**	**9.54**	**9.54**
	U_3 - L_4	-76.72	37.91	-57.88			0.75	1.24	35.17	-53.70	0.00	0.00	Vehicle	Vehicle	-----	-169.54	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	-----	-----	-----	**-----**	**-----**	**4.84**	**4.84**
	U_4 - L_4	118.39	68.96	-25.71			0.75	1.24	63.98	-23.85	0.00	0.00	Vehicle	Vehicle	237.08	-----	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	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
	U_5 - L_5	137.53	86.39	-5.32			0.75	1.24	80.15	-4.94	0.00	0.00	Vehicle	Vehicle	282.97	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
	U_6 - L_6	157.34	90.86	-0.25			0.75	1.24	84.30	-0.23	0.00	0.00	Vehicle	Vehicle	314.12	-----	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	-----	-----	-----	-----	-----	**5.85**	**5.85**	-----	-----
	U_7 - L_7	149.30	102.41	-0.28			0.75	1.24	95.01	-0.26	0.00	0.00	Vehicle	Vehicle	317.61	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
	U_8 - L_8	249.09	121.31	-5.05			0.75	1.20	109.00	-4.54	0.00	0.00	Vehicle	Vehicle	465.52	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
	U_9 - L_{10}	260.26	120.63	-4.08			0.75	1.20	108.38	-3.66	0.00	0.00	Vehicle	Vehicle	479.23	-----	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	-----	-----	-----	-----	-----	**6.48**	**6.48**	-----	-----
	U_{10} - L_{11}	236.30	117.09	-3.92			0.75	1.20	105.21	-3.52	0.00	0.00	Vehicle	Vehicle	443.96	-----	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	-----	-----	-----	-----	-----	**6.41**	**6.41**	-----	-----
	U_{11} - L_{12}	211.92	100.72	-18.32			0.75	1.20	90.50	-16.46	0.00	0.00	Vehicle	Vehicle	393.14	-----	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	-----	-----	-----	-----	-----	**6.25**	**6.25**	-----	-----
	U_{12} - L_{13}	151.66	96.05	-28.97			0.75	1.20	86.30	-26.03	0.00	0.00	Vehicle	Vehicle	309.34	-----	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	-----	-----	-----	-----	-----	**5.56**	**5.56**	-----	-----
	U_{13} - L_{14}	108.60	76.82	-38.67			0.75	1.20	69.02	-34.74	0.00	0.00	Vehicle	Vehicle	230.91	-----	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	-----	-----	-----	-----	-----	**4.62**	**4.62**	-----	-----
	U_{14} - L_{14}	-24.45	55.97	-56.12			0.75	1.20	50.29	-50.43	0.00	0.00	Vehicle	Vehicle	33.60	-97.34	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	-----	-----	-----	**8.99**	**8.99**	**6.03**	**6.03**
	U_{15} - L_{15}	23.99	67.03	-40.49			0.75	1.20	60.23	-36.38	0.00	0.00	Vehicle	Vehicle	109.48	-16.11	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**	**9.58**	**9.58**
	U_{17} - L_{16}	120.03	81.60	-22.94			0.75	1.20	73.32	-20.61	0.00	0.00	Vehicle	Vehicle	251.36	-----	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	-----	-----	-----	-----	-----	**5.52**	**5.52**	-----	-----
	U_{18} - L_{17}	144.79	94.36	-12.36			0.75	1.20	84.78	-11.10	0.00	0.00	Vehicle	Vehicle	298.44	-----	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	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
	U_{19} - L_{18}	193.05	97.43	-7.08			0.75	1.20	87.54	-6.36	0.00	0.00	Vehicle	Vehicle	364.76	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
	U_{20} - L_{19}	193.51	100.18	-5.77			0.75	1.20	90.01	-5.18	0.00	0.00	Vehicle	Vehicle	368.57	-----	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	-----	-----	-----	-----	-----	**5.74**	**5.74**	-----	-----
Structure 2	U_0 - L_1	202.41	110.80	-18.30			0.75	1.18	98.31	-16.23	0.00	0.00	Vehicle	Vehicle	390.94	-----	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	-----	-----	-----	-----	-----	**5.85**	**5.85**	-----	-----
	U_1 - L_2	190.86	104.33	-20.52			0.75	1.18	92.57	-18.21	0.00	0.00	Vehicle	Vehicle	368.46	-----	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	-----	-----	-----	-----	-----	**6.34**	**6.34**	-----	-----
	U_2 - L_3	155.85	97.12	-20.05			0.75	1.18	86.17	-17.79	0.00	0.00	Vehicle	Vehicle	314.62	-----	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	-----	-----	-----	-----	-----	**5.74**	**5.74**	-----	-----
	U_3 - L_4	134.05	87.62	-23.58			0.75	1.18	77.74	-20.92	0.00	0.00	Vehicle	Vehicle	275.33	-----	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	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
	U_4 - L_5	46.02	73.94	-35.20			0.75	1.18	65.60	-31.23	0.00	0.00	Vehicle	Vehicle	145.11	-----	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	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
	U_5 - L_6	3.45	61.11	-47.64			0.75	1.18	54.22	-42.27	0.00	0.00	Vehicle	Vehicle	74.96	-50.47	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	-----	-----	-----	**7.82**	**7.82**	**7.79**	**7.79**
	U_6 - L_7	-84.29	46.58	-70.68			0.75	1.18	41.32	-62.71	0.00	0.00	Vehicle	Vehicle	-----	-191.09	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	-----	-----	-----	**-----**	**-----**	**4.39**	**4.39**
	U_7 - L_7	137.30	84.36	-41.66			0.75	1.18	74.85	-36.96	0.00	0.00	Vehicle	Vehicle	275.79	-----	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	-----	-----	-----	-----	-----	**6.23**	**6.23**	-----	-----
	U_8 - L_8	210.89	94.41	-30.43			0.75	1.18	83.76	-26.99	0.00	0.00	Vehicle	Vehicle	383.05	-----	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	-----	-----	-----	-----	-----	**5.96**	**5.96**	-----	-----
	U_{10} - L_9	236.36	106.92	-19.36			0.75	1.18	94.86	-17.18	0.00	0.00	Vehicle	Vehicle	430.59	-----	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	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
	U_{11} - L_{10}	274.62	109.66	-12.66			0.75	1.18	97.29	-11.23	0.00	0.00	Vehicle	Vehicle	483.49	-----	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	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
	U_{12} - L_{11}	281.06	110.79	-8.01			0.75	1.18	98.30	-7.11	0.00	0.00	Vehicle	Vehicle	493.17	-----	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	-----	-----	-----	-----	-----	**5.73**	**5.73**	-----	-----
	U_{13} - L_{12}	278.12	108.19	-8.60			0.75	1.18	95.99	-7.63	0.00	0.00	Vehicle	Vehicle	486.34	-----	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	-----	-----	-----	-----	-----	**5.20**	**5.20**	-----	-----
	U_{14} - L_{13}	235.45	106.03	-10.09			0.75	1.18	94.07	-8.95	0.00	0.00	Vehicle	Vehicle	428.37	-----	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	-----	-----	-----	-----	-----	**5.76**	**5.76**	-----	-----
	U_{15} - L_{14}	143.03	96.65	-13.54			0.75	1.17	84.74	-11.87	0.00	0.00	Vehicle	Vehicle	296.10	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
	U_{16} - L_{15}	171.91	103.44	-13.11			0.75	1.17	90.69	-11.49	0.00	0.00	Vehicle	Vehicle	341.38	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
	U_{17} - L_{16}	181.04	107.13	-13.06			0.75	1.17	93.93	-11.45	0.00	0.00	Vehicle	Vehicle	357.45	-----	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	-----	-----	-----	-----	-----	**5.63**	**5.63**	-----	-----
	U_{17} - L_{18}	171.16	96.89	-14.74			0.75	1.17	84.94	-12.92	0.00	0.00	Vehicle	Vehicle	332.93	-----	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	-----	-----	-----	-----	-----	**5.64**	**5.64**	-----	-----
	U_{18} - L_{19}	150.64	96.35	-19.92			0.75	1.17	84.47	-17.46	0.00	0.00	Vehicle	Vehicle	305.65	-----	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	-----	-----	-----	-----	-----	**5.92**	**5.92**	-----	-----
	U_{19} - L_{20}	125.86	88.86	-31.00			0.75	1.17	77.91	-27.17	0.00	0.00	Vehicle	Vehicle	264.90	-----	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}	76.05	77.41	-33.72			0.75	1.17	67.86	-29.56	0.00	0.00	Vehicle	Vehicle	187.09	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
	U_{21} - L_{22}	38.34	61.68	-54.33			0.75	1.17	54.08	-47.64	0.00	0.00	Vehicle	Vehicle	120.15	-12.08	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	-----	-----	-----	**7.20**	**7.20**	**7.64**	**7.64**
	U_{23} - L_{22}	18.02	61.99	-58.01			0.75	1.17	54.35	-50.86	0.00	0.00	Vehicle	Vehicle	94.08	-42.68	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	-----	-----	-----	**7.54**	**7.54**	**6.71**	**6.71**
	U_{24} - L_{23}	58.54	73.19	-40.92			0.75	1.17	64.17	-35.87	0.00	0.00	Vehicle	Vehicle	159.53	-----	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	-----	-----	-----	-----	-----	**5.75**	**5.75**	-----	-----
	U_{25} - L_{24}	114.92	87.77	-31.74			0.75	1.17	76.95	-27.82	0.00	0.00	Vehicle	Vehicle	249.43	-----	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	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
	U_{26} - L_{25}	142.93	98.77	-20.04			0.75	1.17	86.60	-17.57	0.00	0.00	Vehicle	Vehicle	298.39	-----	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	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
	U_{27} - L_{26}	173.71	96.44	-13.41			0.75	1.17	84.55	-11.75	0.00	0.00	Vehicle	Vehicle	335.74	-----	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	-----	-----	-----	-----	-----	**5.64**	**5.64**	-----	-----
	U_{28} - L_{27}	186.49	106.73	-11.68			0.75	1.17	93.57	-10.24	0.00	0.00	Vehicle	Vehicle	364.08	-----	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	-----	-----	-----	-----	-----	**5.60**	**5.60**	-----	-----
	U_{29} - L_{28}	190.57	103.67	-7.89			0.75	1.17	90.89	-6.92	0.00	0.00	Vehicle	Vehicle	365.90	-----	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	-----	-----	-----	-----	-----	**5.06**	**5.06**	-----	-----
	U_{30} - L_{29}	161.74	98.40	-7.44			0.75	1.17	86.27	-6.53	0.00	0.00	Vehicle	Vehicle	322.42	-----	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	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U_{31} - L_{31}	191.49	102.11	-13.63			0.75	1.18	90.60	-12.09	0.00	0.00	Vehicle	Vehicle	366.71	-----	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	-----	-----	-----	-----	-----	**6.47**	**6.47**	-----	-----
	U_{32} - L_{32}	226.17	108.07	-14.84			0.75	1.18	95.88	-13.16	0.00	0.00	Vehicle	Vehicle	418.67	-----	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	-----	-----	-----	-----	-----	**5.75**	**5.75**	-----	-----
	U_{33} - L_{33}	243.26	111.23	-3.99			0.75	1.18	98.69	-3.54	0.00	0.00	Vehicle	Vehicle	444.53	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
	U_{34} - L_{34}	238.98	106.03	-11.87			0.75	1.18	94.08	-10.53	0.00	0.00	Vehicle	Vehicle	432.98	-----	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	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
	U_{35} - L_{35}	222.10	107.36	-18.37			0.75	1.18	95.25	-16.30	0.00	0.00	Vehicle	Vehicle	412.56	-----	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	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
	U_{36} - $L

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: 5C1 **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
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.77	13.38	-46.03	2.20	-8.83	0.90	1.24	14.90	-51.25	2.20	-8.83	Vehicle	Vehicle	-----	-153.42	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	-----	-----	9.73	9.73
		U_1 - U_2	-86.66	31.98	-72.52	6.00	-16.34	0.90	1.24	35.60	-80.74	6.00	-16.34	Vehicle	Vehicle	-----	-217.62	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	-----	-----	5.93	5.93
		U_2 - U_3	-48.28	47.12	-77.20	9.44	-19.05	0.90	1.24	52.46	-85.95	9.44	-19.05	Vehicle	Vehicle	5.44	-174.50	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	13.71	13.71	6.02	6.02
		U_3 - U_4	-36.43	60.45	-71.89	12.72	-17.47	0.90	1.24	67.30	-80.04	12.72	-17.47	Vehicle	Vehicle	134.85	-56.68	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	9.43	9.43	7.52	7.52
		U_4 - U_5	-38.78	60.63	-71.49	12.78	-17.37	0.90	1.24	67.50	-79.59	12.78	-17.37	Vehicle	Vehicle	138.17	-53.05	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	9.37	9.37	7.59	7.59
		U_5 - U_6	154.43	67.78	-47.42	15.13	-12.03	0.90	1.24	75.46	-52.79	15.13	-12.03	Vehicle	Vehicle	298.85	-----	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	-----	-----	6.85	6.85	-----	-----
		U_6 - U_7	288.19	73.72	-16.95	17.11	-4.31	0.90	1.24	82.08	-18.87	17.11	-4.31	Vehicle	Vehicle	481.35	-----	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	-----	-----	6.29	6.29	-----	-----
		U_7 - U_8	410.75	75.39	-0.80	22.59	0.00	0.90	1.24	83.93	-0.89	22.59	0.00	Vehicle	Vehicle	643.08	-----	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	-----	-----	8.33	8.33	-----	-----
		U_8 - U_9	311.35	50.90	-0.13	19.05	0.00	0.90	1.20	54.88	-0.14	19.05	0.00	Pedestrian	Vehicle	500.85	-----	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	-----	-----	8.49	8.49	-----	-----
		U_9 - U_{10}	78.25	51.04	-34.27	12.28	-6.83	0.90	1.20	55.03	-36.95	12.28	-6.83	Vehicle	Vehicle	173.27	-----	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	-----	-----	11.46	11.46	-----	-----
		U_{10} - U_{11}	-141.75	48.02	-76.92	11.11	-18.45	0.90	1.20	51.78	-82.93	11.11	-18.45	Vehicle	Vehicle	-----	-292.08	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	-----	-----	5.49	5.49
		U_{11} - U_{12}	-338.40	44.15	-112.85	9.77	-27.96	0.90	1.20	47.60	-121.67	9.77	-27.96	Vehicle	Vehicle	-----	-598.09	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	-----	-----	3.90	3.90
		U_{12} - U_{13}	-480.50	38.62	-136.75	8.23	-34.35	0.90	1.20	41.63	-147.45	8.23	-34.35	Vehicle	Vehicle	-----	-816.32	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	-----	-----	4.46	4.46
		U_{13} - U_{14}	-571.10	32.77	-152.61	6.68	-37.24	0.90	1.20	35.33	-164.54	6.68	-37.24	Vehicle	Vehicle	-----	-956.33	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	-----	-----	4.60	4.60
		U_{14} - U_{15}	-571.52	32.61	-152.48	6.65	-37.25	0.90	1.20	35.16	-164.41	6.65	-37.25	Vehicle	Vehicle	-----	-956.71	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	-----	-----	4.60	4.60
		U_{15} - U_{16}	-582.34	25.46	-147.46	4.98	-36.14	0.90	1.20	27.45	-158.99	4.98	-36.14	Vehicle	Vehicle	-----	-963.73	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	-----	-----	4.69	4.69
		U_{16} - U_{17}	-539.92	19.01	-131.85	3.53	-31.87	0.90	1.20	20.49	-142.16	3.53	-31.87	Vehicle	Vehicle	-----	-886.69	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	-----	-----	5.54	5.54
		U_{17} - U_{18}	-422.72	12.31	-99.67	2.26	-25.07	0.90	1.20	13.27	-107.46	2.26	-25.07	Vehicle	Vehicle	-----	-689.23	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	-----	-----	5.10	5.10
		U_{18} - U_{19}	-286.53	6.95	-64.47	1.28	-16.97	0.90	1.20	7.50	-69.51	1.28	-16.97	Vehicle	Vehicle	-----	-462.86	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	-----	-----	5.62	5.62
		U_{19} - U_{20}	-140.97	2.95	-28.59	0.55	-8.68	0.90	1.20	3.18	-30.82	0.55	-8.68	Vehicle	Vehicle	-----	-223.33	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	-----	-----	17.41	17.41
	Structure 2	U_0 - U_1	-147.48	7.15	-39.48	0.45	-4.88	0.90	1.18	7.61	-42.03	0.45	-4.88	Vehicle	Vehicle	-----	-246.37	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	-----	-----	11.89	11.89
		U_1 - U_2	-319.09	14.89	-82.12	1.96	-13.36	0.90	1.18	15.85	-87.43	1.96	-13.36	Vehicle	Vehicle	-----	-528.48	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	-----	-----	5.40	5.40
		U_2 - U_3	-460.93	26.70	-116.15	3.77	-20.95	0.90	1.18	28.43	-123.66	3.77	-20.95	Vehicle	Vehicle	-----	-759.97	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	-----	-----	4.99	4.99
		U_3 - U_4	-580.02	40.61	-145.55	5.92	-27.68	0.90	1.18	43.24	-154.97	5.92	-27.68	Vehicle	Vehicle	-----	-955.49	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	-----	-----	4.91	4.91
		U_4 - U_5	-616.47	52.66	-158.93	7.86	-31.35	0.90	1.18	56.07	-169.21	7.86	-31.35	Vehicle	Vehicle	-----	-1021.39	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	-----	-----	5.15	5.15
		U_5 - U_6	-604.69	64.80	-166.70	9.87	-32.88	0.90	1.18	68.99	-177.48	9.87	-32.88	Vehicle	Vehicle	-----	-1016.82	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	-----	-----	4.97	4.97
		U_6 - U_7	-514.75	74.07	-153.54	11.56	-31.23	0.90	1.18	78.86	-163.47	11.56	-31.23	Vehicle	Vehicle	-----	-881.69	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	-----	-----	5.06	5.06
		U_7 - U_8	-512.80	74.14	-153.27	11.57	-31.18	0.90	1.18	78.93	-163.18	11.57	-31.18	Vehicle	Vehicle	-----	-878.77	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	-----	-----	5.08	5.08
		U_8 - U_9	-373.48	82.42	-134.20	13.16	-27.41	0.90	1.18	87.76	-142.88	13.16	-27.41	Vehicle	Vehicle	-----	-671.27	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	-----	-----	5.27	5.27
		U_9 - U_{10}	-181.02	86.23	-99.99	14.25	-21.42	0.90	1.18	91.81	-106.46	14.25	-21.42	Vehicle	Vehicle	-----	-373.72	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	-----	-----	6.62	6.62
		U_{10} - U_{11}	26.21	89.11	-64.60	15.21	-14.40	0.90	1.18	94.88	-68.78	15.21	-14.40	Vehicle	Vehicle	157.41	-55.34	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	9.32	9.32	11.57	11.57
		U_{11} - U_{12}	237.41	86.94	-28.93	15.56	-6.85	0.90	1.18	92.57	-30.80	15.56	-6.85	Vehicle	Vehicle	428.96	-----	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	-----	-----	7.27	7.27	-----	-----
		U_{12} - U_{13}	435.92	84.97	-22.79	18.38	0.00	0.90	1.18	90.47	-24.26	18.38	0.00	Vehicle	Vehicle	684.30	-----	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	-----	-----	7.77	7.77	-----	-----
		U_{13} - U_{14}	595.85	80.70	-21.28	24.32	0.00	0.90	1.18	85.92	-22.66	24.32	0.00	Vehicle	Vehicle	886.31	-----	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	-----	-----	11.27	11.27	-----	-----
		U_{14} - U_{15}	615.52	74.32	-18.43	24.37	0.00	0.90	1.17	78.19	-19.39	24.37	0.00	Vehicle	Vehicle	901.83	-----	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	-----	-----	12.13	12.13	-----	-----
		U_{15} - U_{16}	486.12	77.45	-16.18	18.61	0.00	0.90	1.17	81.48	-17.02	18.61	0.00	Vehicle	Vehicle	737.89	-----	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	-----	-----	9.65	9.65	-----	-----
		U_{16} - U_{17}	339.23	76.98	-36.47	14.66	-2.95	0.90	1.17	80.99	-38.37	14.66	-2.95	Vehicle	Vehicle	546.29	-----	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	-----	-----	8.70	8.70	-----	-----
		U_{17} - U_{18}	192.06	75.25	-64.32	15.12	-9.49	0.90	1.17	79.17	-67.68	15.12	-9.49	Vehicle	Vehicle	352.60	-----	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	-----	-----	7.25	7.25	-----	-----
		U_{18} - U_{19}	53.73	68.93	-89.70	15.12	-15.34	0.90	1.17	72.52	-94.37	15.12	-15.34	Vehicle	Vehicle	164.12	-52.84	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	9.83	9.83	7.43	7.43
		U_{19} - U_{20}	-59.08	61.12	-114.00	15.07	-19.84	0.90	1.17	64.30	-119.93	15.07	-19.84	Vehicle	Vehicle	6.79	-232.72	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	13.67	13.67	5.28	5.28
	Structure 3	U_{20} - U_{21}	-125.50	50.97	-123.23	14.76	-22.39	0.90	1.17	53.63	-129.65	14.76	-22.39	Vehicle	Vehicle	-----	-331.70	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	-----	-----	5.49	5.49
		U_{21} - U_{22}	-146.93	42.16	-125.24	14.37	-22.74	0.90	1.17	44.35	-131.76	14.37	-22.74	Vehicle	Vehicle	-----	-362.30	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	-----	-----	5.24	5.24
		U_{22} - U_{23}	-146.70	42.28	-125.10	14.36	-22.72	0.90	1.17	44.49	-131.62	14.36	-22.72	Vehicle	Vehicle	-----	-361.82	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	-----	-----	5.24	5.24
		U_{23} - U_{24}	-112.76	51.45	-116.49	13.87	-21.04	0.90	1.17	54.13	-122.56	13.87	-21.04	Vehicle	Vehicle	-----	-305.92	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	-----	-----	5.91	5.91
		U_{24} - U_{25}	-36.27	59.31	-98.65	13.40	-17.33	0.90	1.17	62.39	-103.79	13.40	-17.33	Vehicle	Vehicle	33.96	-182.09	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	13.73	13.73	6.33	6.33
		U_{25} - U_{26}	80.70	64.49	-69.91	12.92	-12.15	0.90	1.17	67.85	-73.55	12.92	-12.15	Vehicle	Vehicle	193.10	-----	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	-----	-----	10.11	10.11	-----	-----
		U_{26} - U_{27}	220.59	68.54	-43.55	12.57	-7.08	0.90	1.17	72.11	-45.81	12.57	-7.08	Vehicle	Vehicle	380.51	-----	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	-----	-----	7.57	7.57	-----	-----
		U_{27} - U_{28}	363.31	69.13	-16.05	14.90	-2.16	0.90	1.17	72.73	-16.88	14.90	-2.16	Vehicle	Vehicle	566.85	-----	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	-----	-----	9.36	9.36	-----	-----
		U_{28} - U_{29}	503.82	69.30	-16.06	21.74	0.00	0.90	1.17	72.91	-16.90	21.74	0.00	Vehicle	Vehicle	749.74	-----	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	-----	-----	10.54	10.54	-----	-----
		U_{29} - U_{30}	616.57	68.23	-18.89	27.08	0.00	0.90	1.17	71.79	-19.87	27.08	0.00	Pedestrian	Vehicle	930.06	-----	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

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: 5C1 **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 (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 - Lower Chord	Structure 1	L_0- L_1	-2.01	9.32	-7.03	0.36	-2.06	0.90	1.24	10.37	-7.83	0.36	-2.06	Vehicle	Vehicle	10.88	-12.79	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	**48.64**	**48.64**	**53.86**	**53.86**
		L_1 - L_2	67.91	45.66	-17.87	9.23	-3.36	0.90	1.24	50.83	-19.90	9.23	-3.36	Vehicle	Vehicle	154.36	-----	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	-----	-----	**8.55**	**8.55**	-----	-----
		L_2 - L_3	78.84	76.93	-38.62	15.48	-7.39	0.90	1.24	85.65	-42.99	15.48	-7.39	Vehicle	Vehicle	213.83	-----	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	-----	-----	**6.89**	**6.89**	-----	-----
		L_3 - L_4	39.14	82.11	-53.71	18.09	-10.83	0.90	1.24	91.42	-59.80	18.09	-10.83	Vehicle	Vehicle	169.72	-26.86	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	**6.89**	**6.89**	**10.07**	**10.07**
		L_4 - L_5	-166.38	57.12	-76.61	10.96	-16.90	0.90	1.24	63.59	-85.29	10.96	-16.90	Vehicle	Vehicle	-----	-327.17	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	-----	-----	**3.92**	**3.92**
		L_5 - L_6	-301.23	25.03	-82.53	3.23	-18.93	0.90	1.24	27.86	-91.88	3.23	-18.93	Vehicle	Vehicle	-----	-511.04	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	44.32	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.90**	**3.90**
		L_6 - L_7	-438.94	6.08	-88.88	0.00	-26.51	0.90	1.24	6.77	-98.95	0.00	-26.51	Vehicle	Vehicle	-----	-699.25	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	-----	-----	**5.11**	**5.11**
		L_7 - L_8	-551.65	3.15	-88.98	0.00	-35.55	0.90	1.24	3.50	-99.06	0.00	-35.55	Vehicle	Pedestrian	-----	-892.14	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	-----	-----	**4.81**	**4.81**
		L_8 - L_9	-570.53	10.70	-97.73	0.00	-37.48	0.90	1.20	11.54	-105.38	0.00	-37.48	Vehicle	Pedestrian	-----	-927.40	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	44.41	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.40**	**4.40**
		L_9 - L_{10}	-355.48	11.87	-55.68	0.00	-24.70	0.90	1.20	12.80	-60.03	0.00	-24.70	Vehicle	Pedestrian	-----	-572.27	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	-----	-----	**6.96**	**6.96**
		L_{10} - L_{11}	-118.48	25.17	-42.50	0.00	-12.43	0.90	1.20	27.14	-45.82	0.00	-12.43	Vehicle	Vehicle	-----	-213.59	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	-----	-----	**8.33**	**8.33**
		L_{11} - L_{12}	103.45	62.99	-39.34	9.96	-9.47	0.90	1.20	67.91	-42.42	9.96	-9.47	Vehicle	Vehicle	222.77	-----	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}	300.60	104.01	-36.47	17.83	-8.14	0.90	1.20	112.14	-39.32	17.83	-8.14	Vehicle	Vehicle	536.56	-----	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	-----	-----	**6.01**	**6.01**	-----	-----
		L_{13} - L_{14}	441.19	129.38	-31.00	24.15	-6.61	0.90	1.20	139.49	-33.42	24.15	-6.61	Vehicle	Vehicle	754.89	-----	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	-----	-----	**6.21**	**6.21**	-----	-----
		L_{14} - L_{15}	547.00	140.75	-19.48	24.57	-3.49	0.90	1.20	151.76	-21.00	24.57	-3.49	Vehicle	Vehicle	908.39	-----	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	-----	-----	**6.77**	**6.77**	-----	-----
		L_{15} - L_{16}	506.09	122.82	-17.93	20.32	-2.03	0.90	1.20	132.43	-19.33	20.32	-2.03	Vehicle	Vehicle	830.07	-----	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	-----	-----	**8.07**	**8.07**	-----	-----
		L_{16} - L_{17}	398.75	92.91	-16.09	12.72	-0.83	0.90	1.20	100.17	-17.35	12.72	-0.83	Vehicle	Vehicle	648.60	-----	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	-----	-----	**8.16**	**8.16**	-----	-----
		L_{17} - L_{18}	263.81	62.54	-13.00	4.81	0.00	0.90	1.20	67.43	-14.01	4.81	0.00	Vehicle	Vehicle	430.61	-----	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	-----	-----	**9.19**	**9.19**	-----	-----
		L_{18} - L_{19}	118.75	50.13	-10.06	0.71	-3.38	0.90	1.20	54.04	-10.85	0.71	-3.38	Vehicle	Vehicle	224.64	-----	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	-----	-----	**7.10**	**7.10**	-----	-----
		L_{19} - L_{20}	-23.36	43.04	-8.73	1.28	-12.08	0.90	1.20	46.40	-9.41	1.28	-12.08	Vehicle	Pedestrian	29.96	-58.30	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	**11.34**	**11.34**	**18.62**	**18.62**
		L_0- L_1	-36.12	26.02	-17.96	1.33	-5.14	0.90	1.18	27.70	-19.12	1.33	-5.14	Vehicle	Vehicle	-----	-71.82	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	-----	-----	**26.08**	**26.08**
		L_1 - L_2	132.64	33.39	-6.81	2.93	-0.06	0.90	1.18	35.55	-7.25	2.93	-0.06	Vehicle	Vehicle	218.65	-----	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	-----	-----	**14.08**	**14.08**	-----	-----
		L_2 - L_3	303.94	80.09	-15.21	10.52	-1.79	0.90	1.18	85.27	-16.20	10.52	-1.79	Vehicle	Vehicle	505.97	-----	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	-----	-----	**7.88**	**7.88**	-----	-----
		L_3 - L_4	445.73	112.91	-27.15	18.15	-3.63	0.90	1.18	120.21	-28.90	18.15	-3.63	Vehicle	Vehicle	735.72	-----	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	-----	-----	**7.18**	**7.18**	-----	-----
		L_4 - L_5	567.64	146.86	-43.43	24.81	-6.10	0.90	1.18	156.36	-46.24	24.81	-6.10	Vehicle	Vehicle	941.20	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
		L_5 - L_6	603.43	160.53	-55.56	28.47	-8.06	0.90	1.18	170.92	-59.15	28.47	-8.06	Vehicle	Vehicle	1006.66	-----	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	-----	-----	**6.96**	**6.96**	-----	-----
		L_6 - L_7	599.28	172.79	-70.30	30.25	-10.41	0.90	1.18	183.97	-74.85	30.25	-10.41	Vehicle	Vehicle	1018.23	-----	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	-----	-----	**6.62**	**6.62**	-----	-----
		L_7 - L_8	373.73	138.76	-87.56	24.92	-13.66	0.90	1.18	147.74	-93.22	24.92	-13.66	Vehicle	Vehicle	677.90	-----	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	-----	-----	**6.55**	**6.55**	-----	-----
		L_8 - L_9	195.51	110.43	-94.17	19.51	-15.12	0.90	1.18	117.57	-100.27	19.51	-15.12	Vehicle	Vehicle	407.00	-----	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	-----	-----	**7.69**	**7.69**	-----	-----
		L_9 - L_{10}	-13.41	74.15	-97.23	12.45	-16.11	0.90	1.18	78.95	-103.52	12.45	-16.11	Vehicle	Vehicle	85.19	-152.02	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	**11.09**	**11.09**	**6.90**	**6.90**
		L_{10} - L_{11}	-217.51	38.88	-98.40	5.50	-17.02	0.90	1.18	41.39	-104.77	5.50	-17.02	Vehicle	Vehicle	-----	-418.96	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	-----	-----	**4.13**	**4.13**
		L_{11} - L_{12}	-420.12	26.78	-96.62	0.00	-23.35	0.90	1.18	28.51	-102.87	0.00	-23.35	Vehicle	Vehicle	-----	-679.89	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	-----	-----	**4.96**	**4.96**
		L_{12} - L_{13}	-591.61	26.85	-98.30	0.00	-30.09	0.90	1.18	28.59	-104.66	0.00	-30.09	Vehicle	Vehicle	-----	-905.15	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	-----	-----	**6.53**	**6.53**
		L_{13} - L_{14}	-724.42	25.17	-94.25	0.00	-35.12	0.90	1.18	26.79	-100.35	0.00	-35.12	Vehicle	Pedestrian	-----	-1117.85	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	-----	-----	**5.84**	**5.84**
		L_{14} - L_{15}	-747.19	28.99	-108.56	0.00	-36.29	0.90	1.17	30.50	-114.21	0.00	-36.29	Vehicle	Vehicle	-----	-1119.82	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	-----	-----	**6.72**	**6.72**
		L_{15} - L_{16}	-632.29	26.62	-88.80	0.00	-31.22	0.90	1.17	28.01	-93.43	0.00	-31.22	Vehicle	Pedestrian	-----	-984.02	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	44.36	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.16**	**5.16**
		L_{16} - L_{17}	-488.73	22.75	-64.88	0.00	-25.40	0.90	1.17	23.93	-68.26	0.00	-25.40	Vehicle	Pedestrian	-----	-757.10	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	-----	-----	**5.97**	**5.97**
		L_{17} - L_{18}	-337.06	30.49	-64.29	0.00	-18.13	0.90	1.17	32.08	-67.64	0.00	-18.13	Vehicle	Vehicle	-----	-526.11	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	59.59	-63.26	4.48	-11.34	0.90	1.17	62.69	-66.55	4.48	-11.34	Vehicle	Vehicle	-----	-325.24	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	-----	-----	**5.86**	**5.86**
		L_{19} - L_{20}	-45.76	79.05	-56.88	8.92	-9.58	0.90	1.17	83.17	-59.84	8.92	-9.58	Vehicle	Vehicle	48.63	-137.28	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	**8.71**	**8.71**	**8.82**	**8.82**
	Structure 2	L_{20} - L_{21}	68.06	106.35	-50.54	11.57	-9.12	0.90	1.17	111.89	-53.17	11.57	-9.12	Vehicle	Vehicle	233.94	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
		L_{21} - L_{22}	134.01	114.05	-40.40	13.61	-8.81	0.90	1.17	120.00	-42.50	13.61	-8.81	Vehicle	Vehicle	330.20	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
		L_{22} - L_{23}	122.68	108.70	-44.50	11.79	-7.57	0.90	1.17	114.36	-46.81	11.79	-7.57	Vehicle	Vehicle	308.16	-----	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	-----	-----	**7.36**	**7.36**	-----	-----
		L_{23} - L_{24}	46.89	90.14	-49.96	8.09	-7.09	0.90	1.17	94.84	-52.57	8.09	-7.09	Vehicle	Vehicle	184.25	-7.38	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.68**	**9.68**	**16.38**	**16.38**
		L_{24} - L_{25}	-66.54	65.44	-55.59	3.32	-6.23	0.90	1.17	68.85	-58.48	3.32	-6.23	Vehicle	Vehicle	3.01	-162.53	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	**10.83**	**10.83**	**8.67**	**8.67**
		L_{25} - L_{26}	-205.63	57.56	-59.38	0.00	-11.77	0.90	1.17	60.56	-62.47	0.00	-11.77	Vehicle	Vehicle	-----	-348.53	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	-----	-----	**5.89**	**5.89**
		L_{26} - L_{27}	-350.43	53.63	-60.47	0.00	-18.87	0.90	1.17	56.42	-63.62	0.00	-18.87	Vehicle	Vehicle	-----	-538.25	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	-----	-----	**5.93**	**5.93**
		L_{27} - L_{28}	-494.65	45.07	-60.31	0.00	-25.89	0.90	1.17	47.41	-63.45	0.00	-25.89	Vehicle	Pedestrian	-----	-759.18	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	-----	-----	**6.19**	**6.19**
		L_{28} - L_{29}	-620.83	38.90	-67.48	0.00	-31.78	0.90	1.17	40.93	-70.99	0.00	-31.78	Vehicle	Pedestrian	-----	-940.68	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	-----	-----	**6.37**	**6.37**
		L_{29} - L_{30}	-716.91	30.61	-81.75	0.00	-36.29	0.90	1.17	32.20	-86.01	0.00	-36.29	Vehicle	Pedestrian	-----	-1090.97	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	-----	-----	**6.53**	**6.53**
		L_{30} - L_{31}	-850.71	43.20	-116.62	0.00	-35.97	0.90	1.18	45.99	-124.17	0.00	-35.97	Vehicle	Vehicle	-----	-1267.34	11

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: 5C1
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

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
South Truss - Verticals	Structure 1	U_0 - L_0	-93.72	17.51	-78.78	3.44	-12.32	0.90	1.24	19.50	-87.70	3.44	-12.32	Vehicle	Vehicle	-----	-235.85	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	-----	-----	-----	-----	-----	2.86	2.86
		U_1 - L_1	-46.53	15.10	-41.69	2.93	-9.05	0.90	1.24	16.81	-46.41	2.93	-9.05	Vehicle	Vehicle	-----	-120.83	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	-----	-----	-----	-----	-----	6.58	6.58
		U_2 - L_2	-0.10	13.51	-24.59	2.84	-5.68	0.90	1.24	15.04	-27.38	2.84	-5.68	Vehicle	Vehicle	19.42	-35.72	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	28.44	28.44	12.85	12.85			
		U_3 - L_3	39.60	11.83	-14.25	2.69	-2.12	0.90	1.24	13.17	-15.86	2.69	-2.12	Vehicle	Vehicle	68.60	-----	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	-----	-----	29.47	29.47	-----	-----			
		U_4 - L_4	-30.20	2.08	-23.40	0.00	-3.46	0.90	1.24	2.32	-26.05	0.00	-3.46	Vehicle	Vehicle	-----	-73.12	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	-----	-----	12.27	12.27			
		U_5 - L_5	-130.49	2.82	-37.51	0.00	-10.23	0.90	1.24	3.14	-41.76	0.00	-10.23	Vehicle	Vehicle	-----	-223.92	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	-----	-----	7.06	7.06			
		U_6 - L_6	-158.18	8.85	-41.77	0.00	-13.06	0.90	1.24	9.85	-46.51	0.00	-13.06	Vehicle	Vehicle	-----	-266.09	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	-----	-----	7.52	7.52			
		U_7 - L_7	-152.32	14.13	-41.99	0.00	-13.24	0.90	1.24	15.74	-46.75	0.00	-13.24	Vehicle	Vehicle	-----	-258.79	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	-----	-----	6.59	6.59			
		U_8 - L_8	-455.55	16.01	-78.93	0.00	-31.72	0.90	1.24	17.83	-87.87	0.00	-31.72	Vehicle	Pedestrian	-----	-747.68	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	-----	-----	5.10	5.10			
		U_9 - L_9	-287.55	3.33	-76.04	0.00	-18.20	0.90	1.20	3.59	-81.98	0.00	-18.20	Vehicle	Vehicle	-----	-480.39	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	-----	-----	4.36	4.36			
		U_{10} - L_{10}	-276.32	1.61	-70.80	0.00	-17.54	0.90	1.20	1.73	-76.34	0.00	-17.54	Vehicle	Vehicle	-----	-458.46	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	-----	-----	6.11	6.11			
		U_{11} - L_{11}	-232.59	1.66	-60.50	0.00	-14.41	0.90	1.20	1.79	-65.23	0.00	-14.41	Vehicle	Vehicle	-----	-387.17	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	-----	-----	6.27	6.27			
		U_{12} - L_{12}	-178.43	1.00	-49.75	0.00	-11.20	0.90	1.20	1.07	-53.64	0.00	-11.20	Vehicle	Vehicle	-----	-301.69	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	-----	-----	6.60	6.60			
		U_{13} - L_{13}	-127.74	2.64	-36.06	0.00	-7.88	0.90	1.20	2.84	-38.88	0.00	-7.88	Vehicle	Vehicle	-----	-216.61	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	-----	-----	6.50	6.50			
		U_{14} - L_{14}	-30.39	1.17	-25.71	0.00	-3.03	0.90	1.20	1.26	-27.72	0.00	-3.03	Vehicle	Vehicle	-----	-75.54	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	-----	-----	11.34	11.34			
		U_{15} - L_{15}	-28.94	7.10	-28.58	1.55	-4.54	0.90	1.20	7.65	-30.82	1.55	-4.54	Vehicle	Vehicle	-----	-77.68	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	-----	-----	10.20	10.20			
		U_{16} - L_{16}	-76.03	6.57	-35.56	1.39	-7.08	0.90	1.20	7.09	-38.34	1.39	-7.08	Vehicle	Vehicle	-----	-148.69	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	-----	-----	6.92	6.92			
		U_{17} - L_{17}	-161.89	7.05	-48.75	1.30	-10.66	0.90	1.20	7.60	-52.56	1.30	-10.66	Vehicle	Vehicle	-----	-278.79	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	-----	-----	4.75	4.75			
		U_{18} - L_{18}	-190.28	6.06	-50.62	1.12	-12.71	0.90	1.20	6.53	-54.58	1.12	-12.71	Vehicle	Vehicle	-----	-318.32	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	-----	-----	6.14	6.14			
		U_{19} - L_{19}	-228.17	5.19	-50.51	0.97	-14.98	0.90	1.20	5.60	-54.46	0.97	-14.98	Vehicle	Vehicle	-----	-367.41	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	-----	-----	7.13	7.13			
		U_{20} - L_{20}	-242.83	4.71	-52.16	0.95	-15.63	0.90	1.20	5.07	-56.24	0.95	-15.63	Vehicle	Vehicle	-----	-388.78	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	-----	-----	6.03	6.03			
		U_0 - L_0	-303.03	13.76	-80.27	2.22	-15.08	0.90	1.18	14.65	-85.46	2.22	-15.08	Vehicle	Vehicle	-----	-505.04	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	-----	-----	3.97	3.97			
		U_1 - L_1	-268.78	14.00	-75.34	2.12	-13.67	0.90	1.18	14.90	-80.21	2.12	-13.67	Vehicle	Vehicle	-----	-453.69	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	-----	-----	5.03	5.03			
		U_2 - L_2	-220.87	15.05	-66.33	2.34	-12.32	0.90	1.18	16.03	-70.62	2.34	-12.32	Vehicle	Vehicle	-----	-378.95	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	-----	-----	5.01	5.01			
		U_3 - L_3	-175.23	16.13	-59.00	2.49	-10.35	0.90	1.18	17.17	-62.82	2.49	-10.35	Vehicle	Vehicle	-----	-309.45	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	-----	-----	4.40	4.40			
		U_4 - L_4	-82.08	13.96	-42.77	2.21	-6.62	0.90	1.18	14.86	-45.54	2.21	-6.62	Vehicle	Vehicle	-----	-165.90	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	-----	-----	5.65	5.65			
		U_5 - L_5	-19.89	13.79	-30.67	2.23	-4.16	0.90	1.18	14.68	-32.65	2.23	-4.16	Vehicle	Vehicle	-----	-68.31	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	-----	-----	9.82	9.82			
		U_6 - L_6	60.32	22.16	-16.97	1.75	-0.47	0.90	1.18	23.60	-18.07	1.75	-0.47	Vehicle	Vehicle	109.09	-----	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	-----	-----	15.57	15.57	-----	-----			
		U_7 - L_7	-41.77	1.01	-22.67	0.00	-2.50	0.90	1.18	1.07	-24.14	0.00	-2.50	Vehicle	Vehicle	-----	-85.68	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	-----	-----	12.38	12.38			
		U_8 - L_8	-189.01	4.07	-46.43	0.00	-8.38	0.90	1.18	4.34	-49.44	0.00	-8.38	Vehicle	Vehicle	-----	-309.99	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	-----	-----	6.91	6.91			
		U_9 - L_9	-253.99	1.79	-58.15	0.00	-10.55	0.90	1.18	1.90	-61.91	0.00	-10.55	Vehicle	Vehicle	-----	-410.67	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	-----	-----	7.06	7.06			
		U_{10} - L_{10}	-290.02	4.37	-61.07	0.00	-12.18	0.90	1.18	4.65	-65.02	0.00	-12.18	Vehicle	Vehicle	-----	-461.54	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	-----	-----	7.51	7.51			
		U_{11} - L_{11}	-312.18	10.01	-66.32	0.00	-12.59	0.90	1.18	10.65	-70.61	0.00	-12.59	Vehicle	Vehicle	-----	-497.62	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	-----	-----	6.41	6.41			
		U_{12} - L_{12}	-327.28	14.94	-61.23	0.00	-13.75	0.90	1.18	15.90	-65.19	0.00	-13.75	Vehicle	Vehicle	-----	-510.20	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	-----	-----	7.28	7.28			
		U_{13} - L_{13}	-277.21	21.20	-51.63	0.45	-12.38	0.90	1.18	22.57	-54.97	0.45	-12.38	Vehicle	Vehicle	-----	-431.84	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	-----	-----	7.51	7.51			
		U_{14} - L_{14}	-505.44	24.55	-65.03	0.00	-21.41	0.90	1.18	26.14	-69.24	0.00	-21.41	Vehicle	Vehicle	-----	-747.09	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	-----	-----	7.89	7.89			
		U_{15} - L_{15}	-232.94	7.01	-68.78	1.67	-12.16	0.90	1.17	7.38	-72.36	1.67	-12.16	Vehicle	Vehicle	-----	-396.89	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	-----	-----	6.32	6.32			
		U_{16} - L_{16}	-260.12	8.23	-73.98	0.83	-13.04	0.90	1.17	8.66	-77.84	0.83	-13.04	Vehicle	Vehicle	-----	-439.34	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	-----	-----	5.22	5.22			
		U_{17} - L_{17}	-228.24	9.29	-67.28	0.66	-11.76	0.90	1.17	9.77	-70.79	0.66	-11.76	Vehicle	Vehicle	-----	-388.73	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	-----	-----	5.58	5.58			
		U_{18} - L_{18}	-209.27	11.15	-60.85	0.00	-11.28	0.90	1.17	11.73	-64.02	0.00	-11.28	Vehicle	Vehicle	-----	-355.28	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	-----	-----	5.75	5.75			
		U_{19} - L_{19}	-166.55	11.94	-54.86	0.00	-9.53	0.90	1.17	12.56	-57.72	0.00	-9.53	Vehicle	Vehicle	-----	-291.55	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	-----	-----	5.97	5.97			
	Structure 2	U_{20} - L_{20}	-113.95	11.97	-40.49	0.00	-7.50	0.90	1.17	12.59	-42.60	0.00	-7.50	Vehicle	Vehicle	-----	-203.51	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	-----	-----	6.13	6.13			
		U_{21} - L_{21}	-62.76	13.66	-31.21	0.00	-5.22	0.90	1.17	14.38	-32.83	0.00	-5.22	Vehicle	Vehicle	-----	-124.28	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	-----	-----	8.46	8.46			
		U_{22} - L_{22}	-38.94	0.92	-25.08	0.00	-2.15	0.90	1.17	0.97	-26.38	0.00	-2.15	Vehicle	Vehicle	-----	-84.92	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	-----	-----	11.48	11.48			
		U_{23} - L_{23}	-74.43	12.69	-36.84	0.48	-6.10	0.90	1.17	13.35	-38.75	0.48	-6.10	Vehicle	Vehicle	-----	-147.14	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	-----	-----	6.87	6.87			
		U_{24} - L_{24}	-121.36	12.44	-43.43	0.37	-8.17	0.90	1.17	13.09	-45.69	0.37	-8.17	Vehicle	Vehicle	-----	-217.18	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	-----	-----	5.55	5.55			
		U_{25} - L_{25}	-169.12	11.96	-52.80	0.43	-9.94	0.90	1.17	12.58	-55.55	0.43	-9.94	Vehicle	Vehicle	-----	-292.07	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	-----	-----	6.16	6.16			
		U_{26} - L_{26}	-207.97	10.82	-56.64	0.14	-11.42	0.90	1.17	11.38	-59.59	0.14	-11.42	Vehicle	Vehicle	-----	-347.83	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	-----	-----	6.20	6.20			
		U_{27} - L_{27}	-219.96	8.90	-58.26	0.16	-11.49	0.90	1.17	9.36	-61.29	0.16	-11.49	Vehicle	Vehicle	-----	-365.63	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	-----	-----	6.58	6.58			
		U_{28} - L_{28}	-240.91	13.44	-55.41	0.00	-12.60	0.90	1.17	14.14	-58.30	0.00	-12.60	Vehicle	Vehicle	-----	-388.97	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	-----	-----	7.29	7.29			
		U_{29} - L_{29}	-202.73	21.21	-47.65	0.00	-10.35	0.90	1.17	22.31	-50.13	0.00	-10.35	Vehicle	Vehicle	-----	-328.71	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	-----	-----	9.72	9.72			
		U_{30} - L_{30}	-518.05	19.95	-67.68	0.00	-22.08	0.90	1.18	21.24	-72.06	0.00	-22.08	Vehicle	Vehicle	-----	-767.14	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	-----	-----	7.41	7.41			
		U_{31} - L_{31}	-318.43	9.50	-72.75	0.87	-14.13	0.90	1.18	10.11	-77.45	0.87	-14.13	Vehicle	Vehicle	-----	-514.65	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	-----	-----	4.80	4.80			
		U_{32} - L_{32}	-358.67	4.19	-76.03	0.00	-14.88	0.90	1.18	4.46	-80.95	0.00	-14.88	Vehicle	Vehicle	-----	-571.51	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

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: 5C1 **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} (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	63.48	-23.68	14.00	-4.60	0.90	1.24	70.67	-26.36	14.00	-4.60	Vehicle	Vehicle	205.84	-----	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	-----	-----	-----	-----	-----	7.06	7.06	-----	-----
		U_1 - L_2	23.90	41.65	-23.05	9.20	-4.71	0.90	1.24	46.36	-25.66	9.20	-4.71	Vehicle	Vehicle	91.34	-2.29	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	-----	-----	-----	8.71	8.71	14.00	14.00
		U_2 - L_3	-49.02	21.04	-19.08	3.33	-4.32	0.90	1.24	23.42	-21.24	3.33	-4.32	Vehicle	Vehicle	-----	-91.34	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	-----	-----	-----	-----	-----	13.43	13.43
		U_3 - L_4	-108.88	6.47	-25.27	0.00	-6.30	0.90	1.24	7.21	-28.14	0.00	-6.30	Vehicle	Vehicle	-----	-178.12	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	-----	-----	-----	-----	-----	8.09	8.09
		U_4 - L_4	153.12	43.68	-2.51	10.11	0.00	0.90	1.24	48.63	-2.79	10.11	0.00	Vehicle	Vehicle	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_5	186.35	50.16	-3.83	13.44	0.00	0.90	1.24	55.84	-4.26	13.44	0.00	Vehicle	Vehicle	314.86	-----	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	-----	-----	-----	-----	-----	8.31	8.31	-----	-----
		U_6 - L_6	177.52	50.30	-15.18	14.13	0.00	0.90	1.24	55.99	-16.90	14.13	0.00	Vehicle	Vehicle	303.57	-----	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	-----	-----	-----	-----	-----	8.45	8.45	-----	-----
		U_7 - L_7	173.18	47.01	-15.77	13.87	0.00	0.90	1.24	52.34	-17.56	13.87	0.00	Vehicle	Vehicle	293.17	-----	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	-----	-----	-----	-----	-----	9.12	9.12	-----	-----
		U_8 - L_8	328.11	83.17	-4.33	19.45	-0.13	0.90	1.20	89.67	-4.67	19.45	-0.13	Vehicle	Vehicle	543.12	-----	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	-----	-----	-----	-----	-----	7.07	7.07	-----	-----
		U_9 - L_{10}	339.70	84.77	-3.00	19.74	0.00	0.90	1.20	91.40	-3.24	19.74	0.00	Vehicle	Vehicle	560.43	-----	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	-----	-----	-----	-----	-----	6.81	6.81	-----	-----
		U_{10} - L_{11}	313.22	76.58	-2.20	18.15	0.00	0.90	1.20	82.57	-2.37	18.15	0.00	Vehicle	Vehicle	514.52	-----	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	-----	-----	-----	-----	-----	7.24	7.24	-----	-----
		U_{11} - L_{12}	270.68	69.21	-2.19	14.84	0.00	0.90	1.20	74.62	-2.36	14.84	0.00	Vehicle	Vehicle	448.90	-----	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	-----	-----	-----	-----	-----	6.79	6.79	-----	-----
		U_{12} - L_{13}	194.17	48.08	-3.68	10.79	0.00	0.90	1.20	51.84	-3.97	10.79	0.00	Vehicle	Vehicle	319.80	-----	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	-----	-----	-----	-----	-----	8.43	8.43	-----	-----
		U_{13} - L_{14}	123.57	33.47	-11.89	5.96	0.00	0.90	1.20	36.09	-12.82	5.96	0.00	Vehicle	Vehicle	207.55	-----	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	-----	-----	-----	-----	-----	8.43	8.43	-----	-----
		U_{14} - L_{15}	-16.32	30.46	-17.91	1.48	-2.35	0.90	1.20	32.84	-19.31	1.48	-2.35	Vehicle	Vehicle	21.48	-46.32	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	-----	-----	-----	13.52	13.52	16.16	16.16
		U_{15} - L_{15}	59.12	39.33	-9.30	6.08	-2.09	0.90	1.20	42.41	-10.02	6.08	-2.09	Vehicle	Vehicle	131.99	-----	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	-----	-----	-----	-----	-----	8.69	8.69	-----	-----
		U_{17} - L_{16}	172.14	58.52	-9.83	9.93	-1.86	0.90	1.20	63.09	-10.60	9.93	-1.86	Vehicle	Vehicle	305.81	-----	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	-----	-----	-----	-----	-----	5.59	5.59	-----	-----
		U_{18} - L_{17}	210.78	58.11	-8.34	12.51	-1.53	0.90	1.20	62.66	-8.99	12.51	-1.53	Vehicle	Vehicle	355.47	-----	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	-----	-----	-----	-----	-----	7.02	7.02	-----	-----
		U_{19} - L_{18}	242.64	60.19	-6.67	13.73	-1.21	0.90	1.20	64.89	-7.19	13.73	-1.21	Vehicle	Vehicle	399.79	-----	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	-----	-----	-----	-----	-----	7.21	7.21	-----	-----
		U_{20} - L_{19}	257.76	53.29	-5.48	15.70	-1.03	0.90	1.20	57.46	-5.91	15.70	-1.03	Vehicle	Vehicle	409.79	-----	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	-----	-----	-----	-----	-----	7.87	7.87	-----	-----
		U_0 - L_1	298.99	78.05	-14.60	14.21	-2.21	0.90	1.18	83.10	-15.55	14.21	-2.21	Vehicle	Vehicle	496.71	-----	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	-----	-----	-----	-----	-----	5.76	5.76	-----	-----
		U_1 - L_2	284.21	77.55	-17.38	14.05	-2.66	0.90	1.18	82.57	-18.50	14.05	-2.66	Vehicle	Vehicle	476.81	-----	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	-----	-----	-----	-----	-----	5.98	5.98	-----	-----
		U_2 - L_3	221.42	67.80	-18.51	11.83	-2.85	0.90	1.18	72.18	-19.71	11.83	-2.85	Vehicle	Vehicle	381.69	-----	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	-----	-----	-----	-----	-----	5.95	5.95	-----	-----
		U_3 - L_4	178.30	64.24	-20.89	10.08	-3.23	0.90	1.18	68.40	-22.24	10.08	-3.23	Vehicle	Vehicle	320.71	-----	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	-----	-----	-----	-----	-----	5.83	5.83	-----	-----
		U_4 - L_5	53.50	39.17	-17.86	5.37	-2.87	0.90	1.18	41.70	-19.02	5.37	-2.87	Vehicle	Vehicle	123.76	-----	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	-----	-----	-----	-----	-----	8.97	8.97	-----	-----
		U_5 - L_6	-16.51	30.80	-20.50	2.23	-2.92	0.90	1.18	32.79	-21.83	2.23	-2.92	Vehicle	Vehicle	21.16	-49.84	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	-----	-----	-----	13.55	13.55	14.17	14.17
		U_6 - L_7	-133.21	13.55	-40.82	0.00	-5.36	0.90	1.18	14.42	-43.46	0.00	-5.36	Vehicle	Vehicle	-----	-229.67	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	-----	-----	-----	-----	-----	5.20	5.20
		U_7 - L_7	208.77	51.98	-9.14	8.33	0.00	0.90	1.18	55.34	-9.73	8.33	0.00	Vehicle	Vehicle	343.35	-----	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	-----	-----	-----	-----	-----	7.13	7.13	-----	-----
		U_8 - L_8	289.58	69.15	-2.22	10.70	0.00	0.90	1.18	73.63	-2.36	10.70	0.00	Vehicle	Vehicle	472.17	-----	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	-----	-----	-----	-----	-----	5.71	5.71	-----	-----
		U_{10} - L_9	327.97	71.07	-2.51	12.66	0.00	0.90	1.18	75.67	-2.67	12.66	0.00	Vehicle	Vehicle	524.73	-----	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	-----	-----	-----	-----	-----	5.94	5.94	-----	-----
		U_{11} - L_{10}	349.25	76.46	-10.48	12.70	0.00	0.90	1.18	81.41	-11.15	12.70	0.00	Vehicle	Vehicle	559.86	-----	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	-----	-----	-----	-----	-----	6.08	6.08	-----	-----
		U_{12} - L_{11}	358.20	72.69	-11.28	13.52	0.00	0.90	1.18	77.40	-12.00	13.52	0.00	Vehicle	Vehicle	566.27	-----	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	-----	-----	-----	-----	-----	6.28	6.28	-----	-----
		U_{13} - L_{12}	307.75	59.45	-21.99	12.26	-0.24	0.90	1.18	63.30	-23.41	12.26	-0.24	Vehicle	Vehicle	482.36	-----	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	-----	-----	-----	-----	-----	7.42	7.42	-----	-----
		U_{14} - L_{13}	260.20	49.11	-19.76	11.72	-1.50	0.90	1.18	52.28	-21.04	11.72	-1.50	Vehicle	Vehicle	406.23	-----	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	-----	-----	-----	-----	-----	9.89	9.89	-----	-----
		U_{15} - L_{14}	208.42	63.19	-9.41	11.04	-2.51	0.90	1.17	66.49	-9.90	11.04	-2.51	Vehicle	Vehicle	357.38	-----	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	-----	-----	-----	-----	-----	6.65	6.65	-----	-----
		U_{16} - L_{15}	243.55	71.87	-6.29	11.54	-1.48	0.90	1.17	75.61	-6.61	11.54	-1.48	Vehicle	Vehicle	414.91	-----	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	-----	-----	-----	-----	-----	5.38	5.38	-----	-----
		U_{17} - L_{16}	255.86	70.83	-9.78	12.23	-0.85	0.90	1.17	74.51	-10.29	12.23	-0.85	Vehicle	Vehicle	429.49	-----	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	-----	-----	-----	-----	-----	6.10	6.10	-----	-----
		U_{18} - L_{17}	235.29	69.96	-11.46	11.35	-0.75	0.90	1.17	73.61	-12.06	11.35	-0.75	Vehicle	Vehicle	401.57	-----	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	-----	-----	-----	-----	-----	5.64	5.64	-----	-----
		U_{19} - L_{18}	212.11	64.25	-13.98	11.09	0.00	0.90	1.17	67.60	-14.70	11.09	0.00	Vehicle	Vehicle	363.62	-----	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	-----	-----	-----	-----	-----	6.49	6.49	-----	-----
	Structure 2	U_{20} - L_{20}	168.24	55.22	-15.47	9.14	0.00	0.90	1.17	58.10	-16.28	9.14	0.00	Vehicle	Vehicle	294.24	-----	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	-----	-----	-----	-----	-----	7.49	7.49	-----	-----
		U_{26} - L_{21}	97.26	39.95	-16.62	6.66	0.00	0.90	1.17	42.03	-17.49	6.66	0.00	Vehicle	Vehicle	181.08	-----	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	-----	-----	-----	-----	-----	7.86	7.86	-----	-----
		U_{21} - L_{22}	30.60	31.36	-25.65	3.66	-2.18	0.90	1.17	32.99	-26.99	3.66	-2.18	Vehicle	Vehicle	82.67	-----	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	-----	-----	-----	-----	-----	12.04	12.04	-----	-----
		U_{23} - L_{22}	49.78	40.10	-18.04	5.11	-0.95	0.90	1.17	42.19	-18.97	5.11	-0.95	Vehicle	Vehicle	119.56	-----	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	-----	-----	-----	-----	-----	8.96	8.96	-----	-----
		U_{24} - L_{23}	115.07	49.65	-16.87	8.00	-0.72	0.90	1.17	52.24	-17.74	8.00	-0.72	Vehicle	Vehicle	217.50	-----	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	-----	-----	-----	-----	-----	5.98	5.98	-----	-----
		U_{25} - L_{24}	179.22	61.82	-16.40	10.10	-0.73	0.90	1.17	65.04	-17.25	10.10	-0.73	Vehicle	Vehicle	317.53	-----	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	-----	-----	-----	-----	-----	6.52	6.52	-----	-----
		U_{26} - L_{25}	220.97	64.43	-14.39	11.89	-0.57	0.90	1.17	67.79	-15.13	11.89	-0.57	Vehicle	Vehicle	375.39	-----	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	-----	-----	-----	-----	-----	6.34	6.34	-----	-----
		U_{27} - L_{26}	234.87	67.69	-11.44	11.45	-0.35	0.90	1.17	71.22	-12.03	11.45	-0.35	Vehicle	Vehicle	397.91	-----	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	-----	-----	-----	-----	-----	5.84	5.84	-----	-----
		U_{28} - L_{27}	253.15	63.74	-10.09	12.25	-0.28	0.90	1.17	67.06	-10.62	12.25	-0.28	Vehicle	Vehicle	416.27	-----	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	-----	-----	-----	-----	-----	6.82	6.82	-----	-----
		U_{29} - L_{28}	215.91	51.91	-22.10	10.20	0.00	0.90	1.17	54.61	-23.25	10.20	0.00	Vehicle	Vehicle	351.69	-----	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	-----	-----	-----	-----	-----	7.96	7.96	-----	-----
		U_{30} - L_{29}	180.73	45.16	-20.10	8.90	-0.90	0.90	1.17	47.51	-21.15	8.90	-0.90	Vehicle	Vehicle	296.72	-----	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	-----	-----	-----	-----	-----	9.89	9.89	-----	-----
		U_{31} - L_{31}	294.99	66.76	-11.16	12.90	-1.64	0.90	1.18	71.08	-11.88	12.90	-1.64	Vehicle	Vehicle	475.88	-----	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	-----	-----	-----	-----	-----	6.79	6.79	-----	-----
		U_{32} - L_{32}	342.70	73.76	-9.82	13.70	-0.55	0.90	1.18	78.53	-10.45	13.70	-0.55	Vehicle	Vehicle	547.60	-----	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	-----	-----	-----	-----	-----	5.54	5.54	-----	-----
		U_{33} - L_{33}	363.39	77.71	-5.11	14.16	0.00	0.90	1.18	82.74	-5.44	14.16	0.00	Vehicle	Vehicle	579.97	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spreads

Loading: 3G1
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 6.6.2.1-1, 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		-129.89	-23.02	-0.10	1.75	-2.75	-10.43				
	L_1-U_1		-54.81	-51.14	0.28	3.06	-1.68	-18.30				
	U_1-L_2		-54.81	-51.14	0.28	3.06	-1.68	-18.30				
	L_2-U_2		-52.27	-51.68	2.78	4.43	-5.28	-14.49				
	U_2-L_3		-52.27	-51.68	2.78	4.43	-5.28	-14.49				
	L_3-U_3		-49.74	-52.21	5.27	5.80	-8.87	-10.55				
	U_3-L_4		-49.74	-52.21	5.27	5.80	-8.87	-10.55				
	L_4-U_4		-47.20	-52.74	7.77	7.16	-12.45	-6.61				
	U_4-L_5		-47.20	-52.74	7.77	7.16	-12.45	-6.61				
	L_5-U_5		-44.67	-53.27	10.26	8.53	-16.04	-2.67				
	U_5-L_6		-44.67	-53.27	10.26	8.53	-16.04	-2.67				
	L_6-U_6		-42.13	-53.80	12.76	9.89	-19.62	1.27				
	U_6-L_7		-42.13	-53.80	12.76	9.89	-19.62	1.27				
	L_7-U_7		-39.60	-54.33	15.25	11.26	-23.21	5.21				
	U_7-L_8		-39.60	-54.33	15.25	11.26	-23.21	5.21				
	L_8-U_8		-37.06	-54.86	17.75	12.62	-26.80	9.15				
	U_8-L_9		-37.06	-54.86	17.75	12.62	-26.80	9.15				
	L_9-U_9		-34.53	-55.41	20.24	13.99	-30.39	13.09				
	U_9-L_{10}		-34.53	-55.41	20.24	13.99	-30.39	13.09				
	L_{10}-U_{10}		-31.99	-55.94	22.74	15.35	-33.98	17.03				
	U_{10}-L_{11}		-31.99	-55.94	22.74	15.35	-33.98	17.03				
	L_{11}-U_{11}		-29.46	-56.47	25.23	16.72	-37.57	20.97				
	U_{11}-L_{12}		-29.46	-56.47	25.23	16.72	-37.57	20.97				
	L_{12}-U_{12}		-26.93	-57.00	27.73	18.08	-41.16	24.91				
	U_{12}-L_{13}		-26.93	-57.00	27.73	18.08	-41.16	24.91				
	L_{13}-U_{13}		-24.39	-57.53	30.22	19.45	-44.75	28.85				
	U_{13}-L_{14}		-24.39	-57.53	30.22	19.45	-44.75	28.85				
	L_{14}-U_{14}		-21.86	-58.06	32.72	20.81	-48.34	32.79				
	U_{14}-L_{15}		-21.86	-58.06	32.72	20.81	-48.34	32.79				
	L_{15}-U_{15}		-19.33	-58.59	35.21	22.18	-51.93	36.73				
	U_{15}-L_{16}		-19.33	-58.59	35.21	22.18	-51.93	36.73				
	L_{16}-U_{16}		-16.79	-59.12	37.71	23.54	-55.52	40.67				
	U_{16}-L_{17}		-16.79	-59.12	37.71	23.54	-55.52	40.67				
	L_{17}-U_{17}		-14.26	-59.65	40.20	24.91	-59.11	44.61				
	U_{17}-L_{18}		-14.26	-59.65	40.20	24.91	-59.11	44.61				
	L_{18}-U_{18}		-11.73	-60.18	42.70	26.27	-62.70	48.55				
	U_{18}-L_{19}		-11.73	-60.18	42.70	26.27	-62.70	48.55				
	L_{19}-U_{19}		-9.20	-60.71	45.19	27.64	-66.29	52.49				
	U_{19}-L_{20}		-9.20	-60.71	45.19	27.64	-66.29	52.49				
	L_{20}-U_{20}		-6.66	-61.24	47.69	29.00	-69.88	56.43				
	U_{20}-L_{21}		-6.66	-61.24	47.69	29.00	-69.88	56.43				
	L_{21}-U_{21}		-4.13	-61.77	50.18	30.37	-73.47	60.37				
	U_{21}-L_{22}		-4.13	-61.77	50.18	30.37	-73.47	60.37				
	L_{22}-U_{22}		-1.60	-62.30	52.68	31.73	-77.06	64.31				
	U_{22}-L_{23}		-1.60	-62.30	52.68	31.73	-77.06	64.31				
	L_{23}-U_{23}		0.93	-62.83	55.17	33.10	-80.65	68.25				
	U_{23}-L_{24}		0.93	-62.83	55.17	33.10	-80.65	68.25				
	L_{24}-U_{24}		3.46	-63.36	57.67	34.46	-84.24	72.19				
	U_{24}-L_{25}		3.46	-63.36	57.67	34.46	-84.24	72.19				
	L_{25}-U_{25}		5.99	-63.89	60.16	35.83	-87.83	76.13				
	U_{25}-L_{26}		5.99	-63.89	60.16	35.83	-87.83	76.13				
	L_{26}-U_{26}		8.53	-64.42	62.66	37.19	-91.42	80.07				
	U_{26}-L_{27}		8.53	-64.42	62.66	37.19	-91.42	80.07				
	L_{27}-U_{27}		11.06	-64.95	65.15	38.56	-95.01	84.01				
	U_{27}-L_{28}		11.06	-64.95	65.15	38.56	-95.01	84.01				
	L_{28}-U_{28}		13.59	-65.48	67.65	39.92	-98.60	87.95				
	U_{28}-L_{29}		13.59	-65.48	67.65	39.92	-98.60	87.95				
	L_{29}-U_{29}		16.13	-66.01	70.14	41.29	-102.19	91.89				
	U_{29}-L_{30}		16.13	-66.01	70.14	41.29	-102.19	91.89				
	L_{30}-U_{30}		18.66	-66.54	72.64	42.65	-105.78	95.83				
	U_{30}-L_{31}		18.66	-66.54	72.64	42.65	-105.78	95.83				
	L_{31}-U_{31}		21.19	-67.07	75.13	44.02	-109.37	99.77				
	U_{31}-L_{32}		21.19	-67.07	75.13	44.02	-109.37	99.77				
	L_{32}-U_{32}		23.72	-67.60	77.63	45.38	-112.96	103.71				
	U_{32}-L_{33}		23.72	-67.60	77.63	45.38	-112.96	103.71				
	L_{33}-U_{33}		26.26	-68.13	80.12	46.75	-116.55	107.65				
	U_{33}-L_{34}		26.26	-68.13	80.12	46.75	-116.55	107.65				
	L_{34}-U_{34}		28.79	-68.66	82.62	48.11	-120.14	111.59				
	U_{34}-L_{35}		28.79	-68.66	82.62	48.11	-120.14	111.59				
	L_{35}-U_{35}		31.32	-69.19	85.11	49.48	-123.73	115.53				
	U_{35}-L_{36}		31.32	-69.19	85.11	49.48	-123.73	115.53				
	L_{36}-U_{36}		33.85	-69.72	87.61	50.84	-127.32	119.47				
	U_{36}-L_{37}		33.85	-69.72	87.61	50.84	-127.32	119.47				
	L_{37}-U_{37}		36.39	-70.25	90.10	52.21	-130.91	123.41				
	U_{37}-L_{38}		36.39	-70.25	90.10	52.21	-130.91	123.41				
	L_{38}-U_{38}		38.92	-70.78	92.60	53.57	-134.50	127.35				
	U_{38}-L_{39}		38.92	-70.78	92.60	53.57	-134.50	127.35				
	L_{39}-U_{39}		41.45	-71.31	95.09	54.94	-138.09	131.29				
	U_{39}-L_{40}		41.45	-71.31	95.09	54.94	-138.09	131.29				
	L_{40}-U_{40}		43.98	-71.84	97.59	56.30	-141.68	135.23				
Structure 2	U_0-L_1		-92.46	-69.91	2.12	2.31	-6.33	-26.08				
	L_1-U_1		-59.53	-59.47	3.08	3.32	-4.55	-20.42				
	U_1-L_2		-48.21	-31.51	0.15	0.30	-22.99	-6.04				
	L_2-U_2		-48.21	-31.51	0.15	0.30	-22.99	-6.04				
	U_2-L_3		10.71	137.69	3.30	4.90	-19.40	-5.53				
	L_3-U_3		57.18	-122.64	4.19	3.69	-18.84	1.18				
	U_3-L_4		57.18	-122.64	4.19	3.69	-18.84	1.18				
	L_4-U_4		85.58	3.84	3.99	1.69	-0.52	-1.18				
	U_4-L_5		14.12	810.62	2.79	1.74	-0.27	-15.78				
	L_5-U_5		823.61	100.42	14.35	1.42	-1.65	-9.72				
	U_5-L_6		34.32	29.60	3.83	4.73	-2.96	-12.48				
	L_6-U_6		150.29	-52.92	3.83	4.73	-2.96	-12.48				
	U_6-L_7		17.33	-89.79	5.05	5.31	-0.96	-16.70				
	L_7-U_7		38.29	-124.31	5.31	5.27	-1.21	-21.07				
	U_7-L_8		-79.26	-230.76	5.31	3.27	-1.16	-26.70				
	L_8-U_8		-58.29	-271.24	3.27	1.21	-0.96	-31.07				
	U_8-L_9		-84.35	-278.75	5.24	4.54	-21.01	-17.62				
	L_9-U_9		-138.80	-311.39	4.54	3.84	-21.01	-22.08				
	U_9-L_{10}		-275.08	-274.62	5.31	0.43	-29.65	-18.27				
	L_{10}-U_{10}		-297.08	-269.15	1.97	0.29	-33.70	-13.41				
	U_{10}-L_{11}		-284.75	-284.41	0.29	1.97	-33.70	-13.41				
	L_{11}-U_{11}		-154.97	-33.11	1.30	-0.32	-17.08	-3.55				
	U_{11}-L_{12}		-153.80	-61.83	1.30	-0.32	-17.08	-3.55				
	L_{12}-U_{12}		40.07	-167.66	0.48	0.50	4.61	-10.98				
	U_{12}-L_{13}		-10.53	-132.37	-0.37	0.64	1.53	-13.63				
	L_{13}-U_{13}		-140.16	-260.93	-0.13	0.60	-2.72	-20.71				
	U_{13}-L_{14}		-187.10	-276.08	1.42	1.98	4.90	-21.50				
	L_{14}-U_{14}		-322.62	-146.39	1.98	1.00	2.19	-25.63				
	U_{14}-L_{15}		-162.95	-104.84	1.08	3.11	-17.41	-6.57				
	L_{15}-U_{15}		-147.84	26.72	3.32	3.73	-18.26	2.15				
	U_{15}-L_{16}		-153.86	61.93	3.68	3.68	-18.26	5.81				
	L_{16}-U_{16}		-10.77	46.02	3.38	1.85	-9.65	0.72				
	U_{16}-L_{17}		-10.77	46.02	3.38	1.85	-9.65	0.72				
	L_{17}-U_{17}		426.23	9.55	0.22	1.35	0.03	-0.02				
	U_{17}-L_{18}		128.06	54.04	4.28	3.75	-0.06	-10.78				
	L_{18}-U_{18}		70.10	43.63	4.61	3.35	-2.30	-12.49				
	U_{18}-L_{19}		74.15	13.32	3.40	3.14	-1.00	-12.49				
	L_{19}-U_{19}		-92.95	-104.84	1.08	3.11	-17.41	-6.57				
	U_{19}-L_{20}		-147.84	26.72	3.32	3.73	-18.26	2.15				
	L_{20}-U_{20}		-153.86	61.93	3.68	3.68	-18.26	5.81				
	U_{20}-L_{21}		-10.77	46.02	3.38	1.85	-9.65	0.72				
	L_{21}-U_{21}		-10.77	46.02	3.38	1.85	-9.65	0.72				
	U_{21}-L_{22}		-8.36	-35.51	4.28	2.43	-15.61	8.52				

ZZ Axis Moment Properties

Location		Member	Rcv. Proc. Mom. Start (k-in)	Rcv. Proc. Mom. End (k-in)	Mod. Neg. Mom. (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor	M_p (k-in)	Formula (.8 Term * F_y*S_bot)	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(a)}$	Equivalent Mom. Factor $L_{(ft)}$
Structure 1	U_0-L_1		-116.90	-20.72	-0.10	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.974	0.99
	L_1-U_1		-49.33	-46.03	0.25	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.974	0.99
	U_1-L_2		-49.33	-46.03	0.25	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_2-U_2		-47.05	-46.51	2.50	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_2-L_3		-47.05	-46.51	2.50	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_3-U_3		-44.78	-47.39	4.74	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_3-L_4		-44.78	-47.39	4.74	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_4-U_4		-42.50	-47.92	6.99	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_4-L_5		-42.50	-47.92	6.99	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_5-U_5		-40.23	-48.44	9.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_5-L_6		-40.23	-48.44	9.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_6-U_6		-37.96	-48.97	11.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_6-L_7		-37.96	-48.97	11.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_7-U_7		-35.69	-49.50	13.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_7-L_8		-35.69	-49.50	13.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_8-U_8		-33.42	-50.03	15.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_8-L_9		-33.42	-50.03	15.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_9-U_9		-31.15	-50.56	18.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_9-L_{10}		-31.15	-50.56	18.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{10}-U_{10}		-28.88	-51.09	20.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{10}-L_{11}		-28.88	-51.09	20.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{11}-U_{11}		-26.61	-51.62	22.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{11}-L_{12}		-26.61	-51.62	22.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{12}-U_{12}		-24.34	-52.15	24.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{12}-L_{13}		-24.34	-52.15	24.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{13}-U_{13}		-22.07	-52.68	27.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{13}-L_{14}		-22.07	-52.68	27.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{14}-U_{14}		-19.80	-53.21	29.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{14}-L_{15}		-19.80	-53.21	29.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{15}-U_{15}		-17.53	-53.74	31.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{15}-L_{16}		-17.53	-53.74	31.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{16}-U_{16}		-15.26	-54.27	33.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{16}-L_{17}		-15.26	-54.27	33.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{17}-U_{17}		-12.99	-54.80	36.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{17}-L_{18}		-12.99	-54.80	36.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{18}-U_{18}		-10.72	-55.33	38.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{18}-L_{19}		-10.72	-55.33	38.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{19}-U_{19}		-8.45	-55.86	40.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{19}-L_{20}		-8.45	-55.86	40.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{20}-U_{20}		-6.19	-56.39	42.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{20}-L_{21}		-6.19	-56.39	42.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{21}-U_{21}		-3.92	-56.92	45.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{21}-L_{22}		-3.92	-56.92	45.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{22}-U_{22}		-1.65	-57.45	47.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{22}-L_{23}		-1.65	-57.45	47.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{23}-U_{23}		0.62	-57.98	49.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{23}-L_{24}		0.62	-57.98	49.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{24}-U_{24}		2.89	-58.51	51.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{24}-L_{25}		2.89	-58.51	51.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{25}-U_{25}		5.16	-59.04	54.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{25}-L_{26}		5.16	-59.04	54.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{26}-U_{26}		7.43	-59.57	56.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{26}-L_{27}		7.43	-59.57	56.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{27}-U_{27}		9.70	-60.10	58.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{27}-L_{28}		9.70	-60.10	58.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{28}-U_{28}		11.97	-60.63	60.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{28}-L_{29}		11.97	-60.63	60.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{29}-U_{29}		14.24	-61.16	63.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{29}-L_{30}		14.24	-61.16	63.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{30}-U_{30}		16.51	-61.69	65.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{30}-L_{31}		16.51	-61.69	65.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{31}-U_{31}		18.78	-62.22	67.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{31}-L_{32}		18.78	-62.22	67.73	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{32}-U_{32}		21.05	-62.75	69.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{32}-L_{33}		21.05	-62.75	69.98	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{33}-U_{33}		23.32	-63.28	72.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{33}-L_{34}		23.32	-63.28	72.23	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	L_{34}-U_{34}		25.59	-63.81	74.48	2474.3	2474.3	2474.3	5974.3	0.99	6099.4	4206	0.99800041	2474.3	0.931	0.97
	U_{34}-L_{35}		25.59	-63.81	74.48	2474.3	2474.3	2474.3	5974.3	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Segment
Loading: SU1
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 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-th	Dead Load End-th	Live Load (Max) Start-th	Live Load (Max) End-th	Pedestrian Load (Max) Start-th	Pedestrian Load (Min) End-th	Lane Reduction & Impact Live Load Start-th	Lane Reduction & Impact Live Load End-th	Impact Pedestrian Load Max Start-th	Impact Pedestrian Load Max End-th
Structure 1	L_0-L_1	-44.17	-99.07	0.00	-0.77	-0.80	0.86	6.67	-10.26	-10.67	11.70
	L_1-L_2	131.02	-112.64	-3.92	-8.47	-0.39	2.43	-46.69	-113.13	-5.14	32.52
	L_2-L_3	129.55	-79.80	-7.51	-15.72	-0.75	4.67	-159.37	-115.73	-17.03	37.81
	L_3-L_4	18.36	16.12	-13.53	-7.02	1.38	5.16	-180.80	-93.81	18.49	68.91
	L_4-L_5	-68.34	212.02	-13.03	-0.68	3.00	13.94	-142.63	47.43	53.60	53.94
	L_5-L_6	8.36	229.14	-5.36	-4.14	3.11	6.07	-71.55	-55.26	41.52	81.15
	L_6-L_7	67.83	177.52	-1.85	0.81	4.12	1.20	-24.70	12.61	55.03	16.02
	L_7-L_8	1.61	409.47	-0.01	0.01	0.68	7.05	-0.10	0.16	9.11	94.21
	L_8-L_9	439.88	-25.12	0.10	0.01	8.24	0.18	1.29	0.09	106.57	2.26
	L_9-L_{10}	204.03	-117.02	0.63	-0.44	2.16	3.03	8.11	-5.64	-27.97	39.20
	L_{10}-L_{11}	168.12	-117.13	-0.69	-4.92	4.75	2.24	-8.98	-43.62	61.51	29.02
	L_{11}-L_{12}	23.72	-27.23	-0.01	-2.01	0.86	0.31	-13.33	-38.74	-37.59	24.12
	L_1-L_{11}	-19.73	-128.50	-5.52	-6.44	2.94	1.44	-71.39	-70.42	38.03	18.68
	L_2-L_{10}	175.78	-425.21	-5.53	-11.43	2.28	1.91	-71.39	-147.87	29.51	25.54
	L_3-L_9	409.28	25.70	-5.53	-11.43	2.28	1.91	-71.39	-147.87	29.51	25.54
	L_4-L_8	-209.39	-318.68	-10.05	-14.34	0.81	0.65	-141.16	-656.43	-298.66	403.38
	L_5-L_7	374.86	83.94	-12.69	-3.41	0.80	-2.20	-164.16	-44.12	10.31	-2.55
	L_6-L_6	-171.07	19.86	-6.20	-1.95	0.30	-0.04	-80.21	-25.18	3.91	-0.52
	L_7-L_5	-208.33	253.78	-2.81	-0.40	3.47	3.52	-36.28	3.12	45.50	0.00
	L_8-L_4	-84.78	1.02	1.84	0.96	4.23	3.39	-23.89	11.68	-54.77	43.86
	L_9-L_3	10.35	-213.29	0.62	-1.72	3.39	-6.70	7.92	-21.91	43.26	85.58
	L_{10}-L_2	164.56	-247.73	0.10	-0.24	1.17	0.00	13.55	-127.66	4.19	15.00
	L_{11}-L_1	-14.97	-194.33	-1.17	-10.69	-0.52	1.16	-14.97	-194.33	-1.17	-10.69
	L_{12}-L_0	-287.80	-299.08	-13.85	-12.61	-0.21	2.13	-176.95	-161.05	-2.68	27.24
	L_{12}-L_1	-467.54	-273.29	-17.50	-19.87	3.10	4.60	-223.64	-253.84	39.66	58.73
	L_1-L_2	-310.55	-49.89	-14.96	-14.56	3.75	6.93	-191.01	-185.99	-47.90	88.58
	L_2-L_3	-272.22	-223.06	-14.31	-17.79	5.74	12.38	-133.32	-78.75	57.74	57.38
	L_3-L_4	-261.97	188.33	-10.44	-6.33	3.34	6.83	-133.36	-83.47	42.72	87.20
	L_4-L_5	-77.23	329.45	-11.39	-2.41	4.39	2.34	-133.36	-41.74	97.72	43.60
	L_5-L_6	-131.48	389.15	-8.89	-1.39	3.83	6.84	-11.42	-17.86	48.90	87.34
	L_6-L_7	-164.35	-140.48	-1.49	-0.01	5.99	-2.31	-18.97	-0.15	76.57	-29.50
	L_7-L_8	-267.47	564.45	-0.23	-0.01	0.00	0.00	-238.32	-182.76	-114.12	-220.98
	L_8-L_9	912.03	-326.86	-0.68	-0.50	8.67	0.65	-8.55	-6.34	109.42	8.23
	L_9-L_{10}	289.13	4.50	-0.01	-0.01	2.91	0.00	-3.01	-0.06	37.39	0.00
	L_{10}-L_{11}	515.59	-35.24	-1.74	0.10	7.56	2.30	-21.92	1.30	95.47	29.00
	L_{11}-L_{12}	1,116.59	-18.63	-3.38	-0.16	14.52	2.02	-47.88	-98.26	82.06	25.82
	L_1-L_{11}	252.02	-29.09	-3.80	-7.78	6.50	2.84	-47.88	-98.26	82.06	25.82
	L_2-L_{10}	230.55	-46.37	-5.62	-11.57	3.81	4.34	-70.93	-146.07	-66.09	54.76
	L_3-L_9	411.53	-186.96	-10.35	-21.73	3.16	2.84	-130.70	-274.32	39.85	39.89
	L_4-L_8	-197.37	333.77	-10.35	-21.73	3.16	2.84	-130.70	-274.32	39.85	39.89
	L_5-L_7	-108.55	-10.73	-8.56	-11.70	1.94	5.23	-108.05	-147.68	24.46	66.08
	L_6-L_6	-108.55	-10.73	-8.56	-11.70	1.94	5.23	-108.05	-147.68	24.46	66.08
	L_7-L_5	-65.47	170.47	-7.76	-8.95	2.48	5.76	-88.00	-62.48	31.35	72.57
	L_8-L_4	-30.98	151.24	-3.81	-0.38	2.07	5.86	-65.55	4.76	-26.67	74.00
	L_9-L_3	-273.03	313.17	-0.14	-0.01	0.42	1.21	-14.13	-12.84	9.11	15.60
	L_{10}-L_2	-19.38	-193.41	-1.12	-1.02	0.77	3.27	-14.13	-12.84	9.70	41.26
	L_{11}-L_1	-27.10	-118.21	-0.32	-0.03	0.77	1.85	-1.49	-2.34	3.76	20.78
	L_1-L_2	740.88	-268.17	-1.44	0.11	13.05	-1.21	-18.37	1.39	166.71	-13.50
	L_2-L_3	-140.43	-76.07	0.27	-1.15	3.65	-0.21	3.44	-14.72	44.67	-2.07
	L_3-L_4	277.39	-114.88	0.27	-1.15	3.65	-0.21	3.44	-14.72	44.67	-2.07
	L_4-L_5	147.94	-145.21	1.02	-4.00	2.65	4.73	13.03	-51.16	33.88	60.38
	L_5-L_6	95.37	-212.64	-3.36	-8.15	3.77	3.86	-42.99	-116.85	48.15	49.36
	L_6-L_7	79.16	-178.58	-3.36	-8.15	3.77	3.86	-42.99	-116.85	48.15	49.36
	L_7-L_8	-182.93	415.63	-11.28	-24.24	3.32	3.09	-144.13	-309.60	42.44	39.34
	L_8-L_9	-370.36	-165.17	-16.39	-18.84	3.07	0.61	-209.46	-240.69	39.27	10.53
	L_9-L_{10}	-224.72	278.52	-16.39	-18.84	3.07	0.61	-209.46	-240.69	39.27	10.53
	L_{10}-L_{11}	-309.19	-21.34	-16.49	-7.99	1.48	-0.36	-204.71	-102.13	18.93	-4.54
	L_{11}-L_{12}	-227.31	59.39	-12.98	-1.80	0.94	-0.42	-165.85	23.05	12.04	-5.44
	L_1-L_{11}	-43.83	-117.87	0.29	0.36	3.83	-4.95	3.78	-17.53	49.99	-63.99
	L_2-L_{10}	-152.35	-177.62	0.51	-2.54	1.82	-2.18	8.65	-32.86	23.48	-28.26
	L_3-L_9	16.58	-333.31	0.51	-2.54	1.82	-2.18	-16.30	-78.12	23.48	-28.26
	L_4-L_8	55.48	-320.54	-3.40	-2.61	-0.15	0.70	-43.94	-101.12	-1.91	9.11
	L_5-L_7	55.48	-320.54	-3.40	-2.61	-0.15	0.70	-43.94	-101.12	-1.91	9.11
	L_6-L_6	-64.07	-371.05	-6.52	-19.13	0.61	2.15	-89.47	-247.45	0.10	27.77
	L_7-L_5	-370.76	82.43	-11.58	-5.85	1.46	2.40	-141.73	-20.68	18.76	31.69
	L_8-L_4	-204.71	-202.14	-10.23	-4.54	0.00	0.00	-145.73	-73.57	0.00	0.00
	L_9-L_3	-200.77	-149.87	-9.58	-2.67	1.78	2.62	-111.06	-34.56	23.02	36.45
	L_{10}-L_2	-131.78	166.76	-1.16	-0.89	3.13	5.41	-14.96	11.55	-40.51	70.05
	L_{11}-L_1	-131.78	166.76	-1.16	-0.89	3.13	5.41	-14.96	11.55	-40.51	70.05
	L_1-L_2	361.88	-178.02	-0.04	0.01	9.81	0.16	-0.52	0.07	131.06	2.12
	L_2-L_3	91.50	-331.31	-0.04	-0.96	1.98	3.90	-12.79	-12.49	-25.08	52.08
	L_3-L_4	189.90	5.62	-3.11	-6.14	4.13	4.32	-41.55	-62.07	55.15	58.35
	L_4-L_5	189.90	5.62	-3.11	-6.14	4.13	4.32	-41.55	-62.07	55.15	58.35
	L_5-L_6	-38.98	-56.51	-6.68	-13.68	3.14	1.51	-115.91	-182.71	41.91	20.12
	L_6-L_7	-66.52	-29.78	-1.26	-1.52	4.46	3.55	-16.83	20.31	-69.64	68.01

M_z Information

YY Axis Moments from STAAD

Location	Member	Lane Reduction & Impact Live Load Start-th	Lane Reduction & Impact Live Load End-th	Impact Pedestrian Load Max Start-th	Impact Pedestrian Load Max End-th	Max. Pos. Mom. Start-th	Max. Pos. Mom. End-th	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{bot}	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{my}	Equivalent Mom. Factor C_{mm}
Structure 1	L_0-L_1	-3.77	-13.84	-1.91	-7.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_1-L_2	-33.97	-1.54	3.89	-10.13	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_2-L_3	-1.67	-1.16	-0.05	-12.07	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
	L_3-L_4	54.36	-8.07	20.61	2.00	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_4-L_5	-43.77	74.28	16.37	1.08	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_5-L_6	10.54	4.72	9.28	0.51	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_6-L_7	-17.79	44.58	0.94	-2.40	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	-49.51	-57.39	-0.11	-0.19	1.75	3.56											
	L_8-L_9	-1.51	-2.90	-2.43	47.01	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_9-L_{10}	-3.96	-2.29	21.54	-17.76	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}	2.67	2.15	20.17	17.96	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_1-L_{11}	2.59	-22.34	5.98	16.11	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_2-L_{10}	-4.55	1.43	3.34	0.85	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_3-L_9	-4.55	1.43	3.34	0.85	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_4-L_8	-141.16	-656.43	-298.66	403.38	179.7	179.69	170.68	251.43	6743	3050.7	1.40	8297	0.99912321	5924.6	0.673	0.87	0.87
	L_5-L_7	-164.16	-44.12	10.31	-2.55	179.7	179.69	170.68	251.43	6743	3050.7	1.40	8297	0.99912321	5924.6	0.673	0.87	0.87
	L_6-L_6	-80.21	-25.18	3.91	-0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_7-L_5	-36.28	3.12	45.50	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_8-L_4	-23.89	11.68	-54.77	43.86	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_9-L_3	7.92	-21.91	43.26	85.58	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_2	13.55	-127.66	4.19	15.00	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_{11}-L_1	-14.97	-194.33	-1.17	-10.69	-0.52	1.16	-14.97	-194.33	-1.17	-10.69	-0.52	1.16	-14.97	-194.33	-1.17	-10.69	-0.52
	L_{12}-L_0	-176.95	-161.05	-2.68	27.24	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_{12}-L_1	-223.64	-253.84	39.66	58.73	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_1-L_2	-191.01	-185.99	-47.90	88.58	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_2-L_3	-133.32	-78.75	57.74	57.38	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_3-L_4	-133.36	-83.47	42.72	87.20	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_4-L_5	-133.36	-41.74	97.72	43.60	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_5-L_6	-11.42	-17.86	48.90	87.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-L_7	-18.97	-0.15	76.57	-29.50	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	-238.32	-182.76	-114.12	-220.98	226.0	226.0	325.96	219.39	8262	3738.1	1.40	10350	0.99887763	7449.1	0.767	0.91	0.91
	L_8-L_9	-8.55	-6.34	109.42	8.23	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_9-L_{10}	-3.01	-0.06	37.39	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}	-21.92	1.30	95.47	29.00	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_{11}-L_{12}	-47.88	-98.26	82.06	25.82	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_1-L_{11}	-47.88	-98.26	82.06	25.82	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_2-L_{10}	-70.93	-146.07	-66.09	54.76	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_3-L_9	-130.70	-274.32	39.85	39.89	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_4-L_8	-130.70	-274.32	39.85	39.89	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_5-L_7	-108.05	-147.68	24.46	66.08	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_6-L_6	-108.05	-147.68	24.46	66.08	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_5	-88.00	-62.48	31.35	72.57	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_8-L_4	-65.55	4.76	-26.67	74.00	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_9-L_3	-14.13	-12.84	9.70	41.26	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
	L_{10}-L_2	-14.13	-12.84	9.11	15.60	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_{11}-L_1	-1.49	-2.34	3.76	20.78	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_1-L_2	-18.37	1.39	166.71	-13.50	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_2-L_3	3.44	-14.72	44.67	-2.07	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
	L_3-L_4	3.44	-14.72	44.67	-2.07	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
	L_4-L_5	13.03	-51.16	33.88	60.38	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_5-L_6	-42.99	-116.85	48.15	49.36	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_6-L_7	-42.99	-116.85	48.15	49.36	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	-144.13	-309.60	42.44	39.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-L_9	-209.46	-240.69	39.27	10.53	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_9-L_{10}	-209.46	-240.69	39.27	10.53	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}	-204.71	-102.13	18.93	-4.54	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_{11}-L_{12}	-165.85	23.05	12.04	-5.44	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
	L_1-L_{11}	-43.83	-117.87	0.29	0.36	3.83	-4.95	3.78	-17.53	49.99	-63.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_2-L_{10}	-152.35	-177.62	0.51	-2.54	1.82	-2.18	8.65	-32.86	23.48	-28.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_3-L_9	16.58	-333.31	0.51	-2.54	1.82	-2.18	-16.30	-78.12	23.48	-28.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_4-L_8	55.48	-320.54	-3.40	-2.61	-0.15	0.70	-43.94	-101.12	-1.91	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_5-L_7	55.48	-320.54	-3.40	-2.61	-0.15	0.70	-43.94	-101.12	-1.91	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_6-L_6	-89.47	-247.45	0.10	27.77	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_5	-141.73	-20.68	18.76	31.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_8-L_4	-145.73	-73.57	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	0.00
	L_9-L_3	-111.06	-34.56	23.02	36.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{10}-L_2	-14.96	11.55	-40.51	70.05	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_{11}-L_1	-14.96	11.55	-40.51	70.05	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_1-L_2	-0.52	0.07	131.06	2.12	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_2-L_3	-12.79	-12.49	-25.08	52.08	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_3-L_4	-41.55	-62.07	55.15	58.35	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
	L_4-L_5	-41.55	-62.07	55.15	58.35	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
	L_5-L_6	-115.91	-182.71	41.91	20.12	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_6-L_7	-16.83	20.31	-69.64	68.01	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

Compression

Location	Member	Yield Axial Portion	Yield Moment Portion	Yield Total	Pass	Buckle Axial Portion	Buckle Moment Portion	Buckle Total	Pass	Fracture Axial Portion	Fracture Moment Portion	Fracture Total	Pass
Structure 1	L_0-L_1	0.013	0.030	0.043	OK	0.030	0.005	Yes		0.030	0.005	Yes	
	L_1-L_2	0.031	0.107	0.142	OK	0.096	0.042	Yes		0.096	0.042	Yes	
	L_2-L_3	0.031	0.107	0.142	OK	0.096	0.042	Yes		0.096	0.042	Yes	
	L_3-L_4	0.190	0.039	0.229	Yes	0.190	0.039	0.23	Yes	0.190	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SU
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-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	-66.29	86.22	0.70	-0.93	-3.43	4.30	9.41	-12.46	-49.88	67.41
	L_1~L_2	-14.44	23.27	0.91	-0.92	-2.77	3.00	12.14	-12.22	-36.99	40.12
	L_2~L_3	-14.59	5.55	0.49	-1.68	2.37	0.74	14.59	-16.58	-22.50	6.84
	U_1~L_2	36.84	-39.22	0.96	-1.18	-0.76	1.24	12.84	-15.76	-10.19	16.54
	L_2~U_2	49.77	-49.19	0.69	-0.81	-1.08	1.07	11.80	-12.37	-14.51	14.42
	U_2~L_3	57.71	-69.80	-0.01	0.01	2.02	-2.65	-0.08	0.11	26.53	-35.38
	L_3~L_4	62.32	-67.29	-0.06	0.07	1.96	-2.56	-0.77	1.06	-8.52	34.10
	U_3~L_4	106.28	-118.16	-0.13	0.10	5.21	-5.41	-1.78	1.35	-69.68	-72.30
	L_4~L_5	-10.96	6.72	0.00	-0.01	0.70	-0.82	0.05	-0.07	9.31	-10.58
	U_4~L_5	-144.91	167.70	0.35	-0.32	-3.79	4.46	-1.62	1.41	-49.05	57.68
	L_5~L_6	-102.02	95.66	0.16	-0.39	-3.25	3.89	2.03	-4.59	-42.06	50.14
	U_5~L_6	-111.13	108.65	-0.02	-0.13	-3.07	4.40	-0.22	1.75	-39.75	50.20
	L_6~L_7	-96.42	93.90	0.17	0.15	-2.50	2.94	2.17	-1.99	-32.36	37.97
	U_6~L_7	-43.29	63.30	-0.11	-0.07	-1.61	2.31	-1.39	1.11	-44.81	46.92
	L_7~L_8	-60.91	75.94	0.67	-0.65	-2.72	3.05	8.63	-8.42	-35.13	39.48
	U_7~L_8	-53.33	69.60	0.32	-0.30	-1.46	1.64	3.28	-3.06	-36.77	37.23
	L_8~L_9	8.32	-15.87	-1.30	1.26	3.16	-3.33	-16.81	16.29	40.83	-43.14
	U_8~L_9	47.73	-60.39	-0.37	0.31	2.61	-2.82	-8.27	8.31	44.81	-46.32
	L_9~L_{10}	61.55	-72.81	-0.53	0.54	3.80	-3.95	-6.86	6.95	49.19	-51.13
	U_9~L_{10}	113.11	-138.25	-0.74	0.74	5.47	-5.66	-9.43	9.53	84.14	-86.14
	L_{10}~L_{11}	157.87	-153.86	-0.76	0.68	7.48	-7.34	-9.79	8.79	96.82	-94.93
	U_{10}~L_{11}	131.38	-213.66	-0.31	0.54	5.08	-6.98	-4.06	7.04	65.69	-90.31
	L_{11}~L_{12}	-147.13	191.00	0.69	-0.69	-5.08	6.27	8.95	-8.95	-72.29	89.88
	U_{11}~L_{12}	-122.87	130.77	0.81	-0.84	-5.04	5.50	10.40	-10.71	-64.34	70.21
	L_{12}~L_{13}	-62.46	69.03	0.55	-0.66	-2.52	2.90	8.25	-8.43	-32.22	37.00
	U_{12}~L_{13}	-37.86	-43.29	0.83	-0.83	-3.81	3.81	10.56	-10.56	-38.63	38.63
	L_{13}~L_{14}	-9.11	15.69	1.20	1.05	-2.51	2.92	15.36	-14.67	-32.06	36.00
	U_{13}~L_{14}	14.84	-14.93	1.45	-1.53	-1.46	1.72	18.56	-19.54	-18.59	22.06
	L_{14}~L_{15}	39.69	-45.43	1.15	-1.14	-0.63	0.93	14.84	-17.63	-8.33	11.70
	U_{14}~L_{15}	88.81	-97.92	-0.90	0.69	4.22	-4.61	-11.47	8.78	53.65	-56.38
	L_{15}~L_{16}	133.08	-133.02	-0.45	0.13	6.40	-6.67	-5.49	2.13	83.02	-84.78
	U_{15}~L_{16}	140.09	-147.00	-0.04	0.00	5.95	-6.29	-0.51	0.00	75.96	-79.81
	L_{16}~L_{17}	148.96	-153.44	0.14	0.26	5.84	-6.47	-1.82	3.37	74.67	-77.73
	U_{16}~L_{17}	149.87	-139.56	0.43	0.32	5.79	-6.10	5.19	4.00	74.67	-72.89
	L_{17}~L_{18}	185.41	-182.32	-0.64	0.57	7.23	-6.87	-8.13	7.24	92.34	-87.79
	U_{17}~L_{18}	72.60	73.14	0.38	0.19	2.48	-2.38	5.19	-5.44	37.38	-37.70
	L_{18}~L_{19}	-128.28	129.98	0.75	-0.67	-5.08	4.95	9.43	-8.42	-64.12	62.44
	U_{18}~L_{19}	-98.32	98.82	0.68	-0.62	-4.06	4.06	8.62	-8.62	-52.24	52.24
	L_{19}~L_{20}	-125.94	122.64	0.76	-0.72	-5.77	6.02	9.60	-8.03	-72.78	76.02
	U_{19}~L_{20}	-109.69	106.91	1.00	-0.96	-5.06	5.86	12.61	-12.41	-63.91	73.92
	L_{20}~L_{21}	-153.06	153.02	0.45	0.13	6.40	-6.67	-5.49	2.13	83.02	-84.78
	U_{20}~L_{21}	-43.25	43.74	0.72	-0.63	-2.63	3.06	9.05	-7.95	-35.74	38.65
	L_{21}~L_{22}	-29.76	34.79	0.91	-0.91	-3.66	3.66	12.40	-12.40	-36.70	36.70
	U_{21}~L_{22}	-5.28	1.60	-1.18	1.39	0.07	-0.14	-14.69	17.52	0.93	-1.77
	L_{22}~L_{23}	46.57	-51.18	-0.99	0.99	3.64	-3.77	-12.49	12.49	45.96	-47.57
	U_{22}~L_{23}	62.68	-61.36	-1.01	0.97	4.82	-4.76	-12.70	12.26	60.63	-60.06
	L_{23}~L_{24}	106.60	-105.79	-1.07	1.04	7.88	-8.00	-13.55	13.14	99.49	-100.95
	U_{23}~L_{24}	50.25	50.25	0.00	0.00	3.27	-3.27	0.00	0.00	37.23	-37.23
	L_{24}~L_{25}	114.56	-114.55	-0.53	0.44	7.55	-7.17	-6.63	5.53	95.35	-90.48
	U_{24}~L_{25}	-13.74	5.73	-0.59	0.59	0.77	-0.77	-7.39	7.39	-5.81	5.81
	L_{25}~L_{26}	-121.12	118.67	0.79	-0.74	4.51	4.48	10.14	-9.48	-57.58	57.29
	U_{25}~L_{26}	-92.37	86.40	0.82	-0.86	4.41	4.52	7.97	-10.99	-56.29	59.07
	L_{26}~L_{27}	-96.77	103.11	0.07	-0.29	-5.04	5.31	0.92	-3.67	-64.43	67.83
	U_{26}~L_{27}	-19.56	19.56	0.46	0.46	-2.71	2.71	6.55	-6.55	-39.96	39.96
	L_{27}~L_{28}	-63.45	70.59	0.51	0.45	-3.13	3.60	6.55	-5.69	-39.96	46.00
	U_{27}~L_{28}	-32.66	38.67	0.18	0.21	-0.67	0.73	-2.31	2.63	-8.59	9.26
	L_{28}~L_{29}	-16.15	17.79	-2.32	2.32	-4.57	4.57	-16.56	16.65	36.71	-37.68
	U_{28}~L_{29}	4.46	-6.40	-1.30	1.23	2.87	-3.11	-16.56	15.65	36.71	-39.67
	L_{29}~L_{30}	47.22	-50.55	-0.79	0.80	3.69	-3.87	-10.11	10.20	47.13	-49.68
	U_{29}~L_{30}	47.22	-50.55	-0.79	0.80	3.69	-3.87	-10.11	10.20	47.13	-49.68
	L_{30}~L_{31}	104.86	-112.00	-1.13	1.06	7.80	-7.64	-14.44	13.59	99.64	-97.66
	U_{30}~L_{31}	108.12	-132.79	-0.57	0.93	4.73	-7.40	-7.31	11.93	60.43	-94.56
	L_{31}~L_{32}	-54.18	54.18	0.55	-0.55	3.77	-3.77	-7.39	7.39	54.77	-54.77
	U_{31}~L_{32}	-109.22	116.95	0.49	-0.46	-5.18	5.41	6.30	-6.00	-66.96	69.96
	L_{32}~L_{33}	-48.65	58.79	0.41	-0.41	-2.60	2.93	5.24	-5.33	-33.68	37.95
	U_{32}~L_{33}	-39.15	42.89	0.53	-0.53	-2.47	2.47	6.55	-6.55	-34.56	34.56
	L_{33}~L_{34}	-5.41	11.55	1.00	1.02	-2.81	3.03	12.93	-13.24	-36.37	39.24
	U_{33}~L_{34}	27.86	-30.67	1.24	-1.38	0.70	-0.74	15.99	-17.82	9.01	-10.56
	L_{34}~L_{35}	76.55	-83.03	0.43	0.30	4.05	-4.19	-5.54	3.87	52.35	-54.19
	U_{34}~L_{35}	85.75	-83.03	0.43	0.30	4.05	-4.19	-5.54	3.87	52.35	-54.19
	L_{35}~L_{36}	91.07	-97.07	0.03	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30
	U_{35}~L_{36}	139.46	-154.10	0.16	0.16	6.16	-6.67	-2.26	2.02	79.64	-86.29
	L_{36}~L_{37}	99.11	-131.56	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28
	U_{36}~L_{37}	95.00	-87.91	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30
	L_{37}~L_{38}	-135.46	-154.10	-0.18	0.16	6.16	-6.67	-2.26	2.02	79.64	-86.29
	U_{37}~L_{38}	52.77	-74.32	0.03	-0.04	1.62	-2.36	0.41	-0.46	21.62	-31.48
	L_{38}~L_{39}	-62.87	69.94	0.34	-0.33	-3.47	3.72	4.58	-4.34	-46.37	49.63
	U_{38}~L_{39}	-41.65	35.38	0.18	-0.32	-2.19	2.84	2.36	-4.25	-29.24	37.91
	L_{39}~L_{40}	-36.85	40.05	0.00	-0.08	-1.95	2.51	-0.01	-1.06	-26.06	33.52
	U_{39}~L_{40}	-39.84	39.91	-1.00	1.20	-1.09	1.17	-13.39	16.02	-14.54	15.58
	L_{40}~L_{41}	-38.87	40.30	-1.80	1.84	1.77	-1.99	-24.09	24.60	23.59	-26.53
	U_{40}~L_{41}	-13.42	14.14	-1.32	1.49	1.28	-1.98	-17.61	19.99	17.13	-26.45
	L_{41}~L_{42}	5.87	-8.62	1.38	1.23	3.67	-3.73	-18.46	18.43	49.00	-49.84
	U_{41}~L_{42}	20.19	-40.81	-0.29	0.95	0.86	-3.91	-3.55	12.68	11.49	-52.22

M_z Axis Moment Properties

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 (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S$_{bot}$	M_z (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	$C_{m(x)}$ Factor
Structure 1	U_1~L_1	-600.95	99.88	-132.82	186.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_1~L_2	-2.98	14.36	-56.86	82.41	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_2~L_3	27.31	-28.74	-20.90	33.01	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_1~L_2	64.58	-66.28	34.64	-24.29	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_2~U_2	76.71	-78.26	34.64	-24.29	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_2~L_3	74.91	-90.60	110.03	-136.72	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	L_3~L_4	-152.52	212.66	-252.18	292.99	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	U_3~L_4	-129.98	118.39	-187.30	189.54	35.5	35.52	33.44	58.46	14	1309.7	1.65	1929	1.5
	U_4~L_5	-144.72	207.42	-196.04	285.90	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	L_5~L_6	-122.52	119.48	-167.61	171.44	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	U_5~L_6	-97.56	87.77	-124.85	150.02	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	L_6~L_7	-32.10	37.84	-65.48	76.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_6~L_7	61.89	-76.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.833
	L_7~L_8	-6.21	61.89	-44.81	46.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_7~L_8	-6.86	6.95	49.19	-51.13	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_8~L_9	-14.64	17.43	9.33	-11.15	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_8~L_9	-160.68	-157.22	281.90	-291.90	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	L_9~L_{10}	-179.86	-233.89	-278.75	364.14	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	U_9~L_{10}	-188.60	331.10	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{10}~L_{11}	-266.21	46.71	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{10}~L_{11}	-395.16	42.74	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{11}~L_{12}	-268.00	46.71	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{11}~L_{12}	-179.86	-233.89	-278.75	364.14	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	L_{12}~L_{13}	-160.68	-157.22	281.90	-291.90	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	U_{12}~L_{13}	-192.50	-188.60	331.10	-323.42	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{13}~L_{14}	-125.72	-15.44	15.42	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.833
	U_{13}~L_{14}	-71.10	-85.62	143.96	-161.12	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	L_{14}~L_{15}	-160.68	-157.22	281.90	-291.90	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	U_{14}~L_{15}	-192.50	-188.60	331.10	-323.42	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{15}~L_{16}	-266.21	46.71	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{15}~L_{16}	-395.16	42.74	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{16}~L_{17}	-268.00	46.71	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{16}~L_{17}	-179.86	-233.89	-278.75	364.14	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	L_{17}~L_{18}	-160.68	-157.22	281.90	-291.90	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	U_{17}~L_{18}	-192.50	-188.60	331.10	-323.42	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{18}~L_{19}	-125.72	-15.44	15.42	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.833
	U_{18}~L_{19}	-71.10	-85.62	143.96	-161.12	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	L_{19}~L_{20}	-14.64	17.43	9.33	-11.15	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{19}~L_{20}	-6.86	6.95	49.19	-51.13	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{20}~L_{21}	-6.21	61.89	-44.81	46.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{20}~L_{21}	-32.10	37.84	-65.48	76.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{21}~L_{22}	-97.56	87.77	-124.85	150.02	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{21}~L_{22}	-152.52	119.48	-167.61	171.44	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	L_{22}~L_{23}	-129.98	118.39	-187.30	189.54	35.5	35.52	33.44	58.46	14	1309.7	1.65	1929	1.5
	U_{22}~L_{23}	-144.72	207.42	-196.04	285.90	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	L_{23}~L_{24}	-152.52	212.66	-252.18	292.99	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	U_{23}~L_{24}	-122.52	119.48	-167.61	171.44	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	L_{24}~L_{25}	-97.56	87.77	-124.85	150.02	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{24}~L_{25}	-32.10	37.84	-65.48	76.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{25}~L_{26}	-6.21	61.89	-44.81	46.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{25}~L_{26}	-6.86	6.95	49.19	-51.13	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{26}~L_{27}	-14.64	17.43	9.33	-11.15	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{26}~L_{27}	-160.68	-157.22	281.90	-291.90	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	L_{27}~L_{28}	-179.86	-233.89	-278.75	364.14	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	U_{27}~L_{28}	-188.60	331.10	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{28}~L_{29}	-266.21	46.71	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{28}~L_{29}	-395.16	42.74	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{29}~L_{30}	-268.00	46.71	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{29}~L_{30}	-179.86	-233.89	-278.75	364.14	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	L_{30}~L_{31}	-160.68	-157.22	281.90	-291.90	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	U_{30}~L_{31}	-192.50	-188.60	331.10	-323.42	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{31}~L_{32}	-125.72	-15.44	15.42	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3	-0.833
	U_{31}~L_{32}	-71.10	-85.62	143.96	-161.12	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	L_{32}~L_{33}	-14.64	17.43	9.33	-11.15	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{32}~L_{33}	-6.86	6.95	49.19	-51.13	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{33}~L_{34}	-6.21	61.89	-44.81	46.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{33}~L_{34}	-32.10	37.84	-65.48	76.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{34}~L_{35}	-97.56	87.77	-124.85	150.02	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{34}~L_{35}	-152.52	119.48	-167.61	171.44	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	L_{35}~L_{36}	-129.98	118.39	-187.30	189.54	35.5	35.52	33.44	58.46	14	1309.7	1.65	1929	1.5
	U_{35}~L_{36}	-144.72	207.42	-196.04	285.90	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	L_{36}~L_{37}	-152.52	212.66	-252.18	292.99	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	U_{36}~L_{37}	-122.52	119.48	-167.61	171.44	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	L_{37}~L_{38}	-97.56	87.77	-124.85	150.02	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{37}~L_{38}	-32.10	37.84	-65.48	76.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{38}~L_{39}	-6.21	61.89	-44.81	46.32	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{38}~L_{39}	-6.86	6.95	49.19	-51.13	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{39}~L_{40}	-14.64	17.43	9.33	-11.15	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{39}~L_{40}	-160.68	-157.22	281.90	-291.90	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	L_{40}~L_{41}	-179.86	-233.89	-278.75	364.14	33.1	33.05	32.91	54.51	14	1187.1	1.65	1766	1.5
	U_{40}~L_{41}	-188.60	331.10	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{41}~L_{42}	-266.21	46.71	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{41}~L_{42}	-395.16	42.74	-323.42	421.72	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5

M_y 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 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	-3.94	1.27	-1.23	-0.39	-6.86	-2.20	-16.41	-5.20	-81.69	-29.42
	L_1~L_2	-16.73	0.03	0.37	-0.23	5.62	2.65	4.88	-3.13	75.03	35.36
	L_2~L_3	-29.24	-7.50	3.09	3.13	41.76	0.00	27.90	-7.64	121.43	41.76
	U_1~L_2	-13.61	-3.05	2.10	0.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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

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 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) | Max. Neg. Mom. Start (k-in) | End (k-in) | S_{req} (in^3) | S_x (in^3) | Z_z (in^3) | I_z (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_x | M_r (k-in) | Equivalent Mom. Factor a | C_{mx} | C_{mm} | 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. Pos. Mom. Start (k-in) | End (k-in) | Max. Neg. Mom. Start (k-in) | End (k-in) | S_{req} (in^3) | S_x (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_x | M_{ry} | Equivalent Mom. Factor a | C_{mx} | C_{mm} | Axial Force (k) | Moment (k-in) | Total | Pass | Axial Force (k) | Moment (k-in) | Total | Pass | Axial Force (k) | Moment (k-in) | Total | Pass | Axial Force (k) | Moment (k-in) | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Condition: 5CI
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
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(+) Positive Stresses / Forces Indicate Tension
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& 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 (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 - U_2	-75.12	-0.70	1.28	1.40	0.69	-14.00	14.27	15.62	7.69	-155.82
	U_2 - U_3	46.81	20.16	0.69	0.21	-2.17	-16.61	2.88	32.40	-24.14	-187.15
	U_3 - U_4	-112.19	86.51	1.43	3.62	-3.07	-16.68	15.95	40.31	-34.17	-185.70
	U_4 - U_5	-15.68	66.14	2.29	2.61	-3.39	-3.24	25.54	29.07	-37.73	-167.43
	U_5 - U_6	-9.16	61.58	2.32	3.07	-16.40	-3.79	25.80	37.47	-182.63	-42.16
	U_6 - U_7	42.76	120.09	2.57	3.67	-13.32	0.64	28.59	40.85	-148.26	7.13
	U_7 - U_8	79.92	43.54	2.62	2.62	-10.31	-2.28	29.40	22.45	-147.37	-25.41
	U_8 - U_9	-47.40	525.96	0.47	2.84	-1.06	-14.55	5.19	84.34	-30.48	-61.61
	U_9 - U_{10}	474.61	-124.27	4.32	0.00	-7.47	-0.00	88.63	-0.01	-83.04	0.00
	U_{10} - U_{11}	46.76	20.63	1.61	2.31	0.53	-9.36	17.39	24.86	5.71	-100.91
	U_{11} - U_{12}	64.51	-138.68	2.29	1.87	1.96	-15.81	32.08	19.33	21.14	-176.46
	U_{12} - U_{13}	27.83	-140.42	3.04	1.41	-1.66	-14.59	32.72	15.23	-11.45	-166.83
	U_{13} - U_{14}	-106.18	-154.99	2.19	0.81	-2.00	-19.60	23.58	8.74	-21.57	-211.37
	U_{14} - U_{15}	-137.97	-202.66	1.16	0.00	-1.84	-25.62	15.19	0.00	-158.85	-266.76
	U_{15} - U_{16}	-245.66	-192.98	1.53	1.13	-25.63	-10.16	16.46	12.14	-276.35	-109.52
	U_{16} - U_{17}	-123.52	-326.70	1.84	0.30	-24.01	8.62	19.83	3.25	-264.27	-95.12
	U_{17} - U_{18}	-269.82	-144.58	0.74	0.11	-24.32	-7.10	8.02	1.13	-262.24	-76.56
	U_{18} - U_{19}	-134.16	-67.25	0.75	-0.33	-17.78	0.90	8.12	-3.47	-189.85	-81.88
	U_{19} - U_{20}	-170.35	-20.48	0.59	-0.05	-10.82	-0.22	6.32	-0.57	-116.69	-2.36
	U_{20} - U_{21}	-186.12	24.46	0.65	-0.52	-9.44	3.78	6.95	-5.60	-101.78	40.71
	U_{21} - U_{22}	-327.18	-325.33	1.42	3.06	-11.67	-21.54	15.14	32.59	-126.42	-229.32
	U_{22} - U_{23}	-338.53	-367.26	1.71	3.66	-8.79	-23.71	17.60	36.50	-83.12	-231.36
	U_{23} - U_{24}	-396.09	-197.74	3.02	5.85	-7.81	-24.97	32.10	62.23	-83.14	-265.84
	U_{24} - U_{25}	-344.15	-179.39	4.51	3.93	-5.72	-37.74	48.04	41.85	-60.89	-401.94
	U_{25} - U_{26}	-226.10	-291.71	3.30	4.46	-3.05	-35.36	35.51	47.47	-422.70	-85.39
	U_{26} - U_{27}	-350.17	-90.75	3.85	0.00	-26.09	-6.13	40.98	53.25	-277.77	-65.21
	U_{27} - U_{28}	-227.32	-313.73	4.50	0.13	-23.66	-0.45	50.23	1.42	-277.77	-44.79
	U_{28} - U_{29}	-167.07	-39.82	4.87	4.85	-18.91	-4.63	51.85	51.58	-201.30	-49.32
	U_{29} - U_{30}	-139.77	-170.72	4.39	5.88	-20.39	0.10	46.21	41.33	-217.07	1.02
	U_{30} - U_{31}	-261.00	-395.93	0.45	15.25	-0.78	-1.55	4.81	162.37	-8.28	16.62
	U_{31} - U_{32}	-1192.75	-50.80	13.25	0.00	-4.89	-0.00	139.43	0.00	-53.16	0.00
	U_{32} - U_{33}	-25.30	71.62	1.15	2.67	-0.66	-0.09	12.14	28.08	-6.89	-0.96
	U_{33} - U_{34}	-150.58	33.05	3.41	3.67	-1.61	-14.67	39.85	35.74	-14.67	-169.73
	U_{34} - U_{35}	-150.58	33.05	3.67	3.06	-1.64	-15.75	38.65	32.18	-10.92	-165.73
	U_{35} - U_{36}	-147.30	4.36	4.25	3.01	-0.18	-19.61	44.68	31.66	-1.86	-206.36
	U_{36} - U_{37}	-147.30	4.36	4.25	3.01	-0.18	-19.61	44.68	31.66	-1.86	-206.36
	U_{37} - U_{38}	-31.67	-34.01	3.50	0.68	-0.54	-22.58	36.82	7.16	-5.72	-237.60
	U_{38} - U_{39}	-86.04	7.79	2.17	2.37	-0.33	-11.79	22.87	24.99	-2.79	-124.90
	U_{39} - U_{40}	-60.95	-86.97	1.42	1.95	-26.31	-10.02	14.97	20.54	-276.84	-105.39
	U_{40} - U_{41}	-141.54	58.98	1.88	2.62	-15.32	0.63	20.23	28.50	-175.97	6.84
	U_{41} - U_{42}	-32.99	28.66	3.17	4.10	-21.39	-0.32	33.36	43.14	-225.07	-66.48
	U_{42} - U_{43}	-15.12	113.76	3.03	4.35	-21.82	-1.24	31.86	45.71	-229.54	-13.08
	U_{43} - U_{44}	-2.69	231.81	2.50	3.27	-21.25	-1.57	26.30	34.37	-223.58	16.50
	U_{44} - U_{45}	-122.28	116.58	0.34	15.74	0.14	-1.96	3.62	165.57	1.48	-20.60
	U_{45} - U_{46}	-1153.78	-196.80	12.23	1.53	-1.21	-0.90	130.24	16.26	-12.85	-9.53
	U_{46} - U_{47}	-67.81	62.60	1.53	1.53	-0.61	-0.13	14.78	16.25	-6.50	-1.43
	U_{47} - U_{48}	-178.87	-59.61	3.89	4.22	-2.28	-18.67	41.46	44.89	24.30	-198.75
	U_{48} - U_{49}	-178.87	-59.61	3.89	4.22	-2.28	-18.67	41.46	44.89	24.30	-198.75
	U_{49} - U_{50}	-68.77	-178.57	5.22	4.18	-3.54	-20.41	55.58	44.47	-37.70	-217.33
	U_{50} - U_{51}	-236.40	-153.06	4.01	3.49	-4.60	-38.25	42.68	37.14	-48.97	-407.23
	U_{51} - U_{52}	-98.63	-313.14	4.21	3.98	-38.61	-11.18	44.77	42.34	-411.08	-119.02
	U_{52} - U_{53}	-250.27	-392.96	2.29	3.47	-17.28	-16.79	24.47	37.01	-134.06	-477.48
	U_{53} - U_{54}	-350.27	-386.72	3.14	3.96	-6.58	-27.38	33.44	9.39	-430.60	-127.73
	U_{54} - U_{55}	-350.27	-386.72	3.14	3.96	-6.58	-27.38	33.44	9.39	-430.60	-127.73
	U_{55} - U_{56}	-278.82	-117.63	2.12	-0.55	-30.97	-3.23	22.54	-5.90	-329.74	-34.43
	U_{56} - U_{57}	-282.26	-37.53	2.12	-0.61	-31.32	-0.42	22.54	-6.03	-329.74	-34.43
	U_{57} - U_{58}	-186.18	-74.10	1.59	-0.90	-13.46	9.21	16.93	-8.53	-143.26	98.06
	U_{58} - U_{59}	-139.59	-187.78	-0.11	0.80	3.39	-13.10	-1.16	8.66	36.53	-141.26
	U_{59} - U_{60}	-47.42	-118.54	-0.63	0.63	1.43	-14.35	11.41	10.34	-74.17	-61.60
	U_{60} - U_{61}	-52.50	-128.95	-0.20	-1.02	0.58	-16.27	-2.12	10.99	6.30	-175.40
	U_{61} - U_{62}	-41.01	-105.92	0.91	0.00	-0.84	-0.00	10.26	0.00	-4.68	0.00
	U_{62} - U_{63}	-277.57	-111.60	0.78	1.98	-4.94	-20.80	8.37	21.34	-53.24	-224.23
	U_{63} - U_{64}	-166.87	-240.33	1.36	1.87	-6.08	-27.34	14.67	20.11	-65.51	-294.82
	U_{64} - U_{65}	-287.50	-127.73	1.65	1.65	-28.28	-6.62	14.65	16.25	-304.86	-44.59
	U_{65} - U_{66}	-141.30	-113.93	1.15	2.11	-23.02	-3.12	12.35	22.71	-248.18	-33.65
	U_{66} - U_{67}	-145.41	22.73	1.43	3.12	-17.09	-2.20	15.41	33.66	-184.30	-23.76
	U_{67} - U_{68}	-141.54	58.98	1.88	2.62	-15.32	0.63	20.23	28.50	-175.97	6.84
	U_{68} - U_{69}	3.07	40.55	2.33	1.52	-10.67	-0.67	25.12	16.36	-115.00	-7.27
	U_{69} - U_{70}	-136.80	470.88	-0.11	8.68	-0.01	-0.03	-1.19	93.56	-0.13	-0.27
	U_{70} - U_{71}	497.19	-34.44	9.34	0.25	-0.03	-0.01	104.03	2.76	-0.29	-0.09
	U_{71} - U_{72}	41.01	105.92	1.91	2.56	-0.02	-8.87	21.22	28.48	0.20	-88.27
	U_{72} - U_{73}	113.01	44.44	3.62	2.46	0.80	-11.28	40.35	27.40	8.93	-125.52
	U_{73} - U_{74}	59.30	15.07	3.50	2.21	-1.58	-15.99	39.01	24.55	-17.58	-177.99
	U_{74} - U_{75}	80.04	-19.79	3.51	1.94	-14.01	-6.29	39.05	21.63	-158.00	-70.05
	U_{75} - U_{76}	80.24	-119.59	3.49	0.74	-18.01	-5.33	38.84	8.24	-200.46	-69.31
	U_{76} - U_{77}	-24.67	-27.08	2.17	0.20	-18.30	-4.66	24.16	2.26	-203.78	-51.84
	U_{77} - U_{78}	29.36	-160.66	1.50	-0.43	-13.68	-0.71	16.70	-4.82	-152.39	-7.86

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_{bb} (in^3)	Z_z (in^4)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula f.S Term = F/S_{bb}	M_n k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(a)}$	Equivalent Mom. Factor $C_{b(bb)}$
Structure 1	U_1 - U_2	0.00	0.00	-72.60	19.40	811.15	2033.47	90.2	90.24	72.24	1247.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_2 - U_3	0.00	0.00	-57.10	19.91	-50.22	2833.16	90.2	90.24	72.24	1247.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_3 - U_4	0.00	0.00	-125.10	164.87	-190.26	-128.95	90.2	90.24	76.71	1247.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_4 - U_5	0.00	0.00	-12.82	63.91	-37.73	-191.91	90.2	90.24	72.24	1247.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_5 - U_6	0.00	0.00	21.62	128.77	-249.33	25.25	90.2	90.24	72.24	1247.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_6 - U_7	0.00	0.00	92.76	269.22	-137.14	165.38	90.2	90.24	76.71	1247.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_7 - U_8	0.00	0.00	103.26	83.42	-35.42	23.75	90.2	90.24	76.71	1247.46	2147	1328.6	1.41	4206	0.99880042	2974.3
	U_8 - U_9	0.00	0.00	-54.87	33.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_9 - U_{10}	0.00	0.00	732.47	-151.57	617.25	-161.59	130.3	130.35	105.11	180.77	2960	1795.3	1.39	5965	0.99880039	4250.8
	U_{10} - U_{11}	0.00	0.00	83.40	99.13	68.22	-104.37	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873194	3184.1
	U_{11} - U_{12}	0.00	0.00	122.97	-154.58	131.35	-611.98	130.3	130.35	105.11	180.77	2960	1795.3	1.39	5965	0.99880039	4250.8
	U_{12} - U_{13}	0.00	0.00	78.72	-162.73	21.29	-386.42	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99872695	4241.5
	U_{13} - U_{14}	0.00	0.00	193.63	-235.2	-364.27	-89.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{14} - U_{15}	0.00	0.00	8.02	1.13	-262.24	-76.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{15} - U_{16}	0.00	0.00	8.12	-3.47	-189.85	-81.88	-449.57	-23.79	127.3	170.43	139.23	3668	2526.5	1.40	6146	0.99907148
	U_{16} - U_{17}	0.00	0.00	6.32	-0.57	-116.69	-2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{17} - U_{18}	0.00	0.00	6.95	-5.60	-101.78	40.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{18} - U_{19}	0.00	0.00	15.14	32.59	-126.42	-229.32	139.6	139.63	111.16	199.70	3434	1990.9	1.45	6999	0.99880041	4553.8
	U_{19} - U_{20}	0.00	0.00	17.60	36.50	-83.12	-231.36	139.6	139.63	111.16	199.70	3434	1990.9	1.45	6999	0.99880041	4553.8
	U_{20} - U_{21}	0.00	0.00	32.10	62.23	-83.14	-265.84	139.6	139.63	111.16	199.70	3434	1990.9	1.45	6999	0.99880041	4553.8
	U_{21} - U_{22}	0.00	0.00	48.04	41.85	-60.89	-401.94	139.6	139.63	111.16	199.70	3434	1990.9	1.45	6999	0.99880041	4553.8
	U_{22} - U_{23}	0.00	0.00	35.51	47.47	-422.70	-85.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{23} - U_{24}	0.00	0.00	40.98	53.25	-277.77	-65.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{24} - U_{25}	0.00	0.00	50.23	1.42	-277.77	-44.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{25} - U_{26}	0.00	0.00	51.85	51.58	-201.30	-49.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{26} - U_{27}	0.00	0.00	46.21	41.33	-217.07	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{27} - U_{28}	0.00	0.00	4.81	162.37	-8.28	16.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{28} - U_{29}	0.00	0.00	139.43	0.00	-53.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{29} - U_{30}	0.00	0.00	12.14	28.08	-6.89	-0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{30} - U_{31}	0.00	0.00	38.85	35.74	-14.67	-169.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{31} - U_{32}	0.00	0.00	38.65	32.18	-10.92	-165.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{32} - U_{33}	0.00	0.00	44.68	31.66	-1.86	-206.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{33} - U_{34}	0.00	0.00	44.68	31.66	-1.86	-206.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{34} - U_{35}	0.00	0.00	36.82	7.16	-5.72	-237.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{35} - U_{36}	0.00	0.00	22.87	24.99	-2.79	-124.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{36} - U_{37}	0.00	0.00	14.97	20.54	-276.84	-105.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{37} - U_{38}	0.00	0.00	20.23	28.50	-175.97	6.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{38} - U_{39}	0.00	0.00	33.36	43.14	-225.07	-66.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{39} - U_{40}	0.00	0.00	31.86	45.71	-229.54	-13.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{40} - U_{41}	0.00	0.00	26.30	34.37	-223.58	16.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{41} - U_{42}	0.00	0.00	3.62	165.57	1.48	-20.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{42} - U_{43}	0.00	0.00	130.24	16.26	-12.85	-9.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{43} - U_{44}	0.00	0.00	14.78	16.25	-6.50	-1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{44} - U_{45}	0.00	0.00	41.46	44.89	24.30	-198.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{45} - U_{46}	0.00	0.00	51.15	44.47	-37.70	-217.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{46} - U_{47}	0.00	0.00	55.58	44.47	-37.70	-217.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{47} - U_{48}	0.00	0.00	42.68	37.14	-48.97	-407.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{48} - U_{49}	0.00	0.00	44.77	42.34	-411.08	-119.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{49} - U_{50}	0.00	0.00	24.47	37.01	-134.06	-477.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{50} - U_{51}	0.00	0.00	33.44	9.39	-430.60	-127.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{51} - U_{52}	0.00	0.00	33.44	9.39	-430.60	-127.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{52} - U_{53}	0.00	0.00	22.54	-5.90	-329.74	-34.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{53} - U_{54}	0.00	0.00	22.54	-6.03	-329.74	-34.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{54} - U_{55}	0.00	0.00	16.93	-8.53	-143.26	98.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{55} - U_{56}	0.00	0.00	-1.16	8.66	36.53	-141.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{56} - U_{57}	0.00	0.00	11.41	10.34	-74.17	-61.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{57} - U_{58}	0.00	0.00	-2.12	10.99	6.30	-175.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{58} - U_{59}	0.00	0.00	10.26	0.00	-4.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{59} - U_{60}	0.00	0.00	8.37	21.34	-53.24	-224.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{60} - U_{61}	0.00	0.00	14.67	20.11	-65.51	-294.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{61} - U_{62}	0.00	0.00	14.65	16.25	-304.86	-44.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{62} - U_{63}	0.00	0.00	12.35	22.71	-248.18	-33.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{63} - U_{64}	0.00	0.00	15.41	33.66	-184.30	-23.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{64} - U_{65}	0.00	0.00	20.23	28.50	-175.97	6.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{65} - U_{66}	0.00	0.00	25.12	16.36	-115.00	-7.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{66} - U_{67}	0.00	0.00	-1.19	93.56	-0.13	-0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{67} - U_{68}	0.00	0.00	104.03	2.76	-0.29	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{68} - U_{69}	0.00	0.00	21.22	28.48	0.20	-88.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{69} - U_{70}	0.00	0.00	40.35	27.40	8.93	-125.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{70} - U_{71}	0.00	0.00	39.01	24.55	-17.58	-177.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{71} - U_{72}	0.00	0.00	39.05	21.63	-158.00	-70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{72} - U_{73}	0.00	0.00	38.84	8.24	-200.46	-69.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{73} - U_{74}	0.00	0.00	24.16	2.26	-203.78	-51.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4704	0.99907361	3321.5
	U_{74} - U_{75}	0.00	0.00	16.70	-4.82	-152.39	-7.86	0.00

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 Span
Loading: 5C1
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-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	3.06	-5.19	2.52	-2.24	34.09	-57.76	28.01	-24.98
	L_1-L_2	-73.00	-87.96	-6.56	-7.87	-0.12	2.32	-73.00	-87.59	-1.31	25.77
	L_2-L_3	-73.59	-82.20	-10.99	-7.46	2.43	—	-122.71	-83.72	16.12	27.02
	L_3-L_4	-11.34	11.55	-14.42	-7.05	1.26	4.01	-160.56	-78.45	14.02	44.63
	L_4-L_5	-49.11	208.03	-8.08	0.44	0.63	—	-89.02	160.69	29.31	40.54
	L_5-L_6	-0.46	181.07	-4.24	-4.41	2.25	5.44	-47.25	-48.12	25.00	80.52
	L_6-L_7	41.44	78.72	-0.02	-0.02	0.09	0.09	-3.20	0.07	-0.06	0.00
	L_7-L_8	-25.11	448.74	0.01	-0.02	0.09	9.09	0.10	-0.20	0.99	101.23
	L_8-L_9	425.89	-36.02	0.00	0.00	11.03	-3.31	0.01	0.02	118.90	-3.32
	L_9-L_{10}	150.02	-126.13	0.00	0.00	11.03	-3.31	0.03	0.27	-17.82	23.32
	L_{10}-L_{11}	120.44	-115.99	-2.08	-5.19	3.89	1.58	-22.38	-55.90	41.97	16.99
	L_{11}-L_{12}	38.08	-108.12	-3.35	-6.12	2.49	1.21	-38.24	-82.96	-26.19	13.00
	L_{12}-L_{13}	-45.24	-121.26	-5.30	-7.49	2.12	1.00	-67.16	-80.75	-22.87	10.73
	L_{13}-L_{14}	96.32	-264.98	-7.50	-12.28	1.66	1.23	-80.90	-132.45	-17.84	13.24
	L_{14}-L_{15}	262.34	-64.09	-9.70	-14.73	0.79	0.36	-94.63	-183.96	-12.06	15.75
	L_{15}-L_{16}	-191.89	-319.35	-9.16	-14.70	0.79	0.36	-88.77	-158.47	8.50	4.14
	L_{16}-L_{17}	-339.58	44.88	-11.85	-0.99	0.70	-0.31	-127.79	-64.61	7.62	-3.29
	L_{17}-L_{18}	-154.59	-31.26	-6.04	-3.20	0.23	-0.20	-65.13	-34.52	2.43	-2.12
	L_{18}-L_{19}	-215.80	146.76	-6.42	-0.99	0.70	-0.56	-69.18	-2.36	2.43	-0.56
	L_{19}-L_{20}	-136.32	49.67	-0.96	-0.07	4.90	3.33	-10.39	-0.73	-52.87	36.28
	L_0-L_{20}	-2.68	-185.02	2.48	-7.06	3.10	4.07	26.42	-75.18	33.00	-44.63
	L_{20}-L_{19}	15.78	243.23	0.00	-6.86	-118.56	-7.88	26.39	0.00	0.00	0.00
	L_{19}-L_{18}	-4.23	-180.72	-4.99	-9.19	-0.21	1.55	-53.15	-97.87	-2.21	18.52
	L_{18}-L_{17}	-252.85	-205.03	-13.49	-14.64	1.42	2.53	-143.66	-155.91	15.15	26.88
	L_{17}-L_{16}	-252.85	-205.03	-13.49	-14.64	1.42	2.53	-143.66	-155.91	15.15	26.88
	L_{16}-L_{15}	-475.08	-292.15	-2.07	-12.23	3.90	3.93	-245.63	-130.20	41.54	41.84
	L_{15}-L_{14}	-280.47	-64.51	-12.06	-13.49	3.20	5.64	-128.41	-143.67	34.09	60.00
	L_{14}-L_{13}	-292.36	219.74	-10.06	-12.28	2.96	5.44	-94.42	-150.77	-224.40	-33.05
	L_{13}-L_{12}	-225.83	141.30	-8.55	-6.91	2.76	5.36	-91.03	-73.52	29.42	57.10
	L_{12}-L_{11}	-20.53	229.45	-6.33	-5.19	4.20	2.25	-66.42	-82.96	32.99	-20.24
	L_{11}-L_{10}	-160.03	387.16	-6.86	-1.53	2.77	6.24	-9.14	-16.33	29.50	66.41
	L_{10}-L_9	-202.71	204.45	-1.26	5.28	2.34	-6.93	-13.45	3.00	24.87	-19.21
	L_9-L_8	379.75	-103.16	0.14	-0.16	0.00	0.00	-0.01	-0.01	0.00	0.00
	L_8-L_7	1072.48	-412.35	-1.87	-0.13	18.48	-3.91	-19.68	-1.37	-194.21	-41.16
	L_7-L_6	339.46	-23.77	-8.11	-0.13	18.48	-3.91	-41.47	-1.37	-194.21	-41.16
	L_6-L_5	475.57	-49.03	-1.64	0.27	6.21	1.75	-17.25	2.88	65.38	17.84
	L_5-L_4	1026.29	-362.30	-1.06	0.02	15.44	-4.96	-11.29	0.16	206.92	-52.83
	L_4-L_3	226.51	-41.81	-7.40	-7.01	5.19	2.16	-77.81	-81.57	64.64	-7.40
	L_3-L_2	214.45	-56.43	-4.16	-11.42	3.05	3.21	-43.81	-120.17	32.07	33.79
	L_2-L_1	49.27	-202.49	-15.93	-17.22	2.50	1.96	-167.62	-181.18	26.28	20.97
	L_1-L_0	-111.92	0.86	-8.70	-12.55	2.07	4.48	-91.55	-136.28	21.74	47.17
Structure 2	L_0-L_1	379.75	-103.16	0.14	-0.16	0.00	0.00	-0.01	-0.01	0.00	0.00
	L_1-L_2	-60.79	179.81	9.01	-6.57	2.21	5.11	-84.77	-69.09	23.21	39.73
	L_2-L_3	-81.80	265.56	-7.61	-5.72	3.61	2.02	-80.03	-60.22	38.02	21.26
	L_3-L_4	228.18	371.90	-4.03	-3.24	2.13	1.21	-53.08	-43.53	29.97	16.89
	L_4-L_5	-99.81	-279.28	-0.41	-0.75	-5.19	2.05	-4.29	-7.87	-1.99	21.57
	L_5-L_6	-371.96	1004.43	-1.13	-1.62	-5.19	2.05	-9.29	-16.99	-1.99	21.57
	L_6-L_7	1026.29	-362.30	-1.06	0.02	15.44	-4.96	-11.29	0.16	206.92	-52.83
	L_7-L_8	-226.76	-125.36	0.15	-1.32	-4.17	3.54	1.61	-14.03	-44.42	37.70
	L_8-L_9	68.94	-116.25	0.15	-1.32	-4.17	3.54	1.61	-14.03	-44.42	37.70
	L_9-L_{10}	278.05	-132.91	-2.80	-8.85	2.74	4.30	-29.85	-94.23	-29.91	45.76
	L_{10}-L_{11}	222.98	-243.21	-6.30	-10.99	3.32	3.75	-67.09	-117.02	35.36	39.43
	L_{11}-L_{12}	68.94	-116.25	0.15	-1.32	-4.17	3.54	1.61	-14.03	-44.42	37.70
	L_{12}-L_{13}	-167.58	-470.72	-11.25	-25.44	3.89	2.85	-146.03	-262.54	35.35	-7.38
	L_{13}-L_{14}	-445.06	-93.48	-13.72	-24.66	3.32	6.89	-146.03	-262.54	35.35	-7.38
	L_{14}-L_{15}	-68.94	-116.25	0.15	-1.32	-4.17	3.54	-52.66	-68.24	34.32	0.91
	L_{15}-L_{16}	-392.27	38.30	-13.79	-10.67	1.68	-0.45	-146.86	-115.73	17.90	-4.83
	L_{16}-L_{17}	-392.27	38.30	-13.79	-10.67	1.68	-0.45	-146.86	-115.73	17.90	-4.83
	L_{17}-L_{18}	-297.04	199.10	-12.36	-2.93	0.99	-0.48	-131.58	31.15	10.99	9.04
	L_{18}-L_{19}	-297.04	199.10	-12.36	-2.93	0.99	-0.48	-131.58	31.15	10.99	9.04
	L_{19}-L_{20}	24.53	-109.42	1.74	3.65	3.72	-6.55	18.76	-39.39	40.14	71.73
	L_{20}-L_0	-139.90	-177.77	2.02	-6.56	-0.36	0.81	21.81	-92.25	-3.88	8.69
	L_0-L_{20}	-111.57	-188.51	2.02	-6.56	-0.36	0.81	-23.07	-72.36	33.00	-44.63
	L_{20}-L_{19}	47.96	293.64	-3.57	-6.31	-0.25	1.13	18.37	-89.59	-2.72	12.22
	L_{19}-L_{18}	-47.68	-343.07	-9.06	-16.35	3.32	2.06	-97.70	-165.59	-3.46	22.18
	L_{18}-L_{17}	-341.10	86.20	-9.14	-11.94	1.60	1.40	-97.72	-128.72	17.26	16.68
	L_{17}-L_{16}	-341.10	86.20	-9.14	-11.94	1.60	1.40	-97.72	-128.72	17.26	16.68
	L_{16}-L_{15}	-201.09	152.50	-6.55	-4.35	1.15	2.49	-70.62	-46.93	12.39	28.88
	L_{15}-L_{14}	-148.24	148.96	-0.02	-0.02	2.11	-2.90	-19.03	-19.32	-167.13	165.69
	L_{14}-L_{13}	-148.24	148.96	-0.02	-0.02	2.11	-2.90	-19.03	-19.32	-167.13	165.69
	L_{13}-L_{12}	428.31	-26.46	-0.02	-0.01	10.34	-5.22	-0.27	-0.13	115.16	-2.47
	L_{12}-L_{11}	70.66	27.55	-0.02	-0.01	1.80	2.40	-0.19	-0.40	-20.07	27.69
	L_{11}-L_{10}	194.48	-25.11	-4.30	-8.59	3.47	2.52	-47.92	-95.64	38.66	32.52
	L_{10}-L_9	68.94	-116.25	0.15	-1.32	-4.17	3.54	1.61	-14.03	-44.42	37.70
	L_9-L_8	-85.48	-80.88	-7.21	-13.21	2.07	0.73	-80.24	-147.11	23.03	8.14
	L_8-L_7	-85.48	-80.88	-7.21	-13.21	2.07	0.73	-80.24	-147.11	23.03	8.14
	L_7-L_6	-74.64	-5.53	-4.43	-3.68	4.39	3.34	-49.32	-39.85	-48.91	37.14

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)
L_0-L_1	-18.54	-68.17	3.26	12.01	0.00	0.00	-29.29	-107.70	-0.95	-3.46
L_1-L_2	-127.47	21.68	9.85	4.56	0.00	0.00	-178.88	64.58	-1.92	30.45
L_2-L_3	-0.58	-36.27	-3.43	-1.04	0.00	0.00	22.10	-42.17	16.40	1.02
L_3-L_4	-11.71	17.42	5.41	-9.23	0.00	0.00	-73.93	95.45	-50.36	60.80
L_4-L_5	-30.42	28.20	24.25	-5.81	0.00	0.00	-72.66	68.38	-33.23	31.44
L_5-L_6	-2.46	-0.76	5.34	-2.78	0.00	0.00	-34.58	29.06	-14.44	76.43
L_6-L_7	-0.53	-0.07	0.32	10.97	0.00	0.00	116.22	-42.12	132.08	-22.52
L_7-L_8	-0.03	-0.12	30.19	41.39	0.00	0.00	40.98	71.79	80.28	125.44
L_8-L_9	0.01	0.02	30.19	13.79	0.00	0.00	41.19	-13.84	81.09	-4.35
L_9-L_{10}	0.00	0.10	0.40	-2.08	0.00	0.00	24.41	9.29	24.93	6.23
L_{10}-L_{11}	-22.31	-46.28	3.94	-0.40	0.00	0.00	21.81	-41.90	57.23	-17.74
L_{11}-L_{12}	-29.08	-64.30	-6.31	-1.25	0.47	-0.81	-4.69	-122.71	-77.65	-21.96
L_{12}-L_{13}	-9.01	-34.13	-4.17	-4.56	0.00	0.00	-9.75	-54.01	-3.46	-15.63
L_{13}-L_{14}	-68.91	-7.08	-1.02	-5.54	0.00	0.00	-199.93	105.14	-109.02	88.21
L_{14}-L_{15}	-22.58	-42.42	-2.26	-4.41	0.13	-0.29	-101.65	-2.42	-39.01	-15.25
L_{15}-L_{16}	-5.51	-9.79	-1.25	-2.78	0.00	0.00	-34.08	21.34	-68.55	30.45
L_{16}-L_{17}	-0.61	29.31	0.60	1.95	0.00	0.00	-48.03	37.60	-50.37	29.06
L_{17}-L_{18}	-28.11	-58.50	-0.89	2.72	0.06	0.18	-100.41	-69.23	-90.80	-30.59
L_{18}-L_{19}	-28.92	-29.99	0.28	-2.18	0.96	0.60	-27.48	69.48	-27.98	62.09
L_{19}-L_{20}	-3.32	-0.76	-0.04	0.01	-0.74	-0.17	-0.39	-0.10	-7.98	-1.78
L_0-L_{20}	-21.29	-73.96	2.53	8.82	0.00	0.00	-32.92	-114.03	-1.84	-6.41
L_{20}-L_{19}	-110.56	-0.49	-0.25	-0.04	-0.25	-0.06	-36.25	-113.62	-31.10	-10.62
L_{19}-L_{18}	-22.15	-50.47	-2.61	3.42	0.00	0.00	-39.11	69.13	132.10	140.69
L_{18}-L_{17}	-68.89	-68.89	-3.23	0.00	0.00	0.00	-84.98	32.67	84.98	32.67
L_{17}-L_{16}	-68.89	-68.89	-3.23	0.00	0.00	0.00	-84.98	32.67	84.98	32.67
L_{16}-L_{15}	-3.17	-16.55	1.08	-8.24	0.00	0.00	-42.43	11.50	-47.96	21.65
L_{15}-L_{14}	-13.37	-3.27	0.60	1.19	0.00	0.00	-117.88	66.75	-92.69	72.55
L_{14}-L_{13}	-5.28	-4.48	4.49	3.92	0.00	0.00	-21.12	56.17	-5.81	69.18
L_{13}-L_{12}	-8.76	-12.00	40.82	31.28	0.00	0.00	51.09	69.53	116.85	-32.77
L_{12}-L_{11}	-14.51	-38.49	5.65	4.44	0.00	0.00	-58.05	15.40	-58.05	15.40
L_{11}-L_{10}	-15.99	-8.25	24.24	1.37	0.00	0.00	-148.18	-119.27	-85.87	-106.77
L_{10}-L_9	-4.83	0.77	-13.15	0.99	0.00	0.00	-19.32	3.09	-52.60	3.96
L_9-L_8	5.90	5.45	-0.02	-3.01	0.00	0.00	29.48	3.23	21.74	-7.70
L_8-L_7	-49.28	10.58	0.02	0.00	0.00	0.00	-197.12	42.33	0.08	0.00
L_7-L_6	8.70	-24.23	-5.43	0.24	0.00	0.00	30.19	47.40	14.42	-22.73
L_6-L_5	-28.87	21.82	3.69	-8.69	0.00	0.00	-64.45	59.73	-52.12	20.07
L_5-L_4	-19.29	66.70	0.00	0.00	0.00	0.00	-77.16	266.79	0.00	0.00
L_4-L_3	-6.18	21.94	1.28	-7.88	0.00	0.00	-69.48	92.85	-59.79	54.08
L_3-L_2	-16.44	8.75	7.33	-3.43	0.00	0.00	-65.77	35.00	-29.31	13.72
L_2-L_1	-22.60	38.30	-0.47	0.02	0.35	0.25	-90.41	153.21	-1.87	0.08
L_1-L_0	-4.94	0.18	3.68	2.65	0.00	0.00	-20.00	0.72	14.73	10.61
L_0-L_{20}	31.40	-26.65	0.00	0.00	0.00	0.00	37.38	-106.60	0.00	0.00
L_{20}-L_{19}	-4.92	-4.49	3.83	4.17	0.00	0.00	-7.17	45.41	-8.59	56.83
L_{19}-L_{18}	-6.24	1.12	12.21	3.17	0.00	0.00	54.31	-28.63	78.16	-34.19
L_{18}-L_{17}	-0.57	-0.12	0.00	0.00	0.00	0.00	-0.74	-0.18	-0.74	-0.18
L_{17}-L_{16}	-0.57	-0.12	0.00	0.00	0.00	0.00	-0.74	-0.18	-0.74	-0.18
L_{16}-L_{15}	-1.83	7.71	12.91	-3.06	0.00	0.00	123.30	26.17	137.70	12.17
L_{15}-L_{14}	9.99	15.18	1.24	-1.27	0.00	0.00	12.39	-2.53	12.39	-2.53
L_{14}-L_{13}	16.29	11.05	23.83	13.48	0.00	0.00	15.49	3.29	25.25	-0.13
L_{13}-L_{12}	-1.41	-13.58	1.53	1.04	2.24	1.27	15.83	20.58	-16.26	-7.58
L_{12}-L_{11}	4.21	11.72	0.75	0.39	-1.51	-1.65	15.83	20.58	-16.26	-7.58
L_{11}-L_{10}	7.96	4.11	-16.72	-17.56	0.00	0.00	15.83	20.58	-16.26	-7.58
L_{10}-L_9	5.94	2.12	-4.13	-3.15	0.00	0.00	15.49	3.29	25.25	-0.13
L_9-L_8	-8.21	4.48	8.39	2.28	0.00	0.00	-48.32	101.26	13.19	62.38
L_8-L_7	-44.45	14.62	15.10	-15.29	0.00	0.00	-49.02	101.26	13.19	62.38
L_7-L_6	-8.21	4.48	8.39	2.28	0.00	0.00	-48.32	101.26	13.19	62.38
L_6-L_5	-3.20	16.00	0.48	-6.46	0.00	0.00	3.47	-1.96	8.26	-31.16
L_5-L_4	-3.20	16.00	0.48	-6.46	0.00	0.00	3.47	-1.96	8.26	-31.16
L_4-L_3	-36.72	14.46	-0.23	-0.23	0.00	0.00	-49.23	19.38	-0.31	-0.31
L_3-L_2	-12.42	-29.92	6.83	2.79	0.16	0.44	-23.84	-13.93	-32.73	34.62
L_2-L_1	-26.89	-13.80	0.00	0.00	0.00	0.00	-36.05	-18.50	0.00	0.00
L_1-L_0	-12.16	29.12	19.00	9.94	0.00	0.00	11.87	38.85	52.39	13.92
L_0-L_{20}	9.43	22.50	0.00	0.00	0.00	0.00	12.97	-41.68	0.00	0.00
L_{20}-L_{19}	-19.41	-5.66	4.98	1.70	0.00	0.00	-22.97	-18.15	16.00	5.44
L_{19}-L_{18}	-8.54	-38.72	0.18	-0.05	-0.02	0.08	-36.56	-133.10	1.31	-0.46
L_{18}-L_{17}	-70.74	-22.24	1.27	-1.39	0.00	0.00	-64.67	96.66	28.95	65.93
L_{17}-L_{16}	-46.20	-274.09	-15.55	-13.66	0.00	0.00	-82.61	-105.58	-28.48	-53.13
L_{16}-L_{15}	-4.75	24.54	0.16	4.73	0.00	0.00	21.28	146.08	27.61	114.84
L_{15}-L_{14}	-12.12	-110.38	3.50	2.12	0.05	-0.19	-116.79	173.21	-67.02	140.80
L_{14}-L_{13}	-37.72	22.86	0.57	-2.07	0.00	0.00	-116.79	173.21	-67.02	140.80
L_{13}-L_{12}	-14.34	12.13	4.29	13.27	0.00	0.00	-42.53	5.85	-18.07	14.10
L_{12}-L_{11}	-24.34	3.52	1.29	4.73	0.00	0.00	-42.53	5.85	-18.07	14.10
L_{11}-L_{10}	-6.15	28.96	8.61	-5.07	0.00	0.00	8.97	30.15	28.16	-24.39
L_{10}-L_9	-19.00	4.79	8.39	2.28	0.00	0.00	-48.32	101.26	13.19	62.38
L_9-L_8	-8.87	-29.66	1.70	0.73	0.00	0.00	-36.56	-133.10	1.31	-0.46
L_8-L_7	-8.87	-29.66	1.70	0.73	0.00	0.00	-36.56	-133.10	1.31	-0.46
L_7-L_6	-19.41	-5.66	4.98	1.70	0.00	0.00	-22.97	-18.15	16.00	5.44

M_y Information

ZZ Axis Moments from STAAD

Member	Start (k-in)	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_{NA} (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_{mx}
L_0-L_1	24.11	-170.39	16.21	-127.81	83.6	83.58	74.65	100.97	2577	1.21	3332	0.99600094	2755.4	-0.142	0.54	0.54
L_1-L_2	21.23	-228.22	49.98	-80.85	83.6	83.58	67.49	100.97	2577	1.21	3332	0.99600094	2755.4	0.189	0.68	0.68
L_2-L_3	19.16	-179.18	99.5	99.50	91.00	129.40	3469	1373.0	1.26	4141	0.99991188	3294.8	0.389	0.76	0.76	0.76
L_3-L_4	-223.46	-86.97	3.48	73.04	99.9	99.93	84.14	129.49	3469	1373.0	1.26	4141	0.99991188	3294.8	0.389	0.76
L_4-L_5	-352.04	-69.00	323.13	52.6	92.98	76.68	114.47	3186	1202.0	1.21	3777	0.99991188	3052.4	-0.490	0.57	0.57
L_5-L_6	-47.25	-48.12	25.00	80.52	0.00	0.00	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99529445	3448.5	0.102
L_6-L_7	-53.61	102.42	-15.01	-8.56	0.00	0.00	144.95	129.09	184.50	4040	1678.1	1.31	4520	0.99529445	4776.0	-0.523
L_7-L_8	-32.52	583.09	-31.36	714.96	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99529153	4806.3	-0.044	0.58
L_8-L_9	0.01	0.02	118.90	-3.32	0.00	0.00	145.75	130.74	228.84	6500	2932.4	1.57	7552	0.99529161	4806.4	-0.072
L_9-L_{10}	0.03	0.27	-17.82	23.32	0.00	0.00	145.75	130.74	228.84	6500	2932.4	1.57	7552	0.99529161	4806.4	-0.072
L_{10}-L_{11}	127.47	-223.32	211.14	-128.69	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.570	0.57
L_{11}-L_{12}	157.08	-343.32	240.83	-263.05	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.468	0.57
L_{12}-L_{13}	43.24	-221.26	-23.05	43.24	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.468	0.57
L_{13}-L_{14}	96.32	-264.98	-7.50	-12.28	1.66	1.23	262.68	2613.8	1.35	7258	0.99991006	5370.6	-0.032	0.59	0.59	0.59
L_{14}-L_{15}	262.34	-64.09	-9.70	-14.73	0.79	0.36	266.46	2632.9	1.35	7258	0.99991006	5370.6	-0.032	0.59	0.59	0.59
L_{15}-L_{16}	-191.89	-319.35	-9.16	-14.70	0.79	0.36	-377.86	-619.87	-238.41	3048.47	179.7	179.69	170.68	2511.43	3353.7	0.000
L_{16}-L_{17}	-339.58	44.88	-11.85	-0.99	0.70	-0.31	-127.79	-64.61	7.62	-3.29	0.13	153.89	138.16	2511.43	3353.7	0.000
L_{17}-L_{18}	-154.59	-31.26	-6.04	-3.20	0.23	-0.20	-65.13	-34.52	2.43	-2.12	0.00	153.89	138.16	2511.43	3353.7	0.000
L_{18}-L_{19}	-215.80	146.76	-6.42	-0.99	0.70	-0.56	-69.18	-2.36	2.43	-0.56	0.00	153.89	138.16	2511.43	3353.7	0.000
L_{19}-L_{20}	-136.32	49.67	-0.96	-0.07	4.90	3.33	-10.39	-0.73	-52.87	36.28	0.00	153.89	138.16	2511.43	3353.7	0.000
L_0-L_{20}	-2.68	-185.02	2.48	-7.06	3.10	4.07	26.42	-75.18	33.00	-44.63	0.00	0.00	0.00	30.96	-338.25	39.41
L_{20}-L_{19}	15.78	243.23	0.00	-6.86	-118.56	-7.88	26.39	0.00	0.00	0.00	0.00	0.00	0.00	198.76	-473.19	189.53
L_{19}-L_{18}	-4.23	-180.72	-4.99	-9.19	-0.21	1.55	-53.15	-97.87	-2.21	18.52	0.00	0.00	0.00	-74.60	-362.16	-8.38
L_{18}-L_{17}	-252.85	-205.03	-13.49	-14.64	1.42	2.53	-143.66	-155.91	15.15	26.88	0.00	0.00	0.00	515.46	-586.23	309.01
L_{17}-L_{16}

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SCI
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 (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_1~L_1	-29.84	-49.00	8.85	-9.92	-1.71	4.49	9.49	-10.28	-19.02	50.03
	U_1~L_2	-9.06	15.16	7.72	-0.78	-2.27	2.57	7.99	-8.65	-25.25	28.59
	U_2~L_2	10.20	-9.71	3.90	-0.99	-1.39	2.56	3.00	-10.99	-15.42	22.98
	U_2~L_3	33.43	-34.38	1.52	-1.58	-0.92	1.42	16.87	-17.60	-10.25	15.78
	U_3~L_3	41.60	-42.42	0.08	-2.03	0.26	-0.85	0.00	0.00	0.00	0.00
	U_3~L_4	45.52	-51.05	-0.22	0.12	0.99	-3.25	-2.40	1.32	23.27	-36.15
	U_4~L_4	55.57	-55.55	0.01	0.00	1.06	3.42	-14.05	11.44	36.86	-37.32
	U_4~L_5	91.21	-101.85	-0.02	0.02	3.97	-4.46	-0.23	0.27	-44.21	49.15
	U_5~L_5	-20.53	21.18	0.28	-0.34	0.11	-0.68	3.11	-3.81	-1.27	-0.87
	U_5~L_6	-135.19	155.81	0.27	-0.26	-4.83	5.32	-17.02	19.62	198.56	-239.26
	U_6~L_6	-88.41	88.14	0.00	-0.10	-2.75	3.67	0.04	-1.09	-29.64	39.57
	U_6~L_7	-91.02	123.95	0.00	-0.05	-2.77	4.22	0.03	-0.35	-27.74	40.56
	U_7~L_7	-79.50	78.32	0.70	-0.65	-3.15	3.36	7.59	-6.98	-33.91	36.24
	U_7~L_8	-49.20	60.09	1.06	-1.07	-2.02	2.46	11.44	-11.55	-21.82	26.50
	U_8~L_8	-29.72	34.60	0.54	-0.64	0.72	-1.04	1.20	-1.45	-5.54	6.77
	U_8~L_9	-1.46	-2.70	-2.02	1.92	3.16	-3.28	-21.74	20.67	34.09	-35.40
	U_9~L_9	34.16	-36.57	-1.30	1.06	3.42	-3.46	-14.05	11.44	36.86	-37.32
	U_9~L_{10}	46.21	-55.82	-0.47	0.31	3.36	-3.46	-5.09	3.37	36.23	-37.09
	U_{10}~L_{10}	110.34	-114.53	-0.42	0.43	3.98	-3.96	-4.52	4.13	63.38	-64.32
	U_{10}~L_{11}	-121.24	-131.09	-0.37	0.37	6.03	-6.22	-3.99	4.03	-165.17	242.15
	U_{11}~L_{11}	-134.20	-173.18	-0.22	0.31	6.10	-7.14	-2.42	3.37	-66.31	-76.98
	U_{11}~L_{12}	-114.26	168.30	-1.52	-1.19	7.08	7.47	-0.66	0.00	-134.41	202.08
	U_{12}~L_{12}	-124.38	133.15	0.98	-1.05	-4.86	5.59	10.47	-11.16	-51.69	59.47
	U_{12}~L_{13}	-66.00	112.15	-1.55	1.16	-4.16	4.89	9.00	-11.16	-51.69	59.47
	U_{13}~L_{13}	-56.00	62.15	0.66	-0.70	-2.21	2.60	7.56	-7.44	-23.52	27.68
	U_{13}~L_{14}	-34.04	39.78	0.51	-0.61	-2.07	2.53	7.56	-7.44	-23.52	27.68
	U_{14}~L_{14}	-7.09	-12.30	1.61	-1.58	-1.86	2.22	17.14	-16.86	-19.85	23.67
	U_{14}~L_{15}	15.85	-15.58	1.95	-2.06	-1.41	1.66	20.78	-21.91	-15.01	17.71
	U_{15}~L_{15}	38.85	-40.63	0.16	-0.20	-0.43	0.51	1.60	-1.28	8.66	-10.19
	U_{15}~L_{16}	86.89	-96.05	-1.54	1.36	4.75	-4.70	-16.44	14.49	50.57	-50.05
	U_{16}~L_{16}	155.09	-159.44	-1.36	1.36	6.96	-6.95	-14.05	11.44	36.86	-37.32
	U_{16}~L_{17}	141.21	-149.39	-0.84	0.43	5.37	-5.56	-8.90	4.56	67.21	-69.17
	U_{17}~L_{17}	192.53	-192.81	-0.38	0.21	5.23	-5.39	-4.09	2.25	55.67	-57.04
	U_{17}~L_{18}	147.39	-146.79	-0.21	0.00	3.93	-4.05	-2.29	0.00	41.83	-43.06
	U_{18}~L_{18}	203.50	-203.15	-0.49	0.52	6.79	-6.50	-5.26	5.55	72.25	-69.19
	U_{18}~L_{19}	60.02	-29.84	-1.72	1.87	12.18	15.17	-19.27	19.72	112.60	97.74
	U_{19}~L_{19}	-159.87	162.82	0.82	-0.86	-5.69	5.79	8.66	-9.01	-59.83	60.62
	U_{19}~L_{20}	-113.84	96.20	0.60	-0.63	-4.06	4.11	6.31	-6.56	-41.99	42.53
	U_{20}~L_{20}	-130.37	-127.18	0.84	-0.82	-5.10	5.61	8.81	-8.60	-53.68	59.04
	U_{20}~L_{21}	-113.07	114.60	0.94	-0.96	-4.36	5.19	9.84	-10.10	-45.87	54.58
	U_{21}~L_{21}	-67.07	67.44	-2.64	2.56	-2.58	3.09	18.51	-19.35	-25.27	30.63
	U_{21}~L_{22}	-44.77	46.58	1.10	-1.04	-2.10	2.40	11.52	-10.93	-22.07	25.23
	U_{22}~L_{22}	-30.30	34.39	0.77	-0.81	-1.49	1.74	8.00	-7.59	-15.61	18.00
	U_{22}~L_{23}	-3.70	4.34	-0.64	0.57	-2.59	2.71	-6.74	5.97	-6.21	7.79
	U_{23}~L_{23}	22.64	-25.70	-1.94	1.94	-1.13	1.31	-13.27	12.06	36.00	-36.84
	U_{23}~L_{24}	39.94	-42.12	-1.26	1.15	3.42	-3.50	-13.27	12.06	36.00	-36.84
	U_{24}~L_{24}	88.55	-87.48	-1.03	0.74	4.18	-4.12	-10.79	7.75	44.00	-43.31
	U_{24}~L_{25}	138.75	-142.49	-0.96	0.74	6.05	-6.04	-10.79	7.75	44.00	-43.31
	U_{25}~L_{25}	138.22	-138.56	-0.78	0.77	6.50	-7.00	-8.21	8.10	72.63	-73.09
	U_{25}~L_{26}	124.45	-125.62	-0.50	0.49	5.19	-5.42	-5.26	5.55	72.25	-69.19
	U_{26}~L_{26}	173.80	-176.10	-0.44	0.39	6.18	-6.37	-4.63	4.05	64.99	-67.00
	U_{26}~L_{27}	124.53	-127.70	-0.51	0.51	5.08	-5.27	-2.29	0.00	41.83	-43.06
	U_{27}~L_{27}	-167.09	167.27	-0.77	-0.85	-5.73	5.71	8.16	-9.05	-61.04	60.82
	U_{27}~L_{28}	-116.04	109.89	-0.39	-0.67	-4.20	4.70	4.17	-7.12	-44.69	50.05
	U_{28}~L_{28}	-124.53	127.70	-0.51	-0.51	-5.08	5.27	5.33	-4.37	-44.16	49.00
	U_{28}~L_{29}	-119.83	124.38	0.52	-0.41	-4.15	4.60	5.53	-4.37	-44.16	49.00
	U_{29}~L_{29}	-79.51	79.51	0.89	-0.89	-3.17	3.17	10.48	-10.11	-28.17	32.72
	U_{29}~L_{30}	-79.51	88.86	0.98	-0.95	-2.65	3.07	10.48	-10.11	-28.17	32.72
	U_{30}~L_{30}	-43.96	51.93	-0.89	1.09	-0.22	0.20	-9.42	11.56	-2.38	2.16
	U_{30}~L_{31}	-28.91	32.43	-0.46	0.54	-0.25	0.29	-9.42	11.56	-2.38	2.16
	U_{31}~L_{31}	-5.57	1.81	-1.77	1.66	3.11	-3.30	-18.83	17.64	33.15	-35.15
	U_{31}~L_{32}	-28.91	27.17	-1.29	1.29	3.41	-3.41	-18.83	17.64	33.15	-35.15
	U_{32}~L_{32}	55.25	-61.09	-0.64	0.65	3.39	-3.47	-6.80	6.95	36.04	-36.91
	U_{32}~L_{33}	110.75	-122.73	-1.01	0.96	5.70	-5.86	-6.80	6.95	36.04	-36.91
	U_{33}~L_{33}	137.13	-150.74	-0.84	0.85	6.50	-6.57	-8.95	9.08	69.71	-69.92
	U_{33}~L_{34}	165.72	-206.83	-0.62	0.83	5.10	-6.54	-6.58	8.81	54.90	-69.59
Structure 2	U_1~L_1	-62.72	94.00	-0.44	-0.44	-4.75	5.21	-14.39	18.10	-180.10	177.45
	U_1~L_2	-109.81	112.89	0.46	-0.49	-4.75	5.21	4.99	-5.32	-51.25	56.17
	U_2~L_2	-38.40	48.11	0.34	-0.36	-1.98	2.45	3.64	-3.91	-21.38	26.38
	U_2~L_3	-38.40	48.11	0.34	-0.36	-1.98	2.45	3.64	-3.91	-21.38	26.38
	U_3~L_3	-27.47	34.14	1.02	-1.02	-1.41	1.74	17.43	-18.07	-23.13	26.06
	U_3~L_4	-2.78	8.39	1.62	-1.68	-2.15	2.42	17.43	-18.07	-23.13	26.06
	U_4~L_4	25.87	-28.68	-0.41	0.28	-0.50	0.59	-4.42	2.99	-5.35	6.36
	U_4~L_5	25.87	-28.68	-0.41	0.28	-0.50	0.59	-4.42	2.99	-5.35	6.36
	U_5~L_5	-27.47	34.14	1.02	-1.02	-1.41	1.74	17.43	-18.07	-23.13	26.06
	U_5~L_6	-2.78	8.39	1.62	-1.68	-2.15	2.42	17.43	-18.07	-23.13	26.06
	U_6~L_6	-38.40	48.11	0.34	-0.36	-1.98	2.45	3.64	-3.91	-21.38	26.38
	U_6~L_7	-38.40	48.11	0.34	-0.36	-1.98	2.45	3.64	-3.91	-21.38	26.38
	U_7~L_7	-62.72	94.00	-0.44	-0.44	-4.75	5.21	-14.39	18.10	-180.10	177.45
	U_7~L_8	-109.81	112.89	0.46	-0.49	-4.75	5.21	4.99	-5.32	-51.25	56.17
Structure 3	U_8~L_8	92.27	-95.87	0.00	0.03	4.21	-4.62	0.02	0.32	-45.34	49.77
	U_8~L_9	92.27	-95.87	0.00	0.03	4.21	-4.62	0.02	0.32	-45.34	49.77
	U_9~L_9	142.63	-166.19	-0.06	0.08	5.70	-6.27	-0.68	0.83	61.48	-67.60
	U_9~L_{10}	37.52	-58.80	-0.10	0.12	0.69	-1.31	-1.10	1.28	-7.66	-14.53
	U_{10}~L_{10}	-81.19	89.90	0.01	-0.03	-4.06	4.57	0.07	-0.33	-40.14	50.91
	U_{10}~L_{11}	-48.49	45.44	0.02	-0.02	-2.11	2.68	0.20	-0.21	-23.49	29.78
	U_{11}~L_{11}	-38.99	42.96	0.11	-0.10	-1.00	2.20	1.22	-1.06	-16.70	24.49
	U_{11}~L_{12}	-38.90	40.31	-1.15	1.24	-0.58	0.71	-12.83	13.77	-6.45	7.84
	U_{12}~L_{12}	-37.48	38.73	-2.46	2.49	2.25	-2.47	-27.34	27.71	25.02	27.52
	U_{12}~L_{13}	-10.29	11.13	-1.29	1.27	0.87	-1.48	-14.39	14.09	9.71	-16.44
	U_{13}~L_{13}	3.53	-11.97	-0.76	0.74	2.50	-3.04	-6.48	8.23	28.36	-33.84
	U_{13}~L_{14}	44.79	-53.89	-0.51	0.71	1.60	-3.71	-5.62	7.89	17.62	-41.29

Mz Axis Moment Properties

Location	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_z (k-in)	Equivalent Mom. Factor a	$C_{b(x)}$	$C_{b(m)}$
Structure 1	U_1~L_1	-26.47	50.34	83.52	128.74	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_1~L_2	-1.39	8.46	-44.61	56.87	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_2~L_2	-173.02	198.56	-239.26	277.15	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	U_2~L_3	-65.38	47.57	30.12	-24.18	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_3~L_3	-52.97	37.77	30.12	-24.18	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_3~L_4	-56.04	44.64	-152.41	-113.36	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5
	U_4~L_4	-72.11	72.05	-101.84	-72.11	15.4	15.42	15.42	23.71	2	751.9	1.54	.782	1.5
	U_4~L_5	-114.87	114.87	-132.05	-196.99	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
	U_5~L_5	-22.65	22.58	-25.03	26.40	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5
	U_5~L_6	-173.02	198.56	-239.26	277.15	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5
	U_6~L_6	-114.88	113.17	-153.47	166.03	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5
	U_6~L_7	-117.18	160.46	-154.41	222.41	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_7~L_7	-94.47	92.14	-147.44	148.82	21.1	21.09	21.09	36.46	10	1137.6	1.68	1170	1.5
	U_7~L_8	-49.09	63.11	-92.33	112.57	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_8~L_8	-46.19	36.04	-53.57	41.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8~L_9	-30.13	25.14	-35.24	29.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_9~L_9	-14.05	11.44	-16.45	13.24	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_9~L_{10}	-53.46	48.18	107.17	-121.05	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	U_{10}~L_{10}	-137.06	-142.92	220.80	-232.48	33.1	33.05	33.05	53.51	14	1187.1	1.61	1766	1.5
	U_{10}~L_{11}	-192.43	-165.17	242.15	-257.63	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{11}~L_{11}	-227.10	-220.74	260.66	-329.21	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{11}~L_{12}	-134.41	202.08	-188.68	282.12	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{12}~L_{12}	-148.08	198.09	-228.89	292.42	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{12}~L_{13}	-134.41	202.08	-188.68	282.12	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{13}~L_{13}	-63.63	71.12	-103.38	116.78	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5
	U_{13}~L_{14}	-63.63	71.12	-103.38	116.78	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5
	U_{14}~L_{14}	-38.53	38.53	-54.36	54.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{14}~L_{15}	-13.12	5.94	-34.96	40.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{15}~L_{15}	-47.62	-48.74	1.08	2.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{15}~L_{16}	-52.65	-52.67	-75.85	75.85	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{16}~L_{16}	-91.59	-106.02	-178.71	-189.93	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5
	U_{16}~L_{17}	-154.58	-154.58	-81.35	-81.35	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{17}~L_{17}	-172.00	-188.28	257.94	-271.12	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{17}~L_{18}	-4.09	2.25	55.67	-57.04	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{18}~L_{18}	-190.37	-193.13	268.08	-270.20	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{18}~L_{19}	-257.71	-256.88	358.48	-354.05	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{19}~L_{19}	-196.57	199.96	285.61	290.47	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{19}~L_{20}	-196.57	199.96	-285.61	290.47	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{20}~L_{20}	-158.03	154.16	-239.26	242.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{20}~L_{21}	-134.21	135.85	-206.63	219.94	39.8	39.83	38.83	59.23	6	1264.6	1.53	1903	1.5
	U_{21}~L_{21}	-54.58	-54.58	81.35	81.35	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	U_{22}~L_{22}	-43.23	46.34	-66.90	93.35	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{22}~L_{23}	-21.01	19.54	-33.39	33.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{23}~L_{23}	-13.57	13.39	-12.87	15.76	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{23}~L_{24}	-13.27	12.06	36.00	-36.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{24}~L_{24}	-13.27	12.06	36.00	-36.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{24}~L_{25}	-10.79	7.75	44.00	-43.31	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{25}~L_{25}	-10.79	7.75	44.00	-43.31	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{25}~L_{26}	-8.21	8.10	72.63	-73.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{26}~L_{26}	-5.26	5.55	72.25	-69.19	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{26}~L_{27}	-4.63	4.05	64.99	-67.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{27}~L_{27}	-2.29	0.00	41.83	-43.06	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{27}~L_{28}	8.16	-9.05	-61.04	60.82	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{28}~L_{28}	4.17	-7.12	-44.69	50.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{28}~L_{29}	5.53	-4.37	-44.16	49.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{29}~L_{29}	5.53	-4.37	-44.16	49.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{29}~L_{30}	10.48	-10.11	-28.17	32.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{30}~L_{30}	-69.26	82.55	-161.93	70.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{30}~L_{31}	-9.42	11.56	-2.38	2.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{31}~L_{31}	-18.83	17.64	33.15	-35.15	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{31}~L_{32}	-18.83	17.64	33.15	-35.15	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{32}~L_{32}	-6.80	6.95	36.04	-36.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{32}~L_{33}	-6.80	6.95	36.04	-36.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{33}~L_{33}	-8.95	9.08	69.71	-69.92	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{33}~L_{34}	-6.58	8.81	54.90	-69.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
Structure 2	U_1~L_1	-114.39	180.10	-177.45	205.89	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_1~L_2	-131.08	139.85	-204.18	219.79	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_2~L_2	-45.19	57.45	-70.33	89.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_2~L_3	-45.19	57.45	-70.33	89.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_3~L_3	-32.29	41.09	-50.27	63.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_3~L_4	-16.46	20.80	-25.62	32.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_4~L_4	-16.46	20.80	-25.62	32.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_4~L_5	-32.29	41.09	-50.27	63.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_5~L_5	-45.19	57.45	-70.33	89.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_5~L_6	-45.19	57.45	-70.33	89.39	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_6~L_6	-114.39	180.10	-177.45	205.89	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_6~L_7	-131.08	139.85	-204.18	219.79	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_7~L_7	-62.72	94.00	-97.45	146.10	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_7~L_8	-38.40	48.11	-59.63	74.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8~L_8	-38.40	48.11	-59.63	74.72	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_8~L_9	-27.47	34.14	-42.62	53.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_9~L_9	-2.78	8.39	-5.35	6.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_9~L_{10}	-4.42	2.99	-5.35	6.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5
	U_{10}~L_{10}	-4.42	2.99	-5.35	6.36	15.4	15.42	15.42

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

Loading:	SU
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 6.6.2.1-1, 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-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	-12.55	3.37	0.18	0.15	0.42	-0.24				
	L_1-L_2	-1.68	-7.06	-1.19	0.03	0.28	-0.07				
	L_2-L_3	-9.78	-11.75	-0.70	-0.49	0.23	-0.69				
	L_3-L_4	-10.32	-17.09	-0.97	-0.58	-0.71	-1.79				
	L_4-L_5	-26.82	-58.45	-2.00	-2.03	-0.41	-0.23				
	L_5-L_6	-39.76	-86.83	-1.27	-2.03	-0.36	-0.43				
	L_6-L_7	-21.00	-88.83	-1.89	-3.37	-0.01	-0.01				
	L_7-L_8	-9.60	-109.51	-1.34	-3.32	0.19	-0.09				
	L_8-L_9	-74.77	-111.66	-2.31	-3.43	0.23	0.08				
	L_9-L_{10}	-56.82	-54.75	-2.40	-1.30	0.04	0.14				
	L_{10}-L_{11}	-56.52	-22.36	-2.46	-0.52	-0.36	-0.39				
	L_{11}-L_{12}	-55.23	39.04	-2.24	1.32	0.23	-0.73				
	L_{12}-L_{13}	-20.96	7.36	-1.40	0.46	0.28	-0.76				
	L_{13}-L_{14}	-1.16	-20.25	-0.16	-0.84	0.27	-0.85				
	L_{14}-L_{15}	-19.01	4.12	-1.62	1.22	-0.12	-0.49				
	L_{15}-L_{16}	-28.63	13.01	-2.03	1.50	-0.47	-0.53				
	L_{16}-L_{17}	-69.28	58.13	-3.48	3.10	-0.47	-0.12				
	L_{17}-L_{18}	-39.21	61.33	-2.97	3.10	-0.22	-0.40				
	L_{18}-L_{19}	-105.04	88.44	-5.29	3.76	0.19	-0.19				
	L_{19}-L_{20}	-82.69	87.74	-4.67	4.22	0.83	-0.77				
	L_{20}-L_{21}	-84.37	71.76	-4.67	3.97	0.83	-0.67				
	L_{21}-L_{22}	-81.28	63.04	-4.03	2.92	0.88	-0.72				
	L_{22}-L_{23}	-53.63	29.53	-2.20	1.67	0.43	-0.73				
	L_{23}-L_{24}	-17.36	7.21	-1.79	1.20	0.52	-0.78				
	L_{24}-L_{25}	-0.62	-11.45	-1.54	0.08	0.29	-0.79				
	L_{25}-L_{26}	-7.42	-23.91	-1.13	0.41	1.03	-1.41				
	L_{26}-L_{27}	-44.31	35.87	-1.93	1.45	-0.17	-0.76				
	L_{27}-L_{28}	-56.38	68.64	-2.32	2.79	-0.37	-0.83				
	L_{28}-L_{29}	-88.54	73.82	-3.19	2.48	-0.42	-4.57				
	L_{29}-L_{30}	-57.45	64.53	-2.57	2.21	-0.53	-0.83				
	L_{30}-L_{31}	-108.36	116.66	-3.92	3.68	-0.16	0.19				
	L_{31}-L_{32}	-154.28	139.69	-5.22	4.56	0.52	-0.20				
	L_{32}-L_{33}	-74.70	148.30	-3.03	4.76	0.13	3.89				
	L_{33}-L_{34}	-24.74	100.39	-3.26	4.24	0.73	-0.57				
	L_{34}-L_{35}	-98.29	93.22	-4.35	3.69	0.22	-0.50				
	L_{35}-L_{36}	-74.15	95.51	-4.37	3.86	0.48	-0.55				
	L_{36}-L_{37}	-55.45	68.85	-3.37	2.78	0.32	-0.61				
	L_{37}-L_{38}	-55.45	68.85	-3.37	2.71	0.23	-0.73				
	L_{38}-L_{39}	-32.97	39.97	-2.56	1.73	0.32	-0.81				
	L_{39}-L_{40}	-10.33	4.39	-1.32	0.60	0.63	-1.06				
	L_{40}-L_{41}	-10.33	4.39	-1.32	0.60	0.63	-1.06				
	L_{41}-L_{42}	-17.08	15.19	-1.63	1.43	0.02	-0.62				
	L_{42}-L_{43}	-29.51	27.42	-2.45	2.45	0.01	-0.68				
	L_{43}-L_{44}	-55.66	65.11	-3.42	3.01	-0.84	-0.23				
	L_{44}-L_{45}	-69.18	80.37	-3.72	3.43	0.46	-0.51				
	L_{45}-L_{46}	-74.77	111.66	-3.73	4.24	0.24	-0.45				
	L_{46}-L_{47}	-106.02	102.92	-4.88	4.55	0.35	-0.39				
	L_{47}-L_{48}	-39.07	102.92	-3.29	4.55	0.54	-0.39				
	L_{48}-L_{49}	-47.57	127.97	-3.63	4.65	0.80	-0.64				
	L_{49}-L_{50}	-74.15	139.69	-5.22	4.56	0.52	-0.20				
	L_{50}-L_{51}	-89.45	99.26	-3.96	3.20	0.55	0.04				
	L_{51}-L_{52}	-86.48	82.53	-3.49	2.62	-0.08	-0.26				
	L_{52}-L_{53}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{53}-L_{54}	-50.13	67.65	-2.67	2.24	0.31	-0.93				
	L_{54}-L_{55}	-89.45	99.26	-3.96	3.20	0.55	0.04				
	L_{55}-L_{56}	-86.48	82.53	-3.49	2.62	-0.08	-0.26				
	L_{56}-L_{57}	-37.14	27.84	-2.05	1.77	0.00	-0.61				
	L_{57}-L_{58}	-50.15	67.65	-2.67	2.24	0.31	-0.93				
	L_{58}-L_{59}	-39.11	23.84	-3.25	-0.92	0.00	0.00				
	L_{59}-L_{60}	-37.14	27.84	-2.05	1.77	0.00	-0.61				
	L_{60}-L_{61}	-10.56	5.10	-3.51	-10.81	0.00	0.00				
	L_{61}-L_{62}	-15.46	11.53	-3.24	9.94	0.00	0.00				
	L_{62}-L_{63}	-38.90	20.90	-3.76	17.76	0.00	0.00				
	L_{63}-L_{64}	-38.91	20.55	-2.18	1.87	-0.42	-0.23				
	L_{64}-L_{65}	-50.13	67.65	-2.67	2.24	0.31	-0.93				
	L_{65}-L_{66}	-88.49	71.14	-4.31	3.66	0.65	-0.55				
	L_{66}-L_{67}	-74.15	111.66	-3.73	4.24	0.24	-0.45				
	L_{67}-L_{68}	-70.17	69.10	-4.47	3.58	0.41	-0.34				
	L_{68}-L_{69}	-86.86	56.37	-3.95	2.63	0.39	-0.29				
	L_{69}-L_{70}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{70}-L_{71}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{71}-L_{72}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{72}-L_{73}	-15.87	1.03	-1.32	-0.07	0.00	0.00				
	L_{73}-L_{74}	-9.08	-18.28	-1.12	0.30	0.07	-1.02				
	L_{74}-L_{75}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{75}-L_{76}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{76}-L_{77}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{77}-L_{78}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{78}-L_{79}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{79}-L_{80}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{80}-L_{81}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{81}-L_{82}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{82}-L_{83}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{83}-L_{84}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{84}-L_{85}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{85}-L_{86}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{86}-L_{87}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{87}-L_{88}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{88}-L_{89}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{89}-L_{90}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{90}-L_{91}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{91}-L_{92}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{92}-L_{93}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{93}-L_{94}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{94}-L_{95}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{95}-L_{96}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{96}-L_{97}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{97}-L_{98}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{98}-L_{99}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{99}-L_{100}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{100}-L_{101}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{101}-L_{102}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{102}-L_{103}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{103}-L_{104}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{104}-L_{105}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{105}-L_{106}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{106}-L_{107}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{107}-L_{108}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{108}-L_{109}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{109}-L_{110}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{110}-L_{111}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{111}-L_{112}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{112}-L_{113}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{113}-L_{114}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{114}-L_{115}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{115}-L_{116}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{116}-L_{117}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{117}-L_{118}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{118}-L_{119}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{119}-L_{120}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{120}-L_{121}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{121}-L_{122}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{122}-L_{123}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{123}-L_{124}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{124}-L_{125}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{125}-L_{126}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{126}-L_{127}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{127}-L_{128}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{128}-L_{129}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{129}-L_{130}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{130}-L_{131}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{131}-L_{132}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{132}-L_{133}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{133}-L_{134}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{134}-L_{135}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{135}-L_{136}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{136}-L_{137}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{137}-L_{138}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{138}-L_{139}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{139}-L_{140}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{140}-L_{141}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{141}-L_{142}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{142}-L_{143}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{143}-L_{144}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{144}-L_{145}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{145}-L_{146}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{146}-L_{147}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{147}-L_{148}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{148}-L_{149}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{149}-L_{150}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{150}-L_{151}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{151}-L_{152}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{152}-L_{153}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{153}-L_{154}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{154}-L_{155}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{155}-L_{156}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{156}-L_{157}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{157}-L_{158}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{158}-L_{159}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{159}-L_{160}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{160}-L_{161}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{161}-L_{162}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{162}-L_{163}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{163}-L_{164}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{164}-L_{165}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{165}-L_{166}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{166}-L_{167}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{167}-L_{168}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{168}-L_{169}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{169}-L_{170}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{170}-L_{171}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{171}-L_{172}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{172}-L_{173}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{173}-L_{174}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{174}-L_{175}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{175}-L_{176}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{176}-L_{177}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{177}-L_{178}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{178}-L_{179}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{179}-L_{180}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{180}-L_{181}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{181}-L_{182}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{182}-L_{183}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{183}-L_{184}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{184}-L_{185}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{185}-L_{186}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{186}-L_{187}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{187}-L_{188}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{188}-L_{189}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{189}-L_{190}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{190}-L_{191}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{191}-L_{192}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{192}-L_{193}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{193}-L_{194}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{194}-L_{195}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{195}-L_{196}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{196}-L_{197}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{197}-L_{198}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{198}-L_{199}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{199}-L_{200}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{200}-L_{201}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{201}-L_{202}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{202}-L_{203}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{203}-L_{204}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{204}-L_{205}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{205}-L_{206}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{206}-L_{207}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{207}-L_{208}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{208}-L_{209}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{209}-L_{210}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{210}-L_{211}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{211}-L_{212}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{212}-L_{213}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{213}-L_{214}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{214}-L_{215}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{215}-L_{216}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{216}-L_{217}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{217}-L_{218}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{218}-L_{219}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{219}-L_{220}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{220}-L_{221}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{221}-L_{222}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{222}-L_{223}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{223}-L_{224}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{224}-L_{225}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{225}-L_{226}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{226}-L_{227}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{227}-L_{228}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{228}-L_{229}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{229}-L_{230}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{230}-L_{231}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{231}-L_{232}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{232}-L_{233}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{233}-L_{234}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{234}-L_{235}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{235}-L_{236}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{236}-L_{237}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{237}-L_{238}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{238}-L_{239}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{239}-L_{240}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{240}-L_{241}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{241}-L_{242}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{242}-L_{243}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{243}-L_{244}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{244}-L_{245}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{245}-L_{246}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{246}-L_{247}	-59.57	20.60	-2.31	1.57	-1.08	-0.44				
	L_{247}-L_{248}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{248}-L_{249}	-37.73	67.15	-3.11	2.66	0.06	0.03				
	L_{249}-L_{250}	-74.15	139.69	-5.24	4.56	0.52	-0.20				
	L_{250}-L_{251}	-2.84	82.09	-1.50	3.57	0.32	0.18				
	L_{251}-L_{252}	-54.59	58.66	-3.70	2.28	0.02	-0.51				
	L_{252}-L_{253}	-39.09	12.70	-2.03	1.27	0.19	-0.44				
	L_{253}-L_{254}	-9.16	17.57	-1.16	-0.17	-0.16	-0.40				
	L_{254}-L_{255}	-50.46	39.07	-2.10	1.85	-0.14	-0.63				
	L_{255}-$L_

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

| Location | Member | Dead Load | | 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) | | ZZ Axis Moments from STAAD | | | | | | | | | | | | | | Max. Pos. Mom. | | Max. Neg. Mom. | | | | | | | | | | | | | |

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Factor Analysis - Truss Spans
Loading: 5C1
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

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) (k-in)	Pedestrian Load (Min) (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. Moment Start (k-in)	Max. Neg. Moment End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	$I_{t/t}$ (in^4)	Shape Factor	M_p (k-in)	Formula f, f Term = F/S_{top}	M_z (k-in)	Equivalent Mom. Factor a	$C_{m/t}$	$C_{m/b}$	Pass
Structure 1	L_0-L_1	-19.48	-91.71	0.88	-0.48	1.91	-2.28	-0.11	0.13	0.00	-0.64	11.76	-6.43	25.53	-30.42	-1.37	1.50	3.54	-7.68	-10.04	-127.68	7.87	-158.77	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.050	0.58	0.58	Yes
	L_1-L_2	30.33	-116.64	-2.63	-5.44	-0.65	2.35	-0.07	-0.13	0.43	-0.35	-12.72	-8.82	-15.98	-1.85	5.12	-6.20	-248.98	-175.50	-107.61	-67.35	99.5	-247.86	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	0.050	0.61	0.61	Yes
	L_2-L_3	22.01	78.07	-0.70	-2.21	0.50	-0.66	-0.04	0.03	0.12	-0.10	3.38	-2.31	6.57	-7.82	-0.35	0.39	0.91	-1.98	-2.58	-67.35	99.5	-69.31	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.050	0.58	0.58	Yes
	L_3-L_4	-65.05	14.64	-6.93	-4.80	1.34	4.23	-1.19	-1.34	0.23	0.86	-92.61	-64.14	17.84	56.56	-14.24	-16.13	2.75	10.32	-204.95	-64.36	-61.37	92.56	99.9	99.93	84.14	129.49	3409	1372.0	1.26	4141	0.99911881	3294.8	0.314	0.73	0.73	Yes
	L_4-L_5	-60.77	234.10	-5.93	-4.93	1.30	4.10	-0.09	0.03	0.11	-0.09	17.61	-9.17	45.73	39.54	-17.81	-11.08	7.39	5.24	-181.80	-81.29	-53.97	76.68	99.9	99.93	84.14	129.49	3409	1372.0	1.26	4141	0.99911881	3294.8	0.314	0.73	0.73	Yes
	L_5-L_6	-2.22	269.06	-3.41	-0.78	2.45	4.62	-0.84	0.05	0.53	1.12	-45.57	-10.43	32.78	81.76	-10.07	0.55	6.35	0.20	-62.12	236.22	39.74	430.07	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	0.092	0.64	0.64	Yes
	L_6-L_7	2.28	58.33	-1.07	-0.47	2.67	1.43	0.02	0.00	-0.29	-0.14	-14.26	-2.24	34.5	16.45	-4.31	-2.56	1.71	-2.60	-21.92	-80.02	48.65	-67.02	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	0.092	0.64	0.64	Yes
	L_7-L_8	-38.40	570.90	0.30	-0.95	0.10	6.33	0.00	0.00	0.00	0.00	-0.00	-4.16	43.81	-44.70	725.68	-53.58	117.00	145.8	145.75	130.44	228.84	650	2932.4	1.57	7552	0.99952915	4806.3	-0.062	0.58	0.58	Yes
	L_8-L_9	555.48	-39.97	-1.24	0.41	7.63	-0.25	0.00	0.00	5.40	-0.27	-15.98	5.36	97.44	-3.21	0.00	0.00	40.84	-3.23	701.35	-4.47	901.68	713.75	145.8	145.75	130.74	228.84	650	2932.4	1.57	7552	0.99952915	4806.3	0.062	0.58	0.58	Yes
	L_9-L_{10}	186.35	-153.68	1.11	-0.30	3.40	-1.98	0.00	0.00	0.34	-0.49	-14.35	-3.70	41.09	-26.61	0.00	0.00	5.13	-5.92	260.91	-34.07	299.14	244.79	102.84	102.84	93.92	134.17	3969	1648.7	1.29	5316	0.99911881	4736.1	0.601	0.86	0.86	Yes
	L_{10}-L_{11}	164.35	-164.49	-0.87	-3.52	2.65	1.45	0.00	0.00	-0.00	-0.73	-11.24	-45.57	34.31	18.81	0.00	0.00	0.00	11.59	-8.75	199.04	-273.07	258.26	-189.38	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.3	-0.729	0.31	0.31	Yes
	L_{11}-L_{12}	179.34	-221.25	-0.59	-0.37	1.99	1.26	0.16	0.42	0.25	-0.19	-7.69	-9.42	21.80	16.50	0.00	0.00	0.00	13.25	-5.25	223.27	-416.93	341.49	-360.23	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3252.3	-0.729	0.31	0.31	Yes
	L_{12}-L_{13}	-57.28	170.48	-4.02	-5.10	1.89	0.94	-0.37	-0.97	0.43	0.20	-51.97	-66.00	24.41	32.18	6.78	-11.64	5.10	2.41	-142.03	-307.42	42.72	-205.80	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952915	5288.6	0.482	0.79	0.79	Yes
	L_{13}-L_{14}	70.09	-469.84	-3.71	-10.89	1.40	1.29	-0.45	-2.28	0.35	0.23	-48.00	-140.95	18.80	16.72	-5.44	-27.35	4.18	2.75	28.72	-794.02	115.56	-589.06	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99910S	5370.6	-0.036	0.59	0.59	Yes
	L_{14}-L_{15}	-88.80	137.87	-5.04	-4.02	1.89	0.74	-0.37	-0.76	0.43	0.16	-67.68	-52.03	24.41	25.36	6.78	-9.17	5.10	1.90	-167.68	-242.34	33.66	-162.28	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952915	5288.6	0.482	0.79	0.79	Yes
	L_{15}-L_{16}	-272.90	-364.23	-5.45	-7.91	0.49	0.86	-1.43	-1.04	0.13	-0.03	-70.45	-102.39	9.37	11.18	-17.14	-12.52	1.55	-0.35	-446.35	-550.61	-346.49	-445.97	179.7	179.67	165.64	251.43	6743	3050.7	1.40	8297	0.99912252	6024.6	0.752	0.90	0.90	Yes
	L_{16}-L_{17}	-29.28	58.33	-1.07	-0.47	2.67	-1.43	0.02	0.00	-0.29	-0.14	-14.26	-2.24	34.5	16.45	-4.31	-2.56	1.71	-2.60	-21.92	-80.02	48.65	-67.02	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99952345	3448.5	0.092	0.64	0.64	Yes
	L_{17}-L_{18}	-202.42	201.75	-1.01	-0.47	2.26	0.03	-0.91	0.20	0.00	0.00	-13.62	-6.13	3.31	0.41	-10.86	2.40	0.00	0.00	-280.07	19.00	-258.84	27.51	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904048	3891.8	-0.068	0.57	0.57	Yes
	L_{18}-L_{19}	-240.36	179.73	-1.98	-1.48	0.00	0.06	-0.06	-0.12	0.00	0.01	-13.57	-0.67	0.36	0.06	-0.77	-0.13	0.00	0.89	-346.62	234.32	-309.63	232.74	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.050	0.58	0.58	Yes
	L_{19}-L_{20}	-190.79	100.10	-0.99	-0.12	3.60	2.48	0.06	-0.06	1.21	0.90	-12.76	-1.49	-46.60	32.04	0.74	-0.71	-14.53	10.82	264.62	128.19	327.51	-192.31	83.6	83.68	74.65	100.97	2740	1098.2	1.21	3332	0.99900394	2755.4	0.587	0.83	0.83	Yes
	L_{20}-L_{21}	26.57	-260.07	0.38	-0.42	1.62	-3.56	-0.05	0.10	0.35	-1.08	4.87	-5.39	20.67	-45.50	-6.56	-1.20	4.19	-12.92	40.87	-345.10	61.42	-397.23	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.155	0.54	0.54	Yes
	L_{21}-L_{22}	201.83	-347.02	-1.11	-0.45	1.27	-0.12	0.17	0.11	-0.25	-0.09	-13.25	-3.09	4.10	0.00	-10.76	-1.45	1.86	-279.60	-285.72	-336.36	-280.72	-336.36	83.6	83.58	74.62	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.050	0.58	0.58	Yes
	L_{22}-L_{23}	7.20	-277.30	-1.71	-0.63	-0.70	1.17	0.23	-1.18	-0.13	0.17	-21.89	-82.20	29.90	44.92	-2.78	-14.17	-1.60	2.04	-19.09	-344.17	-201.72	-343.11	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99904048	5357.2	0.041	0.62	0.62	Yes
	L_{23}-L_{24}	36.10	-475.17	-2.20	-0.95	-0.90	1.50	0.30	-1.52	-0.17	0.22	-28.14	-105.66	38.44	57.74	-3.57	-18.22	-2.06	2.62	-24.54	-442.43	-259.43	-441.00	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99904048	5357.2	0.041	0.62	0.62	Yes
	L_{24}-L_{25}	-367.44	-421.31	-5.93	-7.23	0.59	2.13	-1.24	-1.72	0.04	0.32	-127.66	-82.41	-7.49	27.15	-14.87	-20.62	0.43	3.78	-642.85	-687.84	-667.84	-687.84	-512.41	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.963	0.99	0.99	Yes
	L_{25}-L_{26}	23.57	-549.43	-5.06	-10.56	1.89	0.94	-0.37	-1.42	-0.24	0.17	-21.89	-82.20	29.90	44.92	-2.78	-14.17	-1.60	2.04	-19.09	-344.17	-201.72	-343.11	162.3	162.31	151.98	209.67	4946	2152.2	1.29	6919	0.99904048	5357.2	0.041	0.62	0.62	Yes
	L_{26}-L_{27}	-419.34	-397.03	-18.20	-8.43	3.54	3.80	-2.41	-2.01	0.47	0.59	-232.53	-120.52	45.23	69.54	-28.90	-24.11	5.63	7.06	-1107.41	-833.92	-746.34	-401.04	214.3	216.33	205.74	344.18	7629	3425.8	1.99	11778	0.99911881	6361.2	0.581	0.82	0.82	Yes
	L_{27}-L_{28}	-394.51	-7.27	-8.27	-7.94	3.07	5.74	-1.94	-0.96	0.46	0.95	-105.65	-101.48	39.20	73.31	-23.32	-11.46	5.50	10.76	-650.21	-141.38	-461.91	85.85	205.7	205.71	195.15	274.47	5445	2642.2	1.33	9057	0.99895457	6781.3	0.217	0.85	0.85	Yes
	L_{28}-L_{29}	-488.80	137.87	-5.04	-4.02	1.89	0.74	-0.37	-0.76	0.43	0.16	-112.68	-19.25	24.41	25.36	6.78	-9.17	5.10	1.90	-167.68	-242.34	33.66	-162.28	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952915	5288.6	0.482	0.79	0.79	Yes
	L_{29}-L_{30}	-295.55	262.64	-7.40	-1.92	2.79	5.38	-1.43	-0.65	0.41	0.92	-94.06	-24.56	35.65	68.71	-17.12	-0.60	4.93	10.36	-507.14	309.50	-337.88	430.75	149.0	149.01	130.61	189.42	4703	1908.4	1.27	6251	0.99900394	4912.7	0.410	0.36	0.36	Yes
	L_{30}-L_{31}	-188.92	585.38	-0.81	-0.08	1.24	5.63	0.00	0.00	0.08	1.89	-10.34	-17.22	36.30	71.97	0.00	0.00	0.00	6.97	22.08	-209.04	738.61	-198.41	854.66	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916251	5468.6	-0.222	0.51	0.51	Yes
	L_{31}-L_{32}	-132.48	-278.84	-1.36	0.09	3.91	-3.58	0.00	0.00	0.24	-1.23	-17.43	1.10	49.92	45.74	0.00	0.00	0.00	2.82	-14.77	-192.07	-361.06	-154.72	-421.95	226.0	226.04	214.72	325.96	7379	3194.4	1.35	11452	0.99900394	8222.2	-0.336	0.47	0.47	Yes
	L_{32}-L_{33}	1356.39	-488.30	-0.80	-0.41	10.29	-0.89	0.00	0.00	0.00	-1.83	-10.14	-5.15	129.89	-11.24	0.00	0.00	0.00	60.67	-21.36	1750.13	-641.51	1932.16	-649.40	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900394	8222.2	-0.336	0.47	0.47	Yes
	L_{33}-L_{34}	396.67	-68.03	-0.23	-0.12	3.91	-1.26	0.00	0.00	0.07	-0.43	-17.43	0.39	49.92	16.16	0.00	0.00	0.00	2.82	-14.77	-192.07	-361.06	-154.72	-421.95	226.0	226.04	214.72	325.96	7379	3194.4	1.35	11452	0.99900394	8222.2	-0.336	0.47	0.47	Yes
	L_{34}-L_{35}	579.91	109.27	-1.47	0.15	4.60	2.12	0.00	0.00	0.03	-0.54	-18.61	1.86	58.13	26.78	0.00	0.00	0.00	24.30	-6.43	-229.10	-139.63	861.04	780.13	180.3	180.29	169.70	249.67	6400	2721.8	1.36	8707	0.99910S	6343.6	0.364	0.96	0.96	Yes
	L_{35}-L_{36}	1.20	-1.20	-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	0.00	0.00	0.00	-0.00	0.00	-0.00	0.0	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_{36}-L_{37}	275.71	-101.81	-4.70	-0.50	4.71	2.18	-0.11	-0.89	1.05	0.48	-69.36	-49.48	59.52	57.26	-13.30	-10.63	12.56	-6.94	281.25	-222.47	-438.79	-96.82	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.221	0.51	0.51	Yes
	L_{37}-L_{38}	209.90	-114.97	-2.16	-0.17	2.74	3.21	-0.29	-1.04	0.42	0.64	-27.30	-113.76	34.53	40.49	-3.53	-12.42	5.08	7.75	-303.29	-395.39	-317.89	-83.74	127.4	127.41	108.77	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.221	0.51	0.51	Yes
	L_{38}-L_{39}	-33.76	-318.83	-8.84	-12.58	2.31	1.67	-0.99	-2.03	0.43	0.76	-112.87	-158.58	29.14	23.60	-11.90	-24.31	5.11	9.08	-190.61	-535.42	-6.00	-383.80	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905C	5313.3	0.307	0.72	0.72	Yes
	L_{39}-L_{40}	329.05	-28.49	-0.93	-0.05	3.91	-0.35	0.00	0.00	0.02	-0.12	-17.43	0.10	49.92	4.52	0.00	0.00	0.00	2.82	-14.77	-192.07	-361.06	-154.72	-421.95	226.0	226.04	214.72	325.96	7379	3194.4	1.35	11452	0.99900394	8222.2	-0.336	0.47	0.47	Yes
	L_{40}-L_{41}	-183.34	53.25	-7.13	-7.01	1.89	4.09	-1.14	-0.36	0.42	0.44	-89.99	-88.52	23.91	61.89	-13.72	-4.37	4.99	5.28	-355.33	-65.86	-207.26	136.42	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905C	5313.3	0.129	0.65	0.65	Yes
	L_{41}-L_{42}	-100.88	310.38	-7.79	-7.19	2.31	1.67	-0.99	-2.03	0.43	0.76	-112.87	-158.58	29.14	23.60	-11.90	-24.31	5.11	9.08	-190.61	-535.42	-6.00	-383.80	161.2	161.16	142.40	207.64	4974	2128.2	1.29	6852	0.99905C	5313.3	0.307	0.72	0.72	Yes
	L_{42}-L_{43}	-100.88	310.38	-1.81	-2.87	2.12	4.28	0.00	0.00	0.00	0.00	-0.56	1.26	-22.81	-36.23	26.70	54.05	0.00	0.00	0.00	-6.77	15.16	-160.80	356.38	-96.43	473.75	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.204	0.52	0.52	Yes
	L_{43}-L_{44}	-92.99	309.46	-3.47	0.43	3.63	1.23	0.00	0.00	-0.22	0.85	-43.78	5.47	45.80	15.49	0.00	0.00	0.00	-2.65	10.27	-136.20	699.41	-19.76	422.44	149.0	149.01	130.61	189.42	4703	1908.4	1.27	8251	0.99900394	4912.7	0.047	0.58	0.58	Yes
	L_{44}-L_{45}	29.50	84.66	-1.54	-0.43	0.53	0.18	-0.03	-0.13	0.06	0.02	-6.38	-0.68	6.68	2.26	-1.73	-0.09	0.72	-0.38	-3.22	-19.86	102.09	-2.88	61.6	61.58	55.26	79.61	2349	1006.2	1.19	3129	0.99911881	2787.1	0.601	0.86	0.86	Yes
	L_{45}-L_{46}	-16.76	420.70	-3.11	0.50	1.14	3.21	0.00	0.00	0.00	-1.43	-39.31	6.25	54.41	40.46	0.00	0.00	0.00	6.45	-17.20	-72.92	-538.79	-2.44	8.46	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99898788	7449.1	0.135	0.65	0.65	Yes
	L_{46}-L_{47}	332.10	-139.91	-4.84	-0.64	4.71	2.18	-0.11	-0.89	1.05	0.48	-69.36	-49.48	59.52	57.26	-13.30	-10.63	12.56	-6.94	281.25	-222.47	-438.79	-96.82	127.4	127.41	116.92	157.02	3868	1501.0	1.23	5182	0.99898888	4200.3	-0.221	0.51	0.51	Yes
	L_{47}-L_{48}	1421.72	-463.08	-3.74	2.12	11.51	-1.67	0.00	0.00	0.23	-1.81	-47.77	27.07	146.99	21.34	0.00	0.00	0.00	62.80	-21.72	1786.13	-533.81	2039.32	616.75	439.3	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900394	8222.2	0.352	0.48	0.48	Yes
	L_{48}-L_{49}	-236.11	-179.35	-2.62	-1.35	2.64	-1.61	0.00	0.00	0.10	-0.40	-33.41	-17.20	26.06	-20.62	0.00	0.00	0.00	-13.75	-4.76	-263.50	-255.51	-373.03	-269.96	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99898788	7449.1	0.135	0.65	0.65	Yes
	L_{49}-L_{50}	-236.11	-198.24	-1.90	-1.35	2.64	-1.61	0.00	0.00	0.10	-0.40	-33.41	-17.20	26.06	-20.62	0.00	0.00	0.00	-13.75	-4.76	-263.50	-255.51	-373.03	-269.96	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99898788	7449.1	0.135	0.65	0.65	Yes
	L_{50}-L_{51}	350.83	-204.06	-0.41	-1.97	2.02	4.09	0.00	0.00	0.04	-0.46	-0.46	-5.19	-25.20	25.77	0.00	0.00	0.00	10.07	-5.57	449.34	-297.95	489.58	-197.19	138.2	138.21	128.71	179.32	4364	1707.4	1.25	5716	0.99904048	4596.4	-0.403	0.44	0.44	Yes
	L_{51}-L_{52}	243.13	-341.87	-3.02	-6.43	2.95	3.25	-0.15	-1.37	0.50	0.46	-38.59	-107.63	37.73	41.46	-1.79	-16.46	5.95	5.47	285.91	-584.38	365.12	-390.63	168.0	168.04	148.99	224.57	5911	2429.7	1.33	7411	0.99914812	5532.6	0.542	0.82	0.82	Yes
	L_{52}-L_{53}	-365.13	-645.03	-8.36	-17.66	2.00	2.53	-2.07	-2.23	0.68	0.27	-106.77	-225.58	25.54	32.23	-26.43	-26.70	8.17	3.24	-1107.41	-1186.13	-533.81	-1186.13	213.3	205.74	344.18	7629	3425.8	1.99	11378	0.99911881	7132.6	0.542	0.82	0.82	Yes
	L_{53}-L_{54}	-620.56	-212.20	-14.02	-9.29	2.51	0.68	-2.14	-1.36	0.38	0.08	-179.14	-118.73	32.12	9.70	-23.70	-16.27	4.58	0.77	-1039.60	-430.21	-764.97	-264.55	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917S	6819.3	0.414	0.77	0.77	Yes
	L_{54}-L_{55}	-434.76	-330.92	-6.85	-7.26	2.51	1.41	-1.04	-2.51	0.00	0.00	-66.48	-160.90	2.56	27.27	-12.46	-30.13	-0.04	3.58	-727.50	-604.66	-546.01	-604.66	213.3	205.74	344.18	7629	3425.8	1.99	11378	0.99911881	7132.6	0.542	0.82	0.82	Yes
	L_{55}-L_{56}	-460.63	26.73	-10.11	-1.18	1.52	-0.09	-1.32	-0.27	0.11	-0.10	-129.14	-15.09	19.36	-1.12	-18.86	-3.19	1.25	-1.15	-786.73	-13.53	-573.68	33.26	176.7	176.67	158.64	241.43	6479	2849.3	1.47	9543	0.99912252	6024.6	0.752	0.90	0.90	Yes
	L_{56}-L_{57}	-332.59	186.75	-5.75	2.26	1.17	-0.22	-1.04	0.21	0.00	0.00	-73.50	28.93	14.94	-2.80	-12.50	2.52	0.00	0.00	-527.88	280.33	-412.91	239.09	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.531	0.35	0.35	Yes
	L_{57}-L_{58}	-298.56	65.28	-1.25	-0.42	1.62	-3.56	-0.05	0.10	0.35	-1.08	4.87	-5.39	20.67	-45.50	-6.56	-1.20	4.19	-12.92	40.87	-345.10	61.42	-397.23	122.0	122.01	103.28	148.52	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.155	0.54	0.54	Yes
	L_{58}-L_{59}	61.32	-104.62	0.17	-0.89	2.05	-2.60	-0.06	0.04	0.57	-0.94	2.21	-11.52	26.46	-33.08	0.71	0.47	6.80	-11.32	92.59	-215.97	156.11	-244.78	83.6	83.58	67.49	100.97	2740	1098.2	1.21	3332	0.99900394	2755.4	-0.625	0.27	0.27	Yes
	L_{59}-L_{60}	196.04	-240.64	-0.44	-1.85	1.98	-2.17	-0.10	0.04	0.67	-1.12	-5.64	-21.28	25.58	-28.09	-1.15	-0.49	8.09	-13.49	247.92	-345.50	288.10	-349.34	83.6	83.58	74.62	100.97	2740	1098.2	1.21	3332	0.99900394	2755.4	-0.825	0.27	0.27	Yes
	L_{60}-L_{61}	40.44	-374.13	-1.46	-7.22	-0.56	0.61	-0.04	-1.42	0.00	0.00	-18.88	-63.38	8.83	7.84	-4.47	-17.05	0.00	0.00	0.00	-28.23	-607.76	51.49	-476.18	153.3	153.89	138.16	208.43	5812	2480.7	1.34	7812	0.99914812	5273.9	-0.046	0.56	0.56	Yes
	L_{61}-L_{62}	-121.41	-479.36	-5.14	-12.64	0.20	2.11	-1.04	-2.51	0.00	0.00	-66.48	-160.90	2.56	27.27	-12.46	-30.13	-0.04	3.58	-244.25	-932.34	-154.50	-587.71	179.7	179.69	166.15	251.43	6743	3050.7	1.40	8297	0.99912252	6024.6	-0.752	0.90	0.90	Yes
	L_{62}-L_{63}	-476.93	95.74	-10.48	-2.21	1.65	1.54	-2.32	-0.58	0.10	0.04	-135.39	-28.61	21.30	19.76	-21.42	-4.93	2.24	4.92	-795.88	-92.18	-582.19	-100.44	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99910S	5370.6	-0.036	0.59	0.59	Yes
	L_{63}-L_{64}	-460.63	26.73	-10.11	-1.18	1.52	-0.09	-1.32	-0.27	0.11	-0.10	-129.14	-15.09	19.36	-1.12	-18.86	-3.19	1.25	-1.15

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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

| 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_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | I_{xx} (in^4) | ZZ Axis Moment Properties: Shape Factor | M_p (k-in) | Formula (LB Terms * F_y/S_{xx}) | M_z (k-in) | Equivalent Mom. Factors: a | C_{mx} | C_{bx} | YY Axis Moments from STAAD: Dead Load (k-in) | Live Load (Max) (k-in) | Lane Reduction & Impact Live Load (k-in) | Pedestrian Load (Max) (k-in) | Lane Reduction & Impact Pedestrian Load (k-in) | Impact Pedestrian Load (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_{yy} (in^4) | YY Axis Moment Properties: Shape Factor | M_p (k-in) | P_{crit} (k-in) | Formula (LB Terms * F_y/S_{yy}) | M_{yy} (k-in) | Equivalent Mom. Factors: a | C_{my} | C_{by} | Yield: Axial Actual | Yield: Moment Portion | Yield: Total | Yield: Pass | Tension: Axial Actual | Tension: Moment Portion | Tension: Total | Tension: Pass | Buckle: Axial Actual | Buckle: Moment Portion | Buckle: Total | Buckle: Pass | Compression: Axial Actual | Compression: Moment Portion | Compression: Total | Compression: Pass |
|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
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Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.30	DL Factor:	1.30
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* 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 (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_{bb} (in^3)	S_{tb} (in^3)	Z_z (in^3)	I_z (in^4)	YY Axis Moments from STAAD: Shape Factor	M_p (k-in)	Formula 1.8 Term = F_y/S_{bb}	M_z (k-in)	Equivalent Mom. Factor: a	$C_{b(a)}$	$C_{b(min)}$	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{tb} (in^3)	S_{bb} (in^3)	Z_y (in^3)	I_{yb} (in^4)	Shape Factor	M_p (k-in)	P_{cm} (kips)	Formula 1.8 Term = F_y/S_{bb}	M_{ny} (k-in)	Equivalent Mom. Factor: a	$C_{b(a)}$	$C_{b(min)}$	Pass	Axial Portion	Moment Portion	Total	Pass	Axial Portion	Moment Portion	Total	Pass
Structure 1		U_0-L_1	3.65	-1.42	0.43	0.33	-0.03	-0.13	0.15	0.01	0.03	-0.02	-5.74	4.40	-0.43	-0.12	-1.72	1.75	0.12	-0.34	-0.23	-2.72	3.87	4.19	-4.08	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.974	0.21	0.21	-84.92	-28.02	-3.85	-6.12	2.39	2.40	-1.09	-0.56	0.55	0.50	-51.43	-81.81	31.97	32.12	-16.17	-8.33	8.12	7.42	-177.26	-142.79	-48.84	5.32	100.5	100.48	126.29	66.1	1.20	3910	144	0.94257776	3126.1	0.836	0.92	0.92	0.270	0.050	0.32	Yes	0.163	0.027	0.20	Yes	—	—	—
		U_1-L_2	-11.48	-3.33	-0.77	-0.01	0.39	-0.16	-0.25	0.07	0.08	-0.04	-10.12	5.25	-2.11	-2.95	0.84	0.98	-0.47	-28.27	-4.48	-8.09	-7.07	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.159	0.66	0.66	122.21	23.62	-8.31	-4.33	2.35	2.31	1.18	-0.11	0.49	0.45	-111.07	-85.55	43.08	33.47	17.52	-1.60	7.33	6.64	14.48	-80.90	214.88	29.1	1.05	3454	166	0.95215722	2947.1	0.345	0.74	0.74	0.164	0.098	0.27	Yes	0.000	0.054	0.15	Yes	0.005	0.079	0.09	Yes	0.005	0.079	0.09	Yes
		U_2-L_3	9.81	-5.01	-0.30	-0.31	-0.02	-0.54	0.00	0.00	0.00	-0.11	-3.56	-4.07	-0.28	-1.16	0.00	0.00	-0.04	-1.27	7.58	-24.80	12.39	-28.82	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.430	0.43	0.43	206.47	91.61	-2.46	-4.62	-11.49	-3.75	0.00	0.00	0.00	0.00	34.30	11.46	225.77	38.89	68.82	53.93	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.95180782	2952.4	0.172	0.67	0.67	—	—	—	—	0.407	0.076	0.49	Yes	0.377	0.037	0.42	Yes
		U_3-L_4	-16.21	25.06	-0.67	-0.66	0.34	0.70	-0.05	0.04	0.01	0.09	-1.69	1.26	0.00	0.00	-1.64	0.89	-0.36	-32.75	8.15	0.00	0.00	15.4	15.42	15.42	19.37	19.37	-29.87	2	754.3	1.54	782	1.5	763.3	-0.027	0.23	0.23	-154.31	8.15	0.48	-6.48	2.39	2.39	-1.86	-0.09	0.00	0.00	-63.92	50.78	113.4	113.37	113.37	130.15	82.8	1.15	3454	169	0.95173746	3008.3	0.011	0.60	0.60	0.385	0.081	0.47	Yes	0.212	0.044	0.26	Yes	—	—	—
		U_4-L_5	-34.06	79.08	-1.43	1.13	0.30	0.94	-0.28	0.44	0.00	0.00	-19.08	13.04	4.02	0.52	-3.32	5.24	0.00	0.00	-69.08	122.36	-39.05	103.49	15.1	15.07	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.921	0.56	0.56	-192.51	23.37	-10.57	7.03	-25.43	-5.49	0.00	0.00	-253.21	76.06	-275.62	39.38	148.0	147.96	147.96	167.25	101.8	1.13	5519	262	0.99848452	4278.8	0.00	0.34	0.34	0.372	0.120	0.50	Yes	0.205	0.066	0.28	—	—	—	—
		U_5-L_6	-46.66	27.26	-1.10	-0.51	0.00	-0.02	0.00	0.00	-29.02	20.78	2.83	1.69	-5.05	8.07	0.00	0.00	-169.70	144.41	-127.51	119.58	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2314.7	-0.951	0.26	0.26	225.29	59.61	-17.87	-11.57	13.55	2.19	2.27	0.75	0.00	0.00	-52.17	-117.35	45.17	24.06	3.05	0.98	31.12	8.63	234.08	-12.21	354.29	114.36	202.9	202.86	190.44	238.56	256.9	1.18	7872	328	0.98136145	6457.7	0.323	0.73	0.73	0.434	0.121	0.57	Yes	0.269	0.062	0.36	—	—	—	—
		U_6-L_7	-73.43	69.78	-1.68	1.02	0.15	0.06	-0.31	0.35	0.00	0.00	-21.70	13.15	1.99	0.76	-3.77	4.25	0.00	0.00	-123.67	107.80	-52.87	91.71	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.872	0.25	0.25	62.46	-78.50	-5.73	-8.16	1.21	1.06	1.09	0.30	0.00	0.00	-15.12	-239.25	101.52	-84.29	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.99831336	6309.9	0.063	0.63	0.63	0.435	0.089	0.53	Yes	0.269	0.050	0.32	—	—	—	—
		U_7-L_8	-82.02	82.02	-1.68	1.68	-0.39	0.39	0.22	0.22	0.00	0.00	-24.75	24.75	2.01	2.01	0.96	-0.96	-5.21	5.21	0.00	0.00	-138.71	138.71	50.74	50.74	143.99	144.00	42.74	42.74	42.74	42.74	65.30	8	1389.8	1.53	2155	1.5	2115.6	-0.389	0.43	0.43	49.31	-81.17	-9.63	-9.63	1.42	1.23	2.23	0.00	0.00	0.00	-60.38	-275.31	85.24	85.24	197.4	197.41	184.99	230.30	248.6	1.17	6690	277	0.91252526	5561.6	0.219	0.69	0.69	0.444	0.106	0.55	Yes	0.244	0.058	0.31	Yes	—	—	—
		U_8-L_9	-69.90	47.85	-1.40	0.73	-0.15	-0.13	-0.31	0.21	0.00	0.00	-18.69	9.46	-1.97	-1.58	-3.70	2.56	0.00	0.00	-114.39	74.50	-53.43	59.63	20.8	20.80	20.67	34.66	17	1076.0	1.67	1444	1.5	1329.6	-0.651	0.34	0.34	5.36	-86.15	-5.44	-8.77	-7.52	-2.10	1.94	0.89	0.00	0.00	-70.37	-113.46	-147.29	133.5	133.45	123.27	155.40	108.8	1.16	5128	176	0.93039181	4196.9	0.326	0.73	0.73	0.390	0.151	0.55	Yes	0.245	0.085	0.34	—	—	—	—
		U_9-L_{10}	-27.40	6.37	-0.64	0.13	0.02	-0.41	-0.15	0.03	0.00	0.00	-8.27	1.67	0.30	-0.27	-1.75	0.34	0.00	0.00	-46.36	10.45	-35.23	1.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.225	0.51	0.51	59.25	-79.65	-5.68	-5.69	-9.37	-2.52	2.30	0.79	0.00	0.00	-13.49	-199.18	-80.61	-145.98	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237355	2925.7	0.093	0.64	0.64	0.373	0.117	0.50	Yes	0.205	0.064	0.27	Yes	—	—	—
		U_{10}-L_{11}	-0.38	3.22	-0.01	-0.34	-0.10	-0.05	0.04	0.00	0.00	0.00	-0.04	0.00	0.00	0.00	-0.01	0.00	-0.01	-0.36	-0.19	-0.88	0.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.024	0.23	0.23	-20.28	-163.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-41.99	-81.97	50.79	113.4	113.37	130.15	82.8	1.15	3454	169	0.95173746	3008.3	0.011	0.60	0.60	0.385	0.081	0.47	Yes	0.212	0.044	0.26	Yes	—	—	—
		U_{11}-L_{12}	-31.05	12.71	-1.04	0.76	0.05	-0.22	-0.19	0.11	0.05	-0.04	-13.47	9.77	0.65	-2.86	-2.29	-1.32	0.56	-0.52	-67.87	29.22	-39.52	12.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.505	0.40	0.40	-199.02	-99.98	0.78	2.11	5.15	-2.82	-2.86	-0.48	0.07	-0.03	-10.10	27.26	88.58	-5.81	-40.94	-4.90	106.1	-0.43	-245.59	-94.53	-172.17	-138.92	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93372272	2894.2	0.135	0.66	0.66	0.373	0.125	0.50	Yes	0.205	0.064	0.27	Yes	—	—	—
		U_{12}-L_{13}	-46.66	27.26	-1.10	-0.51	0.00	-0.02	0.00	0.00	-29.02	20.78	2.83	1.69	-5.05	8.07	0.00	0.00	-169.70	144.41	-127.51	119.58	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2314.7	-0.951	0.26	0.26	225.29	59.61	-17.87	-11.57	13.55	2.19	2.27	0.75	0.00	0.00	-52.17	-117.35	45.17	24.06	3.05	0.98	31.12	8.63	234.08	-12.21	354.29	114.36	202.9	202.86	190.44	238.56	256.9	1.18	7872	328	0.98136145	6457.7	0.323	0.73	0.73	0.434	0.121	0.57	Yes	0.269	0.062	0.36	—	—	—	—
		U_{13}-L_{14}	-118.88	85.32	-2.49	1.99	0.31	-0.29	-0.55	0.42	0.06	-0.05	-32.16	25.73	4.04	-3.74	-6.59	5.04	0.67	-0.62	-196.10	144.37	-149.04	106.05	35.1	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.736	0.31	0.31	301.40	-67.04	0.68	1.73	-0.11	-0.32	-3.13	-1.42	0.03	0.05	8.75	22.33	-1.47	-4.10	-45.00	-20.41	0.39	0.79	-382.43	-58.13	-393.74	-92.49	148.0	147.96	147.96	167.25	101.8	1.13	5519	207	0.99021955	4688.3	0.235	0.69	0.69	0.420	0.182	0.61	Yes	0.231	0.100	0.34	—	—	—	—
		U_{14}-L_{15}	-118.21	87.78	-2.43	-0.57	0.46	0.04	-0.54	0.44	0.06	-0.04	-31.38	23.87	3.91	-2.81	-6.33	5.47	0.62	-0.46	-194.43	149.29	-149.28	110.33	35.8	35.83	35.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.831	0.22	0.27	297.12	-109.44	-1.44	-1.39	0.08	-0.10	-3.27	-1.47	0.02	0.04	18.67	18.02	1.22	-3.17	-47.05	-22.57	-0.17	0.22	-439.68	-112.14	-462.67	-197.22	148.0	147.96	147.96	167.25	101.8	1.13	6080	193	0.95172364	5072.2	0.244	0.73	0.73	0.432	0.176	0.63	Yes	0.238	0.097	0.34	—	—	—	—
		U_{15}-L_{16}	-146.00	120.15	-2.36	2.07	0.17	-0.13	-0.77	0.62	0.04	-0.04	-30.50	28.76	2.19	-2.30	-9.29	7.49	0.50	-0.46	-229.44	191.01	-186.95	153.20	38.8	38.83	38.83	59.23	4	1284.6	1.53	1955	1.5	1922.1	-0.833	0.22	0.27	229.97	-141.08	0.60	1.69	-0.01	0.00	-1.77	0.03	0.02	0.01	13.81	21.89	0.02	-4.82	-29.30	-14.41	-0.09	0.13	-341.40	-112.57	-259.30	-141.08	148.0	147.96	147.96	167.25	101.8	1.13	6080	156	0.94170747	5018.9	0.544	0.82	0.82	0.444	0.160	0.61	Yes	0.244	0.088	0.34	—	—	—	—
		U_{16}-L_{17}	-86.84	116.71	-2.31	2.64	0.24	-0.44	-0.13	0.38	0.01	-0.06	-29.49	33.70	3.00	-5.66	-1.51	4.57	0.14	-0.70	-151.23	195.54	-108.99	144.36	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.773	0.29	0.29	-189.77	-31.06	-6.22	-9.75	1.66	-1.06	-0.10	0.40	0.01	0.20	-79.41	-124.57	21.23	16.83	-15.09	-1.36	5.79	7.23	-349.93	202.32	-219.10	-26.30	173.7	173.70	173.70	202.71	247.5	1.17	6690	180	0.95415621	5469.3	0.176	0.63	0.63	0.491	0.143	0.64	Yes	0.270	0.079	0.35	Yes	—	—	—
		U_{17}-L_{18}	-34.52	8.80	-0.89	0.18	-0.06	-0.58	-0.19	0.12	0.00	0.00	-10.75	2.17	0.39	-0.35	-2.27	0.44	0.00	0.00	-60.26	13.58	-45.79	1.86	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.292	0.49	0.49	-258.01	10.59	0.63	-8.42	3.10	-3.66	-1.67	1.65	0.65	0.00	0.00	-17.53	-259.00	-104.74	-189.72	94.0	93.99	93.99	104.66	65.3	1.11	3454	188	0.94257776	3126.1	0.836	0.92	0.92	0.270	0.050	0.32	Yes	0.163	0.027	0.20	Yes	—	—	—
		U_{18}-L_{19}	-118.22	92.25	-2.92	2.36	0.76	-0.67	-0.62	0.43	0.11	-0.10	-37.35	30.09	9.75	-8.55	-6.28	5.11	1.37	-1.25	-202.23	159.04	-141.08	108.81	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.786	0.29	0.29	32.87	-71.75	-9.35	-8.59	1.75	1.40	1.01	0.01	0.33	0.26	-82.10	-122.49	22.41	17.91	14.32	-16.10	4.71	3.62	-62.71	-252.51	-81.99	-148.09	148.0	147.96	147.96	167.25	101.8	1.13	5519	217	0.99189757	4686.6	0.248	0.70	0.70	0.421	0.160	0.62	Yes	0.248	0.088	0.34	—	—	—	—
		U_{19}-L_{20}	-34.32	8.60	-1.06	0.80	0.46	-0.37	-0.18	0.11	0.07	-0.06	-13.49	10.17	5.81	-4.78	-2.14	1.27	0.86	-0.72	-69.16	26.41	-24.06	4.97	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.466	0.40	0.40	88.14	-32.22	-4.32	-6.03	1.63	1.05	1.44	0.29	0.21	0.14	-55.18	-44.32	20.88	13.45	20.43	4.07	3.04	1.92	-42.84	-126.15	141.72	-25.09	94.0	93.99	93.99	104.66	65.3	1.11	3454	96	0.91239827	2834.3	-0.177	0.33	0.33	0.323	0.104	0.33	Yes	0.122	0.057	0.18	—	—	—	—
		U_{20}-L_{21}	-1.48	3.62	-0.17	-0.17	0.00	-0.01	-0.04	0.04	0.00	0.00	-4.64	4.64	-0.51	-0.51	-1.17	0.00	-0.06	-0.06	-10.79	-10.79	-7.51	-7.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.244	0.59	0.59	-37.32	-10.79	-0.51	-0.51	-2.38	-2.12	0.00	0.00	0.00	0.00	-87.33	-87.33	93.99	93.99	93.99	104.66	65.3	1.11	3454	169	0.95173746	3008.3	0.011	0.60	0.60	0.385	0.081	0.47	Yes	0.212	0.044	0.26	Yes	—	—	—
		U_{21}-L_{22}	-13.33	-37.03	-0.38	0.10	0.46	-0.86	0.00	0.00	0.00	0.00	-4.88	1.33	5.81	-11.94	0.00	0.00	0.00	0.00	-54.16	-154.50	-98.41	-24.89	62.4	49.72	17.24	17.24	26.54	8	824.7	1.54	878	1.5	853.4	-0.398	0.44	0.44	131.99	1.78	-1.40	-3.23	-11.26	-6.69	0.00	0.00	0.00	0.00	29.68	10.41	147.77	-31.37	-143.81	-8.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Axial AB Operating

Operating Loads - 5C1

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															
			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	Controlling Bi-Axial Moment & Axial Value	Rating										
			(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	-----	-530.47	-176	90	-357	-741	8	-3	199	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.271	1.00	Yes	0.715	0.176	0.90	Yes	1.00	**3.93**										
		U_1 - U_2	-----	-572.79	-59	63	-142	-841	-7	-22	43	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1.00	Yes	0.772	0.200	0.98	Yes	1.00	**2.44**										
		U_2 - U_3	124.36	-561.68	-126	246	-393	-630	9	25	70	196	0.143	0.183	0.33	Yes	0.096	0.119	0.22	Yes	0.764	0.231	1.00	Yes	0.757	0.150	0.91	Yes	1.00	**2.41**										
		U_3 - U_4	345.77	-541.06	77	311	-343	-675	1	33	187	28	0.396	0.192	0.59	Yes	0.272	0.132	0.41	Yes	0.736	0.254	1.00	Yes	0.730	0.160	0.90	Yes	1.00	**3.00**										
		U_4 - U_5	372.98	-573.44	136	304	-941	-175	15	-33	44	-47	0.428	0.232	0.66	Yes	0.293	0.159	0.46	Yes	0.780	0.203	0.99	Yes	0.773	0.224	1.00	Yes	1.00	**3.20**										
		U_5 - U_6	657.14	-----	247	464	-832	214	-142	-64	262	-1	0.753	0.242	1.00	Yes	0.508	0.158	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**										
		U_6 - U_7	845.97	-----	371	225	-601	-62	-290	-112	409	-140	0.809	0.184	1.00	Yes	0.565	0.126	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**										
		U_7 - U_8	1099.13	-----	72	1200	-241	950	-491	28	-110	-342	0.762	0.232	1.00	Yes	0.531	0.158	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**										
		U_8 - U_9	893.16	-----	1270	-141	687	-167	-403	-194	-242	-121	0.732	0.262	1.00	Yes	0.501	0.179	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**										
		U_9 - U_{10}	713.33	-----	234	309	113	-512	-164	19	-43	647	0.774	0.219	1.00	Yes	0.524	0.147	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**										
		U_{10} - U_{11}	282.28	-588.59	330	-68	285	-1101	28	99	322	209	0.306	0.298	0.61	Yes	0.204	0.191	0.40	Yes	0.758	0.214	0.98	Yes	0.751	0.247	1.00	Yes	1.00	**3.48**										
		U_{11} - U_{12}	-----	-854.39	215	-114	69	-847	107	411	218	652	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.181	1.00	Yes	0.802	0.141	0.95	Yes	1.00	**2.41**										
		U_{12} - U_{13}	-----	-1186.56	3	-237	-242	-997	347	211	519	373	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1.00	Yes	0.793	0.138	0.94	Yes	1.00	**2.51**										
		U_{13} - U_{14}	-----	-1397.22	-139	-376	-458	-1077	217	172	304	583	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.184	1.00	Yes	0.801	0.119	0.92	Yes	1.00	**2.58**										
		U_{14} - U_{15}	-----	-1385.76	-262	-243	-967	-859	206	28	676	126	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.190	1.00	Yes	0.794	0.107	0.91	Yes	1.00	**2.53**										
		U_{15} - U_{16}	-----	-1361.71	-156	-432	-1103	-798	85	36	428	176	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1.00	Yes	0.781	0.122	0.91	Yes	1.00	**2.27**										
		U_{16} - U_{17}	-----	-1358.77	-342	-209	-1420	-477	136	-53	611	63	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.208	1.00	Yes	0.779	0.157	0.94	Yes	1.00	**2.57**										
		U_{17} - U_{18}	-----	-1058.64	-211	-72	-891	31	-4	-63	431	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.159	1.00	Yes	0.828	0.145	0.98	Yes	1.00	**2.52**										
		U_{18} - U_{19}	-----	-730.52	-199	-69	-750	-55	22	-120	420	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.164	1.00	Yes	0.822	0.151	0.98	Yes	1.00	**2.67**										
		U_{19} - U_{20}	-----	-544.03	-271	304	-1900	1385	-68	-130	463	-756	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.216	0.84	Yes	0.612	0.382	1.00	Yes	1.00	**5.97**										
	Structure 2	U_0 - U_1	-----	-609.98	-89	-82	295	-1621	4	-67	131	119	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.241	0.97	Yes	0.720	0.275	1.00	Yes	1.00	**5.76**										
		U_1 - U_2	-----	-843.89	-49	-178	34	-1132	-70	-221	0	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1.00	Yes	0.814	0.172	0.99	Yes	1.00	**3.36**										
		U_2 - U_3	-----	-1147.54	-100	-265	-20	-1693	-27	375	51	309	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.177	1.00	Yes	0.814	0.172	0.99	Yes	1.00	**3.02**										
		U_3 - U_4	-----	-1301.54	-422	-412	-782	-1672	532	913	294	363	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.251	1.00	Yes	0.741	0.149	0.90	Yes	1.00	**2.52**										
		U_4 - U_5	-----	-1465.64	-459	-356	-1006	-1771	784	311	274	218	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.233	1.00	Yes	0.752	0.147	0.90	Yes	1.00	**2.69**										
		U_5 - U_6	-----	-1682.10	-393	78	-1078	-902	181	-243	146	329	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.122	1.00	Yes	0.864	0.089	0.96	Yes	1.00	**3.13**										
		U_6 - U_7	-----	-1355.29	-267	-88	-812	-1619	-145	-192	365	117	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1.00	Yes	0.772	0.144	0.92	Yes	1.00	**2.41**										
		U_7 - U_8	-----	-1365.01	-183	-161	-1771	-854	-111	-188	182	37	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**2.45**										
		U_8 - U_9	-----	-1176.77	-270	124	-1549	-383	-97	-200	351	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.194	1.00	Yes	0.798	0.165	0.97	Yes	1.00	**2.44**										
		U_9 - U_{10}	-----	-953.56	-60	364	-1336	-132	-146	-155	258	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.167	1.00	Yes	0.823	0.163	0.99	Yes	1.00	**2.86**										
		U_{10} - U_{11}	550.95	-764.61	210	404	-1476	-215	-192	-168	460	-61	0.465	0.264	0.73	Yes	0.317	0.172	0.49	Yes	0.764	0.232	1.00	Yes	0.760	0.208	0.97	Yes	1.00	**3.83**										
		U_{11} - U_{12}	844.14	-----	251	547	-1550	257	-353	-129	527	23	0.713	0.283	1.00	Yes	0.479	0.189	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**										
		U_{12} - U_{13}	1183.92	-----	496	145	-1104	-745	-450	-399	553	-326	0.799	0.192	1.00	Yes	0.570	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**										
		U_{13} - U_{14}	1455.31	-----	128	2278	-339	1390	-947	-491	-414	-492	0.716	0.276	1.00	Yes	0.507	0.182	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.28**										
		U_{14} - U_{15}	1361.54	-----	2778	114	1231	-28	-1028	-801	-555	-486	0.670	0.327	1.00	Yes	0.474	0.215	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**										
		U_{15} - U_{16}	1443.94	-----	155	546	-34	191	-706	-501	-374	-88	0.873	0.122	1.00	Yes	0.621	0.084	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**										
		U_{16} - U_{17}	1077.42	-----	673	334	528	-1241	-230	-34	421	359	0.794	0.200	1.00	Yes	0.528	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**										
		U_{17} - U_{18}	764.07	-----	480	347	284	-771	-7	240	269	660	0.767	0.228	1.00	Yes	0.511	0.150	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**										
		U_{18} - U_{19}	680.78	-649.37	612	302	240	-1337	68	108	554	409	0.683	0.308	1.00	Yes	0.448	0.197	0.65	Yes	0.772	0.183	0.96	Yes	0.767	0.227	1.00	Yes	1.00	**4.69**										
		U_{19} - U_{20}	392.83	-748.24	377	267	-170	-839	1	-6	251	323	0.368	0.178	0.55	Yes	0.244	0.117	0.37	Yes	0.831	0.165	1.00	Yes	0.826	0.134	0.96	Yes	1.00	**3.62**										
		U_{20} - U_{21}	247.38	-898.44	228	-17	-192	-916	-46	-70	385	242	0.192	0.175	0.37	Yes	0.134	0.114	0.25	Yes	0.826	0.174	1.00	Yes	0.820	0.133	0.96	Yes	1.00	**3.46**										
		U_{21} - U_{22}	-----	-816.10	-24	19	-407	-1266	-13	62	256	340	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.247	1.00	Yes	0.745	0.183	0.93	Yes	1.00	**2.76**										
		U_{22} - U_{23}	-----	-797.50	85	-27	-1270	-599	53	-2	384	88	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1.00	Yes	0.728	0.184	0.92	Yes	1.00	**2.69**										
		U_{23} - U_{24}	192.59	-845.38	-55	171	-1199	-339	-31	-59	355	64	0.149	0.213	0.37	Yes	0.105	0.138	0.25	Yes	0.777	0.214	1.00	Yes	0.772	0.174	0.95	Yes	1.00	**3.01**										
		U_{24} - U_{25}	330.82	-751.93	211	309	-941	-318	-73	-87	392	-145	0.310	0.203	0.52	Yes	0.206	0.134	0.34	Yes	0.835	0.162	1.00	Yes	0.830	0.151	0.99	Yes	1.00	**3.21**										
		U_{25} - U_{26}	567.65	-667.20	229	498	-1248	144	-172	-77	352	-77	0.570	0.263	0.84	Yes	0.374	0.168	0.55	Yes	0.793	0.166	0.96	Yes	0.788	0.212	1.00	Yes	1.00	**3.96**										
		U_{26} - U_{27}	731.00	-----	351	403	-1171	238	-240	-69	415	-153	0.734	0.260	1.00	Yes	0.489	0.172	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**										
		U_{27} - U_{28}	1073.79	-----	334	579	-1276	291	-374	-11	417	-84	0.791	0.204	1.00	Yes	0.526	0.134	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**										
		U_{28} - U_{29}	1463.77	-----	595	210	49	-137	-459	-292	-117	-25	0.885	0.106	1.00	Yes	0.630	0.072	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**										
		U_{29} - U_{30}	1499.39	-----	258	2121	-55	749	-851	-461	-269	-21	0.737	0.254	1.00	Yes	0.522	0.168	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**										
		U_{30} - U_{31}	1448.10	-----	2513	12	905	-203	-716	-596	-204	-58	0.712	0.282	1.00	Yes	0.504	0.185	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**										
		U_{31} - U_{32}	1315.70	-----	62	496	-99	20	-467	-298	4	298	0.888	0.107	1.00	Yes	0.633	0.074	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**										
		U_{32} - U_{33}	928.02	-----	487	291	421	-1019	-107	-7	528	433	0.784	0.208	1.00	Yes	0.527	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**										
		U_{33} - U_{34}	783.98	-607.39	423	306	-53	-1442	-7	237	489	1068	0.662	0.334	1.00	Yes	0.451	0.219	0.68	Yes	0.607	0.288	0.90	Yes	0.604	0.203	0.81	Yes	1.00	**4.78**										
		U_{34} - U_{35}	458.73	-903.15	415	122	-130	-1413	165	148	566	551	0.336	0.233	0.57	Yes	0.228	0.158	0.39	Yes	0.784	0.210	1.00	Yes	0.779	0.172	0.96	Yes	1.00	**3.93**										
		U_{35} - U_{36}	-----	-1113.47	191	-122	-161	-1750	96	89	410	550	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1.00	Yes	0.755	0.186	0.95	Yes	1.00	**3.27**										
		U_{36} - U_{37}	-----	-1392.69	-21	74	-661	-1356	73	-7	433	400	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.192	1.00	Yes	0.793	0.121	0.92	Yes	1.00	**3.36**										
		U_{37} - U_{38}	-----	-1411.91	175	-104	-1315	-1362	39	20	443	128	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.187	1.00	Yes	0.804	0.121	0.93	Yes	1.00	**3.42**										
		U_{38} - U_{39}	-----	-1551.25	156	-277	-1385	-1578	131	-30	539	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1.00	Yes	0.796	0.131	0.93	Yes	1.00	**3.33**										
		U_{39} - U_{40}	-----	-1475.98	-188	-335	-1874	-1291	32	-23	443	152	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1.00	Yes	0.758	0.155	0.92	Yes	1.00	**3.08**										
		U_{40} - U_{41}	-----	-1324.35	-240	-336	-1941	-989	49	-112	520	1	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1.00	Yes	0.754	0.173	0.93	Yes	1.00	**2.87**										
		U_{41} - U_{42}	-----	-1113.70	-144	-135	-1668	-205	-67	-98	398	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1.00	Yes	0.790	0.170	0.97	Yes	1.00	**3.08**										
		U_{42} - U_{43}	-----	-816.63	-127	-61	-1154	-241	-38	-91	379	-208	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.198	1.00	Yes	0.788	0.175	0.97	Yes	1.00	**3.36**										
		U_{43} - U_{44}	-----	-586.73	16	-255	-1797	1784	-62	51	173	-649	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.223	0.92	Yes	0.693	0.305	1.00	Yes	1.00	**6.06**										
	Structure 3	U_0 - U_1	-----	-630.71	0	-163	557	-1422	7	-75	17	81	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.207	0.93	Yes	0.710	0.286	1.00	Yes	1.00	**6.52**										
		U_1 - U_2	-----	-721.84	-32	-141	62	-854	-62	-228	-115	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1.00	Yes	0.812	0.172	0.99	Yes	1.00	**2.93**										
		U_2 - U_3	-----	-1059.95	-74	-163	-66	-854	-50	334	-131	304	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.158	1.00	Yes	0.829	0.139	0.97	Yes	1.00	**2.99**										
		U_3 - U_4	-----	-1330.09	-189	-309	-318	-1374	489	820	339	423	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.224	1.00	Yes	0.763	0.152	0.92	Yes	1.00	**2.97**										
		U_4 - U_5	-----	-1444.53	-398	-54	-596	-766	683	228	391	167	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.160	1.00	Yes	0.828	0.084	0.92	Yes	1.00	**2.86**										
		U_5 - U_6	-----	-1380.83	-182	-274	-540	-1283	138	-150	369	377	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1.00	Yes	0.792	0.142	0.94	Yes	1.00	**2.55**										
		U_6 - U_7	-----	-1365.21	-377	-102	-1346	-591	-90	-187	424	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.199	1.00	Yes	0.783	0.149	0.94	Yes	1.00	**2.51**										
		U_7 - U_8	-----	-1215.48	-167	-7	-935	-388	-58	-174	272	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.172	1.00	Yes	0.812	0.129	0.95	Yes	1.00	**2.47**										
		U_8 - U_9	-----	-896.90	-107	172	-866	-44	-30	-158	282	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.151	1.00	Yes	0.841	0.144	0.99	Yes	1.00	**2.19**										
		U_9 - U_{10}	-----	-618.00	-81	224	-925	114	-94	-111	239	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.194	0.99	Yes	0.789	0.207	1.00	Yes	1.00	**2.63**										
		U_{10} - U_{11}	674.54	-378.51	309	221	-828	123	-242	-152	488	-304	0.732	0.264	1.00	Yes	0.496	0.177	0.68	Yes	0.487	0.147	0.64	Yes	0.483	0.186	0.67	Yes	1.00	**5.19**										
		U_{11} - U_{12}	910.19	-----	-51	1138	-155	560	-444	-145	-213	-186	0.746	0.245	1.00	Yes	0.510	0.167	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**										
		U_{12} - U_{13}	1082.89	-----	1255	115	556	10	-561	-507	-272	-265	0.750	0.247	1.00	Yes	0.523	0.169	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**										
		U_{13} - U_{14}	870.25	-----	225	442	60	-430	-343	-217	-53	493	0.832	0.162	1.00	Yes	0.582	0.111	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**										
		U_{14} - U_{15}	705.28	-----	459	326	162	-666	-145	-41	189	88	0.808	0.190	1.00	Yes	0.545	0.124	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**										
		U_{15} - U_{16}	499.85	-527.59	386	271	-56	-741	-82	125	179	407	0.573	0.245	0.82	Yes	0.393	0.168	0.57	Yes	0.718	0.278	1.00	Yes	0.711	0.176	0.89	Yes	1.00	**3.68**										
		U_{16} - U_{17}	534.19	-589.64	485	183	-555	-591	51	71	393	196	0.612	0.207	0.82	Yes	0.420	0.142	0.57	Yes	0.802	0.198	1.00	Yes	0.795	0.141	0.94	Yes	1.00	**4.02**										
		U_{17} - U_{18}	230.00	-548.70	338	-63	-646	-477	-60	71	266	207	0.264	0.199	0.47	Yes	0.178	0.130	0.31	Yes	0.747	0.245	1.00	Yes	0.740	0.154	0.90	Yes	1.00	**2.70**										
		U_{18} - U_{19}	93.57	-523.10	167	-38	-795	-334	-37	31	460	2	0.107	0.267	0.38	Yes	0.074	0.182	0.26	Yes	0.712	0.281	1.00	Yes	0.705	0.189	0.90	Yes	1.00	**2.50**										
		U_{19} - U_{20}	-----	-521.62	209	-352	-1221	625	-141	139	381	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.214	0.93	Yes	0.703	0.290	1.00	Yes	1.00	**4.46**										

Axial AB Operating

Operating Loads - 5C1

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			391.54	-----	334	-731	-684	558	-224	-823	-115	-423	0.599	0.396	1.00	Yes	0.353	0.237	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**45.16**
		L_1 - L_2			484.84	-----	-51	-682	146	8	-204	-9	-24	-50	0.742	0.249	1.00	Yes	0.453	0.166	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.64**
		L_2 - L_3			700.78	-----	-749	-590	-3	56	-29	-21	-38	34	0.806	0.187	1.00	Yes	0.466	0.113	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.25**
		L_3 - L_4			686.63	-193.41	-716	-363	100	303	215	28	77	69	0.790	0.207	1.00	Yes	0.469	0.133	0.61	Yes	0.264	0.201	0.47	Yes	0.262	0.173	0.44	Yes			1.00	**3.15**
		L_4 - L_5			-----	-541.65	-644	219	120	613	-164	323	59	38	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.154	0.99	Yes	0.825	0.171	1.00	Yes			1.00	**3.00**
		L_5 - L_6			-----	-739.13	-261	88	168	606	77	137	73	121	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.137	1.00	Yes	0.853	0.134	0.99	Yes			1.00	**2.92**
		L_6 - L_7			-----	-1181.09	-228	287	248	127	-33	189	127	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.961	0.030	1.00	Yes	0.951	0.045	1.00	Yes			1.00	**4.59**
		L_7 - L_8			-----	-1290.56	1	598	54	1133	-73	-89	69	196	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.166	1.00	Yes	0.817	0.150	0.97	Yes			1.00	**4.38**
		L_8 - L_9			-----	-1299.80	579	-32	1139	-21	-143	-158	-5	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.162	1.00	Yes	0.823	0.151	0.98	Yes			1.00	**4.09**
		L_9 - L_{10}			-----	-1167.94	333	-199	33	173	-75	131	68	176	-----	-----	-----	-----	-----	-----	-----	-----	0.950	0.035	0.99	Yes	0.940	0.052	1.00	Yes			1.00	**6.38**
		L_{10} - L_{11}			-----	-561.14	173	-477	533	-4	125	-151	142	46	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.097	0.96	Yes	0.855	0.141	1.00	Yes			1.00	**3.93**
		L_{11} - L_{12}			571.75	-----	233	-822	513	-150	236	11	107	-35	0.740	0.259	1.00	Yes	0.444	0.169	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.22**
		L_{12} - L_{13}			1091.17	-----	-434	-570	192	-60	264	155	15	28	0.861	0.132	1.00	Yes	0.551	0.079	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.40**
		L_{13} - L_{14}			1357.93	-----	-126	-1284	374	-426	267	-62	11	-6	0.799	0.199	1.00	Yes	0.517	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.80**
		L_{14} - L_{15}			1650.98	-----	-1373	-1012	-346	-27	-214	273	-118	-67	0.807	0.185	1.00	Yes	0.524	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.98**
		L_{15} - L_{16}			1617.92	-----	-1016	-1475	-213	-366	-120	-350	-120	-54	0.790	0.202	1.00	Yes	0.507	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.40**
		L_{16} - L_{17}			1183.34	-----	-1438	-146	-428	94	-422	361	-102	-47	0.748	0.249	1.00	Yes	0.485	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.45**
		L_{17} - L_{18}			908.29	-----	-880	-181	-190	22	-44	-266	-80	-17	0.791	0.204	1.00	Yes	0.506	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**6.31**
		L_{18} - L_{19}			474.65	-----	-539	368	-601	664	-149	232	-335	-1	0.726	0.269	1.00	Yes	0.491	0.170	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.67**
		L_{19} - L_{20}			169.47	-481.43	-259	68	-436	251	146	33	-83	-18	0.259	0.161	0.43	Yes	0.158	0.108	0.27	Yes	0.874	0.102	0.98	Yes	0.867	0.131	1.00	Yes			1.00	**4.39**
	Structure 2	L_0 - L_1			362.10	-----	224	-859	1161	-2547	35	121	-69	-239	0.440	0.558	1.00	Yes	0.262	0.360	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**20.41**
		L_1 - L_2			549.13	-----	313	-1249	166	-213	-428	-149	-49	12	0.667	0.324	1.00	Yes	0.397	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.61**
		L_2 - L_3			1024.44	-----	-102	-1175	-46	-153	41	121	62	73	0.807	0.183	1.00	Yes	0.529	0.108	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.19**
		L_3 - L_4			1357.07	-----	-352	-1468	23	-417	276	161	166	79	0.797	0.194	1.00	Yes	0.537	0.120	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.32**
		L_4 - L_5			1809.77	-----	-1473	-1389	-391	-220	116	1	92	215	0.844	0.154	1.00	Yes	0.559	0.091	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.78**
		L_5 - L_6			1853.03	-----	-689	-1953	-136	-334	-401	-326	124	-17	0.795	0.198	1.00	Yes	0.534	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.33**
		L_6 - L_7			1903.61	-----	-1835	-1748	-390	-33	-433	-43	-174	43	0.806	0.188	1.00	Yes	0.535	0.111	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.22**
		L_7 - L_8			1463.22	-----	-1351	-982	-166	380	-5	-70	-129	11	0.839	0.160	1.00	Yes	0.551	0.093	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.81**
		L_8 - L_9			1144.64	-----	-1098	-149	-32	588	-202	465	-19	18	0.801	0.192	1.00	Yes	0.539	0.121	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.29**
		L_9 - L_{10}			836.01	-760.64	-1236	-316	-54	830	48	-153	33	112	0.746	0.216	0.97	Yes	0.434	0.135	0.57	Yes	0.804	0.134	0.94	Yes	0.799	0.198	1.00	Yes			1.00	**5.16**
		L_{10} - L_{11}			-----	-719.34	-884	288	113	540	-212	395	63	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.114	0.97	Yes	0.845	0.155	1.00	Yes			1.00	**3.49**
		L_{11} - L_{12}			-----	-1052.63	-236	405	106	1001	58	226	80	231	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.118	0.99	Yes	0.863	0.136	1.00	Yes			1.00	**4.36**
		L_{12} - L_{13}			-----	-1554.07	-376	-184	441	-435	119	-163	195	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.937	0.060	1.00	Yes	0.930	0.044	0.98	Yes			1.00	**6.58**
		L_{13} - L_{14}			-----	-1512.65	-366	1230	-622	2667	-261	-452	-248	-535	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.196	0.97	Yes	0.761	0.233	1.00	Yes			1.00	**4.19**
		L_{14} - L_{15}			-----	-1632.78	1123	-471	1983	-365	-518	-320	-278	-401	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.150	0.98	Yes	0.822	0.173	1.00	Yes			1.00	**5.61**
		L_{15} - L_{16}			-----	-1487.36	-469	-14	-1058	342	-214	94	24	400	-----	-----	-----	-----	-----	-----	-----	-----	0.897	0.091	0.99	Yes	0.890	0.105	1.00	Yes			1.00	**5.29**
		L_{16} - L_{17}			-----	-1158.22	544	-38	1220	121	184	-18	401	188	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.149	1.00	Yes	0.844	0.151	1.00	Yes			1.00	**4.43**
		L_{17} - L_{18}			-----	-863.94	147	-491	480	254	144	47	111	-59	-----	-----	-----	-----	-----	-----	-----	-----	0.914	0.081	1.00	Yes	0.907	0.078	0.99	Yes			1.00	**3.48**
		L_{18} - L_{19}			-----	-652.37	125	-448	675	119	117	123	-5	33	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.120	1.00	Yes	0.869	0.130	1.00	Yes			1.00	**3.26**
		L_{19} - L_{20}			467.02	-615.71	-103	-889	573	250	329	10	57	-47	0.529	0.222	0.76	Yes	0.313	0.140	0.46	Yes	0.826	0.167	1.00	Yes	0.821	0.172	1.00	Yes			1.00	**4.36**
		L_{20} - L_{21}			962.72	-585.87	-1074	-1271	672	98	178	365	-114	-123	0.768	0.225	1.00	Yes	0.503	0.135	0.64	Yes	0.553	0.211	0.77	Yes	0.550	0.185	0.74	Yes			1.00	**5.87**
		L_{21} - L_{22}			896.09	-291.10	-684	-1793	279	-40	174	21	-105	-39	0.715	0.280	1.00	Yes	0.478	0.175	0.66	Yes	0.275	0.243	0.52	Yes	0.273	0.262	0.54	Yes			1.00	**4.35**
		L_{22} - L_{23}			908.91	-----	-1503	-1167	-126	249	-124	457	-15	3	0.725	0.269	1.00	Yes	0.485	0.169	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.46**
		L_{23} - L_{24}			1001.46	-426.38	-1022	-1221	61	526	-2	-214	18	98	0.799	0.201	1.00	Yes	0.524	0.120	0.65	Yes	0.403	0.222	0.63	Yes	0.400	0.178	0.58	Yes			1.00	**6.29**
		L_{24} - L_{25}			587.08	-575.60	-1118	-563	347	455	-291	758	90	0	0.665	0.332	1.00	Yes	0.393	0.207	0.61	Yes	0.772	0.217	0.99	Yes	0.767	0.216	0.99	Yes			1.00	**6.26**
		L_{25} - L_{26}			-----	-640.22	-721	-180	118	697	197	-88	41	127	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.116	0.98	Yes	0.853	0.139	1.00	Yes			1.00	**4.99**
		L_{26} - L_{27}			-----	-845.75	-314	225	-197	641	-70	290	-196	23	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.092	0.99	Yes	0.888	0.103	1.00	Yes			1.00	**4.62**
		L_{27} - L_{28}			-----	-1166.68	-67	215	-274	1179	88	196	-51	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.120	0.98	Yes	0.850	0.145	1.00	Yes			1.00	**4.38**
		L_{28} - L_{29}			-----	-1584.20	-111	-330	34	0	171	-19	-66	9	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.037	1.00	Yes	0.948	0.033	0.99	Yes			1.00	**4.69**
		L_{29} - L_{30}			-----	-1622.44	-373	805	-488	2086	-65	-129	-4	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.131	0.96	Yes	0.816	0.182	1.00	Yes			1.00	**3.94**
		L_{30} - L_{31}			-----	-1583.13	817	-338	2287	-472	-133	-117	-603	-490	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.174	0.98	Yes	0.797	0.200	1.00	Yes			1.00	**6.11**
		L_{31} - L_{32}			-----	-1564.64	-153	-255	305	-127	-59	73	-374	151	-----	-----	-----	-----	-----	-----	-----	-----	0.944	0.050	1.00	Yes	0.936	0.030	0.97	Yes			1.00	**8.14**
		L_{32} - L_{33}			-----	-1049.28	378	-371	1008	158	172	42	-142	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.107	0.98	Yes	0.860	0.137	1.00	Yes			1.00	**6.25**
		L_{33} - L_{34}			-----	-767.14	283	-546	429	233	90	-180	4	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.907	0.040	0.95	Yes	0.901	0.096	1.00	Yes			1.00	**5.37**
		L_{34} - L_{35}			726.00	-760.46	-63	-1234	748	98	-238	-114	-52	56	0.648	0.226	0.88	Yes	0.377	0.141	0.52	Yes	0.804	0.158	0.97	Yes	0.799	0.197	1.00	Yes			1.00	**6.55**
		L_{35} - L_{36}			1133.38	-----	-185	-1118	471	79	565	43	102	-67	0.793	0.204	1.00	Yes	0.534	0.129	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.54**
		L_{36} - L_{37}			1449.25	-----	-860	-1252	374	97	140	302	-113	-5	0.831	0.163	1.00	Yes	0.546	0.096	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.92**
		L_{37} - L_{38}			1804.25	-----	-1051	-2288	2	-318	-346	-514	-35	-5	0.764	0.233	1.00	Yes	0.508	0.137	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.34**
		L_{38} - L_{39}			1915.96	-----	-1776	-1702	-239	-162	-151	269	-12	-23	0.822	0.174	1.00	Yes	0.552	0.106	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.75**
		L_{39} - L_{40}			1714.69	-----	-1272	-1831	-180	-303	-69	-325	-48	-33	0.799	0.195	1.00	Yes	0.529	0.116	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.40**
		L_{40} - L_{41}			1323.55	-----	-1564	-594	-290	-53	-293	477	-53	-12	0.778	0.221	1.00	Yes	0.524	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**4.26**
		L_{41} - L_{42}			1031.04	-----	-1193	-297	-150	-68	105	-100	-26	12	0.813	0.184	1.00	Yes	0.533	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.15**
		L_{42} - L_{43}			489.64	-----	-1604	259	-201	35	-397	461	3	-7	0.595	0.402	1.00	Yes	0.354	0.257	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**6.07**
		L_{43} - L_{44}			285.09	-507.50	-672	273	-1320	572	427	125	179	52	0.346	0.339	0.69	Yes	0.206	0.216	0.43	Yes	0.730	0.207	0.94	Yes	0.725	0.269	1.00	Yes			1.00	**11.54**
	Structure 3	L_0 - L_1			399.18	-417.40	95	-331	561	-804	-30	-138	20	92	0.611	0.270	0.89	Yes	0.373	0.182	0.56	Yes	0.758	0.140	0.90	Yes	0.752	0.241	1.00	Yes			1.00	**7.82**
		L_1 - L_2			538.94	-----	248	-480	376	-445	-77	27	33	116	0.825	0.168	1.00	Yes	0.558	0.105	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.83**
		L_2 - L_3			928.70	-----	-125	-858	3	-171	135	78	11	-1	0.809	0.183	1.00	Yes	0.518	0.109	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**6.49**
		L_3 - L_4			1279.58	-----	-229	-1110	59	-355	227	136	34	53	0.809	0.183	1.00	Yes	0.525	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.27**
		L_4 - L_5			1674.35	-----	-1317	-1108	-377	-171	175	62	114	225	0.818	0.175	1.00	Yes	0.525	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**5.30**
		L_5 - L_6			1536.53	-----	-526	-1706	-83	-345	-616	-248	141	77	0.751	0.249	1.00	Yes	0.488	0.152	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.81**
		L_6 - L_7			1363.80	-----	-1186	-413	-394	253	-174	366	-184	18	0.802	0.194	1.00	Yes	0.520	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.62**
		L_7 - L_8			1119.09	-----	-569	-576	-78	128	41	5	-27	41	0.883	0.107	1.00	Yes	0.565	0.063	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.78**
		L_8 - L_9			553.90	-----	-705	57	-169	341	-159	506	-15	44	0.717	0.275	1.00	Yes	0.430	0.177	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.08**
		L_9 - L_{10}			-----	-542.62	-637	-23	6	510	142	103	78	129	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.114	0.95	Yes	0.827	0.169	1.00	Yes			1.00	**4.82**
		L_{10} - L_{11}			-----	-1078.33	-296	313	-510	802	-12	86	-102	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.064	0.95	Yes	0.868	0.126	1.00	Yes			1.00	**6.42**
		L_{11} - L_{12}			-----	-1250.95	-40	472	-63	1175	-171	-212	-380	-559	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.190	1.00	Yes	0.792	0.156	0.95	Yes			1.00	**3.65**
		L_{12} - L_{13}			-----	-1255.79	468	-23	1148	-12	-243	-216	-580	-315	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.192	1.00	Yes	0.795	0.152	0.95	Yes			1.00	**3.98**
		L_{13} - L_{14}			-----	-1150.02	147	-37	-49	298	-260	-35	-240	139	-----	-----	-----	-----	-----	-----	-----	-----	0.936	0.060	1.00	Yes	0.926	0.047	0.98	Yes			1.00	**3.99**
		L_{14} - L_{15}			-----	-750.52	155	-202	570	167	175	-129	160	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.122	1.00	Yes	0.866	0.126	1.00	Yes			1.00	**2.75**
		L_{15} - L_{16}			-----	-569.70	105	-272	435	206	-9	-93	19	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.121	1.00	Yes	0.868	0.115	0.99	Yes			1.00	**2.62**
		L_{16} - L_{17}			639.18	-302.47	-196	-871	389	48	88	319	96	-45	0.735	0.262	1.00	Yes	0.437	0.168	0.61	Yes	0.413	0.219	0.64	Yes	0.409	0.210	0.62	Yes			1.00	**3.19**
		L_{17} - L_{18}			673.70	-169.48	-547	-856	129	13	86	11	0	14	0.775	0.221	1.00	Yes	0.448	0.133	0.59	Yes	0.232	0.237	0.47	Yes	0.229	0.207	0.44	Yes			1.00	**3.30**
		L_{18} - L_{19}			433.40	-----	-726	-189	92	-14	-141	521	40	-130	0.663	0.330	1.00	Yes	0.405	0.217	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----			1.00	**3.53**
		L_{19} - L_{20}			135.06	-292.65	-418	366	-1259	910	1288	350	475	130	0.207	0.654	0.87	Yes	0.122	0.393	0.52	Yes	0.531	0.466	1.00	Yes	0.527	0.378	0.91	Yes			1.00	**15.12**

Axial AB Operating

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-324.77	-52	84	-176	241	-42	-13	-211	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.176	0.91	Yes	0.687	0.308	1.00	Yes	1.00	**1.72**
		$U_1 - L_1$			-----	-346.43	35	-24	-182	208	-1	-10	309	161	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.180	0.94	Yes	0.733	0.266	1.00	Yes	1.00	**3.40**
		$U_2 - L_2$			113.82	-322.62	97	-108	-129	186	94	36	663	245	0.205	0.429	0.64	Yes	0.113	0.236	0.35	Yes	0.705	0.290	1.00	Yes	0.683	0.237	0.92	Yes	1.00	**4.69**
		$U_3 - L_3$			208.89	-----	166	-191	-46	106	241	79	1302	363	0.376	0.621	1.00	Yes	0.207	0.342	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		$U_4 - L_4$			-----	-353.47	118	-127	133	-135	-470	-110	707	190	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.215	1.00	Yes	0.748	0.173	0.93	Yes	1.00	**4.44**
		$U_5 - L_5$			-----	-437.87	75	-90	184	-234	-15	-34	314	13	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.118	0.91	Yes	0.755	0.237	1.00	Yes	1.00	**3.11**
		$U_6 - L_6$			-----	-523.51	86	-81	251	-276	-227	-68	679	172	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.201	1.00	Yes	0.751	0.242	1.00	Yes	1.00	**2.68**
		$U_7 - L_7$			-----	-437.62	134	-150	300	-322	-178	16	223	39	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.142	0.88	Yes	0.675	0.317	1.00	Yes	1.00	**1.79**
		$U_8 - L_8$			-----	-1215.60	-14	8	31	-44	-102	4	1181	302	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.117	1.00	Yes	0.843	0.008	0.86	Yes	1.00	**3.72**
		$U_9 - L_9$			-----	-668.61	-172	203	-365	426	-338	-126	-24	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.136	0.94	Yes	0.755	0.237	1.00	Yes	1.00	**2.77**
		$U_{10} - L_{10}$			-----	-754.68	-124	104	-319	347	-880	-478	-534	-534	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1.00	Yes	0.745	0.180	0.93	Yes	1.00	**3.41**
		$U_{11} - L_{11}$			-----	-675.22	-145	197	-308	452	-524	-361	-69	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.168	0.98	Yes	0.786	0.210	1.00	Yes	1.00	**3.17**
		$U_{12} - L_{12}$			-----	-549.60	-116	114	-262	282	-287	-174	356	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.152	0.95	Yes	0.754	0.241	1.00	Yes	1.00	**3.24**
		$U_{13} - L_{13}$			-----	-382.94	-50	71	-196	230	-171	0	257	24	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.140	0.92	Yes	0.734	0.263	1.00	Yes	1.00	**2.56**
		$U_{14} - L_{14}$			-----	-315.05	9	-9	-142	159	-203	-72	975	88	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.293	1.00	Yes	0.667	0.204	0.88	Yes	1.00	**4.39**
		$U_{15} - L_{15}$			113.55	-309.16	-84	72	242	-265	29	69	247	-107	0.204	0.410	0.62	Yes	0.112	0.226	0.34	Yes	0.693	0.160	0.86	Yes	0.654	0.339	1.00	Yes	1.00	**4.36**
		$U_{16} - L_{16}$			-----	-321.46	26	-41	237	-246	35	-38	315	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.134	0.86	Yes	0.680	0.315	1.00	Yes	1.00	**3.01**
		$U_{17} - L_{17}$			-----	-435.50	60	-75	222	-242	-122	-113	138	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.116	0.94	Yes	0.751	0.246	1.00	Yes	1.00	**2.22**
		$U_{18} - L_{18}$			-----	-538.83	144	-151	428	-442	-133	-121	211	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.093	0.89	Yes	0.749	0.250	1.00	Yes	1.00	**2.34**
		$U_{19} - L_{19}$			-----	-639.56	172	-170	535	-523	-115	-45	247	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.111	0.91	Yes	0.744	0.248	1.00	Yes	1.00	**2.62**
		$U_{20} - L_{20}$			-----	-585.34	161	-261	328	-494	33	4	553	72	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.217	1.00	Yes	0.681	0.229	0.92	Yes	1.00	**1.84**
	Structure 2	$U_0 - L_0$			-----	-694.32	-157	204	-458	588	-53	-9	-332	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.159	1.00	Yes	0.744	0.250	1.00	Yes	1.00	**3.04**
		$U_1 - L_1$			-----	-732.89	-112	120	-458	495	-110	-12	-546	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.131	0.97	Yes	0.785	0.210	1.00	Yes	1.00	**3.56**
		$U_2 - L_2$			-----	-602.29	-102	112	-411	440	-104	-39	280	34	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.107	0.92	Yes	0.767	0.225	1.00	Yes	1.00	**3.09**
		$U_3 - L_3$			-----	-508.03	-52	60	-195	220	85	-45	338	0	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.126	1.00	Yes	0.797	0.201	1.00	Yes	1.00	**2.72**
		$U_4 - L_4$			-----	-345.96	-9	17	-197	202	259	78	63	0	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.153	0.94	Yes	0.732	0.259	1.00	Yes	1.00	**2.89**
		$U_5 - L_5$			82.97	-344.50	65	-53	-171	199	-49	106	403	-1	0.149	0.372	0.53	Yes	0.082	0.204	0.29	Yes	0.778	0.216	1.00	Yes	0.729	0.255	0.99	Yes	1.00	**3.83**
		$U_6 - L_6$			276.37	-260.26	150	-157	-112	136	-24	114	1018	116	0.497	0.495	1.00	Yes	0.273	0.272	0.55	Yes	0.586	0.354	0.94	Yes	0.551	0.201	0.76	Yes	1.00	**5.42**
		$U_7 - L_7$			-----	-324.66	133	-156	104	-121	-28	-24	807	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1.00	Yes	0.687	0.200	0.89	Yes	1.00	**4.28**
		$U_8 - L_8$			-----	-470.55	67	-91	340	-363	0	-29	87	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.109	0.80	Yes	0.678	0.318	1.00	Yes	1.00	**3.22**
		$U_9 - L_9$			-----	-690.68	173	-187	593	-601	-15	-22	275	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.088	0.86	Yes	0.740	0.255	1.00	Yes	1.00	**3.65**
		$U_{10} - L_{10}$			-----	-791.61	180	-191	541	-569	-87	-129	351	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.106	0.89	Yes	0.740	0.251	1.00	Yes	1.00	**3.64**
		$U_{11} - L_{11}$			-----	-816.80	186	-185	514	-533	-182	-63	242	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.110	0.94	Yes	0.764	0.235	1.00	Yes	1.00	**3.30**
		$U_{12} - L_{12}$			-----	-881.31	161	-148	521	-531	-214	-27	298	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.119	0.97	Yes	0.764	0.228	1.00	Yes	1.00	**3.27**
		$U_{13} - L_{13}$			-----	-734.53	212	-212	566	-547	-167	24	356	43	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.178	1.00	Yes	0.708	0.271	0.98	Yes	1.00	**2.71**
		$U_{14} - L_{14}$			-----	-1104.03	120	-116	246	-239	-30	199	1206	330	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.732	0.044	0.78	Yes	1.00	**3.72**
		$U_{15} - L_{15}$			-----	-747.32	-110	119	-550	543	-379	1	236	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.164	1.00	Yes	0.721	0.263	0.99	Yes	1.00	**4.60**
		$U_{16} - L_{16}$			-----	-706.25	-85	57	-425	434	-849	-267	-331	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.179	1.00	Yes	0.757	0.184	0.95	Yes	1.00	**3.91**
		$U_{17} - L_{17}$			-----	-654.28	-121	119	-489	500	-275	-183	-113	-394	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.134	0.95	Yes	0.762	0.232	1.00	Yes	1.00	**3.44**
		$U_{18} - L_{18}$			-----	-600.20	-90	89	-411	453	-114	-126	292	-233	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.097	0.90	Yes	0.765	0.231	1.00	Yes	1.00	**3.24**
		$U_{19} - L_{19}$			-----	-496.55	-49	53	-241	259	-66	-30	295	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.128	0.88	Yes	0.741	0.250	1.00	Yes	1.00	**3.08**
		$U_{20} - L_{20}$			-----	-395.11	-22	26	-193	205	-168	-31	310	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.148	0.96	Yes	0.757	0.234	1.00	Yes	1.00	**2.95**
		$U_{21} - L_{21}$			-----	-348.13	16	-11	-172	200	-105	37	492	30	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.211	1.00	Yes	0.737	0.256	1.00	Yes	1.00	**3.39**
		$U_{22} - L_{22}$			-----	-330.60	-88	104	4	-8	-35	-28	877	77	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1.00	Yes	0.700	0.133	0.84	Yes	1.00	**4.48**
		$U_{23} - L_{23}$			-----	-317.90	-50	38	233	-252	49	113	160	-76	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.126	0.85	Yes	0.673	0.322	1.00	Yes	1.00	**3.67**
		$U_{24} - L_{24}$			-----	-373.84	13	-19	235	-247	-64	-31	310	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.126	0.90	Yes	0.716	0.282	1.00	Yes	1.00	**2.91**
		$U_{25} - L_{25}$			-----	-470.85	35	-35	303	-298	-92	-28	321	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.100	0.81	Yes	0.703	0.292	1.00	Yes	1.00	**2.80**
		$U_{26} - L_{26}$			-----	-569.53	61	-65	503	-531	-128	-21	459	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.117	0.88	Yes	0.726	0.272	1.00	Yes	1.00	**3.17**
		$U_{27} - L_{27}$			-----	-630.50	81	-82	559	-564	-139	3	404	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.119	0.90	Yes	0.734	0.262	1.00	Yes	1.00	**3.25**
		$U_{28} - L_{28}$			-----	-712.58	73	-70	546	-540	-158	17	500	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.120	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**3.41**
		$U_{29} - L_{29}$			-----	-696.55	116	-122	617	-593	-121	27	536	51	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.222	1.00	Yes	0.672	0.295	0.97	Yes	1.00	**3.78**
		$U_{30} - L_{30}$			-----	-1140.46	-65	54	52	-73	-185	62	1170	146	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.166	1.00	Yes	0.756	0.013	0.77	Yes	1.00	**4.81**
		$U_{31} - L_{31}$			-----	-753.36	-102	102	-473	468	-371	-39	258	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.159	1.00	Yes	0.726	0.226	0.96	Yes	1.00	**4.22**
		$U_{32} - L_{32}$			-----	-840.88	-78	54	-418	424	-720	-280	-384	-397	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1.00	Yes	0.729	0.182	0.92	Yes	1.00	**4.06**
		$U_{33} - L_{33}$			-----	-835.63	-117	105	-410	440	-467	-355	125	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.154	1.00	Yes	0.781	0.194	0.98	Yes	1.00	**3.94**
		$U_{34} - L_{34}$			-----	-817.66	-121	113	-493	520	-323	-316	69	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.117	0.93	Yes	0.764	0.230	1.00	Yes	1.00	**4.38**
		$U_{35} - L_{35}$			-----	-723.70	-114	130	-493	526	-143	9	519	8	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.116	0.93	Yes	0.776	0.223	1.00	Yes	1.00	**3.96**
		$U_{36} - L_{36}$			-----	-515.88	-54	67	-256	291	-51	60	655	97	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.187	0.94	Yes	0.743	0.255	1.00	Yes	1.00	**3.34**
		$U_{37} - L_{37}$			-----	-336.27	-56	65	-92	104	-107	-21	724	12	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.235	1.00	Yes	0.712	0.133	0.85	Yes	1.00	**4.44**
		$U_{38} - L_{38}$			347.25	-213.01	-244	246	179	-188	106	147	195	-109	0.625	0.371	1.00	Yes	0.344	0.204	0.55	Yes	0.479	0.103	0.59	Yes	0.451	0.314	0.77	Yes	1.00	**5.80**
		$U_{39} - L_{39}$			98.23	-328.61	-88	78	214	-236	63	39	287	-90	0.177	0.385	0.57	Yes	0.097	0.212	0.31	Yes	0.742	0.134	0.88	Yes	0.695	0.302	1.00	Yes	1.00	**4.37**
		$U_{40} - L_{40}$			-----	-344.51	-14	8	211	-212	17	-31	242	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.095	0.88	Yes	0.729	0.271	1.00	Yes	1.00	**3.05**
		$U_{41} - L_{41}$			-----	-486.73	23	-27	241	-254	11	-27	218	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.092	0.93	Yes	0.763	0.232	1.00	Yes	1.00	**2.93**
		$U_{42} - L_{42}$			-----	-584.87	56	-65	478	-489	13	-34	294	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.078	0.87	Yes	0.745	0.250	1.00	Yes	1.00	**3.04**
		$U_{43} - L_{43}$			-----	-710.84	75	-88	560	-561	-50	-51	383	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.099	0.92	Yes	0.762	0.238	1.00	Yes	1.00	**3.27**
		$U_{44} - L_{44}$			-----	-672.77	114	-130	358	-513	-143	-24	606	103	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.190	1.00	Yes	0.721	0.218	0.94	Yes	1.00	**2.77**
	Structure 3	$U_0 - L_0$			-----	-594.85	-145	193	-431	492	-56	-7	-647	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.211	1.00	Yes	0.692	0.229	0.93	Yes	1.00	**2.45**
		$U_1 - L_1$			-----	-667.92	-114	126	-436	459	-120	-4	-614	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.147	0.99	Yes	0.777	0.213	1.00	Yes	1.00	**3.38**
		$U_2 - L_2$			-----	-547.72	-110	117	-394	412	-146	-45	89	33	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.087	0.89	Yes	0.762	0.233	1.00	Yes	1.00	**2.99**
		$U_3 - L_3$			-----	-458.99	-46	59	-174	201	44	-63	265	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.114	0.98	Yes	0.792	0.204	1.00	Yes	1.00	**2.53**
		$U_4 - L_4$			-----	-350.17	-23	31	-179	197	-3	39	396	33	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.181	0.97	Yes	0.741	0.252	1.00	Yes	1.00	**3.14**
		$U_5 - L_5$			88.89	-329.40	65	-59	-209	233	-50	110	296	17	0.160	0.384	0.55	Yes	0.088	0.211	0.30	Yes	0.738	0.193	0.94	Yes	0.697	0.298	1.00	Yes	1.00	**4.28**
		$U_6 - L_6$			-----	-330.15	131	-145	89	-96	-131	-26	787	47	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.260	1.00	Yes	0.699	0.185	0.89	Yes	1.00	**4.54**
		$U_7 - L_7$			-----	-365.35	32	-46	241	-261	10	-34	71	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.114	0.86	Yes	0.700	0.298	1.00	Yes	1.00	**2.90**
		$U_8 - L_8$			-----	-514.91	88	-92	332	-336	6	-69	203	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.104	0.85	Yes	0.706	0.287	1.00	Yes	1.00	**3.24**
		$U_9 - L_9$			-----	-651.67	131	-169	398	-509	-163	-130	138	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.100	0.89	Yes	0.758	0.236	1.00	Yes	1.00	**3.36**
		$U_{10} - L_{10}$			-----	-782.21	119	-117	397	-435	-203	-97	330	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.127	0.94	Yes	0.772	0.226	1.00	Yes	1.00	**3.47**
		$U_{11} - L_{11}$			-----	-650.27	169	-194	426	-471	-115	-16	375	76	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.138	0.92	Yes	0.734	0.262	1.00	Yes	1.00	**2.41**
		$U_{12} - L_{12}$			-----	-1143.41	71	-99	174	-250	-35	64	1583	457	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.174	1.00	Yes	0.793	0.046	0.84	Yes	1.00	**3.74**
		$U_{13} - L_{13}$			-----	-473.97	-65	75	-250	271	-311	-22	46	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.156	0.95	Yes	0.731	0.267	1.00	Yes	1.00	**2.80**
		$U_{14} - L_{14}$			-----	-509.65	-44	27	-182	212	-786	-368	-293	-330	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.225	1.00	Yes	0.731	0.185	0.92	Yes	1.00	**3.37**
		$U_{15} - L_{15}$			-----	-441.77	-48	47	-161	198	-488	-318	-15	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1.00	Yes	0.762	0.200	0.97	Yes	1.00	**3.34**
		$U_{16} - L_{16}$			-----	-334.80	-126	141	-132	138	-535	-229	674	80	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.255	1.00	Yes	0.708	0.180	0.89	Yes	1.00	**4.26**
		$U_{17} - L_{17}$			286.18	-----	-307	314	201	-230	-276	58	-79	-161	0.515	0.482	1.00	Yes	0.283	0.265	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.19**
		$U_{18} - L_{18}$			147.18	-326.73	-136	153	98	-160	-137	25	1032	165	0.265	0.503	0.77	Yes	0.146	0.277	0.43	Yes	0.714	0.278	1.00	Yes	0.691	0.204	0.90	Yes	1.00	**5.18**
		$U_{19} - L_{19}$			61.94	-338.69	-68	55	210	-218	-100	0	431	107	0.111	0.403	0.52	Yes	0.061	0.222	0.29	Yes	0.740	0.188	0.93	Yes	0.717	0.279	1.00	Yes	1.00	**3.17**
		$U_{20} - L_{20}$			-----	-366.07	19	-30	47	-147	-43	-14	-230	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.173	1.00	Yes	0.775	0.187	0.97	Yes	1.00	**1.38**

Operating Loads - 5C1

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	$U_0 - L_1$	642.74	-----	-91	50	-12	-5	-167	-101	-3	19	0.843	0.148	1.00	Yes	0.509	0.081	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.88**
		$U_1 - L_2$	465.24	-107.52	-86	-10	21	-21	-179	-55	6	-6	0.837	0.161	1.00	Yes	0.460	0.089	0.55	Yes	0.247	0.148	0.40	Yes	0.228	0.110	0.34	Yes					1.00	**3.89**
		$U_2 - L_3$	413.65	-273.22	-118	-30	53	-30	-360	59	43	30	0.744	0.255	1.00	Yes	0.409	0.140	0.55	Yes	0.629	0.267	0.90	Yes	0.578	0.150	0.73	Yes					1.00	**6.51**
		$U_3 - L_4$	-----	-382.37	-27	-51	15	-64	-178	-119	-36	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.123	1.00	Yes	0.809	0.082	0.90	Yes					1.00	**3.70**
		$U_4 - L_4$	523.83	-----	-88	34	-65	12	-208	-216	-587	-237	0.768	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.47**
		$U_4 - L_5$	682.62	-----	-198	228	-49	99	-287	-303	27	-34	0.807	0.185	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.57**
		$U_5 - L_6$	630.11	-----	-281	238	-82	103	-486	-328	310	139	0.745	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.54**
		$U_6 - L_7$	643.34	-----	-99	308	4	137	-189	-133	326	199	0.761	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.62**
		$U_8 - L_8$	972.29	-----	-96	348	22	141	430	462	401	100	0.777	0.214	1.00	Yes	0.481	0.120	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.20**
		$U_9 - L_{10}$	1005.40	-----	-292	249	-74	87	202	506	119	121	0.804	0.195	1.00	Yes	0.498	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.14**
		$U_{10} - L_{11}$	986.01	-----	-239	179	-61	100	-15	402	24	177	0.833	0.163	1.00	Yes	0.516	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
		$U_{11} - L_{12}$	828.51	-----	-263	82	-94	34	86	346	77	97	0.820	0.174	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.50**
		$U_{12} - L_{13}$	652.44	-----	-204	147	-85	37	-36	120	48	-89	0.795	0.202	1.00	Yes	0.500	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_{13} - L_{14}$	455.09	-----	-98	28	-24	-18	-59	30	-59	-173	0.819	0.175	1.00	Yes	0.450	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.93**
		$U_{15} - L_{14}$	270.57	-302.01	-76	-9	27	-100	-303	-291	-498	-134	0.487	0.272	0.76	Yes	0.268	0.149	0.42	Yes	0.708	0.291	1.00	Yes	0.639	0.127	0.77	Yes					1.00	**4.55**
		$U_{16} - L_{15}$	375.29	-----	-119	84	-38	-10	-333	-295	-586	-110	0.675	0.322	1.00	Yes	0.371	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.30**
		$U_{17} - L_{16}$	501.22	-----	-139	96	-34	13	-494	-370	-108	-129	0.735	0.256	1.00	Yes	0.404	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.43**
		$U_{18} - L_{17}$	607.74	-----	-307	253	-112	76	-559	-476	-111	-118	0.719	0.275	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.55**
		$U_{19} - L_{18}$	681.28	-----	-342	257	-132	87	-488	-478	-66	-106	0.738	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.45**
		$U_{20} - L_{19}$	710.87	-----	-229	255	-95	92	-589	-346	-102	-39	0.770	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.60**
	Structure 2	$U_0 - L_1$	802.10	-----	-384	364	-110	95	-158	-111	-59	-45	0.794	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.71**
		$U_1 - L_2$	796.48	-----	-395	309	-89	66	-172	34	-95	-23	0.788	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.67**
		$U_2 - L_3$	649.07	-----	-338	255	-79	60	-186	114	-18	94	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.07**
		$U_3 - L_4$	595.98	-----	-181	135	-33	12	-163	-20	116	66	0.794	0.199	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.21**
		$U_4 - L_5$	421.71	-----	-133	92	-10	-19	-217	70	17	-146	0.758	0.232	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.43**
		$U_5 - L_6$	429.65	-221.53	-132	54	46	-86	-176	172	-85	-187	0.773	0.223	1.00	Yes	0.425	0.123	0.55	Yes	0.523	0.167	0.69	Yes	0.469	0.169	0.64	Yes					1.00	**4.92**
		$U_6 - L_7$	-----	-381.02	-46	-12	49	-101	-149	-93	-22	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1.00	Yes	0.730	0.116	0.85	Yes					1.00	**3.26**
		$U_8 - L_7$	562.39	-----	-173	125	-67	1	-219	-431	-615	-171	0.717	0.280	1.00	Yes	0.451	0.161	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.46**
		$U_8 - L_8$	686.74	-----	-324	232	-150	58	-501	-414	33	-202	0.744	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.07**
		$U_{10} - L_9$	791.71	-----	-304	227	-139	74	-472	-464	-484	-208	0.783	0.213	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.13**
		$U_{11} - L_{10}$	866.07	-----	-333	283	-107	132	-441	-483	140	2	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.00**
		$U_{12} - L_{11}$	856.99	-----	-363	351	-117	154	-446	-391	227	83	0.781	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.91**
		$U_{13} - L_{12}$	757.19	-----	-428	382	-150	152	-221	-191	344	133	0.749	0.250	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**2.48**
		$U_{14} - L_{13}$	746.99	-----	-270	422	-9	162	-275	-164	386	188	0.739	0.254	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.00**
		$U_{14} - L_{15}$	642.37	-----	-221	347	32	65	132	221	201	-43	0.759	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.34**
		$U_{15} - L_{16}$	614.89	-----	-378	340	-56	64	-60	286	-48	12	0.727	0.266	1.00	Yes	0.400	0.146	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.80**
		$U_{16} - L_{17}$	713.47	-----	-320	339	-66	92	-270	320	-156	57	0.773	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.47**
		$U_{17} - L_{18}$	645.36	-----	-290	272	-64	77	-31	384	-29	99	0.763	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.11**
		$U_{18} - L_{19}$	671.11	-----	-272	269	-45	63	117	252	25	15	0.793	0.200	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.52**
		$U_{19} - L_{20}$	606.64	-----	-193	162	-14	21	67	252	-39	-35	0.774	0.224	1.00	Yes	0.425	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.49**
		$U_{20} - L_{21}$	438.64	-----	-127	100	-12	-4	-2	149	-5	-90	0.789	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.21**
		$U_{21} - L_{22}$	441.98	-215.66	-112	52	17	-76	-11	112	52	-179	0.795	0.196	1.00	Yes	0.437	0.108	0.55	Yes	0.509	0.139	0.65	Yes	0.456	0.144	0.60	Yes					1.00	**4.81**
		$U_{23} - L_{22}$	389.81	-256.24	-100	45	1	-62	-222	-285	-570	-20	0.701	0.293	1.00	Yes	0.386	0.161	0.55	Yes	0.610	0.264	0.88	Yes	0.542	0.128	0.68	Yes					1.00	**4.36**
		$U_{24} - L_{23}$	395.07	-----	-110	99	-31	0	-256	-221	-514	-31	0.711	0.289	1.00	Yes	0.391	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.08**
		$U_{25} - L_{24}$	579.38	-----	-190	178	-9	24	-425	-347	84	16	0.739	0.256	1.00	Yes	0.406	0.146	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.35**
		$U_{26} - L_{25}$	654.76	-----	-270	263	-24	35	-350	-376	126	51	0.774	0.221	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.35**
		$U_{27} - L_{26}$	642.82	-----	-288	285	-42	54	-384	-307	185	75	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.16**
		$U_{28} - L_{27}$	704.56	-----	-330	357	-45	64	-291	-286	207	116	0.763	0.230	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.32**
		$U_{29} - L_{28}$	635.44	-----	-360	345	-71	70	-174	-194	216	105	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.17**
		$U_{30} - L_{29}$	612.02	-----	-212	345	39	101	-253	-150	420	160	0.724	0.271	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.56**
		$U_{30} - L_{31}$	761.06	-----	-285	430	24	64	158	131	264	-3	0.753	0.239	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.89**
		$U_{31} - L_{32}$	763.88	-----	-435	390	-64	70	-207	248	-13	40	0.756	0.239	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.07**
		$U_{32} - L_{33}$	873.02	-----	-356	332	-56	94	-305	376	-145	141	0.795	0.202	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.87**
		$U_{33} - L_{34}$	877.11	-----	-337	291	-62	91	-5	359	25	218	0.799	0.192	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.97**
		$U_{34} - L_{35}$	820.86	-----	-304	229	-99	56	53	265	219	2	0.812	0.181	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.74**
		$U_{35} - L_{36}$	729.51	-----	-340	223	-104	39	21	197	39	-94	0.790	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.55**
		$U_{36} - L_{37}$	613.29	-----	-189	150	-45	-8	-102	68	22	-224	0.782	0.214	1.00	Yes	0.492	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.01**
		$U_{38} - L_{37}$	-----	-365.20	-30	-11	33	-78	-155	-238	-438	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.210	1.00	Yes	0.700	0.089	0.79	Yes					1.00	**2.69**
		$U_{39} - L_{38}$	315.13	-268.67	-92	52	19	-80	-282	-266	-765	-89	0.567	0.339	0.91	Yes	0.312	0.186	0.50	Yes	0.640	0.352	1.00	Yes	0.568	0.117	0.69	Yes					1.00	**4.42**
		$U_{40} - L_{39}$	389.85	-----	-128	94	-8	-22	-347	-304	-453	-108	0.701	0.294	1.00	Yes	0.386	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.70**
		$U_{41} - L_{40}$	568.47	-----	-172	129	-14	-1	-404	-383	-87	-72	0.758	0.242	1.00	Yes	0.417	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.16**
		$U_{42} - L_{41}$	609.25	-----	-320	262	-44	28	-526	-441	-62	-59	0.720	0.277	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.08**
		$U_{43} - L_{42}$	750.41	-----	-386	310	-61	41	-510	-470	0	-42	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.24**
		$U_{44} - L_{43}$	776.48	-----	-255	314	-92	77	-549	-334	63	-21	0.768	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.32**
	Structure 3	$U_0 - L_1$	715.51	-----	-361	307	-112	94	-59	-210	-61	-51	0.775	0.219	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.45**
		$U_1 - L_2$	721.85	-----	-341	260	-98	66	-234	-72	-123	-43	0.782	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.63**
		$U_2 - L_3$	648.43	-----	-331	244	-96	62	-243	87	-47	79	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.26**
		$U_3 - L_4$	551.72	-----	-155	96	-28	10	-131	62	74	49	0.809	0.187	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.06**
		$U_4 - L_5$	426.17	-----	-132	92	-15	-27	-200	21	-10	-165	0.766	0.226	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.97**
		$U_5 - L_6$	417.70	-328.94	-114	-4	29	-108	-219	42	-73	-325	0.751	0.239	1.00	Yes	0.413	0.132	0.55	Yes	0.771	0.224	1.00	Yes	0.696	0.145	0.85	Yes					1.00	**5.63**
		$U_7 - L_6$	399.38	-----	-84	25	-40	-22	-269	-310	-584	-194	0.718	0.276	1.00	Yes	0.395	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.18**
		$U_8 - L_7$	588.00	-----	-190	143	-82	25	-412	-395	-571	-229	0.717	0.277	1.00	Yes	0.451	0.158	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.22**
		$U_8 - L_8$	777.96	-----	-238	104	-135	10	-506	-535	-798	-400	0.770	0.230	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.35**
		$U_{10} - L_9$	941.74	-----	-249	176	-64	76	-633	-623	21	-68	0.795	0.199	1.00	Yes	0.492	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.73**
		$U_{11} - L_{10}$	990.09	-----	-301	257	-84	89	-510	-447	212	77	0.791	0.199	1.00	Yes	0.490	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.54**
		$U_{12} - L_{11}$	983.79	-----	-103	361	1	133	-380	-313	288	165	0.786	0.209	1.00	Yes	0.487	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.65**
		$U_{12} - L_{13}$	665.24	-----	-108	283	30	73	168	240	277	-19	0.786	0.212	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.89**
		$U_{13} - L_{14}$	642.79	-----	-303	233	-17	57	61	349	-52	31	0.760	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.90**
		$U_{14} - L_{15}$	706.71	-----	-195	188	4	81	-199	271	-90	122	0.836	0.161	1.00	Yes	0.460	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.35**
		$U_{15} - L_{16}$	566.77	-----	-100	15	-18	21	-40	270	28	84	0.831	0.164	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**4.26**
		$U_{17} - L_{16}$	-----	-377.51	-18	-31	-25	-56	29	19	-385	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.129	1.00	Yes	0.799	0.072	0.88	Yes					1.00	**3.89**
		$U_{18} - L_{17}$	304.81	-325.91	-79	6	-31	-61	-195	-221	-667	-15	0.548	0.294	0.85	Yes	0.302	0.162	0.47	Yes	0.750	0.249	1.00	Yes	0.690	0.100	0.80	Yes					1.00	**5.76**
		$U_{19} - L_{18}$	388.69	-154.20	-107	1	31	-22	-532	-456	196	152	0.699	0.291	1.00	Yes	0.384	0.160	0.55	Yes	0.354	0.296	0.65	Yes	0.326	0.137	0.47	Yes					1.00	**3.58**
		$U_{20} - L_{19}$	630.67	-----	4	32	-15	-8	-516	-413	135	151	0.827	0.167	1.00	Yes	0.500	0.092	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----					1.00	**3.63**

Axial AB Operating

Operating Loads - 5C1

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			-----	-523.24	3	102	-40	-1031	10	-44	-59	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.283	1	Yes	0.706	0.245	0.96	Yes	1.00	**5.09**
		U_1 - U_2			-----	-555.74	-48	123	-172	-890	-24	39	-98	29	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.243	1	Yes	0.749	0.212	0.97	Yes	1.00	**3.55**
		U_2 - U_3			181.08	-559.01	-72	298	-303	-744	-26	-90	203	-145	0.208	0.211	0.42	Yes	0.140	0.138	0.28	Yes	0.761	0.233	1	Yes	0.754	0.177	0.94	Yes	1.00	**3.55**
		U_3 - U_4			395.82	-566.55	131	310	-244	-908	-120	-94	20	-220	0.454	0.253	0.71	Yes	0.311	0.174	0.49	Yes	0.771	0.225	1	Yes	0.764	0.216	0.98	Yes	1.00	**4.57**
		U_4 - U_5			391.96	-548.36	138	298	-1072	-165	-206	-13	-126	-131	0.449	0.290	0.74	Yes	0.308	0.199	0.51	Yes	0.746	0.239	0.99	Yes	0.739	0.255	1.00	Yes	1.00	**4.46**
		U_5 - U_6			628.87	-----	244	426	-922	203	-283	7	-44	-300	0.721	0.270	1.00	Yes	0.486	0.176	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		U_6 - U_7			826.35	-----	309	201	-650	-106	-351	101	-490	-217	0.790	0.206	1.00	Yes	0.552	0.141	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		U_7 - U_8			1087.43	-----	-25	1346	-62	684	-262	411	-242	173	0.753	0.246	1.00	Yes	0.526	0.168	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		U_8 - U_9			908.45	-----	1350	-162	617	-162	-132	238	31	184	0.744	0.256	1.00	Yes	0.509	0.174	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		U_9 - U_{10}			664.91	-----	221	255	113	-900	123	433	179	329	0.721	0.271	1.00	Yes	0.488	0.182	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		U_{10} - U_{11}			-----	-577.09	260	-63	207	-1177	222	102	391	87	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.236	0.98	Yes	0.736	0.264	1.00	Yes	1.00	**4.50**
		U_{11} - U_{12}			-----	-879.27	197	-108	-20	-954	159	103	292	63	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.164	1	Yes	0.825	0.158	0.99	Yes	1.00	**3.78**
		U_{12} - U_{13}			-----	-1164.77	-22	-158	-244	-1243	222	-30	294	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1	Yes	0.778	0.171	0.95	Yes	1.00	**3.79**
		U_{13} - U_{14}			-----	-1349.94	-102	-346	-267	-1743	151	72	199	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1	Yes	0.774	0.192	0.97	Yes	1.00	**3.76**
		U_{14} - U_{15}			-----	-1312.79	-243	-181	-1605	-747	186	-48	255	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1	Yes	0.753	0.177	0.93	Yes	1.00	**3.58**
		U_{15} - U_{16}			-----	-1343.67	-73	-410	-1327	-845	23	-61	163	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.220	1	Yes	0.770	0.146	0.92	Yes	1.00	**3.40**
		U_{16} - U_{17}			-----	-1338.17	-313	-183	-1584	-549	52	-173	-48	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.215	1	Yes	0.767	0.175	0.95	Yes	1.00	**3.62**
		U_{17} - U_{18}			-----	-1016.25	-167	-102	-984	-48	-158	-233	-80	-299	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.189	1	Yes	0.795	0.160	0.96	Yes	1.00	**3.15**
		U_{18} - U_{19}			-----	-729.24	-195	-29	-719	-37	-191	-170	-83	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.168	1	Yes	0.820	0.145	0.97	Yes	1.00	**3.28**
		U_{19} - U_{20}			-----	-652.30	-171	-25	-1283	448	-120	7	175	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.216	0.96	Yes	0.734	0.258	1.00	Yes	1.00	**7.87**
	Structure 2	U_0 - U_1			-----	-599.39	169	-129	230	-1685	94	182	-16	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.712	0.218	0.93	Yes	0.708	0.286	1.00	Yes	1.00	**5.78**
		U_1 - U_2			-----	-772.33	-105	-138	-132	-1137	337	645	203	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.245	1	Yes	0.745	0.172	0.92	Yes	1.00	**3.28**
		U_2 - U_3			-----	-1123.70	-81	-198	-359	-1465	612	-3	168	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.188	1	Yes	0.797	0.149	0.95	Yes	1.00	**3.77**
		U_3 - U_4			-----	-1367.00	-350	-261	-1054	-1563	108	-320	482	222	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.778	0.139	0.92	Yes	1.00	**3.82**
		U_4 - U_5			-----	-1464.51	-347	-290	-885	-2071	-86	-371	464	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.236	1	Yes	0.752	0.172	0.93	Yes	1.00	**3.70**
		U_5 - U_6			-----	-1528.80	-357	49	-924	-1564	-130	-311	38	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.785	0.130	0.92	Yes	1.00	**3.78**
		U_6 - U_7			-----	-1302.89	-240	-52	-711	-1972	-102	-271	32	-321	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.742	0.176	0.92	Yes	1.00	**3.33**
		U_7 - U_8			-----	-1300.12	-142	-179	-2122	-754	-195	-224	-113	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.252	1	Yes	0.740	0.189	0.93	Yes	1.00	**3.33**
		U_8 - U_9			-----	-1156.90	-265	129	-1745	-421	-246	-188	-50	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1	Yes	0.785	0.186	0.98	Yes	1.00	**3.57**
		U_9 - U_{10}			-----	-908.49	-49	330	-1715	-182	-305	-133	-131	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.210	1	Yes	0.784	0.209	1.00	Yes	1.00	**3.96**
		U_{10} - U_{11}			603.69	-759.25	162	430	-1691	-309	-190	-59	-136	-243	0.510	0.268	0.78	Yes	0.347	0.173	0.52	Yes	0.759	0.232	1	Yes	0.755	0.239	1.00	Yes	1.00	**5.63**
		U_{11} - U_{12}			823.55	-----	189	518	-1697	229	-377	-167	-202	-481	0.696	0.298	1.00	Yes	0.467	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		U_{12} - U_{13}			1324.93	-----	396	77	-133	-166	-514	-38	-483	-393	0.895	0.099	1.00	Yes	0.638	0.068	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		U_{13} - U_{14}			1365.11	-----	-299	3020	-409	1506	-658	311	-538	-176	0.671	0.325	1.00	Yes	0.475	0.213	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		U_{14} - U_{15}			1400.04	-----	2923	-1	1299	-97	-586	238	-251	144	0.688	0.311	1.00	Yes	0.487	0.204	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		U_{15} - U_{16}			1459.50	-----	118	442	-118	81	-21	792	85	458	0.882	0.117	1.00	Yes	0.628	0.081	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.55**
		U_{16} - U_{17}			1015.99	-----	639	278	489	-1524	315	346	498	266	0.749	0.244	1.00	Yes	0.498	0.161	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.87**
		U_{17} - U_{18}			740.84	-----	490	288	113	-1217	49	202	313	228	0.744	0.253	1.00	Yes	0.495	0.167	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		U_{18} - U_{19}			546.07	-624.46	523	241	178	-1525	-4	64	195	-30	0.548	0.288	0.84	Yes	0.360	0.182	0.55	Yes	0.742	0.130	0.88	Yes	0.737	0.259	1.00	Yes	1.00	**5.71**
		U_{19} - U_{20}			317.69	-715.82	345	196	-206	-1303	-3	174	126	39	0.298	0.232	0.54	Yes	0.197	0.153	0.36	Yes	0.795	0.195	1	Yes	0.790	0.209	1.00	Yes	1.00	**4.79**
		U_{20} - U_{21}			-----	-850.76	176	-2	-75	-1447	102	9	206	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.776	0.210	0.99	Yes	1.00	**4.54**
		U_{21} - U_{22}			-----	-818.20	10	41	-321	-1507	-30	-58	33	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.247	1	Yes	0.747	0.218	0.97	Yes	1.00	**4.11**
		U_{22} - U_{23}			-----	-788.70	-3	-8	-1496	-652	-88	-103	13	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.273	1	Yes	0.720	0.217	0.94	Yes	1.00	**3.94**
		U_{23} - U_{24}			-----	-793.18	28	118	-1481	-355	-227	-107	-12	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.265	1	Yes	0.724	0.215	0.94	Yes	1.00	**4.05**
		U_{24} - U_{25}			254.79	-697.93	141	275	-1284	-330	-258	-26	-122	-149	0.239	0.240	0.48	Yes	0.158	0.158	0.32	Yes	0.775	0.225	1	Yes	0.770	0.206	0.98	Yes	1.00	**4.24**
		U_{25} - U_{26}			460.59	-616.52	193	453	-1550	61	-228	60	-78	-117	0.462	0.297	0.76	Yes	0.303	0.188	0.50	Yes	0.733	0.186	0.92	Yes	0.728	0.263	1.00	Yes	1.00	**5.13**
		U_{26} - U_{27}			696.58	-----	244	452	-1541	125	-210	30	-142	-160	0.699	0.292	1.00	Yes	0.466	0.194	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		U_{27} - U_{28}			947.37	-----	227	574	-1961	417	-346	-39	-323	-457	0.698	0.294	1.00	Yes	0.464	0.194	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		U_{28} - U_{29}			1502.62	-----	418	127	-14	-139	-452	194	-188	59	0.908	0.086	1.00	Yes	0.646	0.059	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.59**
		U_{29} - U_{30}			1352.31	-----	-124	3123	-145	1302	-577	591	-128	335	0.665	0.329	1.00	Yes	0.471	0.216	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.52**
		U_{30} - U_{31}			1457.31	-----	2735	-102	1378	-346	-268	373	290	408	0.717	0.281	1.00	Yes	0.507	0.184	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		U_{31} - U_{32}			1298.93	-----	53	426	-156	-34	132	666	393	479	0.877	0.117	1.00	Yes	0.625	0.081	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		U_{32} - U_{33}			849.62	-----	521	234	401	-1459	315	278	594	175	0.718	0.278	1.00	Yes	0.482	0.186	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		U_{33} - U_{34}			801.85	-795.72	519	311	-137	-1424	102	229	374	259	0.677	0.247	0.93	Yes	0.461	0.160	0.63	Yes	0.796	0.194	0.99	Yes	0.791	0.201	1.00	Yes	1.00	**6.80**
		U_{34} - U_{35}			-----	-936.02	431	41	-142	-1568	104	19	278	9	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.167	0.98	Yes	0.808	0.191	1.00	Yes	1.00	**4.73**
		U_{35} - U_{36}			-----	-1194.02	211	-208	-239	-1600	92	116	210	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.179	1	Yes	0.810	0.170	0.98	Yes	1.00	**4.29**
		U_{36} - U_{37}			-----	-1310.09	-97	-16	-548	-2203	163	-35	279	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.245	1	Yes	0.746	0.196	0.95	Yes	1.00	**3.78**
		U_{37} - U_{38}			-----	-1279.43	84	-207	-2074	-970	19	26	203	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.729	0.185	0.92	Yes	1.00	**3.64**
		U_{38} - U_{39}			-----	-1496.43	82	-379	-1854	-1455	84	-94	233	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.219	1	Yes	0.768	0.154	0.93	Yes	1.00	**3.95**
		U_{39} - U_{40}			-----	-1402.79	-307	-461	-2365	-1069	-116	-132	-80	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.265	1	Yes	0.720	0.196	0.92	Yes	1.00	**3.41**
		U_{40} - U_{41}			-----	-1295.44	-388	-426	-1985	-1068	-90	-126	-147	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.251	1	Yes	0.738	0.177	0.92	Yes	1.00	**3.26**
		U_{41} - U_{42}			-----	-1121.35	-260	-180	-1859	-309	-91	50	-82	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.796	0.189	0.99	Yes	1.00	**3.49**
		U_{42} - U_{43}			-----	-832.55	-261	-56	-1187	-198	125	-49	136	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.189	1	Yes	0.804	0.180	0.99	Yes	1.00	**3.69**
		U_{43} - U_{44}			-----	-627.71	-95	-179	-1490	758	-49	10	77	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.214	0.96	Yes	0.741	0.253	1.00	Yes	1.00	**6.70**
	Structure 3	U_0 - U_1			-----	-611.90	171	-167	506	-1500	61	128	-36	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.201	0.9	Yes	0.688	0.302	1.00	Yes	1.00	**6.84**
		U_1 - U_2			-----	-679.06	-67	-113	2	-791	249	506	200	11	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.222	1	Yes	0.764	0.159	0.93	Yes	1.00	**3.16**
		U_2 - U_3			-----	-1003.26	-78	-115	-38	-1003	513	5	211	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1	Yes	0.785	0.163	0.95	Yes	1.00	**3.66**
		U_3 - U_4			-----	-1344.55	-140	-196	-530	-1534	126	-240	411	237	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.212	1	Yes	0.771	0.169	0.95	Yes	1.00	**4.24**
		U_4 - U_5			-----	-1347.48	-321	-43	-616	-1219	-16	-312	192	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1	Yes	0.772	0.134	0.91	Yes	1.00	**3.68**
		U_5 - U_6			-----	-1316.48	-148	-222	-526	-1706	-53	-210	-14	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.232	1	Yes	0.755	0.188	0.95	Yes	1.00	**3.63**
		U_6 - U_7			-----	-1318.77	-304	-84	-1821	-474	-92	-232	1	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.756	0.201	0.96	Yes	1.00	**3.65**
		U_7 - U_8			-----	-1144.69	-129	-47	-1286	-298	-205	-202	-100	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.220	1	Yes	0.765	0.177	0.95	Yes	1.00	**3.42**
		U_8 - U_9			-----	-873.06	-122	177	-995	-74	-99	-107	-94	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.171	1	Yes	0.819	0.165	0.99	Yes	1.00	**3.36**
		U_9 - U_{10}			-----	-590.48	-81	228	-1077	109	-209	-126	-136	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.223	0.99	Yes	0.754	0.241	1.00	Yes	1.00	**3.90**
		U_{10} - U_{11}			633.71	-----	231	200	-1035	-13	-355	-90	-470	-251	0.687	0.307	1.00	Yes	0.466	0.206	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		U_{11} - U_{12}			879.21	-----	-188	1378	-179	610	-360	180	-298	4	0.720	0.275	1.00	Yes	0.493	0.187	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		U_{12} - U_{13}			1076.42	-----	1374	-25	644	-45	-421	97	-153	52	0.746	0.251	1.00	Yes	0.520	0.171	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		U_{13} - U_{14}			855.87	-----	199	333	52	-539	-109	398	138	460	0.818	0.178	1.00	Yes	0.572	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		U_{14} - U_{15}			655.96	-----	431	251	210	-827	50	164	264	-18	0.752	0.241	1.00	Yes	0.507	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		U_{15} - U_{16}			378.18	-558.94	303	162	-25	-1013	-25	157	132	116	0.433	0.267	0.71	Yes	0.297	0.183	0.49	Yes	0.761	0.197	0.96	Yes	0.754	0.241	1.00	Yes	1.00	**4.46**
		U_{16} - U_{17}			386.26	-586.90	347	104	-827	-447	22	92	209	1	0.443	0.232	0.68	Yes	0.304	0.159	0.47	Yes	0.799	0.198	1	Yes	0.791	0.197	0.99	Yes	1.00	**4.63**
		U_{17} - U_{18}			149.90	-559.73	272	-120	-759	-411	-73	179	0	-146	0.172	0.211	0.39	Yes	0.116	0.137	0.26	Yes	0.762	0.238	1	Yes	0.755	0.180	0.94	Yes	1.00	**3.31**
		U_{18} - U_{19}			-----	-551.52	69	-26	-881	-251	180	37	59	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.244	1	Yes	0.744	0.209	0.96	Yes	1.00	**3.20**
		U_{19} - U_{20}			-----	-501.64	140	-239	-903	-257	-51	25	314	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.316	1	Yes	0.676	0.215	0.90	Yes	1.00	**4.75**

Axial AB Operating

Operating Loads - 5C1

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			206.10	-----	669	-1263	546	-600	-380	-1397	61	224	0.315	0.679	1.00	Yes	0.186	0.407	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.55**
		L_1 - L_2			436.94	-----	-346	-591	45	26	-707	154	34	11	0.669	0.329	1.00	Yes	0.408	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_2 - L_3			659.98	-----	-836	-553	-6	107	19	-213	2	-13	0.759	0.236	1.00	Yes	0.439	0.141	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		L_3 - L_4			641.94	-238.34	-946	-440	67	274	-127	174	-22	19	0.739	0.256	1.00	Yes	0.439	0.166	0.61	Yes	0.326	0.229	0.56	Yes	0.323	0.228	0.56	Yes	1.00	**4.46**
		L_4 - L_5			-----	-551.12	-584	-80	106	505	-135	72	181	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.123	0.98	Yes	0.840	0.155	1.00	Yes	1.00	**4.45**
		L_5 - L_6			-----	-749.88	-270	-45	142	581	-35	76	9	64	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.118	1	Yes	0.865	0.129	1.00	Yes	1.00	**4.39**
		L_6 - L_7			-----	-1191.39	-52	103	196	-18	112	-43	205	83	-----	-----	-----	-----	-----	-----	-----	-----	0.970	0.029	1	Yes	0.959	0.031	0.99	Yes	1.00	**6.43**
		L_7 - L_8			-----	-1248.58	-32	582	-26	1308	41	73	257	368	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.193	1	Yes	0.791	0.173	0.97	Yes	1.00	**5.51**
		L_8 - L_9			-----	-1261.00	554	-47	1413	-71	37	-14	170	86	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.184	1	Yes	0.799	0.187	0.99	Yes	1.00	**5.56**
		L_9 - L_{10}			-----	-1192.61	195	-164	-39	141	24	10	30	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.970	0.013	0.99	Yes	0.960	0.031	1.00	Yes	1.00	**10.07**
		L_{10} - L_{11}			-----	-549.92	-25	-604	497	-13	-137	-357	84	15	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.127	0.98	Yes	0.838	0.160	1.00	Yes	1.00	**6.23**
		L_{11} - L_{12}			588.30	-----	-8	-628	354	-185	-403	136	-10	11	0.762	0.237	1.00	Yes	0.457	0.153	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		L_{12} - L_{13}			1080.27	-----	-423	-673	87	-89	-56	-227	-25	-39	0.852	0.146	1.00	Yes	0.545	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_{13} - L_{14}			1323.95	-----	-361	-1257	232	-382	-524	138	-104	60	0.779	0.217	1.00	Yes	0.504	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{14} - L_{15}			1674.40	-----	-1023	-1333	-332	-80	-225	124	-63	-51	0.818	0.176	1.00	Yes	0.532	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		L_{15} - L_{16}			1640.55	-----	-945	-1529	-190	-385	-106	-35	-76	14	0.802	0.192	1.00	Yes	0.514	0.111	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		L_{16} - L_{17}			1272.05	-----	-1263	-357	-393	37	-98	112	-33	-63	0.804	0.195	1.00	Yes	0.522	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		L_{17} - L_{18}			957.18	-----	-682	-295	-183	-56	-82	-211	-28	9	0.833	0.158	1.00	Yes	0.534	0.095	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_{18} - L_{19}			452.47	-----	-742	147	-257	186	-154	398	5	-9	0.692	0.305	1.00	Yes	0.468	0.193	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		L_{19} - L_{20}			400.22	-----	-373	51	-1172	747	-12	-3	-154	-34	0.613	0.384	1.00	Yes	0.374	0.259	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.48**
	Structure 2	L_0 - L_1			196.10	-----	674	-2168	842	-1897	-551	-1914	60	208	0.238	0.755	1.00	Yes	0.142	0.473	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**19.72**
		L_1 - L_2			544.67	-----	194	-1090	149	-188	-667	112	79	97	0.662	0.331	1.00	Yes	0.393	0.209	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_2 - L_3			1063.21	-----	-369	-903	-21	-122	-16	-238	118	165	0.838	0.156	1.00	Yes	0.549	0.093	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_3 - L_4			1383.52	-----	-397	-1282	52	-288	-441	85	45	126	0.813	0.185	1.00	Yes	0.547	0.116	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_4 - L_5			1795.95	-----	-1407	-1554	-215	-182	103	-194	16	-11	0.837	0.160	1.00	Yes	0.554	0.095	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		L_5 - L_6			1853.65	-----	-1326	-1939	-18	-289	-413	100	-91	57	0.795	0.198	1.00	Yes	0.534	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		L_6 - L_7			1858.05	-----	-2313	-1226	-331	-39	25	-78	54	-25	0.786	0.208	1.00	Yes	0.523	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		L_7 - L_8			1463.47	-----	-1270	-1097	-124	339	-195	48	-58	79	0.839	0.156	1.00	Yes	0.551	0.092	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		L_8 - L_9			1190.68	-----	-1075	-535	-42	558	-59	53	54	-147	0.833	0.159	1.00	Yes	0.561	0.099	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_9 - L_{10}			876.12	-773.36	-1153	-510	-16	723	-40	-16	-36	23	0.782	0.189	0.98	Yes	0.455	0.119	0.58	Yes	0.818	0.125	0.95	Yes	0.812	0.184	1.00	Yes	1.00	**7.26**
		L_{10} - L_{11}			-----	-720.78	-855	127	26	571	-23	57	127	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.083	0.94	Yes	0.847	0.149	1.00	Yes	1.00	**4.74**
		L_{11} - L_{12}			-----	-1050.43	-275	383	8	990	-53	17	33	90	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.096	0.97	Yes	0.861	0.135	1.00	Yes	1.00	**5.64**
		L_{12} - L_{13}			-----	-1444.04	-385	-239	-40	-898	-24	-181	431	208	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.124	1	Yes	0.864	0.089	0.96	Yes	1.00	**6.92**
		L_{13} - L_{14}			-----	-1504.52	-477	1319	-980	2680	-194	-261	214	219	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.171	0.94	Yes	0.757	0.234	1.00	Yes	1.00	**6.11**
		L_{14} - L_{15}			-----	-1485.63	1252	-546	2800	-834	-243	-168	48	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.176	0.93	Yes	0.748	0.245	1.00	Yes	1.00	**5.57**
		L_{15} - L_{16}			-----	-1485.79	-513	-93	-1054	231	-114	7	-199	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.103	1	Yes	0.889	0.105	1.00	Yes	1.00	**7.80**
		L_{16} - L_{17}			-----	-1172.44	468	-40	1157	85	71	42	18	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.120	0.99	Yes	0.854	0.143	1.00	Yes	1.00	**6.42**
		L_{17} - L_{18}			-----	-838.33	172	-719	498	193	-303	94	18	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.104	1	Yes	0.880	0.115	1.00	Yes	1.00	**4.80**
		L_{18} - L_{19}			-----	-654.22	-185	-554	631	86	63	-165	-12	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.098	0.98	Yes	0.872	0.122	1.00	Yes	1.00	**4.74**
		L_{19} - L_{20}			629.26	-595.83	-71	-1035	535	194	-287	205	-27	-38	0.713	0.244	0.96	Yes	0.422	0.155	0.58	Yes	0.799	0.158	0.96	Yes	0.794	0.200	1.00	Yes	1.00	**6.14**
		L_{20} - L_{21}			993.48	-456.39	-1005	-1146	455	40	-114	-288	-3	-45	0.792	0.198	1.00	Yes	0.520	0.119	0.64	Yes	0.431	0.184	0.62	Yes	0.428	0.167	0.60	Yes	1.00	**6.58**
		L_{21} - L_{22}			937.51	-----	-1107	-1529	248	-120	-105	218	-52	9	0.748	0.247	1.00	Yes	0.500	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{22} - L_{23}			962.00	-----	-1095	-1437	-108	232	-129	137	34	-41	0.767	0.224	1.00	Yes	0.513	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		L_{23} - L_{24}			1017.23	-469.26	-975	-1233	51	428	-74	51	4	74	0.811	0.188	1.00	Yes	0.532	0.111	0.65	Yes	0.443	0.207	0.66	Yes	0.440	0.180	0.63	Yes	1.00	**6.97**
		L_{24} - L_{25}			709.03	-610.72	-846	-646	191	529	-50	173	117	-106	0.803	0.190	1.00	Yes	0.475	0.121	0.60	Yes	0.819	0.111	0.93	Yes	0.814	0.163	0.98	Yes	1.00	**6.75**
		L_{25} - L_{26}			-----	-643.06	-722	-235	78	599	20	20	12	80	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.101	0.97	Yes	0.857	0.139	1.00	Yes	1.00	**5.22**
		L_{26} - L_{27}			-----	-842.79	-684	-89	168	499	17	-22	150	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.085	0.98	Yes	0.885	0.109	1.00	Yes	1.00	**5.55**
		L_{27} - L_{28}			-----	-1167.89	-77	382	60	1132	24	112	93	201	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.122	0.98	Yes	0.851	0.140	1.00	Yes	1.00	**7.16**
		L_{28} - L_{29}			-----	-1546.48	-179	-453	-153	-116	142	104	269	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.061	1	Yes	0.925	0.045	0.98	Yes	1.00	**8.81**
		L_{29} - L_{30}			-----	-1499.13	-498	1189	-719	2705	94	125	-7	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.166	0.93	Yes	0.754	0.236	1.00	Yes	1.00	**5.67**
		L_{30} - L_{31}			-----	-1448.08	1242	-470	3028	-903	128	73	189	93	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.184	0.92	Yes	0.729	0.264	1.00	Yes	1.00	**6.30**
		L_{31} - L_{32}			-----	-1495.25	-278	-307	-751	224	87	57	-166	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.088	1	Yes	0.894	0.075	0.97	Yes	1.00	**7.90**
		L_{32} - L_{33}			-----	-1046.39	412	-213	1003	55	52	42	-21	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.104	0.97	Yes	0.858	0.137	1.00	Yes	1.00	**5.64**
		L_{33} - L_{34}			-----	-735.22	178	-753	541	109	-262	172	19	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.099	0.97	Yes	0.864	0.132	1.00	Yes	1.00	**4.74**
		L_{34} - L_{35}			810.36	-777.54	-195	-1147	760	26	35	-336	-13	-75	0.723	0.224	0.95	Yes	0.421	0.139	0.56	Yes	0.822	0.113	0.94	Yes	0.816	0.183	1.00	Yes	1.00	**7.01**
		L_{35} - L_{36}			1104.07	-----	-221	-1208	559	-16	-626	166	-77	3	0.772	0.222	1.00	Yes	0.520	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_{36} - L_{37}			1437.61	-----	-1009	-1518	428	-9	57	-98	34	-25	0.824	0.176	1.00	Yes	0.541	0.102	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{37} - L_{38}			1799.77	-----	-1082	-2564	80	-390	-178	94	-55	48	0.762	0.236	1.00	Yes	0.506	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		L_{38} - L_{39}			1869.78	-----	-1667	-2077	-315	-67	-16	96	11	-71	0.802	0.190	1.00	Yes	0.538	0.115	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		L_{39} - L_{40}			1743.59	-----	-1260	-1898	-232	-382	-56	-43	-59	1	0.813	0.183	1.00	Yes	0.538	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		L_{40} - L_{41}			1371.33	-----	-1471	-708	-393	18	-74	155	-5	-8	0.806	0.185	1.00	Yes	0.543	0.114	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_{41} - L_{42}			1042.98	-----	-1121	-372	-184	-105	29	-62	38	136	0.822	0.177	1.00	Yes	0.539	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		L_{42} - L_{43}			553.53	-----	-1400	447	-305	168	-66	225	174	78	0.672	0.322	1.00	Yes	0.400	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		L_{43} - L_{44}			235.99	-----	-613	74	-3007	1113	-587	-171	166	49	0.287	0.708	1.00	Yes	0.170	0.455	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.75**
	Structure 3	L_0 - L_1			240.22	-----	396	-908	812	-1536	-174	-790	-5	-21	0.368	0.625	1.00	Yes	0.224	0.415	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.95**
		L_1 - L_2			449.54	-----	303	-765	154	-181	-382	196	35	60	0.688	0.309	1.00	Yes	0.465	0.195	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		L_2 - L_3			959.15	-----	-183	-689	-18	-143	2	-239	100	144	0.835	0.163	1.00	Yes	0.535	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_3 - L_4			1302.72	-----	-210	-1015	43	-295	-6	288	29	118	0.824	0.175	1.00	Yes	0.534	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_4 - L_5			1659.01	-----	-1456	-983	-273	-133	5	-182	27	11	0.811	0.188	1.00	Yes	0.520	0.110	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_5 - L_6			1612.70	-----	-693	-1528	-32	-301	-314	293	-64	130	0.788	0.206	1.00	Yes	0.512	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		L_6 - L_7			1432.03	-----	-1030	-749	-328	220	-120	71	5	-32	0.842	0.152	1.00	Yes	0.546	0.093	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_7 - L_8			1106.06	-----	-526	-620	-80	70	-21	113	-19	73	0.873	0.123	1.00	Yes	0.558	0.073	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_8 - L_9			623.67	-----	-661	-67	-191	350	-18	96	66	-96	0.808	0.192	1.00	Yes	0.485	0.126	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_9 - L_{10}			-----	-546.30	-627	-147	-23	499	-13	87	-32	4	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.102	0.95	Yes	0.832	0.166	1.00	Yes	1.00	**6.46**
		L_{10} - L_{11}			-----	-1198.17	-196	191	121	-103	73	-134	95	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.975	0.014	0.99	Yes	0.964	0.031	1.00	Yes	1.00	**10.61**
		L_{11} - L_{12}			-----	-1247.39	-57	532	-137	1427	-89	-105	-189	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.790	0.189	0.98	Yes	1.00	**5.60**
		L_{12} - L_{13}			-----	-1237.77	555	-35	1355	-52	-137	-142	-308	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.197	1	Yes	0.784	0.179	0.97	Yes	1.00	**5.33**
		L_{13} - L_{14}			-----	-1171.47	90	-39	-69	187	-90	-74	-151	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.954	0.039	1	Yes	0.943	0.029	0.98	Yes	1.00	**6.18**
		L_{14} - L_{15}			-----	-738.79	94	-369	568	138	-83	-223	1	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.133	1	Yes	0.852	0.126	0.98	Yes	1.00	**4.34**
		L_{15} - L_{16}			-----	-552.70	-25	-587	477	156	-403	313	13	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.140	0.99	Yes	0.842	0.155	1.00	Yes	1.00	**4.46**
		L_{16} - L_{17}			636.36	-191.49	-202	-1036	293	17	-99	-29	38	-80	0.732	0.266	1.00	Yes	0.435	0.173	0.61	Yes	0.262	0.207	0.47	Yes	0.259	0.250	0.51	Yes	1.00	**4.25**
		L_{17} - L_{18}			654.10	-----	-510	-933	70	-59	-25	98	26	107	0.753	0.242	1.00	Yes	0.435	0.146	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		L_{18} - L_{19}			471.07	-----	-674	-371	8	25	-7	313	54	-75	0.721	0.269	1.00	Yes	0.440	0.179	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_{19} - L_{20}			151.85	-----	-1584	1194	-1571	1113	1338	364	-18	-5	0.232	0.763	1.00	Yes	0.137	0.459	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.19**

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-376.20	-22	45	-73	155	-93	-30	-136	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.138	0.98	Yes	0.796	0.198	1.00	Yes	1.00	**1.40**
		$U_1 - L_1$			-----	-359.11	33	-29	-154	180	72	33	-433	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.189	0.98	Yes	0.760	0.231	1.00	Yes	1.00	**4.32**
		$U_2 - L_2$			105.24	-366.09	92	-103	-114	174	55	6	366	195	0.189	0.329	0.52	Yes	0.104	0.181	0.29	Yes	0.800	0.183	0.99	Yes	0.775	0.223	1.00	Yes	1.00	**6.34**
		$U_3 - L_3$			282.02	-----	246	-256	-80	145	-225	-52	564	345	0.507	0.490	1.00	Yes	0.279	0.270	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.23**
		$U_4 - L_4$			-----	-422.40	48	-70	56	-61	-125	-49	-77	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.062	1	Yes	0.894	0.089	0.99	Yes	1.00	**5.47**
		$U_5 - L_5$			-----	-426.70	47	-60	229	-251	-125	-19	-125	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.103	0.88	Yes	0.736	0.255	1.00	Yes	1.00	**3.94**
		$U_6 - L_6$			-----	-545.33	72	-71	195	-242	-132	-1	12	31	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.090	0.92	Yes	0.782	0.212	1.00	Yes	1.00	**4.14**
		$U_7 - L_7$			-----	-457.31	118	-132	264	-296	-129	46	58	89	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.119	0.89	Yes	0.705	0.291	1.00	Yes	1.00	**2.53**
		$U_8 - L_8$			-----	-1348.53	-8	5	-19	22	-202	-69	-180	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.974	0.021	1	Yes	0.935	0.004	0.94	Yes	1.00	**4.51**
		$U_9 - L_9$			-----	-641.12	-168	193	-352	409	-229	-161	-908	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.234	1	Yes	0.724	0.228	0.96	Yes	1.00	**2.77**
		$U_{10} - L_{10}$			-----	-826.61	-115	108	-292	352	-205	-147	-281	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.110	0.97	Yes	0.816	0.182	1.00	Yes	1.00	**4.61**
		$U_{11} - L_{11}$			-----	-690.58	-113	158	-272	414	-186	-73	145	122	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.095	0.93	Yes	0.804	0.192	1.00	Yes	1.00	**4.26**
		$U_{12} - L_{12}$			-----	-541.00	-63	65	-283	294	-168	-11	-81	95	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.094	0.88	Yes	0.742	0.251	1.00	Yes	1.00	**4.08**
		$U_{13} - L_{13}$			-----	-403.81	-16	29	-156	190	-97	76	-59	117	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.089	0.91	Yes	0.774	0.217	1.00	Yes	1.00	**3.25**
		$U_{14} - L_{14}$			-----	-386.97	-81	101	-121	139	-86	-21	-105	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.086	0.95	Yes	0.819	0.177	1.00	Yes	1.00	**5.60**
		$U_{15} - L_{15}$			186.47	-316.13	-155	143	239	-254	-152	-140	11	-175	0.335	0.375	0.72	Yes	0.184	0.206	0.40	Yes	0.709	0.162	0.88	Yes	0.669	0.324	1.00	Yes	1.00	**5.43**
		$U_{16} - L_{16}$			-----	-319.01	-31	14	243	-249	-108	-86	-125	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.164	0.89	Yes	0.675	0.318	1.00	Yes	1.00	**4.15**
		$U_{17} - L_{17}$			-----	-438.85	38	-58	214	-231	-119	-65	-162	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.130	0.96	Yes	0.757	0.234	1.00	Yes	1.00	**3.26**
		$U_{18} - L_{18}$			-----	-533.94	123	-128	436	-446	-162	-62	98	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.094	0.88	Yes	0.743	0.253	1.00	Yes	1.00	**3.56**
		$U_{19} - L_{19}$			-----	-649.11	137	-150	487	-510	-66	10	406	60	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.147	0.96	Yes	0.755	0.237	1.00	Yes	1.00	**3.89**
		$U_{20} - L_{20}$			-----	-597.25	166	-213	405	-492	29	4	609	80	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1	Yes	0.695	0.228	0.93	Yes	1.00	**2.67**
	Structure 2	$U_0 - L_0$			-----	-615.44	-110	174	-416	501	-259	-44	-1134	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.660	0.213	0.88	Yes	1.00	**2.73**
		$U_1 - L_1$			-----	-663.28	-114	122	-397	444	34	-67	-1297	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1	Yes	0.711	0.188	0.90	Yes	1.00	**3.51**
		$U_2 - L_2$			-----	-618.10	-76	85	-363	407	101	44	-163	40	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.089	0.92	Yes	0.788	0.208	1.00	Yes	1.00	**3.92**
		$U_3 - L_3$			-----	-513.21	-40	46	-183	210	22	131	156	182	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.109	0.99	Yes	0.805	0.192	1.00	Yes	1.00	**3.60**
		$U_4 - L_4$			-----	-356.31	8	7	-175	186	-98	64	-67	133	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.090	0.9	Yes	0.754	0.238	1.00	Yes	1.00	**3.74**
		$U_5 - L_5$			145.60	-369.37	101	-92	-137	168	-106	91	-101	130	0.262	0.253	0.52	Yes	0.144	0.139	0.29	Yes	0.834	0.101	0.94	Yes	0.782	0.215	1.00	Yes	1.00	**4.95**
		$U_6 - L_6$			359.28	-----	200	-210	-109	133	-127	53	272	192	0.646	0.347	1.00	Yes	0.355	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		$U_7 - L_7$			-----	-392.98	62	-81	111	-129	-136	-32	-120	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.095	0.99	Yes	0.832	0.165	1.00	Yes	1.00	**5.35**
		$U_8 - L_8$			-----	-466.67	32	-53	362	-372	-140	-111	-198	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.126	0.81	Yes	0.672	0.325	1.00	Yes	1.00	**3.79**
		$U_9 - L_9$			-----	-691.59	122	-150	577	-588	-162	-108	-225	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.093	0.87	Yes	0.741	0.249	1.00	Yes	1.00	**4.55**
		$U_{10} - L_{10}$			-----	-794.95	128	-166	541	-564	-96	-41	-4	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.084	0.87	Yes	0.743	0.249	1.00	Yes	1.00	**4.80**
		$U_{11} - L_{11}$			-----	-817.97	173	-183	510	-518	-53	-66	-111	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.079	0.91	Yes	0.765	0.229	1.00	Yes	1.00	**4.34**
		$U_{12} - L_{12}$			-----	-886.62	179	-171	527	-535	-67	42	144	113	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.090	0.95	Yes	0.768	0.230	1.00	Yes	1.00	**4.35**
		$U_{13} - L_{13}$			-----	-744.70	242	-240	573	-559	-90	42	66	91	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.112	0.95	Yes	0.718	0.274	1.00	Yes	1.00	**3.28**
		$U_{14} - L_{14}$			-----	-1336.02	153	-149	167	-166	-59	123	168	105	-----	-----	-----	-----	-----	-----	-----	-----	0.977	0.017	1	Yes	0.886	0.030	0.92	Yes	1.00	**4.50**
		$U_{15} - L_{15}$			-----	-749.96	-158	160	-551	559	-68	-37	-171	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.142	0.98	Yes	0.723	0.268	1.00	Yes	1.00	**4.41**
		$U_{16} - L_{16}$			-----	-740.23	-107	97	-481	480	-151	-86	-295	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.110	0.97	Yes	0.793	0.204	1.00	Yes	1.00	**4.33**
		$U_{17} - L_{17}$			-----	-671.10	-124	121	-447	470	-96	-32	-166	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.083	0.92	Yes	0.781	0.218	1.00	Yes	1.00	**3.97**
		$U_{18} - L_{18}$			-----	-608.35	-95	96	-388	436	-80	-11	98	60	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.074	0.89	Yes	0.775	0.223	1.00	Yes	1.00	**4.05**
		$U_{19} - L_{19}$			-----	-500.66	-45	51	-252	259	-152	-15	-129	35	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.084	0.84	Yes	0.748	0.250	1.00	Yes	1.00	**3.74**
		$U_{20} - L_{20}$			-----	-410.46	-3	9	-163	181	-150	9	-138	35	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.097	0.94	Yes	0.786	0.206	1.00	Yes	1.00	**3.66**
		$U_{21} - L_{21}$			-----	-359.90	36	-33	-152	180	-140	34	98	93	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.108	0.93	Yes	0.762	0.230	1.00	Yes	1.00	**4.11**
		$U_{22} - L_{22}$			-----	-397.35	-56	50	-51	64	-127	-29	226	15	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.098	1	Yes	0.841	0.082	0.93	Yes	1.00	**5.78**
		$U_{23} - L_{23}$			-----	-321.66	-91	79	239	-249	-98	-51	-128	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.133	0.86	Yes	0.681	0.318	1.00	Yes	1.00	**4.53**
		$U_{24} - L_{24}$			-----	-377.61	-14	5	230	-237	-90	-62	-117	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.110	0.89	Yes	0.723	0.271	1.00	Yes	1.00	**3.81**
		$U_{25} - L_{25}$			-----	-473.78	35	-51	296	-294	-98	-30	-13	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.084	0.8	Yes	0.707	0.285	1.00	Yes	1.00	**3.66**
		$U_{26} - L_{26}$			-----	-566.21	103	-110	504	-529	-162	-31	-125	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.093	0.85	Yes	0.721	0.271	1.00	Yes	1.00	**3.95**
		$U_{27} - L_{27}$			-----	-635.62	138	-140	546	-552	-151	-1	-107	4	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.083	0.87	Yes	0.740	0.256	1.00	Yes	1.00	**3.88**
		$U_{28} - L_{28}$			-----	-711.52	135	-132	551	-546	-119	21	109	100	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.075	0.9	Yes	0.763	0.234	1.00	Yes	1.00	**3.89**
		$U_{29} - L_{29}$			-----	-735.78	201	-207	581	-595	-119	23	170	86	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.127	0.95	Yes	0.709	0.285	1.00	Yes	1.00	**4.20**
		$U_{30} - L_{30}$			-----	-1334.01	53	-65	27	-51	-90	122	-114	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.976	0.021	1	Yes	0.885	0.011	0.90	Yes	1.00	**4.76**
		$U_{31} - L_{31}$			-----	-683.22	-183	180	-472	471	-118	-60	-752	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.232	1	Yes	0.659	0.226	0.89	Yes	1.00	**3.21**
		$U_{32} - L_{32}$			-----	-915.67	-125	99	-423	448	-187	-97	-295	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.118	1	Yes	0.794	0.192	0.99	Yes	1.00	**4.68**
		$U_{33} - L_{33}$			-----	-853.14	-162	142	-401	436	-140	-67	138	62	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.077	0.94	Yes	0.798	0.192	1.00	Yes	1.00	**4.70**
		$U_{34} - L_{34}$			-----	-830.20	-118	132	-457	495	-174	-31	-120	80	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.082	0.91	Yes	0.776	0.219	1.00	Yes	1.00	**5.24**
		$U_{35} - L_{35}$			-----	-734.27	-113	133	-439	495	-168	44	-131	105	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.069	0.89	Yes	0.787	0.210	1.00	Yes	1.00	**4.76**
		$U_{36} - L_{36}$			-----	-517.20	-49	63	-249	284	-134	72	139	173	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.086	0.84	Yes	0.745	0.249	1.00	Yes	1.00	**3.97**
		$U_{37} - L_{37}$			-----	-383.70	-120	145	-73	82	-88	51	-180	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.111	0.98	Yes	0.812	0.186	1.00	Yes	1.00	**5.17**
		$U_{38} - L_{38}$			351.95	-----	-241	242	169	-167	-101	-104	-153	-185	0.633	0.363	1.00	Yes	0.348	0.200	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		$U_{39} - L_{39}$			166.91	-328.52	-133	120	214	-232	-135	-106	-132	-170	0.300	0.346	0.65	Yes	0.165	0.190	0.36	Yes	0.742	0.157	0.9	Yes	0.695	0.297	1.00	Yes	1.00	**5.13**
		$U_{40} - L_{40}$			-----	-336.57	-31	8	217	-218	-107	-78	-36	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.119	0.89	Yes	0.712	0.279	1.00	Yes	1.00	**3.91**
		$U_{41} - L_{41}$			-----	-483.85	39	-46	246	-257	-105	-42	-113	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.104	0.93	Yes	0.759	0.234	1.00	Yes	1.00	**3.71**
		$U_{42} - L_{42}$			-----	-581.41	96	-106	487	-493	-85	-50	-1	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.079	0.86	Yes	0.741	0.252	1.00	Yes	1.00	**3.89**
		$U_{43} - L_{43}$			-----	-708.69	132	-149	537	-555	-42	-20	433	57	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.127	0.94	Yes	0.760	0.236	1.00	Yes	1.00	**3.95**
		$U_{44} - L_{44}$			-----	-657.48	191	-236	418	-526	-36	-6	749	127	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1	Yes	0.705	0.223	0.93	Yes	1.00	**2.84**
	Structure 3	$U_0 - L_0$			-----	-584.91	-105	170	-299	404	-247	-32	-752	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.226	1	Yes	0.681	0.187	0.87	Yes	1.00	**2.52**
		$U_1 - L_1$			-----	-615.19	-114	122	-379	412	-3	-77	-1049	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.225	1	Yes	0.716	0.191	0.91	Yes	1.00	**3.63**
		$U_2 - L_2$			-----	-561.08	-91	96	-351	381	82	31	-111	49	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.080	0.91	Yes	0.780	0.216	1.00	Yes	1.00	**3.90**
		$U_3 - L_3$			-----	-470.77	-33	45	-146	182	0	119	-52	149	-----	-----	-----	-----	-----	-----	-----	-----	0.880	0.099	0.98	Yes	0.812	0.184	1.00	Yes	1.00	**3.47**
		$U_4 - L_4$			-----	-362.73	20	-11	-161	180	-158	81	95	216	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.110	0.93	Yes	0.768	0.230	1.00	Yes	1.00	**4.27**
		$U_5 - L_5$			177.40	-352.39	119	-116	-166	194	-143	70	-117	140	0.319	0.289	0.61	Yes	0.175	0.159	0.34	Yes	0.790	0.114	0.91	Yes	0.746	0.248	1.00	Yes	1.00	**5.40**
		$U_6 - L_6$			71.93	-420.07	-2	-13	-9	13	-171	8	-114	-32	0.129	0.067	0.20	Yes	0.071	0.037	0.11	Yes	0.937	0.054	1	Yes	0.889	0.017	0.91	Yes	1.00	**6.13**
		$U_7 - L_7$			-----	-368.17	-3	-10	231	-252	-176	-132	-215	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.155	0.9	Yes	0.705	0.288	1.00	Yes	1.00	**3.40**
		$U_8 - L_8$			-----	-516.07	52	-55	335	-335	-161	-102	-102	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.113	0.86	Yes	0.708	0.286	1.00	Yes	1.00	**4.17**
		$U_9 - L_9$			-----	-658.63	100	-148	399	-499	-69	-77	-196	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.107	0.9	Yes	0.767	0.232	1.00	Yes	1.00	**4.43**
		$U_{10} - L_{10}$			-----	-785.09	120	-123	394	-426	-88	12	103	124	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.078	0.9	Yes	0.775	0.221	1.00	Yes	1.00	**4.66**
		$U_{11} - L_{11}$			-----	-647.02	183	-213	415	-469	-45	65	81	137	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.103	0.88	Yes	0.731	0.261	1.00	Yes	1.00	**2.88**
		$U_{12} - L_{12}$			-----	-1332.43	43	-69	93	-158	-108	10	246	105	-----	-----	-----	-----	-----	-----	-----	-----	0.962	0.030	1	Yes	0.924	0.030	0.96	Yes	1.00	**4.34**
		$U_{13} - L_{13}$			-----	-463.41	-105	116	-257	287	-109	-93	-173	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.147	0.93	Yes	0.715	0.283	1.00	Yes	1.00	**2.57**
		$U_{14} - L_{14}$			-----	-559.23	-62	58	-188	218	-162	-134	-46	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.098	0.95	Yes	0.802	0.191	1.00	Yes	1.00	**4.10**
		$U_{15} - L_{15}$			-----	-466.90	-44	50	-139	185	-173	-90	-161	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.106	0.96	Yes	0.806	0.188	1.00	Yes	1.00	**4.07**
		$U_{16} - L_{16}$			-----	-386.54	-135	142	-94	104	-180	-70	-196	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.104	0.96	Yes	0.818	0.181	1.00	Yes	1.00	**5.00**
		$U_{17} - L_{17}$			291.80	-----	-311	316	191	-213	-219	-94	-101	-189	0.525	0.467	1.00	Yes	0.289	0.257	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_{18} - L_{18}$			122.97	-376.01	-155	153	82	-147	-6	17	420	49	0.221	0.320	0.55	Yes	0.122	0.176	0.30	Yes	0.822	0.168	0.99	Yes	0.796	0.198	1.00	Yes	1.00	**7.57**
		$U_{19} - L_{19}$			-----	-349.14	-43	30	162	-204	-172	-94	220	77	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.158	0.93	Yes	0.739	0.260	1.00	Yes	1.00	**4.28**
		$U_{20} - L_{20}$			-----	-378.74	47	-54	94	-153	-182	-58	14	5	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.134	0.99	Yes	0.801	0.195	1.00	Yes	1.00	**1.54**

Operating Loads - 5C1

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	$U_0 - L_1$			684.03	-----	-31	16	16	-14	-184	-265	-35	-15	0.897	0.103	1.00	Yes	0.542	0.056	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_1 - L_2$			464.49	-112.53	-93	-7	19	-15	132	-121	37	30	0.835	0.157	1.00	Yes	0.459	0.086	0.55	Yes	0.258	0.134	0.4	Yes	0.238	0.118	0.36	Yes	1.00	**5.27**
		$U_2 - L_3$			423.62	-343.87	-94	-22	3	-68	-224	-267	-281	-148	0.762	0.201	0.97	Yes	0.419	0.111	0.53	Yes	0.792	0.208	1	Yes	0.728	0.120	0.85	Yes	1.00	**7.25**
		$U_3 - L_4$			-----	-381.96	-28	-44	26	-55	-238	-180	-134	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.120	1	Yes	0.808	0.071	0.88	Yes	1.00	**4.04**
		$U_4 - L_4$			589.00	-----	-86	51	-67	9	-76	-192	-125	-72	0.864	0.133	1.00	Yes	0.475	0.073	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_5 - L_5$			703.59	-----	-181	224	-65	93	35	-94	217	138	0.832	0.167	1.00	Yes	0.458	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_7 - L_6$			655.06	-----	-272	248	-77	85	338	139	297	171	0.774	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_6 - L_7$			655.57	-----	-110	298	-8	115	281	157	241	173	0.775	0.221	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_8 - L_9$			970.17	-----	-98	355	0	137	482	193	95	110	0.776	0.219	1.00	Yes	0.480	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_9 - L_{10}$			1034.95	-----	-313	233	-81	90	218	164	85	103	0.827	0.167	1.00	Yes	0.513	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{10} - L_{11}$			1016.49	-----	-248	165	-71	81	-158	-146	102	29	0.859	0.135	1.00	Yes	0.531	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{11} - L_{12}$			837.01	-----	-243	109	-94	-8	-317	-334	-229	-180	0.828	0.163	1.00	Yes	0.455	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		$U_{12} - L_{13}$			620.10	-----	-190	121	-59	12	-358	-328	-241	-246	0.756	0.236	1.00	Yes	0.476	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{13} - L_{14}$			440.21	-----	-93	31	-14	-27	-305	-298	-278	-303	0.792	0.207	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_{15} - L_{14}$			268.77	-333.15	-62	4	19	-81	-241	-343	-197	-297	0.483	0.203	0.69	Yes	0.266	0.112	0.38	Yes	0.781	0.211	1	Yes	0.705	0.103	0.81	Yes	1.00	**4.60**
		$U_{16} - L_{15}$			416.91	-201.82	-123	90	-33	-28	-224	-293	-187	-181	0.750	0.241	1.00	Yes	0.412	0.133	0.55	Yes	0.478	0.186	0.67	Yes	0.427	0.157	0.59	Yes	1.00	**4.93**
		$U_{17} - L_{16}$			536.09	-----	-146	108	-57	2	-160	-256	-261	-138	0.786	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_{18} - L_{17}$			655.06	-----	-322	259	-144	68	-99	-172	-186	-77	0.774	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_{19} - L_{18}$			734.03	-----	-357	269	-104	66	-24	-126	45	5	0.795	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_{20} - L_{19}$			703.61	-----	-369	319	-126	105	-260	-138	1	34	0.762	0.232	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
	Structure 2	$U_0 - L_1$			782.03	-----	-370	351	-61	71	-207	-310	-119	52	0.774	0.218	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_1 - L_2$			795.33	-----	-415	300	-77	50	-42	-134	54	15	0.787	0.212	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_2 - L_3$			649.16	-----	-328	243	-57	42	-191	-218	-72	-180	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_3 - L_4$			576.31	-----	-177	125	-45	2	-333	-314	-305	-215	0.768	0.231	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_4 - L_5$			411.49	-----	-125	77	7	-35	-320	-278	-216	-209	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_5 - L_6$			393.96	-299.17	-118	51	66	-107	-470	-271	-371	-254	0.709	0.287	1.00	Yes	0.390	0.158	0.55	Yes	0.707	0.284	1	Yes	0.633	0.151	0.79	Yes	1.00	**5.53**
		$U_6 - L_7$			-----	-372.31	-41	-13	55	-94	-319	-270	-297	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.197	1	Yes	0.713	0.107	0.83	Yes	1.00	**3.22**
		$U_8 - L_7$			607.79	-----	-175	135	-68	0	-111	-291	-152	-225	0.775	0.216	1.00	Yes	0.488	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_8 - L_9$			724.01	-----	-327	258	-161	43	-146	-216	-268	-164	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{10} - L_9$			839.62	-----	-306	244	-140	70	-89	-176	-3	-54	0.831	0.168	1.00	Yes	0.457	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{11} - L_{10}$			911.31	-----	-349	305	-194	128	98	-50	132	46	0.830	0.166	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{12} - L_{11}$			819.70	-----	-334	326	-149	159	158	64	749	218	0.747	0.244	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{13} - L_{12}$			760.65	-----	-431	384	-178	173	292	148	272	154	0.753	0.244	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{14} - L_{13}$			724.81	-----	-257	417	-28	210	296	155	548	149	0.717	0.276	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_{14} - L_{15}$			623.61	-----	-209	361	8	100	311	34	40	31	0.737	0.261	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{15} - L_{16}$			625.91	-----	-367	325	-95	102	245	63	46	65	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{16} - L_{17}$			753.76	-----	-350	348	-68	92	6	-10	4	1	0.816	0.181	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{17} - L_{18}$			677.05	-----	-301	279	-59	75	-132	-70	-62	-36	0.800	0.194	1.00	Yes	0.440	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{18} - L_{19}$			681.90	-----	-276	253	-58	46	-168	-165	-131	-91	0.806	0.187	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{19} - L_{20}$			606.03	-----	-196	155	-24	4	-227	-196	-133	-128	0.773	0.221	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		$U_{20} - L_{21}$			428.74	-----	-119	91	-2	-16	-237	-146	-217	-155	0.771	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{21} - L_{22}$			426.52	-281.96	-110	49	33	-72	-276	-259	-292	-264	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	0.666	0.202	0.87	Yes	0.597	0.141	0.74	Yes	1.00	**5.36**
		$U_{23} - L_{22}$			423.61	-351.06	-102	55	-10	-56	-80	-245	-132	-209	0.762	0.201	0.97	Yes	0.419	0.110	0.53	Yes	0.836	0.160	1	Yes	0.743	0.130	0.88	Yes	1.00	**5.66**
		$U_{24} - L_{23}$			438.99	-----	-119	106	-21	-16	-69	-132	-192	-80	0.790	0.208	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{25} - L_{24}$			623.62	-----	-195	183	-44	4	-4	-114	-3	-50	0.795	0.198	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		$U_{26} - L_{25}$			688.84	-----	-281	268	-124	70	110	-25	62	20	0.814	0.179	1.00	Yes	0.448	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{27} - L_{26}$			675.45	-----	-298	296	-64	76	142	26	173	74	0.799	0.200	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{28} - L_{27}$			726.21	-----	-331	354	-80	101	186	97	183	108	0.787	0.212	1.00	Yes	0.433	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{29} - L_{28}$			631.05	-----	-354	335	-122	116	282	134	215	108	0.746	0.252	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_{30} - L_{29}$			590.53	-----	-198	343	-7	159	224	123	545	93	0.698	0.293	1.00	Yes	0.384	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{30} - L_{31}$			755.40	-----	-278	443	-14	128	260	-43	60	36	0.747	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{31} - L_{32}$			785.10	-----	-453	385	-122	126	64	49	37	48	0.777	0.220	1.00	Yes	0.427	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{32} - L_{33}$			897.28	-----	-364	330	-82	132	-176	-71	-20	7	0.817	0.179	1.00	Yes	0.450	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		$U_{33} - L_{34}$			888.71	-----	-341	278	-118	90	-270	-244	-177	-109	0.810	0.181	1.00	Yes	0.445	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{34} - L_{35}$			816.57	-----	-299	211	-97	56	-301	-303	-171	-202	0.810	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_{35} - L_{36}$			704.45	-----	-324	214	-100	36	-421	-297	-290	-243	0.763	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{36} - L_{37}$			596.25	-----	-183	133	-30	-11	-325	-353	-337	-322	0.760	0.236	1.00	Yes	0.479	0.133	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{38} - L_{37}$			-----	-392.13	-26	-14	30	-77	-127	-248	-131	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.151	1	Yes	0.751	0.088	0.84	Yes	1.00	**3.06**
		$U_{39} - L_{38}$			302.78	-335.64	-89	50	29	-86	-200	-247	-303	-180	0.545	0.202	0.75	Yes	0.300	0.111	0.42	Yes	0.800	0.199	1	Yes	0.710	0.114	0.83	Yes	1.00	**4.86**
		$U_{40} - L_{39}$			432.35	-155.86	-126	93	-4	-35	-145	-206	-85	-109	0.778	0.221	1.00	Yes	0.428	0.121	0.55	Yes	0.373	0.141	0.52	Yes	0.330	0.161	0.50	Yes	1.00	**4.67**
		$U_{41} - L_{40}$			599.03	-----	-180	137	-75	13	-72	-165	-84	-72	0.799	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{42} - L_{41}$			664.19	-----	-337	276	-66	43	-71	-106	-1	-1	0.785	0.210	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{43} - L_{42}$			802.43	-----	-397	321	-87	58	-68	-111	-7	-32	0.794	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{44} - L_{43}$			814.50	-----	-353	362	-133	116	-36	-119	37	2	0.806	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
	Structure 3	$U_0 - L_1$			708.41	-----	-348	296	-68	71	-154	-302	-130	44	0.767	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		$U_1 - L_2$			701.71	-----	-353	233	-89	56	-307	-349	37	12	0.760	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_2 - L_3$			637.71	-----	-328	223	-76	47	-212	-283	-73	-167	0.754	0.237	1.00	Yes	0.415	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_3 - L_4$			522.32	-----	-145	86	-24	-8	-352	-320	-249	-217	0.766	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_4 - L_5$			404.23	-167.20	-119	76	6	-45	-404	-322	-335	-233	0.727	0.270	1.00	Yes	0.400	0.148	0.55	Yes	0.396	0.222	0.62	Yes	0.354	0.153	0.51	Yes	1.00	**4.59**
		$U_5 - L_6$			283.84	-311.01	-74	-4	37	-90	-440	-334	-297	-322	0.510	0.243	0.76	Yes	0.281	0.134	0.42	Yes	0.729	0.269	1	Yes	0.658	0.116	0.78	Yes	1.00	**4.67**
		$U_7 - L_6$			448.24	-----	-84	40	-34	-20	-118	-282	-229	-246	0.806	0.188	1.00	Yes	0.443	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_8 - L_7$			644.42	-----	-191	156	-74	8	-175	-244	-118	-147	0.786	0.214	1.00	Yes	0.494	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_8 - L_9$			857.66	-----	-254	137	-154	-4	-29	-200	13	-71	0.848	0.148	1.00	Yes	0.467	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		$U_{10} - L_9$			931.02	-----	-226	181	-86	80	92	-34	768	234	0.786	0.205	1.00	Yes	0.487	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_{11} - L_{10}$			1000.84	-----	-308	265	-96	89	443	279	306	197	0.800	0.194	1.00	Yes	0.496	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		$U_{12} - L_{11}$			973.44	-----	-96	364	-14	141	451	308	281	211	0.778	0.220	1.00	Yes	0.482	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_{12} - L_{13}$			660.80	-----	-88	308	14	117	229	155	92	98	0.781	0.217	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{13} - L_{14}$			662.77	-----	-294	213	-70	76	221	196	91	115	0.784	0.208	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{14} - L_{15}$			714.97	-----	-204	167	-25	74	-119	-157	168	83	0.845	0.147	1.00	Yes	0.465	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_{15} - L_{16}$			574.45	-----	-96	10	-23	-6	-234	-152	-120	-89	0.842	0.152	1.00	Yes	0.463	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{17} - L_{16}$			-----	-406.99	-15	-24	0	-43	-54	-158	-24	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.931	0.062	1	Yes	0.861	0.055	0.92	Yes	1.00	**4.11**
		$U_{18} - L_{17}$			306.82	-375.03	-63	12	-39	-59	-54	-237	-142	-69	0.552	0.149	0.71	Yes	0.304	0.082	0.39	Yes	0.863	0.134	1	Yes	0.794	0.081	0.88	Yes	1.00	**5.97**
		$U_{19} - L_{18}$			465.92	-116.09	-95	36	26	-21	53	-123	42	-2	0.838	0.157	1.00	Yes	0.461	0.086	0.55	Yes	0.266	0.103	0.37	Yes	0.246	0.121	0.37	Yes	1.00	**5.74**
		$U_{20} - L_{19}$			590.65	-----	-111	57	-19	0	-346	-193	34	-12	0.775	0.216	1.00	Yes	0.468	0.119	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**

Axial AB Operating

Operating Loads - 5C1

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 - 5C1

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

DL Factor: 1.300 (Vehicle) 1.300 (Pedestrian)
LL Factor: 1.300 (Vehicle) 1.300 (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	241.48	-186.79	251	-270	575	-835	105	387	-476	-1749	0.370	0.626	1.00	Yes	0.218	0.372	0.59	Yes	0.339	0.475	0.82	Yes	0.336	0.251	0.59	Yes	1.00	**18.10**
		L_1 - L_2	363.70	-----	-151	-545	-8	19	-1275	196	356	-161	0.557	0.437	1.00	Yes	0.340	0.279	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**
		L_2 - L_3	658.14	-----	-713	-471	-8	119	398	-26	-192	139	0.757	0.236	1.00	Yes	0.438	0.141	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_3 - L_4	584.10	-297.92	-625	-355	19	349	-1072	-70	313	-250	0.672	0.323	1.00	Yes	0.399	0.201	0.61	Yes	0.407	0.180	0.59	Yes	0.403	0.151	0.56	Yes	1.00	**4.49**
		L_4 - L_5	-----	-570.24	-408	230	111	468	60	-293	-80	210	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.118	1	Yes	0.869	0.124	1.00	Yes	1.00	**3.19**
		L_5 - L_6	-----	-750.76	-181	309	125	591	-36	-180	162	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.123	1	Yes	0.866	0.131	1.00	Yes	1.00	**3.01**
		L_6 - L_7	-----	-1169.55	-89	110	237	-44	-115	290	-204	361	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.044	1	Yes	0.941	0.037	0.98	Yes	1.00	**4.66**
		L_7 - L_8	-----	-1244.52	-34	692	-61	1245	374	227	410	470	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1	Yes	0.788	0.165	0.96	Yes	1.00	**3.01**
		L_8 - L_9	-----	-1146.84	677	-36	1114	-70	202	321	438	448	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.726	0.148	0.88	Yes	1.00	**2.18**
		L_9 - L_{10}	-----	-1066.34	345	-228	585	-425	361	-230	357	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.125	1	Yes	0.858	0.092	0.96	Yes	1.00	**5.49**
		L_{10} - L_{11}	-----	-525.06	123	-583	491	-62	-281	-879	-273	44	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.189	1	Yes	0.800	0.154	0.96	Yes	1.00	**6.23**
		L_{11} - L_{12}	508.12	-----	191	-709	353	-236	-876	306	128	-88	0.658	0.341	1.00	Yes	0.395	0.217	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_{12} - L_{13}	1046.86	-----	-379	-608	68	-150	4	-506	-159	121	0.826	0.167	1.00	Yes	0.528	0.101	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		L_{13} - L_{14}	1262.28	-----	-146	-1307	184	-528	-845	53	147	23	0.742	0.250	1.00	Yes	0.481	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		L_{14} - L_{15}	1567.24	-----	-1470	-654	-504	-170	-102	-757	-179	93	0.766	0.230	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		L_{15} - L_{16}	1703.52	-----	-911	-1269	-305	-372	-209	86	112	-139	0.832	0.168	1.00	Yes	0.534	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		L_{16} - L_{17}	1249.40	-----	-1285	90	-425	54	128	-212	-129	171	0.790	0.207	1.00	Yes	0.513	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		L_{17} - L_{18}	1016.29	-----	-393	-34	-230	31	-102	-287	111	-96	0.885	0.113	1.00	Yes	0.566	0.068	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		L_{18} - L_{19}	511.67	-----	-483	237	-274	229	-132	301	-165	125	0.783	0.207	1.00	Yes	0.530	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_{19} - L_{20}	429.89	-243.53	-375	115	-854	555	365	82	137	31	0.658	0.332	1.00	Yes	0.401	0.221	0.63	Yes	0.442	0.321	0.77	Yes	0.438	0.256	0.70	Yes	1.00	**7.63**
	Structure 2	L_0 - L_1	-----	-494.77	149	-464	519	-1403	147	510	-111	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.258	0.97	Yes	0.707	0.286	1.00	Yes	1.00	**18.01**
		L_1 - L_2	445.74	-----	364	-1217	239	-385	-1259	301	116	53	0.541	0.455	1.00	Yes	0.322	0.284	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		L_2 - L_3	1017.10	-----	-150	-960	-56	-252	-198	-483	-75	153	0.802	0.190	1.00	Yes	0.526	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		L_3 - L_4	1327.22	-----	-213	-1360	-18	-483	-721	404	187	-17	0.780	0.217	1.00	Yes	0.525	0.136	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_4 - L_5	1769.44	-----	-1316	-1157	-428	-369	680	243	-91	162	0.825	0.170	1.00	Yes	0.546	0.103	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		L_5 - L_6	1818.68	-----	-1058	-1880	-211	-456	-776	20	197	-96	0.780	0.215	1.00	Yes	0.524	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_6 - L_7	1827.51	-----	-2130	-1151	-547	-188	-19	-567	-163	221	0.773	0.222	1.00	Yes	0.514	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		L_7 - L_8	1445.42	-----	-1199	-669	-258	467	-385	130	236	-138	0.829	0.164	1.00	Yes	0.544	0.097	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_8 - L_9	1061.31	-----	-1193	207	-70	614	32	-949	-83	184	0.742	0.250	1.00	Yes	0.500	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		L_9 - L_{10}	567.44	-784.40	-1085	159	-120	850	-680	-204	145	-144	0.506	0.255	0.77	Yes	0.295	0.156	0.46	Yes	0.829	0.146	0.98	Yes	0.824	0.174	1.00	Yes	1.00	**5.70**
		L_{10} - L_{11}	-----	-753.40	-604	465	20	569	-69	-304	-80	78	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.073	0.97	Yes	0.885	0.106	1.00	Yes	1.00	**3.46**
		L_{11} - L_{12}	-----	-1031.37	-294	680	-74	1100	157	-219	58	-374	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.122	0.98	Yes	0.846	0.150	1.00	Yes	1.00	**3.63**
		L_{12} - L_{13}	-----	-1526.94	-296	-355	192	-694	-111	112	-335	182	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.073	1	Yes	0.913	0.069	0.99	Yes	1.00	**5.57**
		L_{13} - L_{14}	-----	-1557.78	-624	1735	-865	2451	172	124	349	504	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.174	0.97	Yes	0.784	0.214	1.00	Yes	1.00	**3.50**
		L_{14} - L_{15}	-----	-1553.54	1712	-661	2425	-692	100	142	517	313	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.174	0.97	Yes	0.782	0.212	1.00	Yes	1.00	**3.92**
		L_{15} - L_{16}	-----	-1539.71	-531	-130	-380	-117	107	-136	248	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.929	0.068	1	Yes	0.921	0.053	0.98	Yes	1.00	**4.43**
		L_{16} - L_{17}	-----	-1056.79	670	-134	1125	-50	-209	64	-384	67	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.221	1	Yes	0.770	0.139	0.91	Yes	1.00	**3.46**
		L_{17} - L_{18}	-----	-843.61	361	-651	527	195	-725	139	127	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.099	1	Yes	0.886	0.104	1.00	Yes	1.00	**4.61**
		L_{18} - L_{19}	-----	-642.17	-1	-554	719	35	40	-460	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.117	0.98	Yes	0.856	0.139	1.00	Yes	1.00	**4.66**
		L_{19} - L_{20}	592.71	-528.75	59	-1057	544	168	-779	391	151	-184	0.671	0.323	1.00	Yes	0.397	0.202	0.60	Yes	0.709	0.157	0.87	Yes	0.705	0.204	0.91	Yes	1.00	**6.03**
		L_{20} - L_{21}	950.24	-----	-853	-1041	440	-65	-159	-793	-188	68	0.758	0.237	1.00	Yes	0.497	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_{21} - L_{22}	881.24	-----	-709	-1348	128	-275	-879	19	137	-105	0.703	0.291	1.00	Yes	0.470	0.185	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		L_{22} - L_{23}	905.53	-----	-1329	-769	-339	99	105	-763	-51	211	0.722	0.276	1.00	Yes	0.483	0.175	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_{23} - L_{24}	986.46	-452.03	-1117	-795	-5	574	-443	-21	179	-145	0.787	0.211	1.00	Yes	0.516	0.127	0.65	Yes	0.427	0.150	0.58	Yes	0.424	0.163	0.59	Yes	1.00	**7.51**
		L_{24} - L_{25}	523.21	-604.38	-994	76	236	551	156	-1110	-105	151	0.593	0.361	0.96	Yes	0.351	0.224	0.58	Yes	0.810	0.177	0.99	Yes	0.805	0.192	1.00	Yes	1.00	**6.81**
		L_{25} - L_{26}	-----	-641.20	-268	187	29	727	-34	-75	101	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.104	0.97	Yes	0.855	0.140	1.00	Yes	1.00	**4.60**
		L_{26} - L_{27}	-----	-873.85	-367	438	222	504	-49	16	-48	231	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.075	1	Yes	0.918	0.081	1.00	Yes	1.00	**5.06**
		L_{27} - L_{28}	-----	-1140.57	-237	727	-35	1295	27	-206	280	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.143	0.99	Yes	0.831	0.160	1.00	Yes	1.00	**4.28**
		L_{28} - L_{29}	-----	-1555.26	-308	-501	87	-378	-169	-47	-119	363	-----	-----	-----	-----	-----	-----	-----	-----	0.938	0.057	1	Yes	0.930	0.050	0.99	Yes	1.00	**5.60**
		L_{29} - L_{30}	-----	-1550.90	-720	1934	-780	2460	58	38	409	373	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.165	0.96	Yes	0.780	0.215	1.00	Yes	1.00	**3.89**
		L_{30} - L_{31}	-----	-1556.82	1675	-491	2382	-666	611	483	289	223	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.183	0.98	Yes	0.783	0.208	1.00	Yes	1.00	**2.79**
		L_{31} - L_{32}	-----	-1551.04	-90	-345	-137	-367	392	-402	122	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.936	0.060	1	Yes	0.928	0.037	0.97	Yes	1.00	**5.00**
		L_{32} - L_{33}	-----	-1048.74	572	-332	1009	-70	-547	-28	-325	27	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.122	0.99	Yes	0.860	0.137	1.00	Yes	1.00	**4.18**
		L_{33} - L_{34}	-----	-762.03	429	-398	591	10	79	-79	99	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.066	0.97	Yes	0.895	0.103	1.00	Yes	1.00	**4.04**
		L_{34} - L_{35}	570.47	-767.21	30	-1161	845	-95	239	-923	-217	93	0.509	0.297	0.81	Yes	0.296	0.181	0.48	Yes	0.811	0.129	0.95	Yes	0.806	0.186	1.00	Yes	1.00	**6.91**
		L_{35} - L_{36}	973.02	-----	24	-1258	601	-131	-1539	179	168	-132	0.681	0.315	1.00	Yes	0.458	0.202	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		L_{36} - L_{37}	1375.31	-----	-845	-1466	353	-224	84	-599	-211	146	0.789	0.211	1.00	Yes	0.518	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_{37} - L_{38}	1786.00	-----	-1180	-2328	-306	-625	-560	94	113	-179	0.756	0.239	1.00	Yes	0.502	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		L_{38} - L_{39}	1815.24	-----	-2038	-1092	-586	-216	150	-553	-104	172	0.779	0.215	1.00	Yes	0.523	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_{39} - L_{40}	1772.20	-----	-1565	-1286	-426	-314	-371	215	129	-120	0.826	0.173	1.00	Yes	0.547	0.103	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_{40} - L_{41}	1335.14	-----	-1569	-79	-453	26	163	-317	-40	278	0.784	0.209	1.00	Yes	0.528	0.130	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		L_{41} - L_{42}	981.94	-----	-1145	86	-259	51	-489	8	273	91	0.774	0.217	1.00	Yes	0.507	0.131	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.23**
		L_{42} - L_{43}	543.44	-----	-1280	576	-260	210	480	316	149	358	0.660	0.339	1.00	Yes	0.393	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.87**
		L_{43} - L_{44}	-----	-462.46	-885	229	-500	157	-253	-74	1226	358	-----	-----	-----	-----	-----	-----	-----	-----	0.665	0.328	1	Yes	0.661	0.180	0.85	Yes	1.00	**23.21**
	Structure 3	L_0 - L_1	-----	-473.43	98	-298	304	-486	32	147	15	68	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.099	0.96	Yes	0.852	0.146	1.00	Yes	1.00	**6.51**
		L_1 - L_2	522.21	-----	217	-456	427	-502	151	-210	60	168	0.799	0.194	1.00	Yes	0.541	0.123	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		L_2 - L_3	1012.21	-----	-177	-362	48	-224	-310	145	-16	161	0.881	0.110	1.00	Yes	0.564	0.067	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.17**
		L_3 - L_4	1169.42	-----	-90	-1189	46	-427	-945	450	140	59	0.739	0.259	1.00	Yes	0.480	0.161	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_4 - L_5	1674.98	-----	-1145	-1071	-372	-248	432	-549	-37	223	0.818	0.177	1.00	Yes	0.525	0.105	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_5 - L_6	1556.46	-----	-566	-1611	-142	-456	-573	223	246	-35	0.760	0.234	1.00	Yes	0.494	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_6 - L_7	1272.14	-----	-1380	-36	-500	237	0	-652	-55	252	0.748	0.244	1.00	Yes	0.485	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		L_7 - L_8	1044.53	-----	-623	-295	-104	159	-517	-109	137	-173	0.824	0.171	1.00	Yes	0.527	0.104	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_8 - L_9	535.17	-----	-733	203	-175	419	65	-628	-111	161	0.693	0.304	1.00	Yes	0.416	0.195	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		L_9 - L_{10}	-----	-564.35	-304	219	-63	526	-97	-339	144	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.090	0.96	Yes	0.860	0.139	1.00	Yes	1.00	**5.28**
		L_{10} - L_{11}	-----	-1174.38	-304	315	20	20	-292	78	-323	146	-----	-----	-----	-----	-----	-----	-----	-----	0.956	0.029	0.99	Yes	0.945	0.050	1.00	Yes	1.00	**6.68**
		L_{11} - L_{12}	-----	-1272.48	-48	719	-66	1279	265	66	309	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.182	1	Yes	0.806	0.169	0.98	Yes	1.00	**3.98**
		L_{12} - L_{13}	-----	-1163.98	716	-15	1179	-26	19	261	-231	64	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.253	1	Yes	0.737	0.156	0.90	Yes	1.00	**3.13**
		L_{13} - L_{14}	-----	-1157.67	195	-113	72	156	341	3	332	-320	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.051	1	Yes	0.932	0.031	0.97	Yes	1.00	**4.69**
		L_{14} - L_{15}	-----	-730.28	228	-303	573	111	-122	-584	-259	84	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.140	1	Yes	0.843	0.127	0.97	Yes	1.00	**3.90**
		L_{15} - L_{16}	-----	-531.75	136	-611	470	124	-1107	233	259	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1	Yes	0.810	0.162	0.98	Yes	1.00	**4.16**
		L_{16} - L_{17}	674.90	-----	-515	-609	301	-58	67	-422	-173	189	0.776	0.215	1.00	Yes	0.461	0.136	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		L_{17} - L_{18}	670.13	-----	-690	-586	32	-101	-374	117	110	-112	0.771	0.227	1.00	Yes	0.446	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_{18} - L_{19}	459.88	-----	-755	76	-16	-24	284	268	-105	204	0.704	0.288	1.00	Yes	0.429	0.192	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		L_{19} - L_{20}	324.93	-159.13	-687	455	-106	-89	968	263	1363	370	0.497	0.499	1.00	Yes	0.293	0.296	0.59	Yes	0.289	0.429	0.72	Yes	0.287	0.206	0.50	Yes	1.00	**36.09**

Axial AB Operating

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-306.07	-12	50	-76	136	202	65	-796	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.307	1	Yes	0.648	0.174	0.83	Yes	1.00	**1.62**
		$U_1 - L_1$			-----	-266.49	22	-16	-139	152	584	216	-1322	-463	-----	-----	-----	-----	-----	-----	-----	-----	0.582	0.410	1	Yes	0.564	0.194	0.76	Yes	1.00	**3.41**
		$U_2 - L_2$			87.53	-159.69	81	-89	-41	76	792	245	-2407	-732	0.157	0.810	0.97	Yes	0.087	0.446	0.54	Yes	0.349	0.648	1	Yes	0.338	0.114	0.46	Yes	1.00	**4.48**
		$U_3 - L_3$			148.80	-----	124	-142	31	-11	646	189	-1885	-453	0.268	0.727	1.00	Yes	0.147	0.400	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		$U_4 - L_4$			-----	-207.59	82	-83	107	-109	1025	471	-1804	-406	-----	-----	-----	-----	-----	-----	-----	-----	0.456	0.537	1	Yes	0.439	0.139	0.58	Yes	1.00	**4.97**
		$U_5 - L_5$			-----	-355.28	80	-86	174	-198	1153	624	-11	172	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.351	1	Yes	0.613	0.201	0.82	Yes	1.00	**3.42**
		$U_6 - L_6$			-----	-401.07	75	-64	180	-194	1641	769	77	180	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.388	1	Yes	0.575	0.170	0.75	Yes	1.00	**3.23**
		$U_7 - L_7$			-----	-387.08	99	-112	261	-280	1196	294	472	183	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.347	1	Yes	0.597	0.275	0.88	Yes	1.00	**3.11**
		$U_8 - L_8$			-----	-1143.50	-98	112	-158	186	971	192	-1635	-444	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.168	1	Yes	0.793	0.035	0.83	Yes	1.00	**3.55**
		$U_9 - L_9$			-----	-629.96	-230	261	-372	418	583	226	-1016	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.239	1	Yes	0.712	0.233	0.95	Yes	1.00	**2.40**
		$U_{10} - L_{10}$			-----	-669.22	-159	158	-275	311	624	302	-1476	-433	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.303	1	Yes	0.660	0.161	0.83	Yes	1.00	**3.12**
		$U_{11} - L_{11}$			-----	-628.37	-166	218	-327	441	635	368	-1054	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.242	1	Yes	0.731	0.205	0.94	Yes	1.00	**3.84**
		$U_{12} - L_{12}$			-----	-446.47	-137	138	-230	245	672	369	-1355	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.645	0.345	1	Yes	0.613	0.210	0.83	Yes	1.00	**3.08**
		$U_{13} - L_{13}$			-----	-318.69	-77	96	-145	176	339	191	-996	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.346	1	Yes	0.611	0.201	0.82	Yes	1.00	**3.02**
		$U_{14} - L_{14}$			-----	-193.49	-51	59	-44	50	571	81	-2123	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.432	0.566	1	Yes	0.409	0.076	0.49	Yes	1.00	**4.27**
		$U_{15} - L_{15}$			-----	-275.59	-21	14	205	-225	337	-82	-1144	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.375	1	Yes	0.583	0.287	0.88	Yes	1.00	**5.94**
		$U_{16} - L_{16}$			-----	-320.54	46	-51	239	-248	473	107	-557	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.241	0.97	Yes	0.678	0.317	1.00	Yes	1.00	**4.45**
		$U_{17} - L_{17}$			-----	-416.98	80	-94	197	-218	505	201	-163	33	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.211	1	Yes	0.719	0.221	0.95	Yes	1.00	**3.02**
		$U_{18} - L_{18}$			-----	-531.83	176	-182	433	-446	682	173	-69	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.183	0.97	Yes	0.740	0.253	1.00	Yes	1.00	**4.01**
		$U_{19} - L_{19}$			-----	-653.54	181	-195	493	-514	587	113	-175	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.158	0.98	Yes	0.761	0.239	1.00	Yes	1.00	**5.04**
		$U_{20} - L_{20}$			-----	-609.56	236	-284	447	-538	453	59	206	27	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.187	1	Yes	0.709	0.250	0.96	Yes	1.00	**4.02**
	Structure 2	$U_0 - L_0$			-----	-621.98	-160	266	-308	457	41	7	-1026	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.247	1	Yes	0.667	0.194	0.87	Yes	1.00	**2.05**
		$U_1 - L_1$			-----	-666.70	-214	221	-466	483	629	164	-1301	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1	Yes	0.714	0.205	0.92	Yes	1.00	**3.04**
		$U_2 - L_2$			-----	-547.51	-160	175	-362	396	624	290	-1139	43	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.261	1	Yes	0.698	0.202	0.91	Yes	1.00	**2.84**
		$U_3 - L_3$			-----	-455.65	-74	85	-198	218	548	265	-585	138	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.220	1	Yes	0.715	0.199	0.92	Yes	1.00	**2.79**
		$U_4 - L_4$			-----	-278.02	-26	37	-138	153	553	238	-961	5	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.363	1	Yes	0.588	0.196	0.79	Yes	1.00	**2.89**
		$U_5 - L_5$			-----	-208.66	50	-42	-81	108	548	184	-1650	-84	-----	-----	-----	-----	-----	-----	-----	-----	0.471	0.528	1	Yes	0.442	0.139	0.59	Yes	1.00	**4.31**
		$U_6 - L_6$			233.89	-----	128	-132	-30	39	-3	-65	-1391	-102	0.421	0.572	1.00	Yes	0.231	0.315	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_7 - L_7$			-----	-209.97	76	-88	78	-90	578	87	-1872	27	-----	-----	-----	-----	-----	-----	-----	-----	0.474	0.519	1	Yes	0.444	0.115	0.56	Yes	1.00	**4.96**
		$U_8 - L_8$			-----	-472.95	155	-174	331	-354	539	56	-484	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.173	0.86	Yes	0.681	0.310	1.00	Yes	1.00	**3.54**
		$U_9 - L_9$			-----	-691.16	278	-278	576	-589	1169	634	-548	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.221	1	Yes	0.741	0.250	1.00	Yes	1.00	**4.49**
		$U_{10} - L_{10}$			-----	-750.87	234	-234	506	-530	1190	708	-224	166	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.258	1	Yes	0.702	0.234	0.94	Yes	1.00	**4.42**
		$U_{11} - L_{11}$			-----	-730.65	227	-220	453	-457	1193	676	398	474	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.683	0.202	0.89	Yes	1.00	**3.54**
		$U_{12} - L_{12}$			-----	-694.33	194	-177	397	-390	1679	642	933	486	-----	-----	-----	-----	-----	-----	-----	-----	0.666	0.327	1	Yes	0.602	0.170	0.78	Yes	1.00	**3.17**
		$U_{13} - L_{13}$			-----	-607.69	224	-222	480	-468	1281	293	411	179	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.313	1	Yes	0.586	0.230	0.82	Yes	1.00	**3.46**
		$U_{14} - L_{14}$			-----	-1083.63	-58	49	-219	199	967	-109	-2256	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.206	1	Yes	0.719	0.039	0.76	Yes	1.00	**4.74**
		$U_{15} - L_{15}$			-----	-643.92	-272	275	-544	529	648	64	-1042	13	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.275	1	Yes	0.621	0.260	0.89	Yes	1.00	**3.63**
		$U_{16} - L_{16}$			-----	-654.82	-192	180	-428	425	673	192	-1344	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.239	1	Yes	0.702	0.182	0.89	Yes	1.00	**3.13**
		$U_{17} - L_{17}$			-----	-598.86	-200	200	-448	463	595	195	-1302	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.259	1	Yes	0.697	0.215	0.92	Yes	1.00	**3.28**
		$U_{18} - L_{18}$			-----	-562.01	-159	165	-423	454	622	215	-1099	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.241	1	Yes	0.716	0.232	0.95	Yes	1.00	**3.48**
		$U_{19} - L_{19}$			-----	-459.13	-89	91	-241	249	520	196	-1215	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.301	1	Yes	0.686	0.240	0.93	Yes	1.00	**3.23**
		$U_{20} - L_{20}$			-----	-313.65	-46	51	-143	158	522	186	-1087	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.349	1	Yes	0.601	0.180	0.79	Yes	1.00	**2.99**
	Structure 3	$U_0 - L_0$			-----	-270.80	5	5	-156	176	73	-63	-1113	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.385	1	Yes	0.573	0.225	0.80	Yes	1.00	**4.43**
		$U_1 - L_1$			-----	-209.37	-5	7	-27	30	631	159	-1891	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.471	0.521	1	Yes	0.443	0.039	0.49	Yes	1.00	**4.63**
		$U_2 - L_2$			-----	-321.96	8	-11	224	-242	523	165	-606	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.681	0.310	1.00	Yes	1.00	**4.47**
		$U_3 - L_3$			-----	-371.26	49	-54	222	-232	583	203	-215	19	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.711	0.264	0.98	Yes	1.00	**3.59**
		$U_4 - L_4$			-----	-475.41	96	-98	298	-297	588	223	-79	120	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.183	0.9	Yes	0.710	0.287	1.00	Yes	1.00	**3.54**
		$U_5 - L_5$			-----	-571.70	166	-174	489	-515	707	300	-280	170	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.189	0.96	Yes	0.728	0.263	1.00	Yes	1.00	**3.89**
		$U_6 - L_6$			-----	-637.02	197	-201	546	-555	768	312	-50	321	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.193	0.98	Yes	0.741	0.257	1.00	Yes	1.00	**4.41**
		$U_7 - L_7$			-----	-592.74	161	-134	441	-426	1843	576	733	368	-----	-----	-----	-----	-----	-----	-----	-----	0.685	0.310	1	Yes	0.635	0.187	0.83	Yes	1.00	**3.69**
		$U_8 - L_8$			-----	-591.98	151	-154	547	-531	1443	194	298	149	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.335	1	Yes	0.571	0.262	0.84	Yes	1.00	**5.04**
		$U_9 - L_9$			-----	-1125.51	-204	177	-276	233	864	-354	-1973	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.172	1	Yes	0.746	0.049	0.80	Yes	1.00	**4.83**
		$U_{10} - L_{10}$			-----	-665.64	-309	302	-486	472	500	95	-892	19	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.254	1	Yes	0.642	0.232	0.88	Yes	1.00	**2.50**
		$U_{11} - L_{11}$			-----	-776.01	-226	208	-392	398	468	169	-1178	-88	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.253	1	Yes	0.673	0.171	0.85	Yes	1.00	**2.94**
		$U_{12} - L_{12}$			-----	-763.81	-247	236	-439	445	449	210	-1014	31	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.227	1	Yes	0.714	0.196	0.92	Yes	1.00	**3.35**
		$U_{13} - L_{13}$			-----	-691.24	-238	250	-404	434	552	331	-1604	-172	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.313	1	Yes	0.646	0.192	0.84	Yes	1.00	**3.24**
		$U_{14} - L_{14}$			-----	-612.51	-256	270	-439	476	631	374	-1841	-337	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.312	1	Yes	0.656	0.202	0.86	Yes	1.00	**3.52**
		$U_{15} - L_{15}$			-----	-470.99	-137	159	-283	314	262	172	-1221	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.313	1	Yes	0.678	0.275	0.96	Yes	1.00	**3.84**
		$U_{16} - L_{16}$			-----	-198.01	-79	93	-127	149	525	117	-1829	39	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.544	1	Yes	0.419	0.191	0.62	Yes	1.00	**4.25**
		$U_{17} - L_{17}$			173.25	-----	-172	192	114	-133	451	163	-1524	-561	0.312	0.687	1.00	Yes	0.171	0.378	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.39**
		$U_{18} - L_{18}$			108.92	-275.13	-115	124	220	-259	464	147	-1126	-512	0.196	0.658	0.86	Yes	0.108	0.362	0.47	Yes	0.601	0.397	1	Yes	0.582	0.332	0.92	Yes	1.00	**7.43**
		$U_{19} - L_{19}$			-----	-329.60	-38	22	228	-236	418	216	131	86	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.209	0.93	Yes	0.697	0.302	1.00	Yes	1.00	**5.58**
		$U_{20} - L_{20}$			-----	-326.92	76	-86	169	-213	602	193	221	71	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.262	1	Yes	0.692	0.272	0.97	Yes	1.00	**3.11**

Axial AB Operating

Operating Loads - 5C1

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	$U_0 - L_1$			607.80	-----	-35	29	2	-14	-470	-608	113	188	0.797	0.195	1.00	Yes	0.481	0.107	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		$U_1 - L_2$			379.86	-161.95	-92	-5	25	-20	-677	-615	483	282	0.683	0.314	1.00	Yes	0.376	0.173	0.55	Yes	0.371	0.279	0.66	Yes	0.343	0.118	0.47	Yes	1.00	**5.79**
		$U_2 - L_3$			-----	-318.15	-76	-29	67	-35	66	-628	628	348	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.260	1	Yes	0.673	0.097	0.78	Yes	1.00	**9.21**
		$U_3 - L_4$			-----	-323.42	-13	-46	11	-66	56	-280	-724	-205	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.253	1	Yes	0.684	0.084	0.77	Yes	1.00	**4.97**
		$U_4 - L_4$			538.30	-----	-84	47	-33	37	-156	-35	536	226	0.789	0.210	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_5 - L_5$			674.77	-----	-192	219	-13	107	-268	303	-401	85	0.798	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		$U_6 - L_6$			599.77	-----	-277	239	-28	82	-69	279	-708	-51	0.709	0.286	1.00	Yes	0.390	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		$U_7 - L_7$			647.27	-----	-92	311	34	76	-144	96	-287	-223	0.765	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		$U_8 - L_8$			957.86	-----	-88	357	10	186	-94	-559	565	269	0.766	0.231	1.00	Yes	0.474	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_9 - L_{10}$			954.02	-----	-297	234	-115	127	-568	-762	558	236	0.763	0.229	1.00	Yes	0.472	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{10} - L_{11}$			926.53	-----	-232	173	-83	96	-385	-766	180	-16	0.783	0.208	1.00	Yes	0.484	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_{11} - L_{12}$			768.18	-----	-245	77	-95	48	-470	-808	167	-25	0.760	0.234	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{12} - L_{13}$			550.83	-----	-195	117	-102	51	-398	-765	-553	-268	0.671	0.320	1.00	Yes	0.422	0.183	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{13} - L_{14}$			384.68	-----	-87	19	-34	-24	-379	-560	-676	-306	0.692	0.307	1.00	Yes	0.381	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		$U_{15} - L_{14}$			267.98	-191.22	-79	-12	-20	-67	-260	-206	1262	-306	0.482	0.466	0.95	Yes	0.265	0.256	0.53	Yes	0.448	0.543	1	Yes	0.405	0.101	0.51	Yes	1.00	**6.77**
		$U_{16} - L_{15}$			406.69	-----	-145	92	-35	-6	-180	82	259	-183	0.731	0.261	1.00	Yes	0.402	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		$U_{17} - L_{16}$			528.23	-----	-144	98	-47	24	-335	-59	-303	-103	0.775	0.224	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{18} - L_{17}$			621.95	-----	-333	254	-132	90	-343	37	-400	-110	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{19} - L_{18}$			692.38	-----	-336	253	-134	97	-356	-91	-457	-203	0.750	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{20} - L_{19}$			697.79	-----	-382	325	-176	142	-172	-3	-260	-141	0.756	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
	Structure 2	$U_0 - L_1$			768.02	-----	-248	306	-99	126	-609	-609	-150	9	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_1 - L_2$			710.98	-----	-384	282	-161	115	-538	-737	147	-27	0.703	0.288	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_2 - L_3$			599.31	-----	-315	250	-112	83	-307	-622	139	-16	0.709	0.291	1.00	Yes	0.390	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_3 - L_4$			532.78	-----	-170	110	-49	23	-314	-617	180	17	0.710	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_4 - L_5$			377.27	-----	-131	86	11	-24	-293	-517	269	57	0.679	0.317	1.00	Yes	0.373	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		$U_5 - L_6$			268.99	-214.83	-85	19	42	-99	-300	-626	-1325	-198	0.484	0.511	1.00	Yes	0.266	0.281	0.55	Yes	0.507	0.239	0.75	Yes	0.455	0.127	0.59	Yes	1.00	**6.81**
		$U_6 - L_7$			-----	-380.88	-6	-42	45	-101	85	-195	-516	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.183	1	Yes	0.730	0.115	0.85	Yes	1.00	**3.68**
		$U_8 - L_7$			595.97	-----	-193	142	-90	48	-189	134	322	-198	0.760	0.238	1.00	Yes	0.478	0.134	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_8 - L_8$			730.45	-----	-336	250	-172	121	-168	45	-142	-56	0.791	0.200	1.00	Yes	0.435	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{10} - L_9$			829.08	-----	-310	253	-128	142	-120	198	-179	119	0.820	0.173	1.00	Yes	0.451	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{11} - L_{10}$			876.17	-----	-338	305	-135	165	-201	225	-403	140	0.798	0.199	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_{12} - L_{11}$			847.37	-----	-331	346	-131	175	-525	216	-560	59	0.772	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		$U_{13} - L_{12}$			735.87	-----	-412	383	-156	160	-492	76	-522	-4	0.728	0.269	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{14} - L_{13}$			766.04	-----	-263	443	-9	113	-17	141	-228	-234	0.758	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{14} - L_{15}$			595.74	-----	-191	343	-15	166	106	-286	541	246	0.704	0.292	1.00	Yes	0.387	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_{15} - L_{16}$			587.40	-----	-346	317	-170	167	197	-298	599	185	0.694	0.304	1.00	Yes	0.382	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**
		$U_{16} - L_{17}$			679.83	-----	-330	343	-126	152	-76	-494	374	110	0.736	0.257	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{17} - L_{18}$			648.03	-----	-285	282	-108	123	-36	-399	361	92	0.766	0.234	1.00	Yes	0.421	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_{18} - L_{19}$			620.42	-----	-273	244	-79	93	-63	-610	294	81	0.733	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{19} - L_{20}$			545.20	-----	-187	143	-38	43	-417	-661	301	89	0.695	0.302	1.00	Yes	0.382	0.173	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{20} - L_{21}$			361.64	-----	-111	88	-33	5	-50	-418	-700	-88	0.650	0.345	1.00	Yes	0.358	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{21} - L_{22}$			320.10	-----	-103	20	8	-74	-159	-737	-979	-121	0.576	0.415	1.00	Yes	0.317	0.228	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		$U_{23} - L_{22}$			418.95	-----	-120	49	14	-19	8	90	-293	-105	0.753	0.239	1.00	Yes	0.414	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		$U_{24} - L_{23}$			426.48	-----	-123	106	-17	16	-172	134	-256	-64	0.767	0.232	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{25} - L_{24}$			600.50	-----	-191	176	-39	47	-139	114	-302	-83	0.766	0.233	1.00	Yes	0.421	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{26} - L_{25}$			664.98	-----	-280	276	-77	95	-56	211	-255	-58	0.786	0.205	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{27} - L_{26}$			649.45	-----	-281	292	-105	124	-273	236	-342	-9	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		$U_{28} - L_{27}$			672.46	-----	-296	341	-93	147	-484	185	-557	45	0.728	0.266	1.00	Yes	0.401	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{29} - L_{28}$			592.61	-----	-343	334	-88	103	-352	94	-575	-51	0.701	0.299	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		$U_{30} - L_{29}$			622.47	-----	-189	356	39	62	-129	77	-261	-302	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{30} - L_{31}$			730.18	-----	-255	426	-54	224	24	-488	500	219	0.722	0.273	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_{31} - L_{32}$			734.79	-----	-428	374	-231	216	-144	-413	462	125	0.727	0.268	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.83**
		$U_{32} - L_{33}$			847.88	-----	-341	339	-158	192	-193	-578	289	67	0.772	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_{33} - L_{34}$			834.90	-----	-320	267	-144	164	-400	-749	246	46	0.761	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{34} - L_{35}$			754.81	-----	-293	218	-154	122	-470	-728	6	-140	0.747	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		$U_{35} - L_{36}$			679.12	-----	-313	218	-167	113	-347	-581	21	-99	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_{36} - L_{37}$			525.25	-----	-184	119	-82	27	-146	-800	-656	-243	0.670	0.328	1.00	Yes	0.422	0.189	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		$U_{38} - L_{37}$			-----	-315.74	-19	-31	14	-75	-332	-171	700	-335	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.315	1	Yes	0.605	0.086	0.70	Yes	1.00	**3.62**
		$U_{39} - L_{38}$			406.00	-180.97	-124	53	50	-59	-108	95	-376	-89	0.730	0.267	1.00	Yes	0.402	0.147	0.55	Yes	0.431	0.229	0.66	Yes	0.383	0.158	0.55	Yes	1.00	**7.70**
		$U_{40} - L_{39}$			396.37	-----	-131	90	-4	-11	-277	106	-382	-103	0.713	0.278	1.00	Yes	0.392	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		$U_{41} - L_{40}$			561.20	-----	-176	126	-54	28	-292	-47	-416	-181	0.748	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{42} - L_{41}$			627.64	-----	-323	264	-118	88	-402	-19	-405	-173	0.742	0.256	1.00	Yes	0.408	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{43} - L_{42}$			770.03	-----	-378	309	-133	100	-373	-57	-375	-195	0.762	0.232	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{44} - L_{43}$			798.60	-----	-371	370	-174	154	-108	60	-211	-87	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
	Structure 3	$U_0 - L_1$			707.37	-----	-226	256	-78	102	-539	-577	-147	6	0.766	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_1 - L_2$			654.36	-----	-342	241	-159	109	-398	-705	160	-43	0.709	0.291	1.00	Yes	0.390	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**
		$U_2 - L_3$			570.71	-----	-311	229	-124	85	-557	-794	131	-28	0.675	0.320	1.00	Yes	0.371	0.176	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		$U_3 - L_4$			494.51	-----	-138	87	-40	18	-339	-562	163	-20	0.725	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_4 - L_5$			323.66	-----	-120	66	-36	-12	-264	-704	-894	-185	0.582	0.413	1.00	Yes	0.320	0.227	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_5 - L_6$			-----	-299.73	-65	-22	20	-127	-221	-481	-1638	-441	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.297	1	Yes	0.634	0.163	0.80	Yes	1.00	**8.05**
		$U_7 - L_6$			421.88	-----	-88	32	-44	-2	-205	-81	433	-161	0.759	0.237	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_8 - L_7$			573.68	-----	-188	145	-111	63	-181	65	664	-85	0.699	0.294	1.00	Yes	0.440	0.168	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		$U_8 - L_8$			828.28	-----	-257	121	-105	53	-78	135	370	154	0.819	0.175	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{10} - L_9$			980.87	-----	-231	200	-60	102	-253	320	-437	53	0.829	0.164	1.00	Yes	0.513	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		$U_{11} - L_{10}$			986.38	-----	-285	280	-65	100	-258	196	-648	-190	0.789	0.210	1.00	Yes	0.488	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		$U_{12} - L_{11}$			981.30	-----	-85	375	27	117	86	364	-377	-193	0.784	0.215	1.00	Yes	0.486	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		$U_{13} - L_{12}$			606.54	-----	-87	290	10	158	-117	-368	627	335	0.717	0.279	1.00	Yes	0.394	0.153	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_{13} - L_{14}$			594.52	-----	-274	222	-96	128	-464	-389	736	311	0.703	0.289	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{14} - L_{15}$			629.46	-----	-199	176	-53	98	-355	-760	317	93	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		$U_{15} - L_{16}$			493.40	-----	-99	3	-23	27	-728	-746	238	31	0.724	0.274	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		$U_{17} - L_{16}$			-----	-303.52	-19	-41	-13	-46	-350	-326	764	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.299	1	Yes	0.642	0.059	0.71	Yes	1.00	**5.11**
		$U_{18} - L_{17}$			-----	-309.86	-115	0	59	-39	-555	-174	-189	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.285	1	Yes	0.656	0.147	0.81	Yes	1.00	**9.95**
		$U_{19} - L_{18}$			431.72	-----	-83	13	22	-22	-377	-267	-202	-115	0.776	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{20} - L_{19}$			653.97	-----	-104	71	-26	1	-64	21	-61	14	0.858	0.138	1.00	Yes	0.518	0.076	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.02**

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: 5C1 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

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 (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_1	-71.64	-75.07	-33.36			0.90	1.24	-37.14	-83.58	0.00	0.00	Vehicle	Vehicle	-----	-201.77	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	-----	-----	5.91	5.91
	U_1 - U_2	-90.83	-2.56	-70.87			0.90	1.24	-2.85	-78.90	0.00	0.00	Vehicle	Vehicle	-----	-220.65	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	-----	-----	6.01	6.01
	U_2 - U_3	-61.13	57.35	-128.34			0.90	1.24	63.84	-142.88	0.00	0.00	Vehicle	Vehicle	3.52	-265.22	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	11.47	11.47	3.53	3.53
	U_3 - U_4	10.71	76.41	-111.88			0.90	1.24	85.06	-124.55	0.00	0.00	Vehicle	Vehicle	124.50	-148.00	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	7.76	7.76	4.62	4.62
	U_4 - U_5	12.86	76.81	-127.25			0.90	1.24	85.52	-141.66	0.00	0.00	Vehicle	Vehicle	127.89	-167.44	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	7.70	7.70	4.08	4.08
	U_5 - U_6	121.37	88.82	-96.69			0.90	1.24	98.89	-107.64	0.00	0.00	Vehicle	Vehicle	286.34	-----	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	-----	-----	5.56	5.56	-----	-----
	U_1 - U_7	249.49	98.21	-50.22			0.90	1.24	109.33	-55.91	0.00	0.00	Vehicle	Vehicle	466.47	-----	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	-----	-----	5.08	5.08	-----	-----
	U_2 - U_8	376.92	95.34	11.48			0.90	1.24	106.14	12.78	0.00	0.00	Vehicle	Vehicle	627.98	-----	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	-----	-----	6.91	6.91	-----	-----
	U_3 - U_9	319.74	30.91	6.95			0.90	1.20	33.32	7.49	0.00	0.00	Vehicle	Vehicle	458.98	-----	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	-----	-----	18.58	18.58	-----	-----
	U_9 - U_{10}	128.77	-19.02	-1.26			0.90	1.20	-1.36	-20.51	0.00	0.00	Vehicle	Vehicle	165.63	-----	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	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U_{10} - U_{11}	-70.90	-81.08	-40.63			0.90	1.20	-43.81	-87.42	0.00	0.00	Vehicle	Vehicle	-----	-205.82	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	-----	-----	6.02	6.02
	U_{11} - U_{12}	-252.96	68.52	-79.94			0.90	1.20	73.87	-86.19	0.00	0.00	Vehicle	Vehicle	-----	-440.90	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	-----	-----	6.49	6.49
	U_{12} - U_{13}	-391.95	59.18	-145.43			0.90	1.20	63.81	-156.80	0.00	0.00	Vehicle	Vehicle	-----	-713.37	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	-----	-----	4.76	4.76
	U_{13} - U_{14}	-482.99	49.74	-168.61			0.90	1.20	53.63	-181.80	0.00	0.00	Vehicle	Vehicle	-----	-864.22	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	-----	-----	4.65	4.65
	U_{14} - U_{15}	-454.44	49.56	-200.68			0.90	1.20	53.43	-216.35	0.00	0.00	Vehicle	Vehicle	-----	-911.03	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	-----	-----	3.90	3.90
	U_{15} - U_{16}	-502.02	38.09	-222.56			0.90	1.20	41.07	-239.96	0.00	0.00	Vehicle	Vehicle	-----	-964.58	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	-----	-----	3.44	3.44
	U_{16} - U_{17}	-467.99	18.48	-208.34			0.90	1.20	19.92	-224.64	0.00	0.00	Vehicle	Vehicle	-----	-900.41	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	-----	-----	3.83	3.83
	U_{17} - U_{18}	-368.86	17.10	-101.30			0.90	1.20	18.44	-109.22	0.00	0.00	Vehicle	Vehicle	-----	-621.50	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	-----	-----	5.51	5.51
	U_{18} - U_{19}	-251.56	8.48	-107.23			0.90	1.20	9.14	-115.61	0.00	0.00	Vehicle	Vehicle	-----	-477.32	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	-----	-----	3.68	3.68
	U_{19} - U_{20}	-117.89	1.71	-46.67			0.90	1.20	1.84	-50.32	0.00	0.00	Vehicle	Vehicle	-----	-218.67	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	-----	-----	11.12	11.12
Structure 2	U_1 - U_1	-118.23	-54.12	-33.75			0.90	1.18	-35.93	-57.62	0.00	0.00	Vehicle	Vehicle	-----	-228.60	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	-----	-----	9.18	9.18
	U_1 - U_2	-239.56	-101.31	-55.43			0.90	1.18	-59.01	-107.86	0.00	0.00	Vehicle	Vehicle	-----	-451.65	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	-----	-----	5.12	5.12
	U_2 - U_3	-350.44	-146.71	-92.91			0.90	1.18	-98.92	-156.20	0.00	0.00	Vehicle	Vehicle	-----	-658.64	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	-----	-----	4.65	4.65
	U_3 - U_4	-449.15	27.88	-199.01			0.90	1.18	29.69	-211.89	0.00	0.00	Vehicle	Vehicle	-----	-859.35	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	-----	-----	4.21	4.21
	U_4 - U_5	-483.26	34.00	-197.50			0.90	1.18	36.29	-185.79	0.00	0.00	Vehicle	Vehicle	-----	-869.76	5.50	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	-----	-----	5.40	5.40
	U_5 - U_6	-485.85	75.04	-195.46			0.90	1.18	79.89	-208.10	0.00	0.00	Vehicle	Vehicle	-----	-902.14	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	-----	-----	4.81	4.81
	U_6 - U_7	-428.85	88.80	-217.69			0.90	1.18	94.55	-231.77	0.00	0.00	Vehicle	Vehicle	-----	-858.81	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	-----	-----	3.94	3.94
	U_7 - U_8	-428.37	89.01	-238.67			0.90	1.18	94.77	-254.12	0.00	0.00	Vehicle	Vehicle	-----	-887.23	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	-----	-----	3.59	3.59
	U_8 - U_9	-335.42	101.96	-219.28			0.90	1.18	108.56	-233.47	0.00	0.00	Vehicle	Vehicle	-----	-739.55	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	-----	-----	3.39	3.39
	U_9 - U_{10}	-200.29	110.17	-175.39			0.90	1.18	117.30	-186.74	0.00	0.00	Vehicle	Vehicle	-----	-503.13	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	-----	-----	3.67	3.67
	U_{10} - U_{11}	-52.14	116.81	-131.62			0.90	1.18	124.37	-140.13	0.00	0.00	Vehicle	Vehicle	93.89	-249.95	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	7.74	7.74	5.12	5.12
	U_{11} - U_{12}	107.02	116.39	-77.14			0.90	1.18	123.92	-82.14	0.00	0.00	Vehicle	Vehicle	300.21	-----	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	-----	-----	6.49	6.49	-----	-----
	U_{12} - U_{13}	259.33	115.13	-24.05			0.90	1.18	122.57	-25.81	0.00	0.00	Vehicle	Vehicle	496.47	-----	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	-----	-----	7.18	7.18	-----	-----
	U_{13} - U_{14}	391.98	102.10	17.67			0.90	1.18	108.70	18.81	0.00	0.00	Vehicle	Vehicle	650.88	-----	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	-----	-----	10.79	10.79	-----	-----
	U_{14} - U_{15}	439.60	24.76	-19.35			0.90	1.17	26.05	-20.36	0.00	0.00	Vehicle	Vehicle	605.09	-----	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	-----	-----	43.18	43.18	-----	-----
	U_{15} - U_{16}	369.66	55.52	5.03			0.90	1.17	58.42	5.29	0.00	0.00	Vehicle	Vehicle	556.51	-----	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	-----	-----	15.45	15.45	-----	-----
	U_{16} - U_{17}	271.39	-5.29	-24.28			0.90	1.17	-5.56	-25.54	0.00	0.00	Vehicle	Vehicle	345.58	-----	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	-36.50	-53.45			0.90	1.17	-38.40	-56.23	0.00	0.00	Vehicle	Vehicle	173.35	-----	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	91.33	-80.25			0.90	1.17	96.08	-84.43	0.00	0.00	Vehicle	Vehicle	219.52	-15.15	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	7.22	7.22	8.53	8.53
	U_{19} - U_{20}	-8.11	81.42	-124.98			0.90	1.17	85.66	-131.49	0.00	0.00	Vehicle	Vehicle	100.82	-181.48	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	9.67	9.67	5.21	5.21
	U_{20} - U_{21}	-60.13	68.83	-142.57			0.90	1.17	72.42	-149.99	0.00	0.00	Vehicle	Vehicle	15.98	-273.16	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	14.52	14.52	5.18	5.18
	U_{21} - U_{22}	-82.18	54.55	-174.47			0.90	1.17	57.39	-183.56	0.00	0.00	Vehicle	Vehicle	-----	-345.47	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	-----	-----	4.11	4.11
	U_{22} - U_{23}	-82.40	54.56	-187.92			0.90	1.17	57.40	-197.71	0.00	0.00	Vehicle	Vehicle	-----	-364.15	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	-----	-----	3.82	3.82
	U_{23} - U_{24}	-65.94	38.78	-184.43			0.90	1.17	40.80	-194.03	0.00	0.00	Vehicle	Vehicle	-----	-337.97	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	-----	-----	3.97	3.97
	U_{24} - U_{25}	61.51	78.33	-77.17			0.90	1.17	84.77	-85.92	0.00	0.00	Vehicle	Vehicle	193.33	-31.73	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	224.00	37.33	45.00	Pass	42.67	50.00	Pass	9.33	12.00	Pass	6.99	6.99	7.30	7.30
	U_{25} - U_{26}	59.89	78.53	-102.57			0.90	1.17	87.43	-114.19	0.00	0.00	Vehicle	Vehicle	191.51	-70.59	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	6.99	6.99	5.48	5.48
	U_{17} - U_{18}	-1.82	59.43	-139.74			0.90	1.24	66.17	-155.57	0.00	0.00	Vehicle	Vehicle	83.66	-204.61	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	10.17	10.17	3.62	3.62
	U_{18} - U_{19}	-36.18	38.72	-131.69			0.90	1.24	43.11	-146.61	0.00	0.00	Vehicle	Vehicle	9.01	-237.63	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	16.41	16.41	3.61	3.61
	U_{19} - U_{20}	-35.04	15.26	-50.49			0.90	1.24	16.99	-56.20	0.00	0.00	Vehicle	Vehicle	-----	-118.61	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	-----	-----	9.43	9.43

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: 5C1 — 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 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	-1.08	-2.74			0.90	1.24	-1.20	-3.04	0.00	0.00	Vehicle	Vehicle	4.75	-----	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	63.96	58.43			0.90	1.24	71.20	65.05	0.00	0.00	Vehicle	Vehicle	189.11	-----	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	-----	-----	6.02	6.02	-----	-----
	L_2 - L_3	97.77	-42.78	121.90			0.90	1.24	135.71	-47.62	0.00	0.00	Vehicle	Vehicle	303.52	-----	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	-----	-----	4.21	4.21	-----	-----
	L_2 - L_4	66.93	-61.38	131.60			0.90	1.24	146.51	-68.34	0.00	0.00	Vehicle	Vehicle	277.47	-1.83	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	4.11	4.11	9.22	9.22
	L_3 - L_5	-108.46	-97.42	73.80			0.90	1.24	82.17	-102.89	0.00	0.00	Vehicle	Vehicle	-----	-274.76	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	-----	-----	3.81	3.81
	L_4 - L_5	-237.28	-102.00	28.94			0.90	1.24	32.22	-113.56	0.00	0.00	Vehicle	Vehicle	-----	-456.09	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	-----	-----	3.72	3.72
	L_5 - L_7	-362.27	-105.82	-25.58			0.90	1.24	-28.48	-117.81	0.00	0.00	Vehicle	Vehicle	-----	-624.10	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_6 - L_7	-478.66	-96.25	-82.52			0.90	1.24	-91.87	-107.15	0.00	0.00	Vehicle	Vehicle	-----	-761.55	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	-----	-----	6.73	6.73
	L_7 - L_9	-477.02	-85.78	-0.19			0.90	1.20	-0.20	-92.49	0.00	0.00	Vehicle	Vehicle	-----	-740.36	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	-----	-----	7.81	7.81
	L_9 - L_{10}	-301.43	-56.65	-50.72			0.90	1.20	-54.69	-61.08	0.00	0.00	Vehicle	Vehicle	-----	-471.26	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	-----	-----	10.54	10.54
	L_{10} - L_{11}	-104.46	-76.86	15.13			0.90	1.20	16.31	-82.87	0.00	0.00	Vehicle	Vehicle	-----	-243.53	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	-----	-----	4.78	4.78
	L_{11} - L_{12}	97.11	36.49	58.07			0.90	1.20	62.61	39.34	0.00	0.00	Vehicle	Vehicle	207.63	-----	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	-----	-----	7.94	7.94	-----	-----
	L_{12} - L_{13}	268.74	-60.04	113.50			0.90	1.20	122.37	-64.73	0.00	0.00	Vehicle	Vehicle	508.45	-----	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	-----	-----	5.77	5.77	-----	-----
	L_{13} - L_{14}	405.66	115.64	148.74			0.90	1.20	160.37	124.69	0.00	0.00	Vehicle	Vehicle	735.83	-----	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	-----	-----	5.63	5.63	-----	-----
	L_{14} - L_{15}	502.77	-28.66	138.13			0.90	1.20	148.93	-30.90	0.00	0.00	Vehicle	Vehicle	847.21	-----	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	-----	-----	7.20	7.20	-----	-----
	L_{15} - L_{16}	469.25	-18.21	145.31			0.90	1.20	156.67	-19.63	0.00	0.00	Vehicle	Vehicle	813.69	-----	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	-----	-----	7.05	7.05	-----	-----
	L_{16} - L_{17}	365.43	-13.71	97.84			0.90	1.20	105.49	-14.78	0.00	0.00	Vehicle	Vehicle	612.20	-----	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	-----	-----	8.07	8.07	-----	-----
	L_{17} - L_{18}	248.67	2.49	61.28			0.90	1.20	66.08	2.68	0.00	0.00	Vehicle	Vehicle	409.17	-----	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	-----	-----	9.61	9.61	-----	-----
	L_{18} - L_{19}	112.99	-1.94	0.51			0.90	1.20	0.54	-2.09	0.00	0.00	Vehicle	Vehicle	147.59	-----	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	-----	-----	715.58	715.58	-----	-----
	L_{19} - L_{20}	-14.26	15.33	-50.60			0.90	1.20	16.53	-54.56	0.00	0.00	Vehicle	Vehicle	2.96	-89.46	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	31.26	31.26	7.50	7.50
Structure 2	L_0- L_1	15.26	-10.40	0.41			0.90	1.18	0.44	-11.08	0.00	0.00	Vehicle	Vehicle	20.40	-----	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	-----	-----	1412.48	1412.48	-----	-----
	L_1 - L_2	136.12	39.80	18.72			0.90	1.18	42.38	19.93	0.00	0.00	Vehicle	Vehicle	232.04	-----	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	-----	-----	11.73	11.73	-----	-----
	L_2 - L_3	262.92	67.57	72.35			0.90	1.18	77.03	71.94	0.00	0.00	Vehicle	Vehicle	441.93	-----	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	-----	-----	9.26	9.26	-----	-----
	L_3 - L_4	373.32	106.94	82.69			0.90	1.18	113.86	88.04	0.00	0.00	Vehicle	Vehicle	633.34	-----	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	-----	-----	8.22	8.22	-----	-----
	L_4 - L_5	456.80	123.72	132.79			0.90	1.18	141.38	131.73	0.00	0.00	Vehicle	Vehicle	777.64	-----	11.08	65.05	54.1000	2145.00	131.71	10.6406	5.6658	16.91	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	-----	-----	8.44	8.44	-----	-----
	L_5 - L_6	489.63	-57.23	189.57			0.90	1.18	201.84	-60.94	0.00	0.00	Vehicle	Vehicle	898.90	-----	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	-----	-----	6.46	6.46	-----	-----
	L_6 - L_7	479.27	-72.51	206.57			0.90	1.18	219.93	-77.20	0.00	0.00	Vehicle	Vehicle	908.96	-----	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	-----	-----	6.08	6.08	-----	-----
	L_7 - L_8	330.30	-98.88	177.29			0.90	1.18	188.76	-105.28	0.00	0.00	Vehicle	Vehicle	674.78	-----	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	-----	-----	5.36	5.36	-----	-----
	L_8 - L_9	189.19	-106.89	134.34			0.90	1.18	143.03	-113.81	0.00	0.00	Vehicle	Vehicle	431.88	-----	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	-----	-----	6.37	6.37	-----	-----
	L_9 - L_{10}	39.95	-113.67	84.81			0.90	1.18	90.30	-121.02	0.00	0.00	Vehicle	Vehicle	169.33	-105.39	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	9.10	9.10	6.34	6.34
	L_{10} - L_{11}	-127.23	-114.59	40.02			0.90	1.18	42.61	-122.00	0.00	0.00	Vehicle	Vehicle	-----	-324.00	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	-----	-----	4.29	4.29
	L_{11} - L_{12}	-282.51	-113.46	-11.98			0.90	1.18	-12.76	-120.80	0.00	0.00	Vehicle	Vehicle	-----	-524.31	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	-----	-----	5.37	5.37
	L_{12} - L_{13}	-426.62	-109.10	-45.61			0.90	1.18	-48.57	-116.16	0.00	0.00	Vehicle	Vehicle	-----	-705.62	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	-----	-----	7.31	7.31
	L_{13} - L_{14}	-536.34	-68.63	-80.36			0.90	1.18	-73.07	-85.56	0.00	0.00	Vehicle	Vehicle	-----	-808.47	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	-----	-----	11.44	11.44
	L_{14} - L_{15}	-537.64	-66.16	12.24			0.90	1.17	12.87	-69.61	0.00	0.00	Vehicle	Vehicle	-789.42	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	-----	-----	14.04	14.04
	L_{15} - L_{16}	-475.53	-101.87	-49.05			0.90	1.17	-51.61	-107.18	0.00	0.00	Vehicle	Vehicle	-757.51	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	-----	-----	7.46	7.46
	L_{16} - L_{17}	-384.21	-56.55	27.95			0.90	1.17	29.40	-59.50	0.00	0.00	Vehicle	Vehicle	-576.82	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	-----	-----	11.15	11.15
	L_{17} - L_{18}	-281.70	-17.11	15.29			0.90	1.17	16.09	-18.00	0.00	0.00	Vehicle	Vehicle	-389.62	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	-----	-----	24.76	24.76
	L_{18} - L_{19}	-174.99	-95.42	57.65			0.90	1.17	60.65	-100.39	0.00	0.00	Vehicle	Vehicle	-357.99	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	-----	-----	3.97	3.97
	L_{19} - L_{20}	-76.34	40.45	82.05			0.90	1.17	86.33	42.55	0.00	0.00	Vehicle	Vehicle	12.98	-43.93	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	8.75	8.75	-----	-----
	L_{20} - L_{21}	4.59	-73.74	119.24			0.90	1.17	125.45	-77.58	0.00	0.00	Vehicle	Vehicle	169.05	-94.89	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	7.65	7.65	10.55	10.55
	L_{21} - L_{22}	56.15	-61.07	134.49			0.90	1.17	141.50	-64.25	0.00	0.00	Vehicle	Vehicle	256.94	-10.53	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	6.42	6.42	13.55	13.55
	L_{22} - L_{23}	63.16	-28.85	118.41			0.90	1.17	124.58	-30.36	0.00	0.00	Vehicle	Vehicle	244.06	-----	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	-----	-----	7.24	7.24	-----	-----
	L_{23} - L_{24}	15.68	-51.95	95.30			0.90	1.17	100.26	-54.65	0.00	0.00	Vehicle	Vehicle	150.72	-50.66	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	9.46	9.46	15.19	15.19
	L_{24} - L_{25}	-55.90	-58.78	64.10			0.90	1.17	67.44	-61.84	0.00	0.00	Vehicle	Vehicle	15.00	-153.07	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	10.90	10.90	8.37	8.37
	L_{25} - L_{26}	-136.32	-67.85	20.81			0.90	1.17	21.90	-71.38	0.00	0.00	Vehicle	Vehicle	-----	-270.01	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	-----	-----	6.13	6.13
	L_{26} - L_{27}	-217.71	-68.95	-32.40			0.90	1.17	-34.09	-72.54	0.00	0.00	Vehicle	Vehicle	-----	-377.33	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	-----	-----	7.03	7.03
	L_{27} - L_{28}	-296.28	-71.46	-53.48			0.90	1.17	-56.26	-75.19	0.00	0.00	Vehicle	Vehicle	-----	-482.90	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	-----	-----	9.99	9.99
	L_{28} - L_{29}	-364.24	-65.88	-94.40			0.90	1.17	-69.32	-99.32	0.00	0.00	Vehicle	Vehicle	-----	-602.63	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	-----	-----	9.17	9.17
	L_{29} - L_{30}	-418.31	-24.70	-43.02			0.90	1.17	-25.98	-45.26	0.00	0.00	Vehicle	Vehicle	-----	-602.63	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	-----	-----	24.24	24.24
	L_{30} - L_{31}	-350.66	-70.59	25.15			0.90	1.18	26.78	-75.15	0.00	0.00	Vehicle	Vehicle	-----	-553.56	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	-----	-----	15.49	15.49
	L_{31} - L_{32}	-275.63	-106.06	-43.89			0.90	1.18	-46.73	-112.93	0.00	0.00	Vehicle	Vehicle	-----	-505.13	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	-----	-----	8.85	8.85
	L_{32} - $L

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: 5C1
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

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	17.42	-76.83			0.90	1.24	19.40	-85.54	0.00	0.00	Vehicle	Vehicle	------	-211.56	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	------	------	------	------	------	3.12	3.12
	U$_1$ - L$_1$	-33.88	15.73	-51.96			0.90	1.24	17.52	-57.85	0.00	0.00	Vehicle	Vehicle	------	-119.25	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	14.78	-37.89			0.90	1.24	16.46	-42.18	0.00	0.00	Vehicle	Vehicle	34.92	-41.31	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	------	------	------	25.36	25.36	8.59	8.59
	U$_2$ - L$_2$	44.37	9.05	-18.10			0.90	1.24	10.07	-20.15	0.00	0.00	Vehicle	Vehicle	70.78	------	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	------	------	------	------	------	38.05	38.05	------	------
	U$_3$ - L$_3$	-16.71	-16.33	-2.13			0.90	1.24	-2.37	-18.17	0.00	0.00	Vehicle	Vehicle	------	-45.35	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	------	------	------	------	------	18.33	18.33
	U$_3$ - L$_4$	-109.52	-64.85	0.16			0.90	1.24	0.18	-72.20	0.00	0.00	Vehicle	Vehicle	------	-236.23	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	------	------	------	------	------	4.37	4.37
	U$_4$ - L$_4$	-143.61	-85.40	-0.26			0.90	1.24	-0.29	-95.07	0.00	0.00	Vehicle	Vehicle	------	-310.28	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	------	------	------	------	------	3.83	3.83
	U$_5$ - L$_5$	-142.76	-97.18	2.55			0.90	1.24	2.84	-108.19	0.00	0.00	Vehicle	Vehicle	------	-326.23	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	------	------	------	------	------	2.93	2.93
	U$_6$ - L$_6$	-391.96	-119.86	-97.82			0.90	1.24	-108.90	-133.44	0.00	0.00	Vehicle	Vehicle	------	-683.01	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	------	------	------	------	------	5.05	5.05
	U$_7$ - L$_7$	-223.26	9.59	-94.03			0.90	1.20	10.34	-101.38	0.00	0.00	Vehicle	Vehicle	------	-422.03	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	------	------	------	------	------	4.16	4.16
	U$_8$ - L$_{10}$	-225.85	7.02	-85.17			0.90	1.20	7.56	-91.83	0.00	0.00	Vehicle	Vehicle	------	-412.98	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	------	------	------	------	------	5.63	5.63
	U$_9$ - L$_{11}$	-198.80	0.18	-83.16			0.90	1.20	0.19	-89.66	0.00	0.00	Vehicle	Vehicle	------	-375.00	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	------	------	------	------	------	4.94	4.94
	U$_{10}$ - L$_{12}$	-154.81	3.59	-64.12			0.90	1.20	3.87	-69.13	0.00	0.00	Vehicle	Vehicle	------	-291.12	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	------	------	------	------	------	5.46	5.46
	U$_{11}$ - L$_{13}$	-109.06	13.30	-55.18			0.90	1.20	14.34	-59.50	0.00	0.00	Vehicle	Vehicle	------	-219.12	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	------	------	------	------	------	4.56	4.56
	U$_{12}$ - L$_{14}$	-12.31	-9.75	-9.46			0.90	1.20	-10.20	-10.51	0.00	0.00	Vehicle	Vehicle	------	-29.66	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	------	------	------	------	------	31.64	31.64
	U$_{13}$ - L$_{15}$	-5.62	-49.42	19.79			0.90	1.20	21.33	-53.28	0.00	0.00	Vehicle	Vehicle	20.43	-76.57	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	------	------	------	20.31	20.31	6.34	6.34
	U$_{14}$ - L$_{16}$	-51.73	-60.34	11.61			0.90	1.20	12.52	-65.06	0.00	0.00	Vehicle	Vehicle	------	-151.83	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	------	------	------	------	------	4.45	4.45
	U$_{17}$ - L$_{17}$	-127.32	-86.82	11.45			0.90	1.20	12.34	-93.60	0.00	0.00	Vehicle	Vehicle	------	-287.19	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	------	------	------	------	------	3.03	3.03
	U$_{18}$ - L$_{18}$	-159.94	-100.79	10.56			0.90	1.20	11.39	-108.67	0.00	0.00	Vehicle	Vehicle	------	-349.20	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	------	------	------	------	------	3.36	3.36
	U$_{19}$ - L$_{19}$	-191.17	-106.44	8.98			0.90	1.20	9.68	-114.76	0.00	0.00	Vehicle	Vehicle	------	-397.71	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	------	------	------	------	------	3.70	3.70
	U$_{20}$ - L$_{20}$	-212.33	-113.91	-23.48			0.90	1.20	-25.32	-122.82	0.00	0.00	Vehicle	Vehicle	------	-435.69	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	------	------	------	------	------	3.01	3.01
	Structure 2																																												
	U$_0$ - L$_0$	-206.69	13.36	-101.00			0.90	1.18	14.22	-107.53	0.00	0.00	Vehicle	Vehicle	------	-408.49	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	------	------	------	------	------	4.05	4.05
	U$_1$ - L$_1$	-188.76	13.70	-87.27			0.90	1.18	14.59	-92.92	0.00	0.00	Vehicle	Vehicle	------	-366.18	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	------	------	------	------	------	5.21	5.21
	U$_1$ - L$_2$	-155.92	14.42	-82.19			0.90	1.18	15.35	-87.51	0.00	0.00	Vehicle	Vehicle	------	-316.46	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	------	------	------	------	------	4.78	4.78
	U$_2$ - L$_3$	-134.58	16.32	-79.61			0.90	1.18	17.37	-84.77	0.00	0.00	Vehicle	Vehicle	------	-285.14	0.00	22.75	22.7330	750.17	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	------	------	------	------	------	3.74	3.74
	U$_3$ - L$_4$	-64.49	15.53	-56.60			0.90	1.18	16.53	-60.26	0.00	0.00	Vehicle	Vehicle	------	-162.18	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	------	------	------	------	------	4.56	4.56
	U$_4$ - L$_5$	-19.94	20.56	-51.15			0.90	1.18	21.89	-54.46	0.00	0.00	Vehicle	Vehicle	2.54	-96.72	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	------	------	------	20.45	20.45	5.89	5.89
	U$_5$ - L$_6$	40.08	28.50	-36.52			0.90	1.18	30.34	-38.88	0.00	0.00	Vehicle	Vehicle	91.55	------	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	------	------	------	------	------	12.78	12.78	------	------
	U$_6$ - L$_7$	-26.04	-22.00	-1.63			0.90	1.18	-1.74	-23.42	0.00	0.00	Vehicle	Vehicle	------	-64.30	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	------	------	------	------	------	13.43	13.43
	U$_7$ - L$_8$	-125.25	-69.09	14.24			0.90	1.18	15.16	-73.56	0.00	0.00	Vehicle	Vehicle	------	-258.45	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	------	------	------	------	------	5.51	5.51
	U$_8$ - L$_9$	-174.53	-91.79	4.59			0.90	1.18	4.89	-97.73	0.00	0.00	Vehicle	Vehicle	------	-353.94	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	------	------	------	------	------	5.29	5.29
	U$_9$ - L$_{10}$	-202.66	-104.86	0.20			0.90	1.18	0.22	-111.64	0.00	0.00	Vehicle	Vehicle	------	-408.59	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	------	------	------	------	------	5.16	5.16
	U$_{10}$ - L$_{11}$	-229.53	-113.05	2.73			0.90	1.18	2.91	-120.37	0.00	0.00	Vehicle	Vehicle	------	-454.86	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	------	------	------	------	------	4.45	4.45
	U$_{11}$ - L$_{12}$	-250.85	-122.78	2.70			0.90	1.18	2.88	-130.72	0.00	0.00	Vehicle	Vehicle	------	-496.04	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	------	------	------	------	------	4.21	4.21
	U$_{12}$ - L$_{13}$	-223.32	-118.44	13.31			0.90	1.18	14.17	-126.11	0.00	0.00	Vehicle	Vehicle	------	-454.26	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	------	------	------	------	------	3.70	3.70
	U$_{13}$ - L$_{14}$	-343.31	-104.85	-73.53			0.90	1.18	-78.29	-111.64	0.00	0.00	Vehicle	Vehicle	------	-591.43	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	------	------	------	------	------	6.35	6.35
	U$_{14}$ - L$_{15}$	-123.14	13.56	-82.05			0.90	1.17	14.27	-86.32	0.00	0.00	Vehicle	Vehicle	------	-272.30	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	------	------	------	------	------	6.57	6.57
	U$_{15}$ - L$_{16}$	-156.70	9.73	-82.32			0.90	1.17	10.23	-86.61	0.00	0.00	Vehicle	Vehicle	------	-316.30	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	------	------	------	------	------	5.88	5.88
	U$_{16}$ - L$_{17}$	-147.91	10.04	-85.73			0.90	1.17	10.56	-90.20	0.00	0.00	Vehicle	Vehicle	------	-309.55	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	------	------	------	------	------	5.27	5.27
	U$_{17}$ - L$_{18}$	-142.22	12.59	-85.53			0.90	1.17	13.25	-89.99	0.00	0.00	Vehicle	Vehicle	------	-301.87	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	------	------	------	------	------	4.83	4.83
	U$_{18}$ - L$_{19}$	-111.48	14.07	-72.40			0.90	1.17	14.81	-76.17	0.00	0.00	Vehicle	Vehicle	------	-243.95	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	------	------	------	------	------	5.25	5.25
	U$_{19}$ - L$_{20}$	-76.55	14.95	-63.01			0.90	1.17	15.73	-66.30	0.00	0.00	Vehicle	Vehicle	------	-185.70	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	------	------	------	------	------	4.50	4.50
	U$_{20}$ - L$_{21}$	-44.31	20.32	-54.67			0.90	1.17	21.38	-57.51	0.00	0.00	Vehicle	Vehicle	------	-132.37	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	------	------	------	------	------	5.15	5.15
	U$_{21}$ - L$_{22}$	-21.25	-21.07	-0.42			0.90	1.17	-0.44	-22.17	0.00	0.00	Vehicle	Vehicle	------	-56.44	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	------	------	------	------	------	14.46	14.46
	U$_{22}$ - L$_{23}$	-39.07	-52.52	24.13			0.90	1.17	25.38	-55.26	0.00	0.00	Vehicle	Vehicle	------	-122.62	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	------	------	------	------	------	5.46	5.46
	U$_{23}$ - L$_{24}$	-74.84	-69.44	17.32			0.90	1.17	18.22	-73.05	0.00	0.00	Vehicle	Vehicle	------	-192.26	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	------	------	------	------	------	4.11	4.11
	U$_{24}$ - L$_{25}$	-167.23	2.29	-88.46			0.90	1.18	2.44	-94.18	0.00	0.00	Vehicle	Vehicle	------	-339.83	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	------	------	------	------	------	6.49	6.49
	U$_{25}$ - L$_{26}$	-148.72	6.73	-85.45			0.90	1.18	7.17	-90.97	0.00	0.00	Vehicle	Vehicle	------	-311.60	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	------	------	------	------	------	5.96	5.96
	U$_{26}$ - L$_{27}$	-109.04	11.59	-72.86			0.90	1.18	12.34	-77.57	0.00	0.00	Vehicle	Vehicle	------	-242.60	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	------	------	------	------	------	5.43	5.43
	U$_{27}$ - L$_{27}$	-27.61	-4.17	-2.70			0.90	1.18	-2.88	-4.44	0.00	0.00	Vehicle	Vehicle	------	-41.67	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	------	------	------	------	------	70.46	70.46
	U$_{28}$ - L$_{28}$	30.70	-31.52	38.31			0.90	1.18	40.79	-33.56	0.00	0.00	Vehicle	Vehicle	92.93	-3.73	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	------	------	------	9.73	9.73	11.10	11.10
	U$_{29}$ - L$_{29}$	-15.05	-51.07	14.65			0.90	1.18	15.60	-54.37	0.00	0.00	Vehicle	Vehicle	0.72	-90.24	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	------	------	------	28.38	28.38	5.99	5.99
	U$_{40}$ - L$_{40}$	-45.60	-67.46	16.47			0.90	1.18	17.54	-71.83	0.00	0.00	Vehicle	Vehicle	------	-152.66	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	------	------	------	------	------	4.09	4.09
	U$_{41}$ - L$_{41}$	-97.53	-88.69	17.51			0.90	1.18	18.64	-94.43	0.00	0.00	Vehicle	Vehicle	------	-249.54	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	------

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: 5C1 — 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)

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	-23.72	54.98			0.90	1.24	61.21	-26.41	0.00	0.00	Vehicle	Vehicle	193.09	-----	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	-----	-----	-----	-----	-----	**8.15**	**8.15**	-----	-----
		U$_1$ - L$_2$	23.35	-24.48	57.83			0.90	1.24	64.39	-27.25	0.00	0.00	Vehicle	Vehicle	114.05	-5.08	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	-----	-----	-----	**6.28**	**6.28**	**13.16**	**13.16**
		U$_3$ - L$_3$	-37.85	-23.79	-2.02			0.90	1.24	-2.25	-26.48	0.00	0.00	Vehicle	Vehicle	-----	-83.63	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	-----	-----	-----	-----	-----	**11.19**	**11.19**
		U$_3$ - L$_4$	-92.19	-23.03	-31.69			0.90	1.24	-25.64	-35.28	0.00	0.00	Vehicle	Vehicle	-----	-165.72	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	-----	-----	-----	-----	-----	**6.92**	**6.92**
		U$_5$ - L$_4$	143.37	15.38	64.23			0.90	1.24	71.51	17.12	0.00	0.00	Vehicle	Vehicle	279.34	-----	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	-----	-----	-----	-----	-----	**5.33**	**5.33**	-----	-----
		U$_5$ - L$_5$	177.90	12.74	85.95			0.90	1.24	95.69	14.18	0.00	0.00	Vehicle	Vehicle	355.67	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.94**	**4.94**	-----	-----
		U$_6$ - L$_6$	184.42	1.64	101.95			0.90	1.24	113.50	1.82	0.00	0.00	Vehicle	Vehicle	387.29	-----	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	-----	-----	-----	-----	-----	**4.11**	**4.11**	-----	-----
		U$_6$ - L$_7$	180.02	-3.39	107.93			0.90	1.24	120.16	-3.77	0.00	0.00	Vehicle	Vehicle	390.22	-----	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	-----	-----	-----	-----	-----	**3.92**	**3.92**	-----	-----
		U$_8$ - L$_8$	268.98	6.12	105.77			0.90	1.20	114.04	6.59	0.00	0.00	Vehicle	Vehicle	497.92	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
		U$_8$ - L$_{10}$	278.85	-11.17	95.88			0.90	1.20	103.38	-12.04	0.00	0.00	Vehicle	Vehicle	496.90	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
		U$_{10}$ - L$_{11}$	285.04	11.21	117.36			0.90	1.20	126.53	12.09	0.00	0.00	Vehicle	Vehicle	535.04	-----	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	-----	-----	-----	-----	-----	**4.94**	**4.94**	-----	-----
		U$_{11}$ - L$_{12}$	250.60	-2.26	102.44			0.90	1.20	110.45	-2.43	0.00	0.00	Vehicle	Vehicle	469.36	-----	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	-----	-----	-----	-----	-----	**4.77**	**4.77**	-----	-----
		U$_{12}$ - L$_{13}$	189.65	-3.69	73.75			0.90	1.20	79.52	-3.98	0.00	0.00	Vehicle	Vehicle	349.91	-----	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	-----	-----	-----	-----	-----	**5.55**	**5.55**	-----	-----
		U$_{13}$ - L$_{14}$	123.32	-18.27	71.80			0.90	1.20	77.41	-19.69	0.00	0.00	Vehicle	Vehicle	260.95	-----	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	-----	-----	-----	-----	-----	**3.93**	**3.93**	-----	-----
		U$_{13}$ - L$_{15}$	-24.41	-32.20	35.93			0.90	1.20	38.74	-34.72	0.00	0.00	Vehicle	Vehicle	18.63	-76.87	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	-----	-----	-----	**11.67**	**11.67**	**8.75**	**8.75**
		U$_{14}$ - L$_{15}$	48.53	-20.45	58.95			0.90	1.20	63.56	-22.05	0.00	0.00	Vehicle	Vehicle	145.73	-----	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	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
		U$_{15}$ - L$_{16}$	146.59	-15.65	86.11			0.90	1.20	92.84	-16.88	0.00	0.00	Vehicle	Vehicle	311.26	-----	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	-----	-----	-----	-----	-----	**4.07**	**4.07**	-----	-----
		U$_{15}$ - L$_{17}$	182.46	-13.49	97.77			0.90	1.20	105.41	-14.54	0.00	0.00	Vehicle	Vehicle	374.24	-----	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	-----	-----	-----	-----	-----	**4.44**	**4.44**	-----	-----
		U$_{17}$ - L$_{18}$	223.82	-11.35	109.39			0.90	1.20	117.95	-12.24	0.00	0.00	Vehicle	Vehicle	444.30	-----	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	-----	-----	-----	-----	-----	**4.12**	**4.12**	-----	-----
		U$_{20}$ - L$_{19}$	232.72	-0.13	86.88			0.90	1.20	93.68	-0.14	0.00	0.00	Vehicle	Vehicle	424.32	-----	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	-----	-----	-----	-----	-----	**5.10**	**5.10**	-----	-----
	Structure 2	U$_1$ - L$_1$	213.54	-14.17	102.23			0.90	1.18	108.84	-15.08	0.00	0.00	Vehicle	Vehicle	419.09	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
		U$_1$ - L$_2$	200.48	-16.71	105.51			0.90	1.18	112.34	-17.79	0.00	0.00	Vehicle	Vehicle	406.67	-----	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	-----	-----	-----	-----	-----	**5.14**	**5.14**	-----	-----
		U$_3$ - L$_3$	172.81	-18.65	99.97			0.90	1.18	106.44	-19.85	0.00	0.00	Vehicle	Vehicle	363.03	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
		U$_3$ - L$_4$	147.16	-21.92	88.17			0.90	1.18	93.87	-23.34	0.00	0.00	Vehicle	Vehicle	313.34	-----	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	-----	-----	-----	-----	-----	**4.58**	**4.58**	-----	-----
		U$_5$ - L$_5$	49.10	-21.70	75.32			0.90	1.18	80.20	-23.10	0.00	0.00	Vehicle	Vehicle	168.09	-----	0.00	16.85	16.8486	556.00	131.71	13.3994	1.9682	61.02	29.46	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
		U$_5$ - L$_6$	2.96	-26.68	62.52			0.90	1.18	66.56	-28.41	0.00	0.00	Vehicle	Vehicle	90.38	-33.07	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	-----	-----	-----	**6.38**	**6.38**	**11.57**	**11.57**
		U$_6$ - L$_7$	-85.74	-59.66	30.33			0.90	1.18	32.29	-63.52	0.00	0.00	Vehicle	Vehicle	-----	-194.04	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	-----	-----	-----	-----	-----	**4.31**	**4.31**
		U$_7$ - L$_7$	140.30	-25.65	57.27			0.90	1.18	60.98	-27.31	0.00	0.00	Vehicle	Vehicle	261.66	-----	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	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U$_8$ - L$_8$	204.22	2.52	90.78			0.90	1.18	96.65	2.68	0.00	0.00	Vehicle	Vehicle	391.12	-----	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	-----	-----	-----	-----	-----	**5.24**	**5.24**	-----	-----
		U$_8$ - L$_9$	234.87	10.44	103.68			0.90	1.18	110.38	11.11	0.00	0.00	Vehicle	Vehicle	448.83	-----	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	-----	-----	-----	-----	-----	**4.92**	**4.92**	-----	-----
		U$_{11}$ - L$_{10}$	263.10	-0.99	120.38			0.90	1.18	128.17	-1.05	0.00	0.00	Vehicle	Vehicle	508.65	-----	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	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
		U$_{11}$ - L$_{11}$	274.02	-2.30	117.65			0.90	1.18	125.26	-2.45	0.00	0.00	Vehicle	Vehicle	519.06	-----	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	-----	-----	-----	-----	-----	**4.55**	**4.55**	-----	-----
		U$_{13}$ - L$_{12}$	254.94	-14.31	116.87			0.90	1.18	124.43	-15.23	0.00	0.00	Vehicle	Vehicle	493.18	-----	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	-----	-----	-----	-----	-----	**4.20**	**4.20**	-----	-----
		U$_{13}$ - L$_{13}$	217.71	-15.48	111.83			0.90	1.18	119.07	-16.48	0.00	0.00	Vehicle	Vehicle	437.80	-----	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	-----	-----	-----	-----	-----	**4.70**	**4.70**	-----	-----
		U$_{15}$ - L$_{15}$	110.05	-9.01	84.14			0.90	1.17	88.53	-9.48	0.00	0.00	Vehicle	Vehicle	258.15	-----	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	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
		U$_{15}$ - L$_{16}$	132.30	-14.55	85.32			0.90	1.17	89.76	-15.31	0.00	0.00	Vehicle	Vehicle	288.68	-----	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	-----	-----	-----	-----	-----	**5.77**	**5.77**	-----	-----
		U$_{17}$ - L$_{17}$	172.89	-8.26	103.02			0.90	1.17	108.39	-8.69	0.00	0.00	Vehicle	Vehicle	365.66	-----	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	-----	-----	-----	-----	-----	**4.96**	**4.96**	-----	-----
		U$_{17}$ - L$_{18}$	160.19	-12.55	102.80			0.90	1.17	108.16	-13.20	0.00	0.00	Vehicle	Vehicle	348.85	-----	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	-----	-----	-----	-----	-----	**4.53**	**4.53**	-----	-----
		U$_{19}$ - L$_{19}$	152.35	-16.40	96.65			0.90	1.17	101.69	-17.25	0.00	0.00	Vehicle	Vehicle	330.24	-----	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	-----	-----	-----	-----	-----	**4.90**	**4.90**	-----	-----
		U$_{20}$ - L$_{20}$	120.69	-18.76	94.29			0.90	1.17	99.20	-19.74	0.00	0.00	Vehicle	Vehicle	285.85	-----	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	-----	-----	-----	-----	-----	**4.86**	**4.86**	-----	-----
		U$_{20}$ - L$_{21}$	76.08	-19.85	77.41			0.90	1.17	81.44	-20.88	0.00	0.00	Vehicle	Vehicle	204.78	-----	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	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
		U$_{21}$ - L$_{22}$	31.46	-27.75	55.37			0.90	1.17	58.25	-29.19	0.00	0.00	Vehicle	Vehicle	116.62	-----	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	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U$_{23}$ - L$_{23}$	24.30	-40.79	36.18			0.90	1.17	38.07	-42.91	0.00	0.00	Vehicle	Vehicle	81.08	-24.20	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	-----	-----	-----	**10.60**	**10.60**	**8.09**	**8.09**
		U$_{24}$ - L$_{23}$	72.26	-22.56	61.31			0.90	1.17	64.51	-23.73	0.00	0.00	Vehicle	Vehicle	177.80	-----	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	-----	-----	-----	-----	-----	**5.51**	**5.51**	-----	-----
		U$_{24}$ - L$_{24}$	112.13	-22.98	85.25			0.90	1.17	89.69	-24.17	0.00	0.00	Vehicle	Vehicle	262.37	-----	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	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U$_{25}$ - L$_{25}$	112.13	-22.98	85.25			0.90	1.17	89.69	-24.17	0.00	0.00	Vehicle	Vehicle	262.37	-----	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	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
		U$_{25}$ - L$_{26}$	127.84	-20.74	99.95			0.90	1.17	105.16	-21.82	0.00	0.00	Vehicle	Vehicle	302.90	-----	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	-----	-----	-----	-----	-----	**4.97**	**4.97**	-----	-----
		U$_{26}$ - L$_{26}$	132.67	-16.85	103.60			0.90	1.17	109.00	-17.73	0.00	0.00	Vehicle	Vehicle	314.16	-----	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	-----	-----	-----	-----	-----	**4.75**	**4.75**	-----	-----
		U$_{27}$ - L$_{27}$	137.94	-14.52	108.13			0.90	1.17	113.76	-15.28	0.00	0.00	Vehicle	Vehicle	327.21	-----	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	-----	-----	-----	-----	-----	**5.03**	**5.03**	-----	-----
		U$_{28}$ - L$_{28}$	122.80	-6.54	106.09			0.90	1.17	111.61	-6.88	0.00	0.00	Vehicle	Vehicle	304.73	-----	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	-----	-----	-----	-----	-----	**4.73**	**4.73**	-----	-----
		U$_{29}$ - L$_{29}$	102.75	-10.49	98.38			0.90	1.17	103.51	-11.03	0.00	0.00	Vehicle	Vehicle	268.14	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
		U$_{30}$ - L$_{31}$	140.07	-10.84	84.71			0.90	1.18	90.19	-11.54	0.00	0.00	Vehicle	Vehicle	299.34	-----	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	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
		U$_{31}$ - L$_{32}$	167.39	-18.84	81.22			0.90	1.18	86.47	-20.06	0.00	0.00	Vehicle	Vehicle	330.03	-----	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	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
		U$_{32}$ - L$_{33}$	202.10	-10.61	114.02			0.90	1.18	121.40	-11.30	0.00	0.00	Vehicle	Vehicle	420.55	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
		U$_{33}$ - L$_{34}$	201.91	-10.67	110.40			0.90	1.18	117.54	-11.36	0.00	0.00	Vehicle	Vehicle	415.29	-----	0.00	33.27	33.2657	1097.77	131.71	14.5729	2.8573	45.90	31.

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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 (I+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$_1$	-52.64	-46.03	-52.43			0.75	1.24	-42.70	-48.64	0.00	0.00	Vehicle	Vehicle	-----	-131.66	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	-----	-----	**10.54**	**10.54**
		U$_1$ - U$_2$	-61.57	-78.92	-85.14			0.75	1.24	-73.22	-78.99	0.00	0.00	Vehicle	Vehicle	-----	-182.72	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	-----	-----	**6.38**	**6.38**
		U$_2$ - U$_3$	-26.99	50.43	-102.68			0.75	1.24	46.79	-95.26	0.00	0.00	Vehicle	25.74	-158.92	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	**14.92**	**14.92**	**5.65**	**5.65**
		U$_3$ - U$_4$	32.92	64.05	-83.94			0.75	1.24	59.42	-77.87	0.00	0.00	Vehicle	120.05	-58.44	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	**10.74**	**10.74**	**7.68**	**7.68**
		U$_4$ - U$_5$	34.77	64.33	-110.24			0.75	1.24	59.68	-102.28	0.00	0.00	Vehicle	122.79	-87.75	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	**10.66**	**10.66**	**5.87**	**5.87**
		U$_5$ - U$_6$	124.13	75.14	-87.33			0.75	1.24	69.71	-81.02	0.00	0.00	Vehicle	251.99	-----	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	-----	-----	**7.85**	**7.85**	-----	-----
		U$_6$ - U$_7$	223.19	32.41	-19.18			0.75	1.24	30.07	-17.80	0.00	0.00	Vehicle	329.23	-----	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	-----	-----	**19.33**	**19.33**	-----	-----
		U$_7$ - U$_8$	331.76	72.01	4.08			0.75	1.24	66.81	3.78	0.00	0.00	Vehicle	518.14	-----	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	-----	-----	**11.65**	**11.65**	-----	-----
		U$_8$ - U$_9$	267.61	28.55	4.73			0.75	1.20	25.65	4.25	0.00	0.00	Vehicle	381.24	-----	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	-----	-----	**26.17**	**26.17**	-----	-----
		U$_9$ - U$_{10}$	89.12	-3.87	-10.48			0.75	1.20	-3.47	-9.42	0.00	0.00	Vehicle	111.34	-----	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	-59.02	-49.41			0.75	1.20	-44.40	-53.03	0.00	0.00	Vehicle	Vehicle	-----	-168.79	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	-----	-----	**9.82**	**9.82**
		U$_{11}$ - U$_{12}$	-230.69	-90.09	-104.03			0.75	1.20	-80.94	-93.47	0.00	0.00	Vehicle	Vehicle	-----	-421.40	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	-----	-----	**6.23**	**6.23**
		U$_{12}$ - U$_{13}$	-341.88	-112.97	-127.51			0.75	1.20	-101.50	-114.57	0.00	0.00	Vehicle	Vehicle	-----	-593.38	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	-----	-----	**6.94**	**6.94**
		U$_{13}$ - U$_{14}$	-421.62	34.62	-170.54			0.75	1.20	31.10	-153.23	0.00	0.00	Vehicle	Vehicle	-----	-747.30	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	-----	-----	**5.91**	**5.91**
		U$_{14}$ - U$_{15}$	-422.51	-104.12	-172.60			0.75	1.20	-93.55	-155.08	0.00	0.00	Vehicle	Vehicle	-----	-750.86	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	-----	-----	**5.84**	**5.84**
		U$_{15}$ - U$_{16}$	-439.94	-104.23	-192.90			0.75	1.20	-93.65	-173.32	0.00	0.00	Vehicle	Vehicle	-----	-797.24	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	-----	-----	**5.12**	**5.12**
		U$_{16}$ - U$_{17}$	-422.43	5.12	-131.52			0.75	1.20	4.60	-118.17	0.00	0.00	Vehicle	Vehicle	-----	-702.77	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$_{18}$	-340.94	13.76	-149.79			0.75	1.20	12.36	-134.59	0.00	0.00	Vehicle	Vehicle	-----	-618.18	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	-----	-----	**4.68**	**4.68**
		U$_{18}$ - U$_{19}$	-247.15	-24.78	-104.79			0.75	1.20	-22.27	-94.15	0.00	0.00	Vehicle	Vehicle	-----	-443.69	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	-----	-----	**4.57**	**4.57**
		U$_{19}$ - U$_{20}$	-131.71	4.07	-50.43			0.75	1.20	-3.66	-45.31	0.00	0.00	Vehicle	Vehicle	-----	-230.13	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	-----	-----	**12.05**	**12.05**
	Structure 2	U$_0$ - U$_1$	-131.51	-41.05	-25.73			0.75	1.18	-22.83	-36.42	0.00	0.00	Vehicle	Vehicle	-----	-218.30	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	-----	-----	**14.17**	**14.17**
		U$_1$ - U$_2$	-247.03	-76.75	-59.37			0.75	1.18	-52.68	-68.10	0.00	0.00	Vehicle	Vehicle	-----	-409.66	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	-----	-----	**7.99**	**7.99**
		U$_2$ - U$_3$	-347.15	-118.95	-92.64			0.75	1.18	-82.20	-105.54	0.00	0.00	Vehicle	Vehicle	-----	-588.49	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	95.35	272.00	30.22	45.00	Pass	23.27	50.00	Pass	5.82	12.00	Pass	-----	-----	**6.92**	**6.92**
		U$_3$ - U$_4$	-437.07	50.15	-139.80			0.75	1.18	44.50	-124.04	0.00	0.00	Vehicle	Vehicle	-----	-729.43	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	-----	-----	**7.29**	**7.29**
		U$_4$ - U$_5$	-468.70	-136.84	-157.32			0.75	1.18	-121.41	-139.58	0.00	0.00	Vehicle	Vehicle	-----	-790.77	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	-----	-----	**7.30**	**7.30**
		U$_5$ - U$_6$	-471.03	73.62	-184.26			0.75	1.18	65.32	-163.49	0.00	0.00	Vehicle	Vehicle	-----	-824.87	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	-----	-----	**6.21**	**6.21**
		U$_6$ - U$_7$	-414.41	82.03	-170.18			0.75	1.18	72.78	-150.99	0.00	0.00	Vehicle	Vehicle	-----	-735.02	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	-----	-----	**6.14**	**6.14**
		U$_7$ - U$_8$	-413.45	82.14	-197.60			0.75	1.18	72.88	-175.32	0.00	0.00	Vehicle	Vehicle	-----	-765.40	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	-----	-----	**5.29**	**5.29**
		U$_8$ - U$_9$	-321.98	89.76	-179.17			0.75	1.18	79.64	-158.97	0.00	0.00	Vehicle	Vehicle	-----	-625.23	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	-----	-----	**5.06**	**5.06**
		U$_9$ - U$_{10}$	-182.11	94.05	-146.93			0.75	1.18	83.44	-130.36	0.00	0.00	Vehicle	Vehicle	-----	-406.21	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	-----	-----	**5.40**	**5.40**
		U$_{10}$ - U$_{11}$	-32.58	98.66	-110.34			0.75	1.18	87.53	-97.90	0.00	0.00	Vehicle	71.45	-169.62	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	**10.78**	**10.78**	**7.53**	**7.53**
		U$_{11}$ - U$_{12}$	133.59	101.25	-70.48			0.75	1.18	89.83	-62.53	0.00	0.00	Vehicle	290.45	-----	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	-----	-----	**8.65**	**8.65**	-----	-----
		U$_{12}$ - U$_{13}$	289.99	103.28	-27.74			0.75	1.18	91.63	-24.61	0.00	0.00	Vehicle	496.10	-----	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	-----	-----	**9.27**	**9.27**	-----	-----
		U$_{13}$ - U$_{14}$	434.76	84.86	11.90			0.75	1.18	75.29	10.56	0.00	0.00	Vehicle	663.07	-----	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	-----	-----	**15.00**	**15.00**	-----	-----
		U$_{14}$ - U$_{15}$	474.45	26.37	-23.57			0.75	1.17	23.12	-20.66	0.00	0.00	Vehicle	646.84	-----	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	-----	-----	**47.14**	**47.14**	-----	-----
		U$_{15}$ - U$_{16}$	383.28	59.74	-4.19			0.75	1.17	52.37	-3.67	0.00	0.00	Vehicle	566.34	-----	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	-----	-----	**16.98**	**16.98**	-----	-----
		U$_{16}$ - U$_{17}$	279.57	-32.68	-31.41			0.75	1.17	-27.54	-28.66	0.00	0.00	Vehicle	327.65	-----	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	-31.08	-56.26			0.75	1.17	-27.25	-49.32	0.00	0.00	Vehicle	188.99	-----	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	-54.54	-92.39			0.75	1.17	-47.82	-81.00	0.00	0.00	Vehicle	34.50	-8.63	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	-----	-----	**8.91**	**8.91**
		U$_{19}$ - U$_{20}$	-10.01	59.96	-105.88			0.75	1.17	52.57	-92.83	0.00	0.00	Vehicle	55.32	-133.70	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	**15.79**	**15.79**	**7.36**	**7.36**
	Structure 3	U$_0$ - U$_1$	-62.06	45.54	-118.08			0.75	1.17	39.93	-103.53	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	-----	-----	**7.48**	**7.48**
		U$_1$ - U$_2$	-88.74	43.81	-129.65			0.75	1.17	38.41	-113.67	0.00	0.00	Vehicle	Vehicle	-----	-263.12	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	-----	-----	**6.58**	**6.58**
		U$_2$ - U$_3$	-88.92	-93.03	-149.62			0.75	1.17	-81.56	-131.18	0.00	0.00	Vehicle	Vehicle	-----	-286.12	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	-----	-----	**5.70**	**5.70**
		U$_3$ - U$_4$	-76.67	28.23	-150.24			0.75	1.17	24.75	-131.72	0.00	0.00	Vehicle	Vehicle	-----	-270.91	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	-----	-----	**5.77**	**5.77**
		U$_4$ - U$_5$	-37.64	62.65	-119.25			0.75	1.17	54.93	-104.55	0.00	0.00	Vehicle	22.47	-184.86	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	**15.62**	**15.62**	**6.27**	**6.27**
		U$_5$ - U$_6$	37.23	69.92	-113.76			0.75	1.17	61.30	-99.74	0.00	0.00	Vehicle	128.09	-81.26	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	**11.89**	**11.89**	**6.86**	**6.86**
		U$_6$ - U$_7$	128.02	77.40	-82.13			0.75	1.17	67.86	-72.00	0.00	0.00	Vehicle	254.64	-----	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	-----	-----	**9.41**	**9.41**	-----	-----
		U$_7$ - U$_8$	233.68	81.87	-49.13			0.75	1.17	71.78	-43.08	0.00	0.00	Vehicle	397.09	-----	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	-----	-----	**11.29**	**11.29**	-----	-----
		U$_8$ - U$_9$	337.65	28.54	-13.23			0.75	1.17	25.02	-11.60	0.00	0.00	Vehicle	471.48	-----	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	-----	-----	**37.36**	**37.36**	-----	-----
		U$_9$ - U$_{10}$	437.10	69.73	22.67			0.75	1.17	61.14	19.88	0.00	0.00	Vehicle	647.70	-----	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	-----	-----	**18.44**	**18.44**	-----	-----
		U$_{10}$ - U$_{11}$	420.53	24.98	43.45			0.75	1.18	38.55	22.16	0.00	0.00	Vehicle	596.80	-----	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	-----	-----	**29.67**	**29.67**	-----	-----
		U$_{11}$ - U$_{12}$	300.69	81.13	2.06			0.75	1.18	71.98	1.83	0.00	0.00	Vehicle	484.47	-----	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	-----	-----	**11.65**	**11.65**	-----	-----
		U$_{12}$ - U$_{13}$	161.60	-46.64	-30.70			0.75	1.18	-27.24	-41.38	0.00	0.00	Vehicle	174.68	-----	6.50	35.88

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: 5C1 **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
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.49	7.22	-4.01			0.75	1.24	6.70	-3.72	0.00	0.00	Vehicle	Vehicle	19.75	-----	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	-----	-----	**73.77**	**73.77**	-----	-----
		L$_1$ - L$_2$	50.81	46.44	62.48			0.75	1.24	57.97	43.08	0.00	0.00	Vehicle	Vehicle	141.41	-----	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	-----	-----	**7.79**	**7.79**	-----	-----
		L$_2$ - L$_3$	61.22	-36.66	96.20			0.75	1.24	89.25	-34.01	0.00	0.00	Vehicle	Vehicle	195.61	-----	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	-----	-----	**6.81**	**6.81**	-----	-----
		L$_3$ - L$_4$	25.70	52.70	113.08			0.75	1.24	104.91	48.89	0.00	0.00	Vehicle	Vehicle	169.79	-----	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	-----	-----	**6.13**	**6.13**	-----	-----
		L$_4$ - L$_5$	-118.45	-72.79	58.73			0.75	1.24	54.48	-67.53	0.00	0.00	Vehicle	Vehicle	-----	-241.78	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	-----	-----	**5.65**	**5.65**
		L$_5$ - L$_6$	-217.80	-87.33	22.09			0.75	1.24	20.49	-81.02	0.00	0.00	Vehicle	Vehicle	-----	-388.47	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	-----	-----	**5.45**	**5.45**
		L$_6$ - L$_7$	-320.36	-96.51	-16.00			0.75	1.24	-14.84	-89.54	0.00	0.00	Vehicle	Vehicle	-----	-532.86	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	-----	-----	**6.98**	**6.98**
		L$_7$ - L$_8$	-417.18	-77.11	-86.98			0.75	1.24	-71.54	-80.70	0.00	0.00	Vehicle	Vehicle	-----	-647.25	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	-----	-----	**9.69**	**9.69**
		L$_8$ - L$_9$	-410.79	-94.83	-4.51			0.75	1.20	-4.05	-85.21	0.00	0.00	Vehicle	Vehicle	-----	-644.80	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	-----	-----	**9.26**	**9.26**
		L$_9$ - L$_{10}$	-247.75	-47.35	-39.08			0.75	1.20	-35.12	-42.54	0.00	0.00	Vehicle	Vehicle	-----	-377.38	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	-----	-----	**16.40**	**16.40**
		L$_{10}$ - L$_{11}$	-65.21	-21.74	44.76			0.75	1.20	40.22	-19.53	0.00	0.00	Vehicle	Vehicle	-----	-110.17	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	-----	-----	**22.28**	**22.28**
		L$_{11}$ - L$_{12}$	101.88	36.10	68.96			0.75	1.20	61.96	32.43	0.00	0.00	Vehicle	Vehicle	212.99	-----	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	-----	-----	**7.94**	**7.94**	-----	-----
		L$_{12}$ - L$_{13}$	264.09	49.37	119.96			0.75	1.20	107.78	44.36	0.00	0.00	Vehicle	Vehicle	483.43	-----	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	-----	-----	**6.59**	**6.59**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	100.47	145.86			0.75	1.20	131.05	90.27	0.00	0.00	Vehicle	Vehicle	656.22	-----	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	-----	-----	**7.13**	**7.13**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	-26.42	151.33			0.75	1.20	135.97	-23.74	0.00	0.00	Vehicle	Vehicle	796.00	-----	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	-----	-----	**8.08**	**8.08**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	-19.98	137.72			0.75	1.20	123.74	-17.95	0.00	0.00	Vehicle	Vehicle	758.83	-----	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	-----	-----	**9.01**	**9.01**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	-13.38	116.73			0.75	1.20	104.88	-12.02	0.00	0.00	Vehicle	Vehicle	632.12	-----	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	-----	-----	**7.96**	**7.96**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	-7.97	79.30			0.75	1.20	71.25	-7.16	0.00	0.00	Vehicle	Vehicle	468.29	-----	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	-----	-----	**8.34**	**8.34**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	-4.40	35.94			0.75	1.20	32.29	-3.95	0.00	0.00	Vehicle	Vehicle	271.04	-----	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	-----	-----	**10.11**	**10.11**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	-1.21	-15.31			0.75	1.20	-1.09	-13.76	0.00	0.00	Vehicle	Vehicle	89.26	-----	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	-----	-----	5.23	-----	-----	5.23	-----	-----	-----	-----	-----	-----
		L$_0$ - L$_1$	24.59	2.14	-1.52			0.75	1.18	1.90	-1.35	0.00	0.00	Vehicle	Vehicle	34.44	-----	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	-----	-----	**320.47**	**320.47**	-----	-----
		L$_1$ - L$_2$	138.59	42.17	28.37			0.75	1.18	37.42	25.17	0.00	0.00	Vehicle	Vehicle	228.81	-----	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	-----	-----	**13.22**	**13.22**	-----	-----
		L$_2$ - L$_3$	252.83	69.67	85.36			0.75	1.18	75.74	61.81	0.00	0.00	Vehicle	Vehicle	427.14	-----	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	-----	-----	**9.55**	**9.55**	-----	-----
		L$_3$ - L$_4$	352.30	94.88	84.69			0.75	1.18	84.18	75.14	0.00	0.00	Vehicle	Vehicle	567.43	-----	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	-----	-----	**11.37**	**11.37**	-----	-----
		L$_4$ - L$_5$	447.17	108.22	171.12			0.75	1.18	151.83	96.02	0.00	0.00	Vehicle	Vehicle	778.69	-----	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	-----	-----	**7.92**	**7.92**	-----	-----
		L$_5$ - L$_6$	477.93	-64.17	174.19			0.75	1.18	154.55	-56.93	0.00	0.00	Vehicle	Vehicle	822.22	-----	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	-----	-----	**8.51**	**8.51**	-----	-----
		L$_6$ - L$_7$	482.68	-75.53	196.59			0.75	1.18	174.43	-67.02	0.00	0.00	Vehicle	Vehicle	854.24	-----	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	-----	-----	**7.65**	**7.65**	-----	-----
		L$_7$ - L$_8$	336.61	-91.37	141.67			0.75	1.18	125.70	-81.07	0.00	0.00	Vehicle	Vehicle	601.00	-----	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	-----	-----	**8.00**	**8.00**	-----	-----
		L$_8$ - L$_9$	196.05	-95.14	115.14			0.75	1.18	102.15	-84.42	0.00	0.00	Vehicle	Vehicle	387.66	-----	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	-----	-----	**8.85**	**8.85**	-----	-----
		L$_9$ - L$_{10}$	45.60	-99.41	79.53			0.75	1.18	70.56	-88.20	0.00	0.00	Vehicle	Vehicle	151.00	-55.39	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	**11.57**	**11.57**	**8.77**	**8.77**
		L$_{10}$ - L$_{11}$	-126.26	-101.09	44.22			0.75	1.18	39.23	-89.69	0.00	0.00	Vehicle	Vehicle	-----	-280.73	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	-----	-----	**5.85**	**5.85**
		L$_{11}$ - L$_{12}$	-284.87	-103.35	-0.31			0.75	1.18	-0.27	-91.70	0.00	0.00	Vehicle	Vehicle	-----	-489.54	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	-----	-----	**7.04**	**7.04**
		L$_{12}$ - L$_{13}$	-433.79	-93.78	-29.62			0.75	1.18	-26.28	-83.20	0.00	0.00	Vehicle	Vehicle	-----	-672.09	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$_{14}$	-552.65	-41.83	-66.34			0.75	1.18	-37.12	-58.86	0.00	0.00	Vehicle	Vehicle	-----	-794.96	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	-----	-----	**16.35**	**16.35**
		L$_{14}$ - L$_{15}$	-573.48	-72.04	28.97			0.75	1.17	25.40	-63.16	0.00	0.00	Vehicle	Vehicle	-----	-827.63	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	-----	-----	**14.91**	**14.91**
		L$_{15}$ - L$_{16}$	-492.94	-78.45	-41.68			0.75	1.17	-36.54	-68.78	0.00	0.00	Vehicle	Vehicle	-----	-730.24	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	-----	-----	**11.38**	**11.38**
		L$_{16}$ - L$_{17}$	-395.30	-40.79	7.36			0.75	1.17	6.45	-35.76	0.00	0.00	Vehicle	Vehicle	-----	-560.38	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	-----	-----	**18.24**	**18.24**
		L$_{17}$ - L$_{18}$	-288.04	-8.05	23.33			0.75	1.17	20.45	-7.06	0.00	0.00	Vehicle	Vehicle	-----	-383.63	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	-----	-----	**62.27**	**62.27**
		L$_{18}$ - L$_{19}$	-175.85	12.30	83.71			0.75	1.17	73.40	10.79	0.00	0.00	Vehicle	Vehicle	-----	-214.58	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	49.11	99.86			0.75	1.17	87.55	43.05	0.00	0.00	Vehicle	Vehicle	12.32	-45.53	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	**8.65**	**8.65**	-----	-----
	Structure 2	L$_{20}$ - L$_{21}$	7.55	-60.13	119.78			0.75	1.17	105.02	-52.72	0.00	0.00	Vehicle	Vehicle	146.34	-58.72	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	**9.11**	**9.11**	**15.59**	**15.59**
		L$_{21}$ - L$_{22}$	59.07	71.97	124.82			0.75	1.17	109.44	63.10	0.00	0.00	Vehicle	Vehicle	219.05	-----	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	-----	-----	**8.27**	**8.27**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	-30.31	117.14			0.75	1.17	102.70	-26.57	0.00	0.00	Vehicle	Vehicle	227.08	-----	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	-----	-----	**8.69**	**8.69**	-----	-----
		L$_{23}$ - L$_{24}$	33.55	-64.57	102.35			0.75	1.17	89.73	-56.61	0.00	0.00	Vehicle	Vehicle	160.26	-29.99	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	**10.38**	**10.38**	**14.98**	**14.98**
		L$_{24}$ - L$_{25}$	-45.09	-71.75	82.26			0.75	1.17	72.12	-62.90	0.00	0.00	Vehicle	Vehicle	35.15	-140.38	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	**10.04**	**10.04**	**8.40**	**8.40**
		L$_{25}$ - L$_{26}$	-134.94	-78.62	49.90			0.75	1.17	43.75	-68.93	0.00	0.00	Vehicle	Vehicle	-----	-265.03	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	-----	-----	**6.36**	**6.36**
		L$_{26}$ - L$_{27}$	-245.90	-80.62	11.06			0.75	1.17	9.69	-70.69	0.00	0.00	Vehicle	Vehicle	-----	-411.56	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	-----	-----	**6.81**	**6.81**
		L$_{27}$ - L$_{28}$	-351.78	-84.20	-21.20			0.75	1.17	-18.59	-73.82	0.00	0.00	Vehicle	Vehicle	-----	-553.28	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	-----	-----	**9.43**	**9.43**
		L$_{28}$ - L$_{29}$	-458.29	-79.70	-53.48			0.75	1.17	-46.89	-69.88	0.00	0.00	Vehicle	Vehicle	-----	-686.62	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	-----	-----	**11.69**	**11.69**
		L$_{29}$ - L$_{30}$	-542.18	-35.96	-60.22			0.75	1.17	-31.52	-52.80	0.00	0.00	Vehicle	Vehicle	-----	-773.47	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	-----	-----	**18.43**	**18.43**
		L$_{30}$ - L$_{31}$	-514.03	-73.21	-60.89			0.75	1.18	-54.03	-64.95	0.00	0.00	Vehicle	Vehicle	-----	-752.68	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	-----	-----	**15.41**	**15.41**
		L$_{31}$ - L$_{32}$	-411.21	-64.31	-46.26			0.75	1.18	-41.04	-57.06	0.00	0.00	Vehicle	Vehicle	-----	-608.75	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	----

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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
Center Truss - Verticals	Structure 1	U_0 - L_0	-67.60	13.90	-78.83			0.75	1.24	12.89	-73.13	0.00	0.00	Vehicle	Vehicle	-----	-182.95	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	-----	-----	-----	-----	-----	3.79	3.79
		U_1 - L_1	-24.06	13.90	-45.84			0.75	1.24	12.89	-42.53	0.00	0.00	Vehicle	Vehicle	-----	-86.56	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	-----	-----	-----	-----	-----	7.71	7.71
		U_2 - L_2	12.88	-3.40	-34.29			0.75	1.24	-3.16	-31.82	0.00	0.00	Vehicle	Vehicle	12.64	-24.62	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	-----	-----	-----	-----	-----	11.47	11.47
		U_3 - L_3	37.35	14.55	-20.91			0.75	1.24	13.50	-19.40	0.00	0.00	Vehicle	Vehicle	66.10	-----	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	-----	-----	-----	-----	-----	**28.92**	**28.92**	-----	-----
		U_4 - L_4	-15.53	-19.79	4.19			0.75	1.24	3.89	-18.36	0.00	0.00	Vehicle	Vehicle	-----	-44.06	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	-----	-----	-----	-----	-----	18.21	18.21
		U_5 - L_5	-92.52	-64.53	-2.05			0.75	1.24	-1.90	-59.87	0.00	0.00	Vehicle	Vehicle	-----	-198.10	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	-----	-----	-----	-----	-----	5.56	5.56
		U_6 - L_6	-117.01	-78.15	-5.59			0.75	1.24	-5.18	-72.51	0.00	0.00	Vehicle	Vehicle	-----	-246.37	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	-----	-----	-----	-----	-----	5.39	5.39
		U_7 - L_7	-127.49	-91.70	0.25			0.75	1.24	0.23	-85.08	0.00	0.00	Vehicle	Vehicle	-----	-276.33	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	-126.26	-121.25			0.75	1.24	-112.49	-117.14	0.00	0.00	Vehicle	Vehicle	-----	-631.46	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	-----	-----	-----	-----	-----	5.95	5.95
		U_9 - L_9	-214.45	4.44	-97.00			0.75	1.20	3.99	-87.16	0.00	0.00	Vehicle	Vehicle	-----	-392.09	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	-----	-----	-----	-----	-----	4.94	4.94
		U_{10} - L_{10}	-198.57	0.98	-87.39			0.75	1.20	0.88	-78.52	0.00	0.00	Vehicle	Vehicle	-----	-360.22	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	-----	-----	-----	-----	-----	6.93	6.93
		U_{11} - L_{11}	-171.30	-14.44	-77.61			0.75	1.20	-12.97	-69.73	0.00	0.00	Vehicle	Vehicle	-----	-313.34	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	-----	-----	-----	-----	-----	6.74	6.74
		U_{12} - L_{12}	-128.27	-2.14	-63.16			0.75	1.20	-1.92	-56.75	0.00	0.00	Vehicle	Vehicle	-----	-240.53	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	-----	-----	-----	-----	-----	7.12	7.12
		U_{13} - L_{13}	-96.55	12.45	-53.11			0.75	1.20	11.19	-47.72	0.00	0.00	Vehicle	Vehicle	-----	-187.55	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	-----	-----	-----	-----	-----	5.95	5.95
		U_{14} - L_{14}	-11.04	-18.86	-4.87			0.75	1.20	-4.37	-16.94	0.00	0.00	Vehicle	Vehicle	-----	-36.39	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	-----	-----	-----	-----	-----	19.69	19.69
		U_{15} - L_{15}	-2.54	-49.28	29.90			0.75	1.20	26.86	-44.28	0.00	0.00	Vehicle	Vehicle	31.62	-60.86	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	-----	-----	-----	-----	-----	**16.02**	**16.02**	7.69	7.69
		U_{16} - L_{16}	-31.31	-57.43	22.85			0.75	1.20	20.53	-51.60	0.00	0.00	Vehicle	Vehicle	-----	-107.79	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	-----	-----	-----	-----	-----	6.01	6.01
		U_{17} - L_{17}	-105.02	-79.29	10.42			0.75	1.20	9.36	-71.25	0.00	0.00	Vehicle	Vehicle	-----	-229.14	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	-----	-----	-----	-----	-----	4.30	4.30
		U_{18} - L_{18}	-126.66	-88.89	4.45			0.75	1.20	4.00	-79.87	0.00	0.00	Vehicle	Vehicle	-----	-268.49	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	-----	-----	-----	-----	-----	4.99	4.99
		U_{19} - L_{19}	-166.54	-92.56	-4.76			0.75	1.20	-4.28	-83.16	0.00	0.00	Vehicle	Vehicle	-----	-324.61	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	-----	-----	-----	-----	-----	5.41	5.41
		U_{20} - L_{20}	-184.30	-104.12	-10.34			0.75	1.20	-9.29	-93.56	0.00	0.00	Vehicle	Vehicle	-----	-361.21	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	-----	-----	-----	-----	-----	4.25	4.25
	Structure 2	U_0 - L_0	-203.39	16.06	-105.61			0.75	1.18	14.25	-93.70	0.00	0.00	Vehicle	Vehicle	-----	-386.22	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	-----	-----	-----	-----	-----	4.69	4.69
		U_1 - L_1	-176.11	17.56	-86.19			0.75	1.18	15.58	-76.47	0.00	0.00	Vehicle	Vehicle	-----	-328.36	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	-----	-----	-----	-----	-----	6.49	6.49
		U_2 - L_2	-137.45	16.67	-80.85			0.75	1.18	14.79	-71.74	0.00	0.00	Vehicle	Vehicle	-----	-271.95	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	-----	-----	-----	-----	-----	6.09	6.09
		U_3 - L_3	-117.61	17.36	-72.68			0.75	1.18	15.41	-64.48	0.00	0.00	Vehicle	Vehicle	-----	-236.72	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	-----	-----	-----	-----	-----	5.18	5.18
		U_4 - L_4	-50.97	22.21	-54.16			0.75	1.18	19.71	-48.06	0.00	0.00	Vehicle	Vehicle	-----	-128.73	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	-----	-----	-----	-----	-----	6.00	6.00
		U_5 - L_5	-13.79	28.65	-46.36			0.75	1.18	25.42	-41.13	0.00	0.00	Vehicle	Vehicle	15.13	-71.39	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	-----	-----	-----	-----	-----	**17.37**	**17.37**	7.94	7.94
		U_6 - L_6	45.46	29.05	-38.07			0.75	1.18	25.77	-33.78	0.00	0.00	Vehicle	Vehicle	92.60	-----	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	-----	-----	-----	-----	-----	**14.83**	**14.83**	-----	-----
		U_7 - L_7	-22.33	-17.10	0.76			0.75	1.18	0.68	-15.17	0.00	0.00	Vehicle	Vehicle	-----	-48.76	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	-----	-----	-----	-----	-----	**20.97**	**20.97**		
		U_8 - L_8	-120.06	-71.04	25.26			0.75	1.18	22.41	-63.03	0.00	0.00	Vehicle	Vehicle	-----	-238.01	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	-----	-----	-----	-----	-----	6.51	6.51
		U_9 - L_9	-177.00	-88.00	16.14			0.75	1.18	14.32	-78.08	0.00	0.00	Vehicle	Vehicle	-----	-331.60	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	-----	-----	-----	-----	-----	6.59	6.59
		U_{10} - L_{10}	-205.85	-95.22	10.64			0.75	1.18	9.44	-84.48	0.00	0.00	Vehicle	Vehicle	-----	-377.44	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	-----	-----	-----	-----	-----	6.78	6.78
		U_{11} - L_{11}	-239.21	-101.32	6.82			0.75	1.18	6.05	-89.90	0.00	0.00	Vehicle	Vehicle	-----	-427.84	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	-----	-----	-----	-----	-----	5.85	5.85
		U_{12} - L_{12}	-257.92	-109.92	-1.90			0.75	1.18	-1.69	-97.53	0.00	0.00	Vehicle	Vehicle	-----	-462.09	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	-----	-----	-----	-----	-----	5.58	5.58
		U_{13} - L_{13}	-243.80	-112.98	7.94			0.75	1.18	7.04	-100.24	0.00	0.00	Vehicle	Vehicle	-----	-447.25	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	-----	-----	-----	-----	-----	4.45	4.45
		U_{14} - L_{14}	-420.84	-123.44	-107.95			0.75	1.18	-95.78	-109.52	0.00	0.00	Vehicle	Vehicle	-----	-689.48	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	-----	-----	-----	-----	-----	5.76	5.76
		U_{15} - L_{15}	-158.85	13.16	-93.11			0.75	1.17	11.54	-81.63	0.00	0.00	Vehicle	Vehicle	-----	-312.62	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	-----	-----	-----	-----	-----	6.51	6.51
		U_{16} - L_{16}	-174.03	10.74	-86.52			0.75	1.17	9.42	-75.86	0.00	0.00	Vehicle	Vehicle	-----	-324.85	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	-----	-----	-----	-----	-----	6.49	6.49
		U_{17} - L_{17}	-156.46	12.34	-85.88			0.75	1.17	10.81	-75.29	0.00	0.00	Vehicle	Vehicle	-----	-301.28	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	-----	-----	-----	-----	-----	6.20	6.20
		U_{18} - L_{18}	-142.20	13.05	-78.04			0.75	1.17	11.44	-68.43	0.00	0.00	Vehicle	Vehicle	-----	-273.82	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	-----	-----	-----	-----	-----	6.36	6.36
		U_{19} - L_{19}	-113.66	17.27	-67.22			0.75	1.17	15.14	-58.94	0.00	0.00	Vehicle	Vehicle	-----	-224.37	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	-----	-----	-----	-----	-----	6.75	6.75
		U_{20} - L_{20}	-76.52	24.37	-56.82			0.75	1.17	21.37	-49.82	0.00	0.00	Vehicle	Vehicle	-----	-164.24	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	-----	-----	-----	-----	-----	5.99	5.99
		U_{21} - L_{21}	-45.78	26.59	-51.29			0.75	1.17	23.31	-44.96	0.00	0.00	Vehicle	Vehicle	-----	-117.97	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	-----	-----	-----	-----	-----	6.55	6.55
		U_{22} - L_{22}	-17.71	-20.35	3.73			0.75	1.17	3.27	-17.84	0.00	0.00	Vehicle	Vehicle	-----	-46.22	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	-----	-----	-----	-----	-----	18.17	18.17
		U_{23} - L_{23}	-30.66	-54.59	31.01			0.75	1.17	27.19	-47.86	0.00	0.00	Vehicle	Vehicle	-----	-102.08	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	-----	-----	-----	-----	-----	6.47	6.47
		U_{24} - L_{24}	-62.03	-68.37	16.74			0.75	1.17	14.68	-59.94	0.00	0.00	Vehicle	Vehicle	-----	-158.56	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	-----	-----	-----	-----	-----	5.22	5.22
		U_{25} - L_{25}	-103.10	-81.46	16.69			0.75	1.17	14.64	-71.42	0.00	0.00	Vehicle	Vehicle	-----	-226.87	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	-----	-----	-----	-----	-----	5.72	5.72
		U_{26} - L_{26}	-134.31	-86.93	8.47			0.75	1.17	7.43	-76.22	0.00	0.00	Vehicle	Vehicle	-----	-273.68	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	-----	-----	-----	-----	-----	5.81	5.81
		U_{27} - L_{27}	-155.93	-97.61	10.72			0.75	1.17	9.40	-85.58	0.00	0.00	Vehicle	Vehicle	-----	-313.96	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	-----	-----	-----	-----	-----	5.46	5.46
		U_{28} - L_{28}	-179.28	-107.82	-4.23			0.75	1.17	-3.71	-94.53	0.00	0.00	Vehicle	Vehicle	-----	-355.96	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	-----	-----	-----	-----	-----	5.15	5.15
		U_{29} - L_{29}	-171.45	-106.33	6.51			0.75	1.17	5.71	-93.22	0.00	0.00	Vehicle	Vehicle	-----	-344.07	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	-----	-----	-----	-----	-----	5.56	5.56
		U_{30} - L_{30}	-392.76	-122.60	-100.47			0.75	1.18	-89.14	-108.78	0.00	0.00	Vehicle	Vehicle	-----	-651.99	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	-----	-----	-----	-----	-----	6.06	6.06
		U_{31} - L_{31}	-203.21	13.50	-102.23			0.75	1.18	11.98	-90.70	0.00	0.00	Vehicle	Vehicle	-----	-382.09	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	-----	-----	-----	-----	-----	5.37	5.37
		U_{32} - L_{32}	-222.46	5.02	-99.36			0.75	1.18	4.45	-88.16	0.00	0.00	Vehicle	Vehicle	-----	-403.80	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	P

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: 5C1 **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
Center Truss - Diagonals	Structure 1	U_0 - L_1	53.25	-21.11	52.34			0.75	1.24	48.56	-19.58	0.00	0.00	Vehicle	Vehicle	132.35	-----	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	-----	-----	-----	-----	-----	**10.98**	**10.98**	-----	-----
		U_1 - L_2	10.78	-19.91	13.76			0.75	1.24	12.76	-18.47	0.00	0.00	Vehicle	Vehicle	30.60	-10.01	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	-----	-----	-----	**32.66**	**32.66**	**18.74**	**18.74**
		U_2 - L_3	-44.02	-17.47	49.27			0.75	1.24	45.71	-16.21	0.00	0.00	Vehicle	Vehicle	2.20	-78.29	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	-----	-----	-----	**10.32**	**10.32**	**17.90**	**17.90**
		U_3 - L_4	-76.72	-20.66	-34.77			0.75	1.24	-19.16	-32.26	0.00	0.00	Vehicle	Vehicle	-----	-141.67	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	-----	-----	-----	**-----**	**-----**	**8.05**	**8.05**
		U_4 - L_4	118.39	-6.41	61.96			0.75	1.24	57.48	-5.95	0.00	0.00	Vehicle	Vehicle	228.63	-----	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	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
		U_5 - L_5	137.53	3.88	80.84			0.75	1.24	75.00	3.60	0.00	0.00	Vehicle	Vehicle	276.28	-----	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	-----	-----	-----	-----	-----	**6.84**	**6.84**	-----	-----
		U_6 - L_6	157.34	4.06	89.68			0.75	1.24	83.20	3.77	0.00	0.00	Vehicle	Vehicle	312.69	-----	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	-----	-----	-----	-----	-----	**5.93**	**5.93**	-----	-----
		U_7 - L_7	149.30	9.09	101.85			0.75	1.24	94.49	8.44	0.00	0.00	Vehicle	Vehicle	316.92	-----	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	7.20	117.51			0.75	1.20	105.59	6.47	0.00	0.00	Vehicle	Vehicle	461.08	-----	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	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
		U_9 - L_{10}	260.26	-1.98	83.06			0.75	1.20	74.63	-1.78	0.00	0.00	Vehicle	Vehicle	435.35	-----	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	-----	-----	-----	-----	-----	**9.41**	**9.41**	-----	-----
		U_{10} - L_{11}	236.30	8.18	112.13			0.75	1.20	100.75	7.35	0.00	0.00	Vehicle	Vehicle	438.17	-----	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	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
		U_{11} - L_{12}	211.92	8.74	84.26			0.75	1.20	75.71	7.85	0.00	0.00	Vehicle	Vehicle	373.92	-----	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	-----	-----	-----	-----	-----	**7.47**	**7.47**	-----	-----
		U_{12} - L_{13}	151.66	-15.49	96.05			0.75	1.20	86.30	-13.92	0.00	0.00	Vehicle	Vehicle	309.34	-----	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	-----	-----	-----	-----	-----	**5.56**	**5.56**	-----	-----
		U_{13} - L_{14}	108.60	-25.67	76.82			0.75	1.20	69.02	-23.07	0.00	0.00	Vehicle	Vehicle	230.91	-----	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	-----	-----	-----	-----	-----	**4.62**	**4.62**	-----	-----
		U_{14} - L_{14}	-24.45	-42.23	35.11			0.75	1.20	31.55	-37.94	0.00	0.00	Vehicle	Vehicle	9.23	-81.10	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	-----	-----	-----	**14.33**	**14.33**	**8.01**	**8.01**
		U_{15} - L_{15}	23.99	-28.26	51.43			0.75	1.20	46.21	-25.39	0.00	0.00	Vehicle	Vehicle	91.26	-1.82	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	-----	-----	-----	**8.74**	**8.74**	**13.73**	**13.73**
		U_{17} - L_{16}	120.03	-17.44	74.76			0.75	1.20	67.17	-15.67	0.00	0.00	Vehicle	Vehicle	243.37	-----	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	-----	-----	-----	-----	-----	**6.02**	**6.02**	-----	-----
		U_{18} - L_{17}	144.79	-8.42	88.19			0.75	1.20	79.24	-7.56	0.00	0.00	Vehicle	Vehicle	291.24	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U_{19} - L_{18}	193.05	1.70	93.51			0.75	1.20	84.01	1.52	0.00	0.00	Vehicle	Vehicle	360.19	-----	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	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
		U_{20} - L_{19}	193.51	9.54	59.76			0.75	1.20	53.69	8.57	0.00	0.00	Vehicle	Vehicle	321.36	-----	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	-----	-----	-----	-----	-----	**9.62**	**9.62**	-----	-----
		U_0 - L_1	202.41	-18.20	92.84			0.75	1.18	82.37	-16.14	0.00	0.00	Vehicle	Vehicle	370.22	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
		U_1 - L_2	190.86	-20.52	104.33			0.75	1.18	92.57	-18.21	0.00	0.00	Vehicle	Vehicle	368.46	-----	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	-----	-----	-----	-----	-----	**6.34**	**6.34**	-----	-----
		U_2 - L_3	155.85	-20.05	93.15			0.75	1.18	82.65	-17.79	0.00	0.00	Vehicle	Vehicle	310.04	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
		U_3 - L_4	134.05	-21.78	81.25			0.75	1.18	72.09	-19.32	0.00	0.00	Vehicle	Vehicle	267.99	-----	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	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_4 - L_5	46.02	-23.48	73.94			0.75	1.18	65.60	-20.84	0.00	0.00	Vehicle	Vehicle	145.11	-----	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	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
		U_5 - L_6	3.45	-47.64	61.11			0.75	1.18	54.22	-42.27	0.00	0.00	Vehicle	Vehicle	74.96	-50.47	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	-----	-----	-----	**7.82**	**7.82**	**7.79**	**7.79**
		U_6 - L_7	-84.29	-70.68	37.86			0.75	1.18	33.59	-62.71	0.00	0.00	Vehicle	Vehicle	-----	-191.09	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	-----	-----	-----	**-----**	**-----**	**4.39**	**4.39**
		U_7 - L_7	137.30	-31.90	65.81			0.75	1.18	58.39	-28.31	0.00	0.00	Vehicle	Vehicle	254.39	-----	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	-----	-----	-----	-----	-----	**7.98**	**7.98**	-----	-----
		U_8 - L_8	210.89	-18.97	81.60			0.75	1.18	72.40	-16.83	0.00	0.00	Vehicle	Vehicle	368.27	-----	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	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
		U_{10} - L_9	236.36	-12.81	93.11			0.75	1.18	82.61	-11.36	0.00	0.00	Vehicle	Vehicle	414.66	-----	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	-----	-----	-----	-----	-----	**6.55**	**6.55**	-----	-----
		U_{11} - L_{10}	274.62	-8.78	96.31			0.75	1.18	85.45	-7.79	0.00	0.00	Vehicle	Vehicle	468.09	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
		U_{12} - L_{11}	281.06	-4.81	104.78			0.75	1.18	92.96	-4.26	0.00	0.00	Vehicle	Vehicle	486.24	-----	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	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U_{13} - L_{12}	278.12	-8.45	102.90			0.75	1.18	91.29	-7.50	0.00	0.00	Vehicle	Vehicle	480.23	-----	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	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
		U_{14} - L_{13}	235.45	-8.30	101.19			0.75	1.18	89.78	-7.36	0.00	0.00	Vehicle	Vehicle	422.80	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
		U_{15} - L_{15}	143.03	-4.85	95.30			0.75	1.17	83.56	-4.25	0.00	0.00	Vehicle	Vehicle	294.56	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
		U_{16} - L_{16}	171.91	-13.11	103.44			0.75	1.17	90.69	-11.49	0.00	0.00	Vehicle	Vehicle	341.38	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
		U_{17} - L_{17}	181.04	-13.06	107.13			0.75	1.17	93.93	-11.45	0.00	0.00	Vehicle	Vehicle	357.45	-----	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	-----	-----	-----	-----	-----	**5.63**	**5.63**	-----	-----
		U_{18} - L_{18}	171.16	-14.74	92.97			0.75	1.17	81.51	-12.92	0.00	0.00	Vehicle	Vehicle	328.47	-----	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	-----	-----	-----	-----	-----	**5.88**	**5.88**	-----	-----
		U_{19} - L_{19}	150.64	-16.63	91.12			0.75	1.17	79.89	-14.58	0.00	0.00	Vehicle	Vehicle	299.69	-----	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_{20} - L_{20}	125.86	-17.82	88.86			0.75	1.17	77.91	-15.63	0.00	0.00	Vehicle	Vehicle	264.90	-----	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}	76.05	-23.64	77.41			0.75	1.17	67.86	-20.72	0.00	0.00	Vehicle	Vehicle	187.09	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
		U_{21} - L_{22}	38.34	-41.10	54.14			0.75	1.17	47.47	-36.03	0.00	0.00	Vehicle	Vehicle	111.56	-----	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	-----	-----	-----	-----	-----	**8.20**	**8.20**	-----	-----
		U_{23} - L_{22}	18.02	-43.99	40.81			0.75	1.17	35.78	-38.57	0.00	0.00	Vehicle	Vehicle	69.94	-26.71	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	-----	-----	-----	**11.45**	**11.45**	**8.84**	**8.84**
		U_{24} - L_{23}	58.54	-33.33	61.05			0.75	1.17	53.52	-29.22	0.00	0.00	Vehicle	Vehicle	145.69	-----	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	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
		U_{25} - L_{24}	114.92	-22.26	72.88			0.75	1.17	63.90	-19.51	0.00	0.00	Vehicle	Vehicle	232.46	-----	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	-----	-----	-----	-----	-----	**7.64**	**7.64**	-----	-----
		U_{26} - L_{25}	142.93	-12.03	85.91			0.75	1.17	75.32	-10.55	0.00	0.00	Vehicle	Vehicle	283.73	-----	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	-----	-----	-----	-----	-----	**6.74**	**6.74**	-----	-----
		U_{27} - L_{26}	173.71	-6.59	88.91			0.75	1.17	77.95	-5.78	0.00	0.00	Vehicle	Vehicle	327.16	-----	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	-----	-----	-----	-----	-----	**6.12**	**6.12**	-----	-----
		U_{28} - L_{27}	186.49	-0.50	100.17			0.75	1.17	87.83	-0.44	0.00	0.00	Vehicle	Vehicle	356.61	-----	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	-----	-----	-----	-----	-----	**5.96**	**5.96**	-----	-----
		U_{29} - L_{28}	190.57	-7.89	99.23			0.75	1.17	87.00	-6.92	0.00	0.00	Vehicle	Vehicle	360.84	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
		U_{30} - L_{29}	161.74	-6.03	98.40			0.75	1.17	86.27	-5.29	0.00	0.00	Vehicle	Vehicle	322.42	-----	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	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
		U_{30} - L_{31}	191.49	-6.67	102.11			0.75	1.18	90.60	-5.92	0.00	0.00	Vehicle	Vehicle	366.71	-----	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	-----	-----	-----	-----	-----	**6.47**	**6.47**	-----	-----
		U_{31} - L_{32}	226.17	-14.84	106.45			0.75	1.18	94.45	-13.16	0.00	0.00	Vehicle	Vehicle	416.80	-----	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	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_{32} - L_{33}	243.26	-3.75	108.89			0.75	1.18	96.61	-3.33	0.00	0.00	Vehicle	Vehicle	441.83	-----	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	-----	-----	-----	-----	-----	**6.22**	**6.22**	-----	-----
		U_{33} - L_{34}	238.98	-3.34	99.87			0.75	1.18	88.61	-2.96	0.00	0.00	Vehicle	Vehicle	425.86	-----	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	-----	-----	-----	-----	-----	**6.83**	**6.83**	-----	-----
		U_{34} - L_{35}	222.10	5.61	107.36			0.75	1.18	95.25	4.98	0.00	0.00	Vehicle	Vehicle	412.56	-----	0.00	30.63	30.6305	1010.81	131.71

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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 - Upper Chord	Structure 1	U$_0$ - U$_1$	-66.77	-37.04	-8.32	-8.83	2.20	0.90	1.24	-9.26	-41.23	2.20	-8.83	Vehicle	Vehicle	-----	-140.40	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	-----	-----	**12.09**	**12.09**
		U$_1$ - U$_2$	-86.66	-11.71	-65.07	6.00	-16.34	0.90	1.24	-13.03	-72.45	6.00	-16.34	Vehicle	Vehicle	-----	-206.84	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	-----	-----	**6.61**	**6.61**
		U$_2$ - U$_3$	-48.28	47.12	-66.49	9.44	-19.05	0.90	1.24	52.46	-74.02	9.44	-19.05	Vehicle	Vehicle	5.44	-158.98	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	**13.71**	**13.71**	**6.99**	**6.99**
		U$_3$ - U$_4$	36.43	60.45	-60.06	12.72	-17.47	0.90	1.24	67.30	-66.86	12.72	-17.47	Vehicle	Vehicle	134.85	-39.56	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	**9.43**	**9.43**	**9.00**	**9.00**
		U$_4$ - U$_5$	38.78	60.63	-71.49	12.78	-17.37	0.90	1.24	67.50	-79.59	12.78	-17.37	Vehicle	Vehicle	138.17	-53.05	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	**9.37**	**9.37**	**7.59**	**7.59**
		U$_5$ - U$_6$	154.43	67.50	-46.75	15.13	-12.03	0.90	1.24	75.15	-52.05	15.13	-12.03	Vehicle	Vehicle	298.45	-----	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	-----	-----	**6.88**	**6.88**	-----	-----
		U$_6$ - U$_7$	288.19	72.82	-16.49	17.11	-4.31	0.90	1.24	81.07	-18.35	17.11	-4.31	Vehicle	Vehicle	480.04	-----	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	-----	-----	**6.37**	**6.37**	-----	-----
		U$_7$ - U$_8$	410.75	17.08	14.73	18.24	4.35	0.90	1.24	19.01	16.40	18.24	4.35	Pedestrian	Vehicle	582.40	-----	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	-----	-----	**18.77**	**18.77**	-----	-----
		U$_8$ - U$_9$	311.35	14.55	2.25	19.05	0.00	0.90	1.20	15.69	2.42	19.05	0.00	Pedestrian	Vehicle	449.90	-----	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	-----	-----	**18.07**	**18.07**	-----	-----
		U$_9$ - U$_{10}$	78.25	-16.69	-5.16	5.45	0.00	0.90	1.20	-5.56	-17.99	5.45	0.00	Vehicle	Vehicle	94.49	-----	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	45.00	Pass	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
		U$_{10}$ - U$_{11}$	-141.75	48.02	-50.64	-7.34	0.00	0.90	1.20	51.78	-54.60	0.00	-7.34	Vehicle	Vehicle	-----	-255.25	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	-----	-----	**8.35**	**8.35**
		U$_{11}$ - U$_{12}$	-338.40	44.15	-83.46	9.77	-27.96	0.90	1.20	47.60	-89.99	9.77	-27.96	Vehicle	Vehicle	-----	-556.91	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	-----	-----	**5.27**	**5.27**
		U$_{12}$ - U$_{13}$	-480.50	38.62	-107.89	8.23	-34.35	0.90	1.20	41.63	-116.33	8.23	-34.35	Vehicle	Vehicle	-----	-775.87	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	-----	-----	**5.65**	**5.65**
		U$_{13}$ - U$_{14}$	-571.10	32.77	-139.90	6.68	-37.24	0.90	1.20	35.33	-150.84	6.68	-37.24	Vehicle	Vehicle	-----	-938.52	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	-----	-----	**5.01**	**5.01**
		U$_{14}$ - U$_{15}$	-571.52	32.61	-152.48	6.65	-37.25	0.90	1.20	35.16	-164.41	6.65	-37.25	Vehicle	Vehicle	-----	-956.71	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	-----	-----	**4.60**	**4.60**
		U$_{15}$ - U$_{16}$	-582.34	25.46	-147.46	4.98	-36.14	0.90	1.20	27.45	-158.99	4.98	-36.14	Vehicle	Vehicle	-----	-963.73	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	-----	-----	**4.69**	**4.69**
		U$_{16}$ - U$_{17}$	-539.92	11.17	-127.52	3.53	-31.87	0.90	1.20	12.04	-137.49	3.53	-31.87	Vehicle	Vehicle	-----	-880.63	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	-----	-----	**5.73**	**5.73**
		U$_{17}$ - U$_{18}$	-422.72	12.31	-94.48	2.26	-25.07	0.90	1.20	13.27	-101.87	2.26	-25.07	Vehicle	Vehicle	-----	-681.96	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	-----	-----	**5.38**	**5.38**
		U$_{18}$ - U$_{19}$	-286.53	6.95	-59.11	1.28	-16.97	0.90	1.20	7.50	-63.74	1.28	-16.97	Vehicle	Vehicle	-----	-455.35	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	-----	-----	**6.13**	**6.13**
		U$_{19}$ - U$_{20}$	-140.97	1.85	-28.40	0.55	-8.68	0.90	1.20	2.00	-30.62	0.55	-8.68	Vehicle	Vehicle	-----	-223.06	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	-----	-----	**17.53**	**17.53**
	Structure 2	U$_0$ - U$_1$	-147.48	-30.25	-12.02	-4.88	0.36	0.90	1.18	-12.80	-32.21	0.36	-4.88	Vehicle	Vehicle	-----	-233.60	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	-----	-----	**15.52**	**15.52**
		U$_1$ - U$_2$	-319.09	-12.76	-75.52	1.96	-13.36	0.90	1.18	-13.59	-80.40	1.96	-13.36	Vehicle	Vehicle	-----	-519.33	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	-----	-----	**5.87**	**5.87**
		U$_2$ - U$_3$	-460.93	-97.50	-78.64	-20.95	3.77	0.90	1.18	-83.73	-103.80	3.77	-20.95	Vehicle	Vehicle	-----	-734.15	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	-----	-----	**5.94**	**5.94**
		U$_3$ - U$_4$	-580.02	40.61	-106.39	5.92	-27.68	0.90	1.18	43.24	-113.28	5.92	-27.68	Vehicle	Vehicle	-----	-901.29	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	-----	-----	**6.72**	**6.72**
		U$_4$ - U$_5$	-616.47	52.66	-125.51	7.86	-31.35	0.90	1.18	56.07	-133.63	7.86	-31.35	Vehicle	Vehicle	-----	-975.13	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	-----	-----	**6.52**	**6.52**
		U$_5$ - U$_6$	-604.69	64.80	-153.43	9.87	-32.88	0.90	1.18	68.99	-163.35	9.87	-32.88	Vehicle	Vehicle	-----	-998.45	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	-----	-----	**5.40**	**5.40**
		U$_6$ - U$_7$	-514.75	73.94	-142.39	11.56	-31.23	0.90	1.18	78.73	-151.60	11.56	-31.23	Vehicle	Vehicle	-----	-866.26	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	-----	-----	**5.45**	**5.45**
		U$_7$ - U$_8$	-512.80	74.01	-114.62	11.57	-31.18	0.90	1.18	78.80	-122.03	11.57	-31.18	Vehicle	Vehicle	-----	-825.28	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	-----	-----	**6.79**	**6.79**
		U$_8$ - U$_9$	-373.48	82.04	-134.20	13.16	-27.41	0.90	1.18	87.35	-142.88	13.16	-27.41	Vehicle	Vehicle	-----	-671.27	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	-----	-----	**5.27**	**5.27**
		U$_9$ - U$_{10}$	-181.02	85.45	-99.99	14.25	-21.42	0.90	1.18	90.98	-106.46	14.25	-21.42	Vehicle	Vehicle	-----	-373.72	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	-----	-----	**6.62**	**6.62**
		U$_{10}$ - U$_{11}$	26.21	87.91	-64.45	15.21	-14.40	0.90	1.18	93.59	-68.62	15.21	-14.40	Vehicle	Vehicle	155.74	-55.13	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	**9.45**	**9.45**	**11.59**	**11.59**
		U$_{11}$ - U$_{12}$	237.41	86.94	-28.68	15.56	-6.85	0.90	1.18	92.57	-30.53	15.56	-6.85	Vehicle	Vehicle	428.96	-----	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	-----	-----	**7.27**	**7.27**	-----	-----
		U$_{12}$ - U$_{13}$	435.92	82.81	-2.33	15.82	0.56	0.90	1.18	88.16	-2.48	15.82	0.56	Vehicle	Vehicle	681.30	-----	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	-----	-----	**7.98**	**7.98**	-----	-----
		U$_{13}$ - U$_{14}$	595.85	9.27	19.85	15.74	6.92	0.90	1.18	21.13	9.87	15.74	6.92	Pedestrian	Pedestrian	822.54	-----	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	-----	-----	**26.27**	**26.27**	-----	-----
		U$_{14}$ - U$_{15}$	615.52	30.41	-1.26	24.37	0.00	0.90	1.17	31.99	-1.33	24.37	0.00	Pedestrian	Vehicle	873.45	-----	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	-----	-----	**16.83**	**16.83**	-----	-----
		U$_{15}$ - U$_{16}$	486.12	35.54	-0.57	14.17	3.09	0.90	1.17	37.39	-0.60	14.17	3.09	Pedestrian	Pedestrian	698.99	-----	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	-----	-----	**15.25**	**15.25**	-----	-----
		U$_{16}$ - U$_{17}$	339.23	-7.15	-21.12	11.57	0.00	0.90	1.17	-7.52	-22.22	11.57	0.00	Vehicle	Vehicle	431.21	-----	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	75.25	-54.45	4.46	0.00	0.90	1.17	79.17	-57.28	4.46	0.00	Vehicle	Vehicle	352.60	-----	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	-----	-----	**7.25**	**7.25**	-----	-----
		U$_{18}$ - U$_{19}$	53.73	68.93	-74.24	-2.79	-12.78	0.90	1.17	72.52	-78.11	-2.79	-12.78	Vehicle	Vehicle	164.12	-31.70	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	**9.83**	**9.83**	**8.98**	**8.98**
		U$_{19}$ - U$_{20}$	-59.08	61.12	-92.27	15.07	-15.68	0.90	1.17	64.30	-97.07	15.07	-15.68	Vehicle	Vehicle	6.79	-203.00	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	**13.67**	**13.67**	**6.53**	**6.53**
	Structure 3	U$_{20}$ - U$_{21}$	-125.50	50.97	-113.04	14.76	-16.53	0.90	1.17	53.63	-118.93	14.76	-16.53	Vehicle	Vehicle	-----	-317.76	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$_{21}$ - U$_{22}$	-146.93	41.91	-112.68	14.37	-22.74	0.90	1.17	44.09	-118.55	14.37	-22.74	Vehicle	Vehicle	-----	-345.13	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	-----	-----	**5.82**	**5.82**
		U$_{22}$ - U$_{23}$	-146.70	39.34	-123.82	14.36	-22.72	0.90	1.17	41.39	-130.27	14.36	-22.72	Pedestrian	Vehicle	-----	-360.07	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	-----	-----	**5.30**	**5.30**
		U$_{23}$ - U$_{24}$	-112.76	27.23	-116.49	13.87	-21.04	0.90	1.17	28.65	-122.56	13.87	-21.04	Pedestrian	Vehicle	-----	-305.92	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	-----	-----	**5.91**	**5.91**
		U$_{24}$ - U$_{25}$	-36.27	58.66	-98.65	13.40	-15.02	0.90	1.17	61.72	-103.79	13.40	-15.02	Vehicle	Vehicle	33.08	-182.09	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	**13.88**	**13.88**	**6.33**	**6.33**
		U$_{25}$ - U$_{26}$	80.70	63.47	-69.91	12.92	-12.15	0.90	1.17	66.77	-73.55	12.92	-12.15	Vehicle	Vehicle	191.71	-----	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	-----	-----	**10.27**	**10.27**	-----	-----
		U$_{26}$ - U$_{27}$	220.59	67.13	-43.55	12.57	-5.86	0.90	1.17	70.63	-45.81	12.57	-5.86	Vehicle	Vehicle	378.59	-----	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	-----	-----	**7.73**	**7.73**	-----	-----
		U$_{27}$ - U$_{28}$	363.31	67.23	-16.05	12.37	0.18	0.90	1.17	70.74	-16.88	12.37	0.18	Vehicle	Vehicle	564.26	-----	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	-----	-----	**9.62**	**9.62**	-----	-----
		U$_{28}$ - U$_{29}$	503.82	7.97	10.34	12.23	3.11	0.90	1.17	10.87	8.38	12.23	3.11	Pedestrian	Pedestrian	685.01	-----	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	-----	-----	**33.26**	**33.26**	-----	-----
		U$_{29}$ - U$_{30}$	616.57	-3.25	18.16	0.00	7.42	0.90	1.17	19.10	-3.42	7.42	0.00	Pedestrian	Vehicle	836.01	-----	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	-----	-----

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: 5C1 **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 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	-2.76	1.27	-2.06	0.36	0.90	1.24	1.42	-3.07	0.36	-2.06	Vehicle	Pedestrian	-----	-9.28	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	-----	-----	**82.13**	**82.13**
		L_1 - L_2	67.91	27.59	29.78	0.00	5.87	0.90	1.24	33.16	30.71	5.87	0.00	Vehicle	Vehicle	131.38	-----	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	-----	-----	**13.11**	**13.11**	-----	-----
		L_2 - L_3	78.84	-38.62	75.65	-7.39	15.48	0.90	1.24	84.22	-42.99	15.48	-7.39	Vehicle	Vehicle	211.98	-----	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	-----	-----	**7.00**	**7.00**	-----	-----
		L_3 - L_4	39.14	-53.71	82.11	-10.83	18.09	0.90	1.24	91.42	-59.80	18.09	-10.83	Vehicle	Vehicle	169.72	-26.86	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	**6.89**	**6.89**	**10.07**	**10.07**
		L_4 - L_5	-166.38	-76.61	53.04	-16.90	10.96	0.90	1.24	59.05	-85.29	10.96	-16.90	Vehicle	Vehicle	-----	-327.17	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	-----	-----	**3.92**	**3.92**
		L_5 - L_6	-301.23	-82.16	20.02	-18.93	3.23	0.90	1.24	22.28	-91.47	3.23	-18.93	Vehicle	Vehicle	-----	-510.50	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	44.35	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.92**	**3.92**
		L_6 - L_7	-438.94	-87.91	-7.82	-21.52	-4.99	0.90	1.24	-8.70	-97.87	-4.99	-21.52	Pedestrian	Vehicle	-----	-697.84	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	-----	-----	**5.17**	**5.17**
		L_7 - L_8	-551.65	-3.04	-59.85	0.00	-35.55	0.90	1.24	-3.38	-66.63	0.00	-35.55	Vehicle	Pedestrian	-----	-849.97	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	-----	-----	**6.34**	**6.34**
		L_8 - L_9	-570.53	-94.43	10.56	-37.48	0.00	0.90	1.20	11.38	-101.81	0.00	-37.48	Vehicle	Pedestrian	-----	-922.76	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	44.52	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.52**	**4.52**
		L_9 - L_{10}	-355.48	-51.81	-28.42	-13.03	-11.67	0.90	1.20	-30.64	-55.87	-11.67	-13.03	Pedestrian	Vehicle	-----	-534.75	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	-----	-----	**10.56**	**10.56**
		L_{10} - L_{11}	-118.48	-42.50	19.44	-12.43	0.00	0.90	1.20	20.96	-45.82	0.00	-12.43	Vehicle	Vehicle	-----	-213.59	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	-----	-----	**8.33**	**8.33**
		L_{11} - L_{12}	103.45	40.15	53.69	0.49	0.00	0.90	1.20	57.89	43.29	0.49	0.00	Vehicle	Vehicle	209.74	-----	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	-----	-----	**8.47**	**8.47**	-----	-----
		L_{12} - L_{13}	300.60	-36.47	100.29	-8.14	17.83	0.90	1.20	108.13	-39.32	17.83	-8.14	Vehicle	Vehicle	531.36	-----	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	-----	-----	**6.23**	**6.23**	-----	-----
		L_{13} - L_{14}	441.19	67.19	104.36	-6.61	24.15	0.90	1.20	112.53	72.44	24.15	-6.61	Vehicle	Vehicle	719.84	-----	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	-----	-----	**7.70**	**7.70**	-----	-----
		L_{14} - L_{15}	547.00	-19.48	132.48	-3.49	24.57	0.90	1.20	142.84	-21.00	24.57	-3.49	Vehicle	Vehicle	896.79	-----	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	-----	-----	**7.19**	**7.19**	-----	-----
		L_{15} - L_{16}	506.09	-13.03	116.58	-2.03	20.32	0.90	1.20	125.69	-14.05	20.32	-2.03	Vehicle	Vehicle	821.32	-----	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	-----	-----	**8.50**	**8.50**	-----	-----
		L_{16} - L_{17}	398.75	-16.09	87.97	-0.83	12.72	0.90	1.20	94.85	-17.35	12.72	-0.83	Vehicle	Vehicle	641.68	-----	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	-----	-----	**8.62**	**8.62**	-----	-----
		L_{17} - L_{18}	263.81	-2.42	51.72	0.15	4.66	0.90	1.20	55.77	-2.60	4.66	0.15	Vehicle	Vehicle	415.45	-----	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	-----	-----	**11.11**	**11.11**	-----	-----
		L_{18} - L_{19}	118.75	-10.06	24.34	0.71	-3.38	0.90	1.20	26.24	-10.85	0.71	-3.38	Vehicle	Vehicle	188.49	-----	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	-----	-----	**14.63**	**14.63**	-----	-----
		L_{19} - L_{20}	-23.36	3.79	-5.17	1.28	-12.08	0.90	1.20	4.09	-5.58	1.28	-12.08	Vehicle	Pedestrian	-----	-53.32	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	-----	-----	**22.66**	**22.66**
		L_0- L_1	-36.12	-7.63	5.06	-5.14	1.19	0.90	1.18	5.39	-8.12	1.19	-5.14	Vehicle	Pedestrian	-----	-64.20	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	-----	-----	**37.61**	**37.61**
		L_1 - L_2	132.64	27.89	11.72	2.93	-0.06	0.90	1.18	29.69	12.48	2.93	-0.06	Vehicle	Vehicle	211.04	-----	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	-----	-----	**16.86**	**16.86**	-----	-----
		L_2 - L_3	303.94	51.87	42.96	10.52	-1.79	0.90	1.18	55.22	45.74	10.52	-1.79	Vehicle	Vehicle	466.91	-----	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	-----	-----	**12.17**	**12.17**	-----	-----
		L_3 - L_4	445.73	91.69	80.41	0.00	13.17	0.90	1.18	97.62	85.61	13.17	0.00	Vehicle	Vehicle	706.36	-----	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	-----	-----	**8.85**	**8.85**	-----	-----
		L_4 - L_5	567.64	-36.72	130.44	-6.10	24.81	0.90	1.18	138.88	-39.10	24.81	-6.10	Vehicle	Vehicle	918.48	-----	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	-----	-----	**7.79**	**7.79**	-----	-----
		L_5 - L_6	603.43	-55.56	160.53	-8.06	28.47	0.90	1.18	170.92	-59.15	28.47	-8.06	Vehicle	Vehicle	1006.66	-----	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	-----	-----	**6.96**	**6.96**	-----	-----
		L_6 - L_7	599.28	-70.30	172.79	-10.41	30.25	0.90	1.18	183.97	-74.85	30.25	-10.41	Vehicle	Vehicle	1018.23	-----	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	-----	-----	**6.62**	**6.62**	-----	-----
		L_7 - L_8	373.73	-87.40	129.54	-13.66	24.92	0.90	1.18	137.92	-93.05	24.92	-13.66	Vehicle	Vehicle	665.14	-----	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	-----	-----	**7.02**	**7.02**	-----	-----
		L_8 - L_9	195.51	-93.67	106.88	-15.12	19.51	0.90	1.18	113.79	-99.73	19.51	-15.12	Vehicle	Vehicle	402.09	-----	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	-----	-----	**7.95**	**7.95**	-----	-----
		L_9 - L_{10}	-13.41	-96.30	69.22	-16.11	12.45	0.90	1.18	73.70	-102.53	12.45	-16.11	Vehicle	Vehicle	78.37	-150.73	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	**11.88**	**11.88**	**6.97**	**6.97**
		L_{10} - L_{11}	-217.51	-96.91	33.59	-17.02	5.50	0.90	1.18	35.77	-103.18	5.50	-17.02	Vehicle	Vehicle	-----	-416.89	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	-----	-----	**4.20**	**4.20**
		L_{11} - L_{12}	-420.12	-96.11	4.13	-17.31	-2.05	0.90	1.18	4.39	-102.33	-2.05	-17.31	Vehicle	Vehicle	-----	-679.18	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	-----	-----	**4.99**	**4.99**
		L_{12} - L_{13}	-591.61	-96.67	-17.05	-18.75	-7.10	0.90	1.18	-18.15	-102.92	-7.10	-18.75	Pedestrian	Vehicle	-----	-902.89	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	-----	-----	**6.64**	**6.64**
		L_{13} - L_{14}	-724.42	-0.29	-47.78	0.00	-35.12	0.90	1.18	-0.31	-50.87	0.00	-35.12	Vehicle	Pedestrian	-----	-1053.53	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	-----	-----	**9.20**	**9.20**
		L_{14} - L_{15}	-747.19	-48.80	17.19	-36.29	0.00	0.90	1.17	18.09	-51.34	0.00	-36.29	Vehicle	Pedestrian	-----	-1085.27	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	-----	-----	**8.76**	**8.76**
		L_{15} - L_{16}	-632.29	13.68	-22.29	0.00	-31.22	0.90	1.17	14.39	-23.45	0.00	-31.22	Vehicle	Pedestrian	-----	-893.04	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	-----	-----	**11.76**	**11.76**
		L_{16} - L_{17}	-337.06	-16.06	21.05	-18.13	0.00	0.90	1.17	22.14	-16.90	0.00	-18.13	Vehicle	Pedestrian	-----	-483.71	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	-----	-----	**11.15**	**11.15**
		L_{17} - L_{18}	-183.64	-63.26	59.59	-11.34	4.48	0.90	1.17	62.69	-66.55	4.48	-11.34	Vehicle	Vehicle	-----	-325.24	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	-----	-----	**5.86**	**5.86**
		L_{18} - L_{19}	-45.76	-56.88	73.63	-9.58	8.92	0.90	1.17	77.46	-59.84	8.92	-9.58	Vehicle	Vehicle	41.22	-137.28	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	**9.36**	**9.36**	**8.82**	**8.82**
	Structure 2	L_{20} - L_{21}	68.06	-50.54	99.49	-9.12	11.57	0.90	1.17	104.67	-53.17	11.57	-9.12	Vehicle	Vehicle	224.56	-----	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	-----	-----	**8.57**	**8.57**	-----	-----
		L_{21} - L_{22}	134.01	-40.40	114.05	-8.81	13.61	0.90	1.17	120.00	-42.50	13.61	-8.81	Vehicle	Vehicle	330.20	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
		L_{22} - L_{23}	122.68	-19.08	96.85	-7.57	11.79	0.90	1.17	101.89	-20.07	11.79	-7.57	Vehicle	Pedestrian	291.95	-----	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	-----	-----	**8.26**	**8.26**	-----	-----
		L_{23} - L_{24}	46.89	-49.96	84.86	-7.09	8.09	0.90	1.17	89.28	-52.57	8.09	-7.09	Vehicle	Vehicle	177.02	-7.38	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**10.28**	**10.28**	**16.38**	**16.38**
		L_{24} - L_{25}	-66.54	-55.59	59.32	-6.23	2.64	0.90	1.17	62.41	-58.48	2.64	-6.23	Vehicle	Vehicle	-----	-162.53	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	-----	-----	**8.67**	**8.67**
		L_{25} - L_{26}	-205.63	-59.38	28.46	-5.87	-3.61	0.90	1.17	29.95	-62.47	-3.61	-5.87	Vehicle	Vehicle	-----	-348.53	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	-----	-----	**5.89**	**5.89**
		L_{26} - L_{27}	-350.43	-60.47	5.62	-5.25	-6.72	0.90	1.17	5.91	-63.62	-5.25	-6.72	Vehicle	Vehicle	-----	-538.25	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	-----	-----	**5.93**	**5.93**
		L_{27} - L_{28}	-494.65	-60.16	-20.99	-5.10	-12.12	0.90	1.17	-22.08	-63.30	-5.10	-12.12	Vehicle	Vehicle	-----	-725.33	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	-----	-----	**8.74**	**8.74**
		L_{28} - L_{29}	-620.83	-34.77	-32.41	-31.78	-17.19	0.90	1.17	-34.10	-36.58	-17.19	-31.78	Pedestrian	Pedestrian	-----	-895.94	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	-----	-----	**9.58**	**9.58**
		L_{29} - L_{30}	-716.91	-24.95	-38.81	0.00	-36.29	0.90	1.17	-26.25	-40.83	0.00	-36.29	Vehicle	Pedestrian	-----	-1032.24	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	-----	-----	**10.35**	**10.35**
		L_{30} - L_{31}	-850.71	-46.53	39.51	-35.97	0.00	0.90	1.18	42.07	-49.54	0.00	-35.97	Vehicle	Pedestrian	-----	-1217.08	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	43.49	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**7.77**	**7.77**
		L_{31} - L_{32}	-694.11	41.70	-20.00	0.00	-30.04	0.90	1.18	44.40	-21.30	0.00	-30.04	Vehicle	Pedestrian	-----	-969.08	9.73	59.60

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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	5.67	-63.67	3.44	-12.32	0.90	1.24	6.31	-70.88	3.44	-12.32	Pedestrian	Vehicle	-----	-213.98	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	-----	-----	-----	-----	-----	3.54	3.54
		U_1 - L_1	-46.53	15.10	-32.80	2.93	-9.05	0.90	1.24	16.81	-36.52	2.93	-9.05	Vehicle	Vehicle	-----	-107.97	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	-----	-----	-----	-----	-----	8.37	8.37
		U_2 - L_2	-0.10	13.51	-22.10	2.84	-5.68	0.90	1.24	15.04	-24.61	2.84	-5.68	Vehicle	Vehicle	19.42	-32.12	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	28.44	28.44	14.30	14.30
		U_3 - L_3	39.60	4.05	-8.90	2.69	-2.12	0.90	1.24	4.51	-9.90	2.69	-2.12	Pedestrian	Vehicle	60.83	-----	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	-----	-----	6.56	-----	-----	53.92	53.92	-----	-----
		U_4 - L_4	-30.20	-12.01	0.50	-3.46	0.00	0.90	1.24	0.56	-13.37	0.00	-3.46	Vehicle	Vehicle	-----	-56.65	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	-----	-----	23.90	23.90
		U_5 - L_5	-130.49	-37.24	2.25	-10.23	0.00	0.90	1.24	2.51	-41.46	0.00	-10.23	Vehicle	Vehicle	-----	-223.53	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	-----	-----	7.11	7.11
		U_6 - L_6	-158.18	-41.39	8.85	-13.06	0.00	0.90	1.24	9.85	-46.08	0.00	-13.06	Vehicle	Vehicle	-----	-265.54	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	-----	-----	7.59	7.59
		U_7 - L_7	-152.32	-41.99	14.13	-13.24	0.00	0.90	1.24	15.74	-46.75	0.00	-13.24	Vehicle	Vehicle	-----	-258.79	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	-----	-----	6.59	6.59
		U_8 - L_8	-455.55	-44.05	-73.13	-12.74	-18.97	0.90	1.24	-49.04	-81.41	-12.74	-18.97	Vehicle	Vehicle	-----	-698.04	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	-----	-----	7.49	7.49
		U_9 - L_9	-287.55	3.33	-70.13	0.00	-18.20	0.90	1.20	3.59	-75.61	0.00	-18.20	Vehicle	Vehicle	-----	-472.11	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}	-276.32	1.57	-68.29	0.00	-17.54	0.90	1.20	1.69	-73.63	0.00	-17.54	Vehicle	Vehicle	-----	-454.94	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	-----	-----	6.33	6.33
		U_{11} - L_{11}	-232.59	0.12	-53.37	0.00	-14.41	0.90	1.20	0.13	-57.54	0.00	-14.41	Vehicle	Vehicle	-----	-377.17	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	-----	-----	7.10	7.10
		U_{12} - L_{12}	-178.43	-4.91	-42.41	0.00	-11.20	0.90	1.20	-5.29	-45.72	0.00	-11.20	Vehicle	Vehicle	-----	-291.40	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	-----	-----	7.74	7.74
		U_{13} - L_{13}	-127.74	1.80	-32.70	0.00	-7.88	0.90	1.20	1.94	-35.26	0.00	-7.88	Vehicle	Vehicle	-----	-211.90	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	-----	-----	7.17	7.17
		U_{14} - L_{14}	-30.39	-8.63	-2.04	0.00	-3.03	0.90	1.20	-2.19	-9.30	0.00	-3.03	Vehicle	Vehicle	-----	-51.60	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	-----	-----	33.79	33.79
		U_{15} - L_{15}	-28.94	-28.58	4.74	-4.54	1.55	0.90	1.20	5.11	-30.82	1.55	-4.54	Vehicle	Vehicle	-----	-77.68	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	-----	-----	10.20	10.20
		U_{16} - L_{16}	-76.03	-35.56	6.57	-7.08	1.39	0.90	1.20	7.09	-38.34	1.39	-7.08	Vehicle	Vehicle	-----	-148.69	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	-----	-----	6.92	6.92
		U_{17} - L_{17}	-161.89	-48.30	7.05	-10.66	1.30	0.90	1.20	7.60	-52.07	1.30	-10.66	Vehicle	Vehicle	-----	-278.15	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	-----	-----	4.79	4.79
		U_{18} - L_{18}	-190.28	-50.62	6.06	-12.71	1.12	0.90	1.20	6.53	-54.58	1.12	-12.71	Vehicle	Vehicle	-----	-318.32	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	-----	-----	6.14	6.14
		U_{19} - L_{19}	-228.17	-50.51	5.19	-14.98	0.97	0.90	1.20	5.60	-54.46	0.97	-14.98	Vehicle	Vehicle	-----	-367.41	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	-----	-----	7.13	7.13
		U_{20} - L_{20}	-242.83	-52.16	-5.13	-15.63	0.95	0.90	1.20	-5.53	-56.24	0.95	-15.63	Vehicle	Vehicle	-----	-388.78	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	-----	-----	6.03	6.03
	Structure 2	U_0 - L_0	-303.03	3.20	-80.27	2.22	-15.08	0.90	1.18	3.41	-85.46	2.22	-15.08	Pedestrian	Vehicle	-----	-505.04	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	-----	-----	3.97	3.97
		U_1 - L_1	-268.78	13.94	-70.13	2.12	-13.67	0.90	1.18	14.85	-74.67	2.12	-13.67	Vehicle	Vehicle	-----	-446.48	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	-----	-----	5.41	5.41
		U_2 - L_2	-220.87	15.05	-64.98	2.34	-12.32	0.90	1.18	16.03	-69.18	2.34	-12.32	Vehicle	Vehicle	-----	-377.07	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	-----	-----	5.11	5.11
		U_3 - L_3	-175.23	16.13	-53.16	2.49	-10.35	0.90	1.18	17.17	-56.60	2.49	-10.35	Vehicle	Vehicle	-----	-301.37	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	-----	-----	4.89	4.89
		U_4 - L_4	-82.08	13.96	-38.41	2.21	-6.62	0.90	1.18	14.86	-40.89	2.21	-6.62	Vehicle	Vehicle	-----	-159.86	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	-----	-----	6.29	6.29
		U_5 - L_5	-19.89	13.79	-29.97	2.23	-4.16	0.90	1.18	14.68	-31.91	2.23	-4.16	Vehicle	Vehicle	-----	-67.35	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	-----	-----	10.05	10.05
		U_6 - L_6	60.32	19.59	-14.09	1.75	-0.47	0.90	1.18	20.85	-15.00	1.75	-0.47	Vehicle	Vehicle	105.53	-----	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	-----	-----	17.62	17.62	-----	-----
		U_7 - L_7	-41.77	-12.01	-5.63	-2.49	0.00	0.90	1.18	-5.99	-12.79	0.00	-2.49	Vehicle	Vehicle	-----	-70.93	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	-----	-----	23.36	23.36
		U_8 - L_8	-189.01	-46.43	4.07	-8.38	0.00	0.90	1.18	4.34	-49.44	0.00	-8.38	Vehicle	Vehicle	-----	-309.99	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	-----	-----	6.91	6.91
		U_9 - L_9	-253.99	-57.29	0.65	-10.55	0.00	0.90	1.18	0.69	-61.00	0.00	-10.55	Vehicle	Vehicle	-----	-409.49	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	-----	-----	7.17	7.17
		U_{10} - L_{10}	-290.02	-61.07	4.37	-12.18	0.00	0.90	1.18	4.65	-65.02	0.00	-12.18	Vehicle	Vehicle	-----	-461.54	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	-----	-----	7.51	7.51
		U_{11} - L_{11}	-312.18	-66.32	10.01	-12.59	0.00	0.90	1.18	10.65	-70.61	0.00	-12.59	Vehicle	Vehicle	-----	-497.62	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	-----	-----	6.41	6.41
		U_{12} - L_{12}	-327.28	-61.23	14.86	-13.01	-0.93	0.90	1.18	15.82	-65.19	-0.93	-13.01	Vehicle	Vehicle	-----	-510.20	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	-----	-----	7.28	7.28
		U_{13} - L_{13}	-277.21	-51.63	21.20	-11.39	0.00	0.90	1.18	22.57	-54.97	0.00	-11.39	Vehicle	Vehicle	-----	-431.84	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	-----	-----	7.51	7.51
		U_{14} - L_{14}	-505.44	-37.43	-54.77	-9.95	-11.34	0.90	1.18	-39.86	-58.32	-9.95	-11.34	Vehicle	Vehicle	-----	-732.89	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	-----	-----	9.37	9.37
		U_{15} - L_{15}	-232.94	2.52	-63.41	1.67	-11.17	0.90	1.17	2.65	-66.72	1.67	-11.17	Pedestrian	Vehicle	-----	-389.55	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	-----	-----	6.85	6.85
		U_{16} - L_{16}	-260.12	8.23	-68.94	0.83	-12.63	0.90	1.17	8.66	-72.53	0.83	-12.63	Vehicle	Vehicle	-----	-432.44	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	-----	-----	5.60	5.60
		U_{17} - L_{17}	-228.24	9.29	-65.84	0.66	-11.76	0.90	1.17	9.77	-69.27	0.66	-11.76	Vehicle	Vehicle	-----	-386.76	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	-----	-----	5.70	5.70
		U_{18} - L_{18}	-209.27	11.07	-55.23	-0.03	-11.28	0.90	1.17	11.65	-58.10	-0.03	-11.28	Vehicle	Vehicle	-----	-347.59	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	-----	-----	6.33	6.33
		U_{19} - L_{19}	-166.55	11.84	-49.75	-0.07	-9.53	0.90	1.17	12.46	-52.35	-0.07	-9.53	Vehicle	Vehicle	-----	-284.57	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	-----	-----	6.59	6.59
		U_{20} - L_{20}	-113.95	11.95	-39.35	-0.43	-7.50	0.90	1.17	12.58	-41.40	-0.43	-7.50	Vehicle	Vehicle	-----	-201.95	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	-----	-----	6.31	6.31
		U_{21} - L_{21}	-62.76	13.66	-26.81	0.00	-5.22	0.90	1.17	14.38	-28.21	0.00	-5.22	Vehicle	Vehicle	-----	-118.26	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	-----	-----	9.85	9.85
		U_{22} - L_{22}	-38.94	-5.70	-6.99	-2.04	-2.15	0.90	1.17	-5.99	-7.36	-2.04	-2.15	Pedestrian	Vehicle	-----	-60.18	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	45.00	Pass	6.56	12.00	Pass	-----	-----	41.18	41.18
		U_{23} - L_{23}	-74.43	-36.84	12.69	-6.10	0.48	0.90	1.17	13.35	-38.75	0.48	-6.10	Vehicle	Vehicle	-----	-147.14	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	-----	-----	6.87	6.87
		U_{24} - L_{24}	-121.36	-42.84	12.44	-8.17	0.37	0.90	1.17	13.09	-45.07	0.37	-8.17	Vehicle	Vehicle	-----	-216.36	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	-----	-----	5.63	5.63
		U_{25} - L_{25}	-169.12	-52.80	11.96	-9.94	0.43	0.90	1.17	12.58	-55.55	0.43	-9.94	Vehicle	Vehicle	-----	-292.07	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	-----	-----	6.16	6.16
		U_{26} - L_{26}	-207.97	-56.35	10.82	-11.42	0.14	0.90	1.17	11.38	-59.29	0.14	-11.42	Vehicle	Vehicle	-----	-347.44	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	-----	-----	6.23	6.23
		U_{27} - L_{27}	-219.96	-58.25	8.90	-11.49	0.16	0.90	1.17	9.36	-61.28	0.16	-11.49	Vehicle	Vehicle	-----	-365.61	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	-----	-----	6.58	6.58
		U_{28} - L_{28}	-240.91	-55.41	12.85	-12.60	-0.25	0.90	1.17	13.52	-58.30	-0.25	-12.60	Vehicle	Vehicle	-----	-388.97	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	-----	-----	7.29	7.29
		U_{29} - L_{29}	-202.73	-47.65	20.35	-10.35	0.00	0.90	1.17	21.41	-50.13	0.00	-10.35	Vehicle	Vehicle	-----	-328.71	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	-----	-----	9.72	9.72
		U_{30} - L_{30}	-518.05	-35.08	-61.62	-8.23	-13.79	0.90	1.18	-37.35	-65.60	-8.23	-13.79	Vehicle	Vehicle	-----	-758.74	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	-----	-----	8.14	8.14
		U_{31} - L_{31}	-318.43	9.24	-68.28	0.00	-12.95	0.90	1.18	9.84	-72.69	0.00	-12.95	Vehicle	Vehicle	-----	-508.46	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	-----	-----	5.11	5.11
		U_{32} - L_{32}	-358.67	2.58	-75.66	-0.26	-14.65	0.90	1.18	2.75	-80.55	-0.26	-14.65	Vehicle	Vehicle	-----	-571.00	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	-----	-----	5.50	5.50
		U_{33} - L_{33}	-325.88	4.38	-67.59	0.00	-13.51

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: 5C1 **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	-10.31	48.24	14.00	-4.60	0.90	1.24	53.71	-11.48	14.00	-4.60	Vehicle	Pedestrian	183.78	-----	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	-----	-----	-----	-----	-----	**9.29**	**9.29**	-----	-----
		U_1 - L_2	23.90	-23.05	36.63	-4.71	9.20	0.90	1.24	40.78	-25.66	9.20	-4.71	Vehicle	Vehicle	84.08	-2.29	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	-----	-----	-----	**9.90**	**9.90**	**14.00**	**14.00**
		U_2 - L_3	-49.02	-19.00	14.97	-4.32	3.33	0.90	1.24	16.66	-21.15	3.33	-4.32	Vehicle	Vehicle	-----	-91.22	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	-----	-----	-----	-----	-----	**13.49**	**13.49**
		U_3 - L_4	-108.88	-17.10	-9.45	-4.20	-2.10	0.90	1.24	-10.52	-19.04	-2.10	-4.20	Vehicle	Vehicle	-----	-166.29	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	-----	-----	-----	-----	-----	**11.95**	**11.95**
		U_4 - L_4	153.12	8.31	37.58	3.11	7.00	0.90	1.24	41.83	9.25	7.00	3.11	Vehicle	Pedestrian	253.44	-----	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	186.35	0.85	49.26	2.78	10.66	0.90	1.24	54.84	0.94	10.66	2.78	Vehicle	Pedestrian	313.55	-----	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	-----	-----	-----	-----	-----	**8.47**	**8.47**	-----	-----
		U_6 - L_6	177.52	-15.18	50.30	1.59	12.54	0.90	1.24	55.99	-16.90	12.54	1.59	Vehicle	Vehicle	303.57	-----	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	-----	-----	-----	-----	-----	**8.45**	**8.45**	-----	-----
		U_7 - L_7	173.18	-2.03	46.07	0.41	13.46	0.90	1.24	51.29	-2.26	13.46	0.41	Vehicle	Vehicle	291.81	-----	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	-----	-----	-----	-----	-----	**9.31**	**9.31**	-----	-----
		U_8 - L_8	328.11	-2.91	83.17	-0.13	19.45	0.90	1.20	89.67	-3.14	19.45	-0.13	Vehicle	Vehicle	543.12	-----	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	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
		U_9 - L_{10}	339.70	-0.80	84.77	0.85	18.90	0.90	1.20	91.40	-0.86	18.90	0.85	Vehicle	Vehicle	560.43	-----	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	-----	-----	-----	-----	-----	**6.81**	**6.81**	-----	-----
		U_{10} - L_{11}	313.22	4.38	72.59	1.69	16.46	0.90	1.20	78.26	4.72	16.46	1.69	Vehicle	Pedestrian	508.92	-----	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	-----	-----	-----	-----	-----	**7.63**	**7.63**	-----	-----
		U_{11} - L_{12}	270.68	5.26	56.12	1.81	13.03	0.90	1.20	60.51	5.67	13.03	1.81	Vehicle	Vehicle	430.54	-----	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	-----	-----	-----	-----	-----	**8.38**	**8.38**	-----	-----
		U_{12} - L_{13}	194.17	-1.18	44.83	0.00	10.79	0.90	1.20	48.33	-1.27	10.79	0.00	Vehicle	Vehicle	315.25	-----	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	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{13} - L_{14}	123.57	-9.31	27.29	0.00	5.96	0.90	1.20	29.42	-10.03	5.96	0.00	Vehicle	Vehicle	198.88	-----	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	-----	-----	-----	-----	-----	**10.34**	**10.34**	-----	-----
		U_{15} - L_{14}	-16.32	-14.46	22.32	-2.35	1.48	0.90	1.20	24.06	-15.59	1.48	-2.35	Vehicle	Vehicle	10.06	-41.48	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	-----	-----	-----	**18.45**	**18.45**	**20.02**	**20.02**
		U_{16} - L_{15}	59.12	-9.23	36.95	-2.09	6.08	0.90	1.20	39.84	-9.95	6.08	-2.09	Vehicle	Vehicle	128.65	-----	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	-----	-----	-----	-----	-----	**9.25**	**9.25**	-----	-----
		U_{17} - L_{16}	172.14	-9.83	55.96	-1.86	9.93	0.90	1.20	60.33	-10.60	9.93	-1.86	Vehicle	Vehicle	302.22	-----	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	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_{18} - L_{17}	210.78	-8.34	54.36	-1.53	12.51	0.90	1.20	58.61	-8.99	12.51	-1.53	Vehicle	Vehicle	350.21	-----	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	-----	-----	-----	-----	-----	**7.50**	**7.50**	-----	-----
		U_{19} - L_{18}	242.64	-6.60	60.19	-1.21	13.73	0.90	1.20	64.89	-7.12	13.73	-1.21	Vehicle	Vehicle	399.79	-----	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	-----	-----	-----	-----	-----	**7.21**	**7.21**	-----	-----
		U_{20} - L_{19}	257.76	-5.48	53.29	-1.03	15.70	0.90	1.20	57.46	-5.91	15.70	-1.03	Vehicle	Vehicle	409.79	-----	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	-----	-----	-----	-----	-----	**7.87**	**7.87**	-----	-----
		U_0 - L_1	298.99	-5.84	64.26	-2.21	14.21	0.90	1.18	68.41	-6.22	14.21	-2.21	Vehicle	Pedestrian	477.62	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
		U_1 - L_2	284.21	-17.38	77.55	-2.66	14.05	0.90	1.18	82.57	-18.50	14.05	-2.66	Vehicle	Vehicle	476.81	-----	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	-----	-----	-----	-----	-----	**5.98**	**5.98**	-----	-----
		U_2 - L_3	221.42	-18.51	61.76	-2.85	11.83	0.90	1.18	65.76	-19.71	11.83	-2.85	Vehicle	Vehicle	373.33	-----	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	-----	-----	-----	-----	-----	**6.53**	**6.53**	-----	-----
		U_3 - L_4	178.30	-20.89	64.24	-3.23	10.08	0.90	1.18	68.40	-22.24	10.08	-3.23	Vehicle	Vehicle	320.71	-----	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	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_4 - L_5	53.50	-17.86	38.44	-2.87	5.37	0.90	1.18	40.93	-19.02	5.37	-2.87	Vehicle	Vehicle	122.76	-----	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	-----	-----	-----	-----	-----	**9.14**	**9.14**	-----	-----
		U_5 - L_6	-16.51	-17.81	30.80	-2.92	2.23	0.90	1.18	32.79	-18.96	2.23	-2.92	Vehicle	Vehicle	21.16	-46.12	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	-----	-----	-----	**13.55**	**13.55**	**16.31**	**16.31**
		U_6 - L_7	-133.21	-38.85	12.78	-2.50	-2.48	0.90	1.18	13.61	-41.36	-2.48	-2.50	Vehicle	Vehicle	-----	-226.93	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	-----	-----	-----	-----	-----	**5.47**	**5.47**
		U_7 - L_7	208.77	-7.22	45.30	0.00	8.33	0.90	1.18	48.23	-7.69	8.33	0.00	Vehicle	Vehicle	334.10	-----	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	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
		U_8 - L_8	289.58	0.56	65.74	0.00	8.99	0.90	1.18	70.00	0.60	8.99	0.00	Vehicle	Vehicle	467.45	-----	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	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{10} - L_9	327.97	0.68	66.22	1.53	11.09	0.90	1.18	70.50	0.72	11.09	1.53	Vehicle	Pedestrian	518.01	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U_{11} - L_{10}	349.25	-4.40	74.08	0.55	12.45	0.90	1.18	78.87	-4.68	12.45	0.55	Vehicle	Vehicle	556.56	-----	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	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
		U_{12} - L_{11}	358.20	-11.07	69.81	0.48	13.32	0.90	1.18	74.33	-11.78	13.32	0.48	Vehicle	Vehicle	562.28	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
		U_{13} - L_{12}	307.75	-21.52	58.32	-0.24	12.26	0.90	1.18	62.09	-22.91	12.26	-0.24	Vehicle	Vehicle	480.80	-----	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	-----	-----	-----	-----	-----	**7.57**	**7.57**	-----	-----
		U_{14} - L_{13}	260.20	-13.75	49.11	-1.50	11.72	0.90	1.18	52.28	-14.64	11.72	-1.50	Vehicle	Vehicle	406.23	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{15} - L_{14}	208.42	-8.82	63.19	-2.51	11.04	0.90	1.17	66.49	-9.28	11.04	-2.51	Vehicle	Vehicle	357.38	-----	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	-----	-----	-----	-----	-----	**6.65**	**6.65**	-----	-----
		U_{16} - L_{15}	243.55	-6.29	71.87	-1.48	11.54	0.90	1.17	75.61	-6.61	11.54	-1.48	Vehicle	Vehicle	414.91	-----	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	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
		U_{16} - L_{17}	255.86	-9.78	70.83	-0.85	11.67	0.90	1.17	74.51	-10.29	11.67	-0.85	Vehicle	Vehicle	429.49	-----	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	-----	-----	-----	-----	-----	**6.10**	**6.10**	-----	-----
		U_{17} - L_{18}	235.29	-11.46	64.86	-0.75	10.45	0.90	1.17	68.24	-12.06	10.45	-0.75	Vehicle	Vehicle	394.59	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_{18} - L_{19}	212.11	-13.98	64.25	0.01	8.95	0.90	1.17	67.60	-14.70	8.95	0.01	Vehicle	Vehicle	363.62	-----	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	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
		U_{19} - L_{20}	168.24	-15.47	55.22	0.06	9.14	0.90	1.17	58.10	-16.28	9.14	0.06	Vehicle	Vehicle	294.24	-----	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	-----	-----	-----	-----	-----	**7.49**	**7.49**	-----	-----
		U_{20} - L_{21}	97.26	-15.06	32.37	0.46	6.66	0.90	1.17	34.06	-15.84	6.66	0.46	Vehicle	Vehicle	170.71	-----	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	-----	-----	-----	-----	-----	**9.70**	**9.70**	-----	-----
	Structure 2	U_{21} - L_{22}	30.60	-15.74	31.36	0.58	3.66	0.90	1.17	32.99	-16.56	3.66	0.58	Vehicle	Vehicle	82.67	-----	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	-----	-----	-----	-----	-----	**12.04**	**12.04**	-----	-----
		U_{23} - L_{22}	49.78	-18.04	33.47	-0.72	5.11	0.90	1.17	35.22	-18.97	5.11	-0.72	Vehicle	Vehicle	110.50	-----	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	-----	-----	-----	-----	-----	**10.73**	**10.73**	-----	-----
		U_{24} - L_{23}	115.07	-16.87	46.21	-0.72	8.00	0.90	1.17	48.61	-17.74	8.00	-0.72	Vehicle	Vehicle	212.79	-----	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	-----	-----	-----	-----	-----	**6.43**	**6.43**	-----	-----
		U_{25} - L_{24}	179.22	-16.40	60.51	-0.73	10.10	0.90	1.17	63.66	-17.25	10.10	-0.73	Vehicle	Vehicle	315.74	-----	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	-----	-----	-----	-----	-----	**6.66**	**6.66**	-----	-----
		U_{26} - L_{25}	220.97	-14.39	62.24	-0.57	11.89	0.90	1.17	65.49	-15.13	11.89	-0.57	Vehicle	Vehicle	372.40	-----	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	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U_{27} - L_{26}	234.87	-9.20	65.31	-0.35	11.45	0.90	1.17	68.72	-9.68	11.45	-0.35	Vehicle	Vehicle	394.66	-----	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	-----	-----	-----	-----	-----	**6.05**	**6.05**	-----	-----
		U_{28} - L_{27}	253.15	-10.04	63.69	-0.28	12.25	0.90	1.17	67.01	-10.56	12.25	-0.28	Vehicle	Vehicle	416.20	-----	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	-----	-----	-----	-----	-----	**6.82**	**6.82**	-----	-----
		U_{29} - L_{28}	215.91	-21.34	49.70	0.00	10.20	0.90	1.17	52.29	-22.46	10.20	0.00	Vehicle	Vehicle	348.67	-----	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	-----	-----	-----	-----	-----	**8.31**	**8.31**	-----	-----
		U_{30} - L_{29}	180.73	-10.34	45.16	-0.90	8.90	0.90	1.17	47.51	-10.88	8.90	-0.90	Vehicle	Vehicle	296.72	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{30} - L_{31}	294.99	-10.35	66.76	-1.64	12.90	0.90	1.18	71.08	-11.02	12.90	-1.64	Vehicle	Vehicle	475.88	-----	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	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
		U_{31} - L_{32}	342.70	-9.50	73.76	-0.55	13.70	0.90	1.18	78.53	-10.11	13.70	-0.55	Vehicle	Vehicle	547.60	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
		U_{32} - L_{33}	363.39	-3.48	71.36	0.37	13.78	0.90	1.18	75.97	-3.70	13.78	0.37	Vehicle	Vehicle	571.18	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64

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: SCI
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

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 (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_{xx} (in^3) | S_{xx} (in^3) | Z_{xx} (in^3) | I_{xx} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F/S_{xx} | M_d (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_m/(1-a)$ | DL Start (k-in) | DL End (k-in) | LL (Max) Start (k-in) | LL (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_{xx} (in^3) | S_{xx} (in^3) | Z_{xx} (in^3) | I_{xx} (in^4) | Shape Factor | M_p (k-in) | F_{crit} (ksi) | Formula 1.8 Term * F/S_{xx} | M_n (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_m/(1-a)$ | Pass | Axial Actual | Moment Actual | Total | Pass | Axial Actual | Moment Actual | Total | Pass | Axial Actual | Moment Actual | 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: 5C1
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_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	-44.17	-99.07	4.28	-8.08	-0.97	1.01	57.23	-81.25	-12.83	13.49
	L_1-L_2	-131.02	-112.64	2.85	-11.93	-5.26	-6.56	38.03	-159.34	-70.28	-87.60
	L_2-L_3	-74.55	-79.90	2.63	-11.93	-8.62	-8.62	17.01	-37.81	-109.37	-119.15
	L_3-L_4	18.36	16.12	1.39	5.07	-13.53	-7.02	18.57	67.77	-180.80	-83.81
	L_4-L_5	-68.34	-21.02	4.01	-5.03	-14.64	1.97	53.60	-51.34	-155.53	-26.37
	L_5-L_6	8.36	-229.14	3.11	-6.07	-8.69	0.43	41.52	-81.15	-108.05	5.69
	L_6-L_7	61.83	171.52	4.14	-5.07	-10.29	2.15	41.52	-184.27	-247.53	78.67
	L_7-L_8	-1.61	459.41	1.06	5.17	-5.49	13.98	14.11	69.00	-73.29	186.73
	L_8-L_9	439.88	-25.12	12.94	-1.65	-5.01	0.01	167.41	-21.28	-0.06	0.09
	L_9-L_{10}	204.03	-117.02	3.56	-10.15	-5.13	0.09	76.89	-85.67	-60.32	7.59
	L_{10}-L_{11}	168.12	-117.13	4.81	2.23	-3.05	-3.77	62.17	29.80	-13.74	-48.74
	L_{11}-L_{12}	239.72	-27.23	3.52	4.52	-2.26	-4.56	50.68	83.14	-34.43	-83.32
	L_{12}-L_{13}	-19.73	-128.50	2.94	1.44	-6.29	-7.21	38.03	-18.68	-81.43	-83.27
	L_{13}-L_{14}	175.78	-425.21	5.99	-18.22	-7.67	-14.09	77.46	-235.67	-99.24	-162.25
	L_{14}-L_{15}	-408.28	-20.70	3.74	2.11	-21.01	-3.74	77.46	0.00	-494.45	-8.81
	L_{15}-L_{16}	-209.39	-318.68	1.11	0.18	-15.62	-8.51	14.40	-2.26	-202.03	-110.04
	L_{16}-L_{17}	374.86	83.54	3.86	-0.30	-14.27	1.71	115.15	-3.52	-184.64	-22.36
	L_{17}-L_{18}	-171.07	19.86	0.44	-0.71	-8.39	0.56	5.67	-9.19	-108.54	7.22
	L_{18}-L_{19}	-208.33	253.78	0.56	-2.34	-13.04	4.33	7.21	-4.44	-36.04	56.68
	L_{19}-L_{20}	-84.78	1.02	0.42	0.43	-9.16	4.92	5.49	-5.58	-118.50	63.99
	L_{20}-L_{21}	10.35	-213.29	3.66	-9.94	-0.52	1.16	46.81	-126.95	-6.66	14.76
	L_{21}-L_{22}	56.16	-247.73	3.66	-10.24	-0.52	-0.58	46.50	-130.22	-6.66	-51.58
	L_{22}-L_{23}	-35.36	-194.33	3.09	-5.59	-4.40	-8.22	45.88	-71.42	-56.27	-105.07
	L_{23}-L_{24}	-287.80	-299.08	1.58	-9.64	-14.29	-10.06	20.19	-123.20	-182.59	-126.57
	L_{24}-L_{25}	-142.71	-270.21	2.38	-5.61	-7.11	-9.31	9.61	-53.26	-222.47	-248.60
	L_{25}-L_{26}	-467.54	-273.29	3.10	-6.57	-24.30	-14.66	39.66	-58.73	-310.52	-187.12
	L_{26}-L_{27}	-310.55	-49.89	3.75	6.93	-23.41	-5.35	47.90	-88.58	-299.12	-68.34
	L_{27}-L_{28}	-272.23	-203.94	3.74	5.17	-21.01	-3.74	47.90	-51.34	-257.36	-37.98
	L_{28}-L_{29}	-261.91	188.33	3.34	6.63	-14.04	0.75	42.72	-87.20	-179.36	9.98
	L_{29}-L_{30}	-71.32	230.34	3.78	2.94	-14.68	2.29	42.72	-87.20	-179.36	47.37
	L_{30}-L_{31}	-131.48	389.15	3.83	6.84	-12.77	4.08	48.90	87.34	-163.17	92.11
	L_{31}-L_{32}	-164.35	-140.48	6.03	-1.91	-13.76	-5.10	77.02	-24.39	-175.76	-92.32
	L_{32}-L_{33}	-307.76	-96.61	3.77	0.00	-13.76	-5.10	77.02	-24.39	-175.76	-92.32
	L_{33}-L_{34}	912.03	-326.86	26.28	-8.74	-1.00	-5.17	331.95	-110.28	-12.63	-2.10
	L_{34}-L_{35}	289.13	415.91	3.42	6.15	-13.76	-5.10	58.64	87.34	-200.73	-28.65
	L_{35}-L_{36}	515.59	-35.24	10.30	-8.00	-1.74	0.10	129.98	-151.01	-21.92	1.30
	L_{36}-L_{37}	1,188.80	-1,188.80	7.80	-7.80	-0.45	0.45	1,188.80	-1,188.80	-0.45	0.45
	L_{37}-L_{38}	252.02	-29.09	6.50	2.84	-5.67	-6.77	82.06	35.82	-71.55	-85.42
	L_{38}-L_{39}	230.55	-46.37	4.30	-9.59	-5.83	-8.50	54.33	-121.01	-73.78	-107.88
	L_{39}-L_{40}	1,188.80	-1,188.80	7.80	-7.80	-0.45	0.45	1,188.80	-1,188.80	-0.45	0.45
	L_{40}-L_{41}	41.53	-186.96	3.16	2.83	-13.71	-17.25	39.90	35.70	-173.10	-217.80
	L_{41}-L_{42}	-197.37	33.04	3.16	2.83	-13.71	-17.25	54.98	17.12	-173.10	-217.80
	L_{42}-L_{43}	-108.55	-10.73	1.94	5.23	-16.62	-3.52	24.46	-66.06	-209.79	-44.43
	L_{43}-L_{44}	53.16	-108.55	3.71	1.94	-16.62	-3.52	24.46	-66.06	-209.79	-44.43
	L_{44}-L_{45}	-65.47	173.47	2.48	5.76	-12.21	1.50	31.35	72.72	-154.12	18.90
	L_{45}-L_{46}	-30.98	151.24	4.48	2.26	-14.36	6.12	56.57	29.58	-181.37	77.30
	L_{46}-L_{47}	-273.03	-178.20	3.51	0.00	-14.36	6.12	56.57	29.58	-181.37	77.30
	L_{47}-L_{48}	-19.38	-193.41	3.76	-3.12	-12.73	-3.25	47.42	-39.42	-160.66	-41.07
	L_{48}-L_{49}	-27.76	-114.86	3.36	-4.06	-12.73	-3.25	47.42	-39.42	-160.66	-41.07
	L_{49}-L_{50}	740.88	-268.17	26.52	-10.08	-1.44	0.11	338.87	-128.80	-18.45	1.44
	L_{50}-L_{51}	-140.43	-76.07	3.67	-0.56	-15.77	-1.40	46.89	-7.15	-201.50	-18.56
	L_{51}-L_{52}	-27.76	-114.86	3.36	-4.06	-12.73	-3.25	47.42	-39.42	-160.66	-41.07
	L_{52}-L_{53}	147.94	-145.21	6.20	-7.61	-2.97	-1.82	79.21	-97.22	-37.97	-23.19
	L_{53}-L_{54}	-370.36	-165.17	3.52	0.68	-25.09	-8.22	46.24	11.19	-320.50	-104.96
	L_{54}-L_{55}	-370.36	-165.17	3.52	0.68	-25.09	-8.22	46.24	11.19	-320.50	-104.96
	L_{55}-L_{56}	-304.19	-21.34	1.48	-0.35	-19.83	-0.67	18.50	-4.50	-253.29	-8.57
	L_{56}-L_{57}	-227.31	59.39	1.15	-0.92	-13.41	4.11	14.63	-11.70	-171.27	52.52
	L_{57}-L_{58}	-227.31	59.39	1.15	-0.92	-13.41	4.11	14.63	-11.70	-171.27	52.52
	L_{58}-L_{59}	43.83	-117.87	5.10	-8.04	-0.38	0.40	65.92	-104.06	-4.93	5.15
	L_{59}-L_{60}	-152.35	-177.82	4.38	-6.74	-0.75	-1.23	56.67	-87.18	-9.76	-15.90
	L_{60}-L_{61}	55.48	-320.54	2.44	-10.61	-4.95	-6.02	44.47	-137.21	-63.40	-77.84
	L_{61}-L_{62}	-64.07	-371.05	1.58	-18.68	-12.14	-13.39	20.48	-241.70	-157.05	-173.19
	L_{62}-L_{63}	-370.76	-82.43	1.45	-2.40	-20.83	1.84	18.16	31.09	-269.46	23.86
	L_{63}-L_{64}	-200.77	-149.87	1.78	-2.82	-11.29	2.05	23.02	36.45	-146.04	26.52
	L_{64}-L_{65}	-131.78	166.76	3.29	-1.11	-8.93	2.63	42.59	-14.32	-115.57	33.99
	L_{65}-L_{66}	-361.88	-172.92	14.31	-6.96	-0.66	0.52	191.23	-122.77	-6.75	-0.77
	L_{66}-L_{67}	61.92	-21.66	5.43	-7.49	-5.85	-0.13	68.35	-54.98	-78.19	-2.50
	L_{67}-L_{68}	-189.90	5.62	4.13	4.37	-3.75	-8.42	55.15	58.35	-49.43	-132.50
	L_{68}-L_{69}	-38.98	-56.51	3.17	1.52	-12.97	-7.26	42.20	20.25	-173.26	-87.03
	L_{69}-L_{70}	-66.52	-29.78	0.90	-0.88	-8.66	2.13	11.96	-11.73	-115.71	-28.44

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	L_0-L_1	-9.61	-35.34	-1.12	-4.14	0.00	0.00	0.00	0.00	-15.30	-56.24
	L_1-L_2	-35.91	-17.77	-1.97	-1.96	0.00	0.00	0.00	0.00	-26.14	-12.74
	L_2-L_3	-3.95	-11.77	-1.97	-1.96	0.00	0.00	0.00	0.00	-26.14	-12.74
	L_3-L_4	20.84	1.99	54.36	-8.07	0.00	0.00	0.00	0.00	19.56	63.53
	L_4-L_5	16.37	1.08	-21.80	-3.63	0.00	0.00	0.00	0.00	-3.76	-21.80
	L_5-L_6	28.81	91.29	0.70	0.04	2.49	0.11	0.00	0.00	49.53	119.33
	L_6-L_7	8.52	4.25	-42.92	16.28	-7.16	2.86	0.00	0.00	84.21	-62.92
	L_7-L_8	22.34	47.84	53.33	-5.68	0.00	0.00	0.00	0.00	-34.54	-12.42
	L_8-L_9	-18.40	-12.69	0.13	0.03	0.45	0.00	0.00	0.00	-182.18	-122.01
	L_9-L_{10}	-29.50	-49.43	69.47	-22.21	-5.03	1.61	0.00	0.00	-137.19	-37.43
	L_{10}-L_{11}	6.37	16.69	6.12	23.90	0.00	0.00	0.00	0.00	122.22	-14.85
	L_{11}-L_{12}	4.55	1.43	-2.47	2.90	0.22	0.03	0.00	0.00	-35.44	-34.51
	L_{12}-L_{13}	-13.52	-5.86	30.48	46.88	0.00	0.00	0.00	0.00	74.26	53.88
	L_{13}-L_{14}	-6.61	-22.27	60.18	16.52	0.00	0.00	0.00	0.00	6.84	-6.55
	L_{14}-L_{15}	-2.50	-4.61	0.00	0.00	0.00	0.00	0.00	0.00	-127.93	-34.06
	L_{15}-L_{16}	-3.58	-7.87	18.20	-67.67	0.00	0.00	0.00	0.00	-104.71	-73.49
	L_{16}-L_{17}	-4.21	-8.77	12.69	-21.67	0.11	0.00	0.00	0.00	-87.79	-23.88
	L_{17}-L_{18}	2.56	-3.42	14.80	-32.23	0.00	0.00	0.00	0.00	-70.95	-8.82
	L_{18}-L_{19}	4.55	-0.79	-22.30	27.04	0.00	0.00	0.00	0.00	-68.87	-28.12
	L_{19}-L_{20}	1.36	0.30	32.49	11.77	0.00	0.00	0.00	0.00	-32.45	7.24
	L_{20}-L_{21}	-13.08	-45.47	-1.11	-3.87	0.00	0.00	0.00	0.00	-17.53	-60.90
	L_{21}-L_{22}	-19.11	-45.47	-1.11	-3.87	0.00	0.00	0.00	0.00	-43.69	-28.56
	L_{22}-L_{23}	-24.80	-33.51	-2.00	26.00	0.00	0.00	0.00	0.00	46.82	14.70
	L_{23}-L_{24}	-60.50	-81.27	22.79	-9.30	0.00	0.00	0.00	0.00	98.27	-53.52
	L_{24}-L_{25}	-2.66	-75.79	-22.42	-9.30	0.00	0.00	0.00	0.00	96.71	37.86
	L_{25}-L_{26}	7.73	108.91	0.21	-6.25	-1.76	-0.73	0.00	0.00	50.54	-10.56
	L_{26}-L_{27}	10.29	-0.41	-0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	-64.25	-45.06	0.83	5.82	0.00	0.00	0.00	0.00	61.86	-10.08
	L_{28}-L_{29}	-12.23	-17.15	0.83	5.82	0.00	0.00	0.00	0.00	61.86	-10.08
	L_{29}-L_{30}	-22.67	-4.37	18.34	32.24	0.00	0.00	0.00	0.00	61.76	45.81
	L_{30}-L_{31}	29.71	2.44	-0.41	-2.68	3.01	-0.05	0.00	0.00	44.89	30.90
	L_{31}-L_{32}	-5.18	-26.21	38.71	10.60	0.00	0.00	0.00	0.00	160.61	188.20
	L_{32}-L_{33}	-12.56	-11.83	38.71	10.60	0.00	0.00	0.00	0.00	160.61	188.20
	L_{33}-L_{34}	-8.75	-8.23	60.45	14.92	0.00	0.00	0.00	0.00	-63.97	-3.73
	L_{34}-L_{35}	8.91	5.33	-1.42	0.00	0.00	0.00	0.00	0.00	-24.84	2.40
	L_{35}-L_{36}	3.33	0.50	16.30	-13.56	0.00	0.00	0.00	0.00	-6.06	36.26
	L_{36}-L_{37}	12.18	-0.16	3.62	0.00	0.00	0.00	0.00	0.00	-7.35	0.48
	L_{37}-L_{38}	7.75	14.48	26.59	-42.91	0.00	0.00	0.00	0.00	0.88	52.20
	L_{38}-L_{39}	23.13	16.86	1.67	4.65	-5.52	1.38	0.00	0.00	57.52	29.24
	L_{39}-L_{40}	20.74	13.40	0.00	0.00	0.00	0.00	0.00	0.00	53.09	24.80
	L_{40}-L_{41}	31.36	-10.50	-60.87	23.66	0.00	0.00	0.00	0.00	178.93	-51.42
	L_{41}-L_{42}	-26.22	8.81	-1.67	0.00	0.00	0.00	0.00	0.00	-23.24	8.47
	L_{42}-L_{43}	-5.98	-1.87	9.79	3.46	0.00	0.00	0.00	0.00	-221.31	-157.25
	L_{43}-L_{44}	-18.78	22.05	61.56	11.95	0.00	0.00	0.00	0.00	-131.17	60.98
	L_{44}-L_{45}	-6.83	-8.78	32.74	6.27	0.00	0.00	0.00	0.00	-23.34	4.41
	L_{45}-L_{46}	-27.06	9.52	2.56	3.30	0.00	0.00	0.00	0.00	-221.31	-157.25
	L_{46}-L_{47}	-29.84	22.77	61.56	11.95	0.00	0.00	0.00	0.00	-131.17	60.98
	L_{47}-L_{48}	-18.78	22.05	61.56	11.95	0.00	0.00	0.00	0.00	-131.17	60.98
	L_{48}-L_{49}	-6.83	-8.78	32.74	6.27	0.00	0.00	0.00	0.00	-23.34	4.41
	L_{49}-L_{50}	-27.06	9.52	2.56	3.30	0.00	0.00	0.00	0.00	-221.31	-157.25
	L_{50}-L_{51}	-29.84	22.77	61.56	11.95	0.00	0.00	0.00	0.00	-131.17	60.98
	L_{51}-L_{52}	10.77	-1.53	20.01	38.91	29.3	292.29
	L_{52}-L_{53}	-19.91	2.33	-8.78	15.52	0.00	0.00	0.00	0.00	39.15	-3.14
	L_{53}-L_{54}	-43.40	9.97	-83.64	42.08	420.1	420.12
	L_{54}-L_{55}	-43.40	9.97	-83.64	42.08	420.1	420.12
	L_{55}-L_{56}	-7.28	-2.41	-91.32	28.12	36.43	0.00
	L_{56}-L_{57}	-6.16	-8.36	-52.23	40.49	0.00	0.00
	L_{57}-L_{58}	-6.66	-2.84	-19.48	0.00	0.00	0.00
	L_{58}-L_{59}	-2.28	-10.25	0.27	1.26	0.00	0.00
	L_{59}-L_{60}	-2.04	0.04	2.15	13.65	0.00	0.00
	L_{60}-L_{61}	-35.71	-10.62	23.56	9.96	0.00	0.00
	L_{61}-L_{62}	-42.33	-24.17	25.86	9.66	0.00	0.00
	L_{62}-L_{63}	-1.24	1.56	18.91	56.12	0.00	0.00
	L_{63}-L_{64}	-3.71	3.87	5.81	50.12	0.00	0.00
	L_{64}-L_{65}	-16.16	-8.36	-52.23	40.49	0.00	0.00
	L_{65}-L_{66}	-37.57	30.47	-97.46	33.03	167.9	167.91
	L_{66}-L_{67}	-19.48	12.84	-97.46	33.03	167.9	167.91
	L_{67}-L_{68}	-2.28	-10.25	0.27	1.26	0.00	0.00
	L_{68}-L_{69}	-4.21	3.87	5.81	50.12	0.00	0.00
	L_{69}-L_{70}	-3.37	-1.87	2.05	-0.75	0.00	0.00

M_y Information

YY Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	Axial Force (k)	Moment Start (k-in)	Moment End (k-in)	Pass	Axial Force (k)	Moment Total	Pass	Axial Force (k)	Moment Total	Pass
Structure 1	L_0-L_1	-15.30	-56.24	-4.27	-15.69	128.3	128.29	121.63	141.18	626.8	1.10	4659	—
	L_1-L_2	-75.92	-22.63	24.67	-27.53	128.3	128.29	115.05	141.18	626.8	1.10	4659	—
	L_2-L_3	-26.14	-12.74	-23.43	-17.32	201.38	198.47	749.5	1.10	6220	—		
	L_3-L_4	19.56	63.53	63.13	50.46	177.6	177.62	158.81	188.47	749.5	1.10	6220	—
	L_4-L_5	-3.76	-21.80	12.03	-6.68	33.63	0.00	0.00	0.00	0.00	0.00	0.00	—
	L_5-L_6	49.53	119.33	80.70	120.56	206.5	205.53	176.18	225.18	784.3	1.10	7464	—
	L_6-L_7	84.21	-62.92	62.28	77.06	288.5	288.46	246.41	286.11	1090.4	1.10	10826	—
	L_7-L_8	-34.54	-12.42	4.97	-81.99	355.4	355.44	302.52	403.40	1093.1	1.13	13312	—
	L_8-L_9	-182.18	-122.01	-145.65	355.4	355.44	304.93	403.40	1093.1	1.13	13312	—	
	L_9-L_{10}	-137.19	-37.43	-8.53	57.08	288.5	288.46	246.11	327.09	1086.4	1.12	10826	—
	L_{10}-L_{11}	122.22	-14.85	119.50	-5.48	158.2	158.16	151.51	173.24	694.3	1.10	5717	—
	L_{11}-L_{12}	-35.44	-34.51	84.63	33.61	158.2	158.16	144.53	172.24	694.3	1.10	5717	—
	L_{12}-L_{13}	74.26	53.88	11.84	122.44	233.3	233.26	201.34	229.94	975.8	1.11	8518	—
	L_{13}-L_{14}	6.84	-6.55	93.68	43.87	321.7	321.70	275.89	363.71	1221.7	1.13	12002	—
	L_{14}-L_{15}	-127.93	-34.06	-41.26	43.87	321.7	321.70	275.89	363.71	1221.7	1.13	12002	—
	L_{15}-L_{16}	-104.71	-73.49	85.70	-145.68	375.5	375.47	322.87	431.42	1347.7	1.15	14237	—
	L_{16}-L_{17}	-87.79	-23.88	61.87	215.67	61.17	302.9	300.95	261.32	1154.2	1.12	11294	—
	L_{17}-L_{18}	-70.95	-8.82	-55.04	-65.81	213.3	213.34	184.04	236.66	908.1	1.11	7813	—
	L_{18}-L_{19}	-68.87	-28.12	19.78	131.1	103.1	107.45	146.13	626.8	1.10	4822	—	
	L_{19}-L_{20}	-32.45	7.24	0.32	143.1	119.24	146.13	626.8	1.10	4822	—		
	L_{20}-L_{21}	-17.53	-60.90	-1.97	-8.62	167.9	167.91	155.45	184.50	1098.1	1.10	6089	—
	L_{21}-L_{22}	-43.69	-28.56	-49.29	-25.76	167.9	167.91	155.45	184.50	1098.1	1.10	6089	—
	L_{22}-L_{23}	46.82	14.70	75.80	91.42	258.92	258.75	284.83	1462.6	1.10	9399	—	
	L_{23}-L_{24}	98.27	-53.52	64.32	-94.58	258.92	258.75	284.83	1462.6	1.10	9399	—	
	L_{24}-L_{25}	96.71	37.86	64.10	129.49	385.1	385.05	321.50	445.45	1568.6	1.16	14832	—
	L_{25}-L_{26}	50.54	-10.56	64.10	129.49	385.1	385.05	321.50	445.45	1568.6	1.16	14832	—
	L_{26}-L_{27}	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}	61.86	-10.08	143.99	-43.93	327.4	327.44	270.63	362.39	1622.3	1.11	15599	—
	L_{28}-L_{29}	61.86	-10.08	143.99	-43.93	327.4	327.44	270.63	362.39	1622.3	1.11	15599	—
	L_{29}-L_{30}	61.76	45.81	115.09	93.40	180.6	180.57	174.56	198.17	1146.7	1.10	6540	—
	L_{30}-L_{31}	44.89	30.90	101.34	92.13	180.6	180.57	168.20	198.17	1146.7	1.10	6540	—
	L_{31}-L_{32}	160.61	188.20	198.17	191.27	294.9	294.93	250.49	301.13	1450.4	1.10	9292	—
	L_{32}-L_{33}	160.61	188.20	198.17	191.27	294.9	294.93	250.49	301.13	1450.4	1.10	9292	—
	L_{33}-L_{34}	-63.97	-3.73	25.99	26.37	256.0	256.03	211.86	281.97	1450.4	1.10	9292	—
	L_{34}-L_{35}	-24.84	2.40	25.99	26.37	256.0	256.03	211.86	281.97	1450.4	1.10	9292	—
	L_{35}-L_{36}	-6.06	36.26	37.53	6.95	256.0	256.03	214.35	281.97	1450.4	1.10	9292	—
	L_{36}-L_{37}	-7.35	0.48	37.53	6.95	256.0	256.03	214.35	281.97	1450.4	1.10	9292	—
	L_{37}-L_{38}	0.88	52.20	25.37	-22.41	180.6	180.57	174.56	198.17	1146.7	1.10	6540	—
	L_{38}-L_{39}	57.52	29.24	40.63	44.56	229.6	229.58	217.57	251.95	1341.1	1.10	8514	—
	L_{39}-L_{40}	53.09	24.80	40.63	44.56	229.6	229.58	217.57	251.95	1341.1	1.10	8514	—
	L_{40}-L_{41}	178.93	-51.42	59.53	-7.00	383.9	383.93	320.77	431.84	2033.6	1.12	14251	—
	L_{41}-L_{42}	-23.24	8.47	59.53	-7.00	383.9	383.93	320.77	431.84	2033.6	1.12	14251	—
	L_{42}-L_{43}	-221.31	-157.25	201.33	-148.98	444.9	444.92	369.61	501.64	2246.6	1.14	16743	—
	L_{43}-L_{44}	-131.17	60.98	26.21	47.84	383.9	383.93	320.77	431.84	2033.6	1.12	14251	—
	L_{44}-L_{45}	-23.34	4.41	59.53	-7.00	383.9	383.93	320.77	431.84	2033.6	1.12	14251	—
	L_{45}-L_{46}	-221.31	-157.25	201.33	-148.98	444.9	444.92	369.61	501.64	2246.6	1.14	16743	—
	L_{46}-L_{47}	-131.17	60.98	26.21	47.84	383.9	383.93	320.77	431.84	2033.6	1.12	14251	—
	L_{47}-L_{48}	-131.17	60.98	26.21	47.84	383.9	383.93	320.77	431.84	2033.6	1.12	14251	—
	L_{48}-L_{49}	-23.34	4.41	59.53	-7.00	383.9	383

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:	5C1
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) 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)
Structure 1	U_0~L_1	-56.29	86.22	0.71	-0.93	-3.71	3.76	9.43	-12.37	-49.56	50.26
	U_1~L_1	-14.44	23.27	0.91	-0.92	-3.56	3.39	12.14	-12.22	-47.60	45.28
	U_1~L_2	-34.84	-5.55	1.09	-1.24	-2.90	3.32	14.59	-16.50	-38.77	44.37
	U_2~L_2	36.84	-39.22	1.61	-1.42	-1.74	1.87	21.46	-18.97	-23.29	25.04
	U_2~L_3	49.77	-69.11	2.01	-2.05	-0.63	0.66	26.16	-27.36	-8.36	8.15
	U_3~L_3	57.71	-69.80	2.98	-3.01	-0.01	0.01	39.82	-44.10	-0.08	0.00
	U_3~L_4	49.73	-60.39	3.46	-3.72	-0.07	0.09	46.70	-51.66	-0.99	2.47
	U_4~L_4	106.28	-118.16	5.21	-5.41	-0.15	0.13	69.66	-72.30	-2.02	1.67
	U_4~L_5	-10.96	6.72	6.09	-7.24	-4.73	5.65	91.45	-116.94	-86.46	106.91
	U_5~L_5	-144.91	167.70	5.36	-5.34	-4.48	4.78	4.71	-4.33	-57.91	59.77
	U_5~L_6	-102.02	95.66	0.16	-0.36	-3.53	4.03	2.03	-4.59	-50.90	52.09
	U_6~L_6	-130.26	-111.13	0.65	-0.01	-4.32	3.56	0.00	-1.82	-55.83	46.80
	U_6~L_7	-96.42	93.90	0.33	-0.24	-3.70	3.68	4.31	-3.08	-47.90	47.67
	U_7~L_7	-90.91	75.94	0.67	-0.65	-3.48	3.60	8.63	-8.42	-44.96	46.55
	U_7~L_8	-33.33	9.96	0.91	-0.92	-2.90	2.27	12.14	-22.33	-28.01	37.19
	U_8~L_8	8.32	-15.87	3.16	-3.33	-1.30	1.26	40.83	-43.14	-16.81	16.29
	U_8~L_9	47.73	-50.39	3.46	-3.72	-0.71	0.60	44.61	-44.32	-9.21	8.31
	U_9~L_9	61.55	-72.81	3.80	-3.95	-0.53	0.54	49.19	-51.13	-6.86	6.93
	U_9~L_{10}	133.11	-138.25	5.47	-5.65	-0.14	0.14	83.34	-84.14	-1.83	1.97
	U_{10}~L_{10}	157.87	-153.86	7.48	-7.34	-0.76	0.69	96.82	-94.93	-8.79	8.79
	U_{10}~L_{11}	131.38	-213.66	5.21	-7.11	-0.45	-0.22	67.43	-91.98	-5.82	-2.79
	U_{11}~L_{11}	-147.13	191.00	0.69	-0.78	-0.27	0.29	0.00	-1.82	-87.29	89.88
	U_{11}~L_{12}	-122.87	130.77	0.81	-0.84	-5.67	5.62	10.40	-10.71	-72.39	71.83
	U_{12}~L_{12}	-117.42	109.01	0.81	-0.84	-5.67	5.62	10.40	-10.71	-72.39	71.83
	U_{12}~L_{13}	-62.46	69.03	0.65	-0.66	-3.27	3.33	8.25	-8.43	-41.78	42.58
	U_{13}~L_{13}	-37.86	-43.29	0.83	-0.81	-2.37	2.27	10.64	-10.84	-41.46	39.49
	U_{13}~L_{14}	-9.11	15.69	1.20	-1.15	-3.14	3.29	15.36	-14.67	-40.11	41.89
	U_{14}~L_{14}	14.84	-14.93	1.56	-1.61	-2.53	2.60	19.93	-20.57	-32.27	33.19
	U_{14}~L_{15}	39.69	-45.43	2.02	-2.09	-1.34	1.43	25.77	-28.18	-13.39	14.63
	U_{15}~L_{15}	88.81	-97.92	4.42	-4.52	-0.50	0.65	56.41	-57.72	-11.47	8.78
	U_{15}~L_{16}	133.08	-153.02	6.97	-7.19	-0.39	0.39	85.98	-89.53	-7.45	2.45
	U_{16}~L_{16}	140.09	-147.00	5.95	-6.25	-0.14	-0.16	75.96	-79.81	-1.79	-1.99
	U_{16}~L_{17}	148.96	-153.44	5.97	-6.02	-0.16	0.24	75.00	-76.93	-1.98	3.02
	U_{17}~L_{17}	147.07	-139.96	5.41	-5.47	-0.16	0.24	67.29	-68.16	-1.98	3.02
	U_{17}~L_{18}	185.41	-182.32	7.23	-6.87	-0.71	0.65	92.34	-87.79	-9.03	8.78
	U_{18}~L_{18}	72.60	-71.73	2.75	-2.61	-0.27	0.25	37.71	-36.24	-3.47	3.38
	U_{18}~L_{19}	-128.28	-129.98	0.75	-0.67	-5.64	5.15	9.43	-8.41	-71.77	65.03
	U_{19}~L_{19}	-125.94	-122.64	0.75	-0.72	-6.38	6.22	9.60	-8.53	-80.54	78.64
	U_{19}~L_{20}	-109.69	106.91	1.00	-0.96	-6.36	6.55	12.61	-12.41	-80.23	82.66
	U_{20}~L_{20}	-133.08	133.02	0.97	-0.93	-6.21	6.39	12.26	-12.06	-78.03	80.43
	U_{20}~L_{21}	-43.25	43.74	0.84	-0.84	-3.55	3.57	10.63	-10.58	-44.83	45.08
	U_{21}~L_{21}	-29.76	34.19	0.99	-0.97	-2.99	2.99	12.49	-12.34	-38.00	38.11
	U_{21}~L_{22}	-4.28	1.60	1.69	-1.75	-1.87	2.00	21.34	-22.28	-23.62	25.21
	U_{22}~L_{22}	38.83	41.63	3.30	-3.47	-0.67	0.68	39.61	-40.14	-9.85	10.65
	U_{22}~L_{23}	46.57	-51.18	3.64	-3.77	-0.99	0.99	45.96	-47.57	-12.49	12.49
	U_{23}~L_{23}	62.68	-61.36	4.92	-4.76	-1.01	0.97	60.83	-60.06	-12.73	12.26
	U_{23}~L_{24}	94.99	-94.99	7.45	-7.45	-1.52	1.52	90.86	-90.86	-19.46	19.46
	U_{24}~L_{24}	106.60	-105.79	7.88	-8.00	-1.08	1.04	99.49	-100.59	-13.57	13.16
	U_{24}~L_{25}	102.52	-103.74	7.88	-8.00	-1.08	1.04	99.49	-100.59	-13.57	13.16
	U_{25}~L_{25}	114.56	-114.55	7.55	-7.17	-0.53	0.44	95.35	-90.49	-6.63	5.52
	U_{25}~L_{26}	-13.73	5.03	7.71	-7.71	-4.81	5.01	92.48	-116.94	-86.46	106.91
	U_{26}~L_{26}	-121.12	118.67	0.80	-0.75	-5.14	4.82	10.26	-9.82	-65.67	61.58
	U_{26}~L_{27}	-92.37	86.40	0.83	-0.88	-4.96	4.77	8.09	-11.22	-53.41	60.88
	U_{27}~L_{27}	-102.94	97.14	0.45	-0.46	-3.04	3.15	4.45	-6.18	-29.42	33.56
	U_{27}~L_{28}	-96.77	103.11	0.13	-0.14	-5.25	5.26	1.67	-1.80	-67.12	67.19
	U_{28}~L_{28}	-10.94	10.94	0.45	-0.45	-4.50	4.50	6.56	-6.56	-67.48	67.48
	U_{28}~L_{29}	-43.45	70.59	0.51	-0.45	-4.50	4.56	6.56	-5.69	-67.48	68.27
	U_{29}~L_{29}	-32.66	38.67	0.76	-0.85	-2.26	2.54	9.74	-10.91	-28.90	32.44
	U_{29}~L_{30}	-29.76	34.19	0.99	-0.97	-2.99	2.99	12.49	-12.34	-38.00	38.11
	U_{30}~L_{30}	4.46	-6.40	2.87	-3.11	-1.44	1.19	36.71	-39.67	-13.42	15.14
	U_{30}~L_{31}	47.22	-50.55	3.69	-3.87	-0.79	0.80	47.13	-49.47	-10.11	10.20
	U_{31}~L_{31}	62.68	-61.36	4.92	-4.76	-1.01	0.97	60.83	-60.06	-12.73	12.26
	U_{31}~L_{32}	104.86	-112.00	7.80	-7.64	-1.13	1.07	99.64	-97.66	-14.48	13.61
	U_{32}~L_{32}	108.12	-132.78	5.04	-7.46	-0.57	0.93	64.38	-95.26	-7.32	11.93
	U_{32}~L_{33}	-24.18	16.55	5.04	-6.37	-3.96	4.71	64.38	-84.89	-6.37	8.77
	U_{33}~L_{33}	-109.22	116.95	0.49	-0.46	-5.59	5.58	6.30	-6.00	-72.35	72.17
	U_{33}~L_{34}	-48.65	58.79	0.41	-0.41	-3.21	3.23	5.24	-5.33	-41.58	41.80
	U_{34}~L_{34}	-39.15	42.89	0.59	-0.61	-4.62	4.64	7.56	-7.69	-59.84	60.19
	U_{34}~L_{35}	-5.41	11.55	1.00	-1.02	-2.97	3.09	12.93	-13.24	-38.48	40.01
	U_{35}~L_{35}	27.86	30.67	1.83	-1.94	-1.65	1.69	23.61	-25.05	-21.28	21.88
	U_{35}~L_{36}	56.99	42.74	3.52	-3.66	-0.92	0.93	44.61	-42.32	-11.98	11.98
	U_{36}~L_{36}	85.70	-83.61	5.33	-5.53	-0.43	0.30	67.53	-66.13	-5.44	3.77
	U_{36}~L_{37}	100.37	-97.46	6.17	-6.40	-0.53	0.37	79.13	-78.39	-6.38	4.64
	U_{37}~L_{37}	52.35	-54.19	6.54	-5.87	-3.23	3.23	52.35	-54.19	-6.54	5.87
	U_{37}~L_{38}	52.35	-54.19	6.54	-5.87	-3.23	3.23	52.35	-54.19	-6.54	5.87
	U_{38}~L_{38}	60.77	-48.39	6.30	-5.70	-3.70	3.70	60.77	-48.39	-6.30	5.70
	U_{38}~L_{39}	34.47	-61.08	5.70	-2.95	-28.34	27.00	34.47	-61.08	-5.70	2.95
	U_{39}~L_{39}	23.59	-26.53	24.09	24.60	0.00	0.00	23.59	-26.53	-24.09	24.60
	U_{39}~L_{40}	38.17	-45.52	-17.61	19.95	0.00	0.00	38.17	-45.52	-17.61	19.95
	U_{40}~L_{40}	63.52	-58.31	-18.53	16.49	0.00	0.00	63.52	-58.31	-18.53	16.49
	U_{40}~L_{41}	20.15	-40.81	2.28	-4.57	-1.32	-0.28	34.47	-61.08	-17.59	-3.70

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_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
U_0~L_1	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.776	0.29	0.29
U_1~L_1	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.905	0.24	0.24
U_1~L_2	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.930	0.23	0.23
U_2~L_2	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_2~L_3	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_3~L_3	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_3~L_4	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_4~L_4	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_4~L_5	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_5~L_5	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_5~L_6	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_6~L_6	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_6~L_7	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_7~L_7	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_7~L_8	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_8~L_8	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_8~L_9	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_9~L_9	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_9~L_{10}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_{10}~L_{10}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.22	0.22
U_{10}~L_{11}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{11}~L_{11}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{11}~L_{12}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{12}~L_{12}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{12}~L_{13}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{13}~L_{13}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{13}~L_{14}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{14}~L_{14}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{14}~L_{15}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{15}~L_{15}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{15}~L_{16}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{16}~L_{16}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{16}~L_{17}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{17}~L_{17}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{17}~L_{18}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{18}~L_{18}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{18}~L_{19}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{19}~L_{19}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{19}~L_{20}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{20}~L_{20}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{20}~L_{21}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{21}~L_{21}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{21}~L_{22}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{22}~L_{22}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{22}~L_{23}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{23}~L_{23}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{23}~L_{24}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{24}~L_{24}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{24}~L_{25}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{25}~L_{25}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{25}~L_{26}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{26}~L_{26}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{26}~L_{27}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{27}~L_{27}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{27}~L_{28}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{28}~L_{28}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{28}~L_{29}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{29}~L_{29}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{29}~L_{30}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{30}~L_{30}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{30}~L_{31}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{31}~L_{31}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{31}~L_{32}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{32}~L_{32}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{32}~L_{33}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{33}~L_{33}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{33}~L_{34}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{34}~L_{34}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{34}~L_{35}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{35}~L_{35}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{35}~L_{36}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{36}~L_{36}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{36}~L_{37}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{37}~L_{37}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{37}~L_{38}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{38}~L_{38}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{38}~L_{39}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{39}~L_{39}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{39}~L_{40}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{40}~L_{40}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21
U_{40}~L_{41}	-637.61	177.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.991	0.21	0.21

M_3 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) Start (k-in) | Lane Reduction & Impact Live Load Start (k-in) | Lane Reduction &

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: SCI
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

M_1 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 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_{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 1.8 Term * F_y/S_x | M_n (k-in) | 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) 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) | Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{req} (in^3) | S_x (in^3) | S_y (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | σ_{bx} (ksi) | Formula 1.8 Term * F_y/S_x | M_n (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor $C_{m(xx)}$ | Pass | Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass | Axial Stress (ksi) | Moment Stress (ksi) | Total | Pass | 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: 501
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, 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) 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	8.79	-11.39	-15.85	-1.13	97.80	-82.24	-176.41	-12.59
	U_1 - U_2	-46.81	-20.16	11.19	-5.49	-9.94	-3.56	13.26	8.13	-110.62	-43.83
	U_2 - U_3	-112.19	86.51	1.46	3.61	-11.40	-5.87	16.21	40.15	-126.96	-65.40
	U_3 - U_4	-15.68	66.14	2.32	5.40	-12.05	-7.26	25.87	39.71	-140.91	-71.47
	U_4 - U_5	-8.16	61.58	2.36	5.37	-16.40	-3.79	26.23	37.51	-182.63	-42.16
	U_5 - U_6	42.76	120.09	2.63	3.29	-14.99	0.18	29.27	36.61	-166.85	2.04
	U_6 - U_7	59.13	43.54	1.50	0.02	-11.50	0.00	41.00	30.00	-127.05	0.23
	U_7 - U_8	-47.40	525.96	1.28	3.81	-19.80	19.33	14.23	42.42	-220.42	215.15
	U_8 - U_9	-46.76	20.63	3.14	-1.09	-4.39	-2.06	33.81	-11.75	-47.30	-22.20
	U_9 - U_{10}	64.51	-138.68	3.80	-7.00	-3.11	-4.55	40.97	-76.12	-83.35	-60.15
	U_{10} - U_{11}	27.83	-140.42	3.28	-7.55	-4.95	-7.18	35.35	-16.76	-74.93	-77.44
	U_{11} - U_{12}	-106.18	-154.99	1.47	0.82	-10.94	-6.64	37.36	8.80	-118.00	-71.55
	U_{12} - U_{13}	-137.97	-202.84	0.76	0.28	-24.78	-6.09	8.13	3.02	-267.16	-65.64
	U_{13} - U_{14}	-245.68	-192.96	1.96	-11.79	-27.73	-4.10	21.09	-127.15	-298.98	-44.24
	U_{14} - U_{15}	-122.53	-326.70	3.81	-18.63	-25.44	-7.28	20.47	-202.97	-274.30	-78.48
	U_{15} - U_{16}	-269.82	-144.38	0.76	0.28	-24.78	-6.09	8.13	3.02	-267.16	-65.64
	U_{16} - U_{17}	-144.16	-67.25	0.75	-0.33	-13.27	0.16	-185.85	-81.88	-455.51	-90.24
	U_{17} - U_{18}	-170.35	-20.48	0.76	-5.37	-15.04	-0.25	8.21	-57.86	-162.12	-2.64
	U_{18} - U_{19}	-186.12	24.46	3.70	-14.58	-14.24	2.62	29.06	-157.15	-153.54	28.24
	U_{19} - U_{20}	-189.27	209.21	5.46	-8.05	-5.95	2.70	30.16	-76.49	-151.30	29.74
	U_{20} - U_{21}	-70.88	-181.00	4.14	-2.37	-7.55	-6.09	44.04	-25.27	-80.42	-64.76
	U_{21} - U_{22}	-53.83	-252.22	3.80	-5.61	-11.65	-1.06	44.04	-25.27	-117.78	-9.00
	U_{22} - U_{23}	-327.18	-325.33	1.43	3.05	-22.29	-12.94	15.17	32.43	-237.32	-137.73
	U_{23} - U_{24}	-338.53	-267.31	1.31	-3.01	-22.29	-12.94	15.17	32.43	-237.32	-137.73
	U_{24} - U_{25}	-396.09	-197.74	3.02	5.85	-31.05	-6.99	32.10	62.23	-330.57	-74.43
	U_{25} - U_{26}	-344.15	-179.39	4.51	3.93	-25.62	9.37	48.04	41.85	-272.73	-99.74
	U_{26} - U_{27}	-224.10	-291.71	3.30	-4.84	-25.62	-24.28	48.04	41.85	-272.73	-99.74
	U_{27} - U_{28}	-350.17	-90.75	3.85	0.00	-26.09	-6.13	40.58	53.25	-277.77	-65.21
	U_{28} - U_{29}	-227.32	-313.73	4.50	4.13	-25.62	-24.28	48.04	41.85	-272.73	-99.74
	U_{29} - U_{30}	-167.07	-39.82	4.91	4.84	-18.91	-4.63	52.32	51.49	-201.30	-49.32
	U_{30} - U_{31}	-109.77	-170.72	4.40	3.93	-20.39	0.10	46.91	-21.86	-217.07	-1.02
	U_{31} - U_{32}	-261.00	-265.93	3.06	2.76	-28.37	30.02	32.62	29.43	-302.04	319.68
	U_{32} - U_{33}	-1192.75	-52.80	0.00	0.00	-3.43	0.23	389.30	36.04	-1455.53	0.00
	U_{33} - U_{34}	-25.30	-71.62	3.19	0.82	-18.45	-4.37	33.59	8.61	-194.12	-46.02
	U_{34} - U_{35}	-150.58	-33.05	3.11	4.89	-18.91	-4.63	52.32	51.49	-201.30	-49.32
	U_{35} - U_{36}	-150.58	33.05	4.89	4.91	-10.08	-4.53	49.33	-47.45	-106.06	-47.70
	U_{36} - U_{37}	-147.37	-4.36	5.46	-2.66	-9.91	-8.40	57.47	-27.99	-104.21	-88.32
	U_{37} - U_{38}	-150.58	33.05	4.89	4.91	-10.08	-4.53	49.33	-47.45	-106.06	-47.70
	U_{38} - U_{39}	-31.67	-34.01	3.50	0.44	-16.21	-5.96	36.86	4.60	-170.51	-62.75
	U_{39} - U_{40}	-86.04	-71.70	2.77	2.27	-23.97	-3.19	22.97	19.23	-249.35	-33.52
	U_{40} - U_{41}	-60.95	-86.97	2.65	-18.77	-26.38	-8.68	27.86	-197.57	-277.59	-101.85
	U_{41} - U_{42}	-32.99	-28.60	3.24	4.14	-22.63	-5.64	34.12	43.55	-238.04	-69.37
	U_{42} - U_{43}	-15.12	113.76	3.20	4.18	-21.82	-1.24	24.13	205.06	-318.06	130.88
	U_{43} - U_{44}	-2.69	209.81	2.64	3.32	-21.25	-1.57	27.78	34.52	-223.58	16.50
	U_{44} - U_{45}	-122.28	-1156.58	2.05	4.90	-29.03	31.83	-130.96	1570.43	-656.94	1938.75
	U_{45} - U_{46}	-1153.78	-196.80	35.83	-10.10	-1.26	2.95	381.44	-107.49	-13.66	31.37
	U_{46} - U_{47}	-67.41	-52.67	2.60	-5.05	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{47} - U_{48}	-178.87	-59.61	6.21	-5.05	-6.20	-4.95	66.15	-53.79	-66.00	-52.67
	U_{48} - U_{49}	-68.77	-178.57	5.27	4.23	-11.11	-9.60	56.68	45.05	-118.25	-102.19
	U_{49} - U_{50}	-67.41	-52.67	2.60	-5.05	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{50} - U_{51}	-236.40	-153.06	4.10	3.15	-19.24	-6.18	43.61	33.55	-204.81	-65.77
	U_{51} - U_{52}	-98.63	-313.14	4.21	3.98	-38.61	-11.18	44.77	42.34	-411.08	-119.22
	U_{52} - U_{53}	-139.47	-392.96	1.45	1.34	-52.42	-17.26	33.44	9.39	-524.42	-179.50
	U_{53} - U_{54}	-350.27	-386.72	3.14	0.89	-40.44	-12.00	33.44	9.39	-430.60	-127.73
	U_{54} - U_{55}	-292.26	-292.26	3.14	0.89	-40.44	-12.00	33.44	9.39	-430.60	-127.73
	U_{55} - U_{56}	-278.82	-117.63	2.12	-0.55	-30.97	-3.23	22.54	-5.90	-329.74	-34.43
	U_{56} - U_{57}	-292.26	-37.16	3.14	0.89	-40.44	-12.00	33.44	9.39	-430.60	-127.73
	U_{57} - U_{58}	-186.18	-74.10	2.69	-3.97	-17.29	-3.22	28.67	-148.78	-184.11	-34.25
	U_{58} - U_{59}	-139.59	-187.78	8.83	-9.52	-14.96	-2.17	95.25	-102.68	-161.30	-23.42
	U_{59} - U_{60}	-67.42	-115.54	2.14	-5.04	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{60} - U_{61}	-52.50	-226.93	4.69	-15.86	-6.72	-6.62	48.37	-170.59	-72.48	-81.37
	U_{61} - U_{62}	-67.42	-115.54	2.14	-5.04	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{62} - U_{63}	-277.57	-111.69	1.77	-0.62	-18.28	-5.53	19.07	-6.68	-197.14	-69.66
	U_{63} - U_{64}	-166.87	-243.33	1.36	1.87	-18.76	0.17	14.67	20.11	-202.28	1.80
	U_{64} - U_{65}	-287.50	-127.73	2.41	-0.29	-28.28	-6.22	25.01	-89.39	-304.86	-64.55
	U_{65} - U_{66}	-141.30	-113.93	1.24	0.31	-23.02	-3.12	13.37	3.33	-248.18	-33.65
	U_{66} - U_{67}	-140.41	-22.73	1.73	2.64	-17.09	-2.20	18.64	28.51	-184.30	-23.76
	U_{67} - U_{68}	-141.54	56.98	1.52	2.27	-16.32	0.63	20.74	24.84	-175.97	8.84
	U_{68} - U_{69}	-112.19	86.51	1.46	3.61	-11.40	-5.87	16.21	40.15	-126.96	-65.40
	U_{69} - U_{70}	-15.68	66.14	2.32	5.40	-12.05	-7.26	25.87	39.71	-140.91	-71.47
	U_{70} - U_{71}	-8.16	61.58	2.36	5.37	-16.40	-3.79	26.23	37.51	-182.63	-42.16
	U_{71} - U_{72}	42.76	120.09	2.63	3.29	-14.99	0.18	29.27	36.61	-166.85	2.04
	U_{72} - U_{73}	59.13	43.54	1.50	0.02	-11.50	0.00	41.00	30.00	-127.05	0.23
	U_{73} - U_{74}	-47.40	525.96	1.28	3.81	-19.80	19.33	14.23	42.42	-220.42	215.15
	U_{74} - U_{75}	-46.76	20.63	3.14	-1.09	-4.39	-2.06	33.81	-11.75	-47.30	-22.20
	U_{75} - U_{76}	64.51	-138.68	3.80	-7.00	-3.11	-4.55	40.97	-76.12	-83.35	-60.15
	U_{76} - U_{77}	27.83	-140.42	3.28	-7.55	-4.95	-7.18	35.35	-16.76	-74.93	-77.44
	U_{77} - U_{78}	-106.18	-154.99	1.47	0.82	-10.94	-6.64	37.36	8.80	-118.00	-71.55
	U_{78} - U_{79}	-137.97	-202.84	0.76	0.28	-24.78	-6.09	8.13	3.02	-267.16	-65.64
	U_{79} - U_{80}	-245.68	-192.96	1.96	-11.79	-27.73	-4.10	21.09	-127.15	-298.98	-44.24
	U_{80} - U_{81}	-122.53	-326.70	3.81	-18.63	-25.44	-7.28	20.47	-202.97	-274.30	-78.48
	U_{81} - U_{82}	-269.82	-144.38	0.76	0.28	-24.78	-6.09	8.13	3.02	-267.16	-65.64
	U_{82} - U_{83}	-144.16	-67.25	0.75	-0.33	-13.27	0.16	-185.85	-81.88	-455.51	-90.24
	U_{83} - U_{84}	-170.35	-20.48	0.76	-5.37	-15.04	-0.25	8.21	-57.86	-162.12	-2.64
	U_{84} - U_{85}	-186.12	24.46	3.70	-14.58	-14.24	2.62	29.06	-157.15	-153.54	28.24
	U_{85} - U_{86}	-189.27	209.21	5.46	-8.05	-5.95	2.70	30.16	-76.49	-151.30	29.74
	U_{86} - U_{87}	-70.88	-181.00	4.14	-2.37	-7.55	-6.09	44.04	-25.27	-80.42	-64.76
	U_{87} - U_{88}	-53.83	-252.22	3.80	-5.61	-11.65	-1.06	44.04	-25.27	-117.78	-9.00
	U_{88} - U_{89}	-327.18	-325.33	1.43	3.05	-22.29	-12.94	15.17	32.43	-237.32	-137.73
	U_{89} - U_{90}	-338.53	-267.31	1.31	-3.01	-22.29	-12.94	15.17	32.43	-237.32	-137.73
	U_{90} - U_{91}	-396.09	-197.74	3.02	5.85	-31.05	-6.99	32.10	62.23	-330.57	-74.43
	U_{91} - U_{92}	-344.15	-179.39	4.51	3.93	-25.62	9.37	48.04	41.85	-272.73	-99.74
	U_{92} - U_{93}	-224.10	-291.71	3.30	-4.84	-25.62	-24.28	48.04	41.85	-272.73	-99.74
	U_{93} - U_{94}	-350.17	-90.75	3.85	0.00	-26.09	-6.13	40.58	53.25	-277.77	-65.21
	U_{94} - U_{95}	-227.32	-313.73	4.50	4.13	-25.62	-24.28	48.04	41.85	-272.73	-99.74
	U_{95} - U_{96}	-167.07	-39.82	4.91	4.84	-18.91	-4.63	52.32	51.49	-201.30	-49.32
	U_{96} - U_{97}	-109.77	-170.72	4.40	3.93	-20.39	0.10	46.91	-21.86	-217.07	-1.02
	U_{97} - U_{98}	-261.00	-265.93	3.06	2.76	-28.37	30.02	32.62	29.43	-302.04	319.68
	U_{98} - U_{99}	-1192.75	-52.80	0.00	0.00	-3.43	0.23	389.30	36.04	-1455.53	0.00
	U_{99} - U_{100}	-25.30	-71.62	3.19	0.82	-18.45	-4.37	33.59	8.61	-194.12	-46.02
	U_{100} - U_{101}	-150.58	-33.05	3.11	4.89	-18.91	-4.63	52.32	51.49	-201.30	-49.32
	U_{101} - U_{102}	-150.58	33.05	4.89	4.91	-10.08	-4.53	49.33	-47.45	-106.06	-47.70
	U_{102} - U_{103}	-147.37	-4.36	5.46	-2.66	-9.91	-8.40	57.47	-27.99	-104.21	-88.32
	U_{103} - U_{104}	-150.58	33.05	4.89	4.91	-10.08	-4.53	49.33	-47.45	-106.06	-47.70
	U_{104} - U_{105}	-31.67	-34.01	3.50	0.44	-16.21	-5.96	36.86	4.60	-170.51	-62.75
	U_{105} - U_{106}	-86.04	-71.70	2.77	2.27	-23.97	-3.19	22.97	19.23	-249.35	-33.52
	U_{106} - U_{107}	-60.95	-86.97	2.65	-18.77	-26.38	-8.68	27.86	-197.57	-277.59	-101.85
	U_{107} - U_{108}	-32.99	-28.60	3.24	4.14	-22.63	-5.64	34.12	43.55	-238.04	-69.37
	U_{108} - U_{109}	-15.12	113.76	3.20	4.18	-21.82	-1.24	24.13	205.06	-318.06	130.88
	U_{109} - U_{110}	-2.69	209.81	2.64	3.32	-21.25	-1.57	27.78	34.52	-223.58	16.50
	U_{110} - U_{111}	-122.28	-1156.58	2.05	4.90	-29.03	31.83	-130.96	1570.43	-656.94	1938.75
	U_{111} - U_{112}	-1153.78	-196.80	35.83	-10.10	-1.26	2.95	381.44	-107.49	-13.66	31.37
	U_{112} - U_{113}	-67.41	-52.67	2.60	-5.05	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{113} - U_{114}	-178.87	-59.61	6.21	-5.05	-6.20	-4.95	66.15	-53.79	-66.00	-52.67
	U_{114} - U_{115}	-68.77	-178.57	5.27	4.23	-11.11	-9.60	56.68	45.05	-118.25	-102.19
	U_{115} - U_{116}	-67.41	-52.67	2.60	-5.05	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{116} - U_{117}	-236.40	-153.06	4.10	3.15	-19.24	-6.18	43.61	33.55	-204.81	-65.77
	U_{117} - U_{118}	-98.63	-313.14	4.21	3.98	-38.61	-11.18	44.77	42.34	-411.08	-119.22
	U_{118} - U_{119}	-139.47	-392.96	1.45	1.34	-52.42	-17.26	33.44	9.39	-524.42	-179.50
	U_{119} - U_{120}	-350.27	-386.72	3.14	0.89	-40.44	-12.00	33.44	9.39	-430.60	-127.73
	U_{120} - U_{121}	-292.26	-292.26	3.14	0.89	-40.44	-12.00	33.44	9.39	-430.60	-127.73
	U_{121} - U_{122}	-278.82	-117.63	2.12	-0.55	-30.97	-3.23	22.54	-5.90	-329.74	-34.43
	U_{122} - U_{123}	-292.26	-37.16	3.14	0.89	-40.44	-12.00	33.44	9.39	-430.60	-127.73
	U_{123} - U_{124}	-186.18	-74.10	2.69	-3.97	-17.29	-3.22	28.67	-148.78	-184.11	-34.25
	U_{124} - U_{125}	-139.59	-187.78	8.83	-9.52	-14.96	-2.17	95.25	-102.68	-161.30	-23.42
	U_{125} - U_{126}	-67.42	-115.54	2.14	-5.04	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{126} - U_{127}	-52.50	-226.93	4.69	-15.86	-6.72	-6.62	48.37	-170.59	-72.48	-81.37
	U_{127} - U_{128}	-67.42	-115.54	2.14	-5.04	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{128} - U_{129}	-277.57	-111.69	1.77	-0.62	-18.28	-5.53	19.07	-6.68	-197.14	-69.66
	U_{129} - U_{130}	-166.87	-243.33	1.36	1.87	-18.76	0.17	14.67	20.11	-202.28	1.80
	U_{130} - U_{131}	-287.50	-127.73	2.41	-0.29	-28.28	-6.22	25.01	-89.39	-304.86	-64.55
	U_{131} - U_{132}	-141.30	-113.93	1.24	0.31	-23.02	-3.12	13.37	3.33	-248.18	-33.65
	U_{132} - U_{133}	-140.41	-22.73	1.73	2.64	-17.09	-2.20	18.64	28.51	-184.30	-23.76
	U_{133} - U_{134}	-141.54	56.98	1.52	2.27	-16.32	0.63	20.74	24.84	-175.97	8.84
	U_{134} - U_{135}	-136.80	470.88	0.86	3.06	-16.80	14.62	9.29	32.99	-181.18	157.63
	U_{135} - U_{136}	-497.19	-34.44	22.03	-19.28	-0.65	0.07	245.22	-214.68	-0.53	0.73
	U_{136} - U_{137}	113.01	44.44	4.26	-1.84	-4.07	-4.52	47.38	-20.50	-45.28	-50.35
	U_{137} - U_{138}	-52.50	-226.93	4.69	-15.86	-6.72	-6.62	48.37	-170.59	-72.48	-81.37
	U_{138} - U_{139}	-67.42	-115.54	2.14	-5.04	-6.20	-4.95	28.27	-27.75	-100.63	-22.05
	U_{139} - U_{140}	-277.57	-111.69	1.77	-0.62	-18.28	-5.53	19.07	-6.68	-197.14	-69.66
	U_{140} - U_{141}	-166.87	-243.33	1.36	1.87	-18.76	0.17	14.67	20.11	-202.28	1.80
	U_{141} - U_{142}	-287.50	-127.73	2.41	-0.29	-28.28	-6.22	25.01	-89.39	-304.86	-64.55
	U_{142} - U_{143}	-141.30	-113.93	1.24	0.31	-23.02	-3.12	13.37	3.33	-248.18	-33.65
	U_{143} - U_{144}	-140.41	-22.73	1.73	2.64	-17.09	-2.20	18.64	28.51	-184.30	-23.76
	U_{144} - U_{145}	-141.54	56.98	1.52	2.27	-16.32	0.63	20.74	24.84	-175.97	8.84

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F_y*S_{xx}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(a)}$	Equivalent Mom. Factor $C_{b(bb)}$
Structure 1	U_0 - U_1	0.00	0.00	1.42	6028	0.99872951	4241.5	0.003	0.60	0.60
	U_1 - U_2	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.201	0.52	0.52
	U_2 - U_3	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_3 - U_4	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_4 - U_5	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_5 - U_6	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_6 - U_7	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_7 - U_8	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_8 - U_9	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_9 - U_{10}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{10} - U_{11}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{11} - U_{12}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{12} - U_{13}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{13} - U_{14}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{14} - U_{15}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{15} - U_{16}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{16} - U_{17}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{17} - U_{18}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{18} - U_{19}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{19} - U_{20}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{20} - U_{21}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{21} - U_{22}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{22} - U_{23}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{23} - U_{24}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{24} - U_{25}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{25} - U_{26}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{26} - U_{27}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{27} - U_{28}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{28} - U_{29}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{29} - U_{30}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{30} - U_{31}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{31} - U_{32}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{32} - U_{33}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{33} - U_{34}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{34} - U_{35}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{35} - U_{36}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{36} - U_{37}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{37} - U_{38}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{38} - U_{39}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{39} - U_{40}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{40} - U_{41}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{41} - U_{42}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{42} - U_{43}	0.00	0.00	1.40	4465	0.99873153	3184.1	-0.297	0.48	0.48
	U_{43} - U_{44}	0.00	0.00	1.40	4465	0.99873153

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: 5C1
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
Gusset Plate Capacity Based on Guidelines for Evaluating Gusset Plates in 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	L_0-L_1	-15.54	-73.33	8.74	-8.11	-1.00	1.04	62.77	-68.08	-11.11	11.61
	L_1-L_2	39.76	-87.96	3.76	-10.18	-6.81	-6.75	41.84	-117.76	-75.83	-75.17
	L_2-L_3	39.76	-42.20	3.76	-2.43	-11.71	-6.57	41.84	-117.76	-130.33	-67.57
	L_3-L_4	-11.34	11.55	2.05	-12.39	-14.42	-7.05	22.83	-137.93	-160.56	-78.45
	L_4-L_5	-49.11	208.03	3.00	33.28	33.38	-153.82	22.83	-137.93	-160.56	-78.45
	L_5-L_6	-0.46	181.07	2.26	5.40	-9.10	0.57	25.12	60.10	-101.31	6.30
	L_6-L_7	41.44	78.72	2.82	-0.65	-6.05	-0.66	62.54	-74.63	-65.27	-7.15
	L_7-L_8	-25.11	448.74	0.91	4.22	-7.82	14.78	10.16	46.56	-87.03	164.99
	L_8-L_9	425.89	-36.02	15.64	-3.06	-3.09	0.61	168.67	-33.00	-0.92	2.24
	L_9-L_{10}	425.89	-126.53	1.93	-0.92	-6.05	-0.66	62.54	-74.63	-65.27	-7.15
	L_{10}-L_{11}	120.44	-115.99	4.19	-3.50	-2.08	-5.19	45.22	-37.69	-22.38	-55.95
	L_{11}-L_{12}	120.44	-115.99	4.19	-3.50	-2.08	-5.19	45.22	-37.69	-22.38	-55.95
	L_{12}-L_{13}	-45.24	-121.26	2.43	-0.37	-7.44	-8.15	26.24	-3.98	-80.23	-87.92
	L_{13}-L_{14}	96.32	-264.98	1.53	-17.34	-10.02	-12.23	81.22	-186.95	-108.01	-181.90
	L_{14}-L_{15}	96.32	-264.98	1.53	-17.34	-10.02	-12.23	81.22	-186.95	-108.01	-181.90
	L_{15}-L_{16}	-191.89	-319.35	0.79	0.38	-16.81	-6.10	8.50	-6.14	-181.21	-68.73
	L_{16}-L_{17}	-339.58	44.88	0.70	7.52	-1.29	-13.07	7.52	-1.29	-153.21	-14.21
	L_{17}-L_{18}	-154.59	-31.26	0.91	3.84	-2.22	-105.34	3.84	-2.22	-105.34	-13.35
	L_{18}-L_{19}	-215.80	145.76	0.53	1.66	-4.29	-133.16	1.66	-4.29	-133.16	-33.64
	L_{19}-L_{20}	-136.32	49.67	0.40	4.29	-2.34	-104.84	4.29	-2.34	-104.84	-11.49
	L_{20}-L_{21}	-2.68	-185.02	4.45	-11.15	-0.73	1.48	47.36	-118.66	-7.79	15.76
	L_{21}-L_{22}	8.53	-235.20	4.45	-11.15	-0.73	1.48	47.36	-118.66	-7.79	15.76
	L_{22}-L_{23}	-4.23	-160.72	4.95	-11.31	-5.68	-6.56	52.65	-120.42	-60.51	-69.88
	L_{23}-L_{24}	-4.23	-160.72	4.95	-11.31	-5.68	-6.56	52.65	-120.42	-60.51	-69.88
	L_{24}-L_{25}	-252.89	-295.03	4.53	-13.71	-16.93	-12.82	48.18	-149.54	-180.30	-136.52
	L_{25}-L_{26}	-252.89	-295.03	4.53	-13.71	-16.93	-12.82	48.18	-149.54	-180.30	-136.52
	L_{26}-L_{27}	-475.08	-292.18	3.90	-23.40	-17.60	-10.23	41.54	-41.84	-249.09	-187.43
	L_{27}-L_{28}	-280.47	-64.51	3.20	5.64	-24.34	-0.33	34.09	-60.00	-299.15	-3.47
	L_{28}-L_{29}	-292.36	219.74	2.43	42.79	-34.39	-157.03	42.79	-34.39	-157.03	-27.25
	L_{29}-L_{30}	-225.83	141.30	2.76	29.42	-57.10	-155.98	29.42	-57.10	-155.98	-3.11
	L_{30}-L_{31}	-203.53	259.03	4.44	47.28	-57.10	-155.98	47.28	-57.10	-155.98	-3.11
	L_{31}-L_{32}	-160.03	387.16	2.86	30.45	65.73	-137.99	30.45	65.73	-137.99	44.70
	L_{32}-L_{33}	-202.71	-204.45	4.61	45.10	-5.61	-154.36	45.10	-5.61	-154.36	-37.12
	L_{33}-L_{34}	-379.75	-103.13	1.91	-40.04	-20.34	-128.73	-40.04	-20.34	-128.73	-89.47
	L_{34}-L_{35}	1072.48	-412.35	33.04	-12.39	-1.87	-5.13	347.52	-130.40	-19.88	-1.37
	L_{35}-L_{36}	339.46	-41.37	1.68	-2.41	-2.44	-0.82	32.36	-20.52	-43.14	-26.07
	L_{36}-L_{37}	475.57	-49.03	10.78	-11.04	-2.43	-2.96	113.37	-116.18	-25.60	-31.13
	L_{37}-L_{38}	339.46	-41.37	1.68	-2.41	-2.44	-0.82	32.36	-20.52	-43.14	-26.07
	L_{38}-L_{39}	-226.51	-41.81	6.20	-8.20	-7.40	-7.71	65.22	-86.29	-77.81	-81.07
	L_{39}-L_{40}	214.45	-56.43	4.92	-11.15	-8.09	-11.10	51.56	-117.33	-85.15	-116.81
	L_{40}-L_{41}	214.45	-56.43	4.92	-11.15	-8.09	-11.10	51.56	-117.33	-85.15	-116.81
	L_{41}-L_{42}	49.27	-202.49	2.86	-18.17	-17.09	-9.89	30.13	-191.17	-179.81	-104.02
	L_{42}-L_{43}	49.27	-202.49	2.86	-18.17	-17.09	-9.89	30.13	-191.17	-179.81	-104.02
	L_{43}-L_{44}	-111.92	0.86	2.07	-4.48	-18.19	-1.92	21.74	-47.17	-191.36	-20.24
	L_{44}-L_{45}	-111.92	0.86	2.07	-4.48	-18.19	-1.92	21.74	-47.17	-191.36	-20.24
	L_{45}-L_{46}	-60.78	179.81	2.21	-5.11	-12.96	0.98	23.21	-53.79	-136.36	10.27
	L_{46}-L_{47}	-81.80	265.56	3.79	2.17	-14.25	4.92	39.89	-72.85	-149.97	47.39
	L_{47}-L_{48}	-99.81	-279.28	3.37	-2.20	-14.27	-6.07	35.41	-23.10	-150.11	-63.88
	L_{48}-L_{49}	-99.81	-279.28	3.37	-2.20	-14.27	-6.07	35.41	-23.10	-150.11	-63.88
	L_{49}-L_{50}	-231.96	1004.43	2.23	-8.38	-5.32	-5.25	32.36	-20.52	-43.14	-26.07
	L_{50}-L_{51}	1026.29	-362.30	32.14	-12.50	-1.68	1.86	342.17	-133.08	-17.86	19.77
	L_{51}-L_{52}	-226.76	-125.36	2.20	-3.17	-18.72	-2.83	23.44	-33.75	-199.32	-30.08
	L_{52}-L_{53}	-278.05	-132.91	5.87	-8.91	-4.48	-1.53	62.49	-94.83	-47.95	-16.29
	L_{53}-L_{54}	-278.05	-132.91	5.87	-8.91	-4.48	-1.53	62.49	-94.83	-47.95	-16.29
	L_{54}-L_{55}	-222.98	-243.21	5.89	-11.72	-8.19	-5.13	62.72	-124.79	-87.18	-54.61
	L_{55}-L_{56}	-222.98	-243.21	5.89	-11.72	-8.19	-5.13	62.72	-124.79	-87.18	-54.61
	L_{56}-L_{57}	-167.98	-470.72	4.11	-2.98	-26.26	-11.21	43.75	-31.70	-279.63	-119.30
	L_{57}-L_{58}	-445.06	-93.48	2.44	0.84	-23.39	-7.69	36.65	-8.89	-251.18	-81.85
	L_{58}-L_{59}	-291.78	-319.50	1.41	-3.55	-12.68	-2.36	22.43	-38.36	-135.03	-25.30
	L_{59}-L_{60}	-392.27	-38.30	1.68	-0.45	-18.45	-1.40	17.90	-4.83	-196.39	-14.95
	L_{60}-L_{61}	-392.27	-38.30	1.68	-0.45	-18.45	-1.40	17.90	-4.83	-196.39	-14.95
	L_{61}-L_{62}	-297.04	199.10	1.31	-3.55	-12.68	2.36	13.95	-5.82	-135.03	25.30
	L_{62}-L_{63}	-291.78	-319.50	1.41	-3.55	-12.68	-2.36	22.43	-38.36	-135.03	-25.30
	L_{63}-L_{64}	24.53	-109.42	5.30	-6.30	-0.38	0.56	57.77	-89.52	-4.04	6.10
	L_{64}-L_{65}	-139.90	-177.77	4.32	-9.07	-1.90	-1.93	46.59	-97.76	-20.45	-20.76
	L_{65}-L_{66}	-138.31	-177.77	4.32	-9.07	-1.90	-1.93	46.59	-97.76	-20.45	-20.76
	L_{66}-L_{67}	47.96	-293.64	3.91	-10.38	-6.55	-5.46	42.16	-111.90	-70.65	-58.90
	L_{67}-L_{68}	-203.24	-58.28	3.91	-10.38	-6.55	-5.46	14.83	-15.52	-70.65	-58.90
	L_{68}-L_{69}	-47.68	-343.07	2.97	-16.37	-14.88	-14.88	31.98	-176.53	-160.47	-160.44
	L_{69}-L_{70}	-341.10	86.20	1.69	0.86	-19.68	2.41	18.20	9.24	-211.15	26.03
	L_{70}-L_{71}	-341.10	86.20	1.69	0.86	-19.68	2.41	18.20	9.24	-211.15	26.03
	L_{71}-L_{72}	-201.09	192.50	1.34	-1.96	-13.12	1.68	14.44	-21.10	-109.16	18.14
	L_{72}-L_{73}	-148.24	148.96	2.38	-1.32	-9.50	2.35	11.79	-18.61	-200.24	25.31
	L_{73}-L_{74}	-148.24	148.96	2.38	-1.32	-9.50	2.35	11.79	-18.61	-200.24	25.31
	L_{74}-L_{75}	-428.31	-26.46	1.52	-3.12	-0.03	0.03	195.07	-23.90	-0.36	0.33
	L_{75}-L_{76}	-428.31	-26.46	1.52	-3.12	-0.03	0.03	195.07	-23.90	-0.36	0.33
	L_{76}-L_{77}	70.66	-27.55	1.51	-5.42	-7.35	-1.37	56.97	-60.32	-81.84	-15.25
	L_{77}-L_{78}	70.66	-27.55	1.51	-5.42	-7.35	-1.37	56.97	-60.32	-81.84	-15.25
	L_{78}-L_{79}	194.48	-25.11	5.09	-12.10	-5.26	-6.44	56.70	-134.71	-58.53	-71.64
	L_{79}-L_{80}	194.48	-25.11	5.09	-12.10	-5.26	-6.44	56.70	-134.71	-58.53	-71.64
	L_{80}-L_{81}	-45.48	-80.88	2.07	-5.73	-13.26	-5.02	23.03	-8.14	-147.62	-55.92
	L_{81}-L_{82}	-45.48	-80.88	2.07	-5.73	-13.26	-5.02	23.03	-8.14	-147.62	-55.92
	L_{82}-L_{83}	-74.44	-5.53	0.79	-0.72	-9.15	4.06	8.84	-7.96	-101.85	45.44

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_0-L_1	-15.54	-73.33	8.74	-8.11	-1.00	1.04	62.77	-68.08	-11.11	11.61
	L_1-L_2	39.76	-87.96	3.76	-10.18	-6.81	-6.75	41.84	-117.76	-75.83	-75.17
	L_2-L_3	39.76	-42.20	3.76	-2.43	-11.71	-6.57	41.84	-117.76	-130.33	-67.57
	L_3-L_4	-11.34	11.55	2.05	-12.39	-14.42	-7.05	22.83	-137.93	-160.56	-78.45
	L_4-L_5	-49.11	208.03	3.00	33.28	33.38	-153.82	22.83	-137.93	-160.56	-78.45
	L_5-L_6	-0.46	181.07	2.26	5.40	-9.10	0.57	25.12	60.10	-101.31	6.30
	L_6-L_7	41.44	78.72	2.82	-0.65	-6.05	-0.66	62.54	-74.63	-65.27	-7.15
	L_7-L_8	-25.11	448.74	0.91	4.22	-7.82	14.78	10.16	46.56	-87.03	164.99
	L_8-L_9	425.89	-36.02	15.64	-3.06	-3.09	0.61	168.67	-33.00	-0.92	2.24
	L_9-L_{10}	425.89	-126.53	1.93	-0.92	-6.05	-0.66	62.54	-74.63	-65.27	-7.15
	L_{10}-L_{11}	120.44	-115.99	4.19	-3.50	-2.08	-5.19	45.22	-37.69	-22.38	-55.95
	L_{11}-L_{12}	120.44	-115.99	4.19	-3.50	-2.08	-5.19	45.22	-37.69	-22.38	-55.95
	L_{12}-L_{13}	-45.24	-121.26	2.43	-0.37	-7.44	-8.15	26.24	-3.98	-80.23	-87.92
	L_{13}-L_{14}	96.32	-264.98	1.53	-17.34	-10.02	-12.23	81.22	-186.95	-108.01	-181.90
	L_{14}-L_{15}	96.32	-264.98	1.53	-17.34	-10.02	-12.23	81.22	-186.95	-108.01	-181.90
	L_{15}-L_{16}	-191.89	-319.35	0.79	0.38	-16.81	-6.10	8.50	-6.14	-181.21	-68.73
	L_{16}-L_{17}	-339.58	44.88	0.70	7.52	-1.29	-13.07	7.52	-1.29	-153.21	-14.21
	L_{17}-L_{18}	-154.59	-31.26	0.91	3.84	-2.22	-105.34	3.84	-2.22	-105.34	-13.35
	L_{18}-L_{19}	-215.80	145.76	0.53	1.66	-4.29	-133.16	1.66	-4.29	-133.16	-33.64
	L_{19}-L_{20}	-136.32	49.67	0.40	4.29	-2.34	-104.84	4.29	-2.34	-104.84	-11.49
	L_{20}-L_{21}	-2.68	-185.02	4.45	-11.15	-0.73	1.48	47.36	-118.66	-7.79	15.76
	L_{21}-L_{22}	8.53	-235.20	4.45	-11.15	-0.73	1.48	47.36	-118.66	-7.79	15.76
	L_{22}-L_{23}	-4.23	-160.72	4.95	-11.31	-5.68	-6.56	52.65	-120.42	-60.51	-69.88
	L_{23}-L_{24}	-4.23	-160.72	4.95	-11.31	-5.68	-6.56	52.65	-120.42	-60.51	-69.88
	L_{24}-L_{25}	-252.89	-295.03	4.53	-13.71	-16.93	-12.82	48.18	-149.54	-180.30	-136.52
	L_{25}-L_{26}	-252.89	-295.03	4.53	-13.71	-16.93	-12.82	48.18	-149.54	-180.30	-136.52
	L_{26}-L_{27}	-475.08	-292.18	3.90	-23.40	-17.60	-10.23	41.54	-41.84	-249.09	-187.43
	L_{27}-L_{28}	-280.47	-64.51	3.20	5.64	-24.34	-0.33	34.09	-60.00	-299.15	-3.47
	L_{28}-L_{29}	-292.36	219.74	2.43	42.79	-34.39	-157.03	42.79	-34.39	-157.03	-27.25
	L_{29}-L_{30}	-225.83	141.30	2.76	29.42	-57.10	-155.98	29.42	-57.10	-155.98	-3.11
	L_{30}-L_{31}	-203.53	259.03	4.44	47.28	-57.10	-155.98	47.28	-57.10	-155.98	-3.11
	L_{31}-L_{32}	-160.03	387.16	2.86	30.45	65.73	-137.99	30.45	65.73	-137.99	44.70
	L_{32}-L_{33}	-202.71	-204.45	4.61	45.10	-5.61	-154.36	45.10	-5.61	-154.36	-37.12
	L_{33}-L_{34}	-379.75	-103.13	1.91	-40.04	-20.34	-128.73	-40.04	-20.34	-128.73	-89.47
	L_{34}-L_{35}	1072.48	-412.35	33.04	-12.39	-1.87	-5.13	347.52	-130.40	-19.88	-1.37
	L_{35}-L_{36}	339.46	-41.37	1.68	-2.41	-2.44	-0.82	32.36	-20.52	-43.14	-26.07
	L_{36}-L_{37}	475.57	-49.03	10.78	-11.04	-2.43	-2.96	113.37	-116.18	-25.60	-31.13
	L_{37}-L_{38}	339.46	-41.37	1.68	-2.41	-2.44	-0.82	32.36	-20.52	-43.14	-26.07
	L_{38}-L_{39}	-226.51	-41.81	6.20	-8.20	-7.40	-7.71	65.22	-86.29	-77.81	-81.07
	L_{39}-L_{40}	214.45	-56.43	4.92	-11.15	-8.09	-11.10	51.56	-117.33	-85.15	-116.81
	L_{40}-L_{41}	214.45	-56.43	4.92	-11.15	-8.09	-11.10	51.56	-117.33	-85.15	-116.81
	L_{41}-L_{42}	49.27	-202.49	2.86	-18.17	-17.09	-9.89	30.13	-191.17	-179.81	-104.02
	L_{42}-L_{43}	49.27	-202.49	2.86	-18.17	-17.09	-9.89	30.13	-191.17	-179.81	-104.02
	L_{43}-L_{44}	-111.92	0.86	2.07	-4.48	-18.19	-1.92	21.74	-47.17	-191.36	-20.24
	L_{44}-L_{45}	-111.92	0.86	2.07	-4.48	-18.19	-1.92	21.74	-47.17	-191.36	-20.24
	L_{45}-L_{46}	-60.78	179.81	2.21	-5.11	-12.96	0.98	23.21	-53.79	-136.36	10.27
	L_{46}-L_{47}	-81.80	265.56	3.79	2.17	-14.25	4.92	39.89	-72.85	-149.97	47.39
	L_{47}-L_{48}	-99.81	-279.28	3.37	-2.20	-14.27	-6.07	35.41	-23.10	-150.11	-63.88
	L_{48}-L_{49}	-99.81	-279.28	3.37	-2.20	-14.27	-6.07	35.41	-23.10	-150.11	-63.88
	L_{49}-L_{50}	-231.96	1004.43	2.23	-8.38	-5.32	-5.25	32.36	-20.52	-43.14	-26.07
	L_{50}-L_{51}	1026.29	-362.30	32.14	-12.50	-1.68	1.86	342.17	-133.08	-17.86	19.77
	L_{51}-L_{52}	-226.76	-125.36	2.20	-3.17	-18.72	-2.83	23.44	-33.75	-199.32	-30.08
	L_{52}-L_{53}	-278.05	-132.91	5.87	-8.91	-4.48	-1.53	62.49	-94.83	-47.95	-16.29
	L_{53}-L_{54}	-278.05	-132.91	5.87	-8.91	-4.48	-1.53	62.49	-94.83	-47.95	-16.29
	L_{54}-L_{55}	-222.98	-243.21	5.89	-11.72	-8.19	-5.13	62.72	-124.79	-87.18	-54.61
	L_{55}-L_{56}	-222.98	-243.21	5.89	-11.72	-8.19	-5.13	62.72	-124.79	-87.18	-54.61
	L_{56}-L_{57}	-167.98	-470.72	4.11	-2.98	-26.26	-11.21	43.75	-31.70	-279.63	-119.30
	L_{57}-L_{58}	-445.06	-93.48	2.44	0.84	-23.39	-7.69	36.65	-8.89	-251.18	-81.85
	L_{58}-L_{59}	-291.78	-319.50	1.41	-3.55	-12.68	-2.36	22.43	-38.36	-135.03	-25.30
	L_{59}-L_{60}	-392.27	-38.30	1.68	-0.45	-18.45	-1.40	17.90	-4.83	-196.39	-14.95
	L_{60}-L_{61}	-392.27	-38.30	1.68	-0.45	-18.45	-1.40	17.90	-4.83	-196.39	-14.95
	L_{61}-L_{62}	-297.04	199.10	1.31	-3.55	-12.68	2.36	13.95	-5.82	-135.03	25.30
	L_{62}-L_{63}	-291.78	-319.50	1.41	-3.55	-12.68	-2.36	22.43	-38.36	-135.03	-25.30
	L_{63}-L_{64}	24.53	-109.42	5.30	-6.30	-0.38	0.56	57.77	-89.52	-4.04	6.10
	L_{64}-L_{65}	-139.90	-177.77	4.32	-9.07	-1.90	-1.93	46.59	-97.76	-20.45	-20.76
	L_{65}-L_{66}	-138.31	-177.77	4.32	-9.07	-1.90	-1.93	46.59	-97.76	-20.45	-20.76
	L_{66}-L_{67}	47.96	-293.64	3.91	-10.38	-6.55	-5.46	42.16	-111.90	-70.65	-58.90
	L_{67}-L_{68}	-203.24	-58.28	3.91	-10.38	-6.55	-5.46	14.83	-15.52	-70.65	-58.90
	L_{68}-L_{69}	-47.68	-343.07	2.97	-16.37	-14.88	-14.88	31.98	-176.53	-160.47	-160.44
	L_{69}-L_{70}	-341.10	86.20	1.69	0.86	-19.68	2.41	18.20	9.24	-211.15	26.03
	L_{70}-L_{71}	-341.10	86.20	1.69	0.86	-19.68	2.41	18.20	9.24	-211.15	26.03
	L_{71}-L_{72}	-201.09	192.50	1.34	-1.96	-13.12	1.68	14.44	-21.10	-109.16	18.14
	L_{72}-L_{73}	-148.24	148.96	2.38	-1.32	-9.50	2.35	11.79	-18.61	-200.24	25.31
	L_{73}-L_{74}	-148.24	148.96	2.38	-1.32	-9.50	2.35	11.79	-18.61	-200.24	25.31
	L_{74}-L_{75}	-428.31	-26.46	1.52	-3.12	-0.03	0.03	195.07	-23.90	-0.36	0.33
	L_{75}-L_{76}	-428.31	-26.46	1.52	-3.12	-0.03	0.03	195.07	-23.90	-0.36	0.33
	L_{76}-L_{77}	70.66	-27.55	1.51	-5.42	-7.35	-1.37	56.97	-60.32	-81.84	-15.25
	L_{77}-L_{78}	70.66	-27.55	1.51	-5.42	-7.35	-1.37	56.97	-60.32	-81.84	-15.25
	L_{78}-L_{79}	194.48	-25.11	5.09	-12.10	-5.26	-6.44	56.70	-134.71	-58.53	-71.64
	L_{79}-L_{80}	194.48	-25.11	5.09	-12.10	-5.26	-6.44	56.70	-134.71	-58.53	-71.64
	L_{80}-L_{81}	-45.48	-80.88	2.07	-5.73	-13.26	-5.02	23.03	-8.14	-147.62	-55.92
	L_{81}-L_{82}	-45.48	-80.88	2.07	-5.73	-13.26	-5.02	23.03	-8.14	-147.62	-55.92
	L_{82}-L_{83}	-74.44	-5.53	0.79	-0.72	-9.15	4.06	8.84	-7.96	-101.85	45.44

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 3	L_0-L_1	-15.54	-73.33	8.74	-8.11	-1.00	1.04	62.77	-68.08	-11.11	11.61
	L_1-L_2	39.76	-87.96	3.76	-10.18	-6.81	-6.75	41.84	-117.76	-75.83	-75.17
	L_2-L_3	39.76	-42.20	3.76	-2.43	-11.71	-6.57	41.84	-117.76	-130.33	-67.57
	L_3-L_4	-11.34	11.55	2.05	-12.39	-14.42	-7.05	22.83	-137.93	-160.56	-78.45
	L_4-L_5	-49.11	208.03	3.00	33.28	33.38	-153.82	22.83	-137.93	-160.56	-78.45
	L_5-L_6	-0.46	181.07	2.26	5.40	-9.10	0.57	25.12	60.10	-101.31	6.30
	L_6-L_7	41.44	78.72	2.82	-0.65	-6.05	-0.66	62.54	-74.63	-65.27	-7.15
	L_7-L_8	-25.11	448.74	0.91	4.22	-7.82	14.78	10.16	46.56	-87.03	164.99
	L_8-L_9	425.89	-36.02	15.64	-3.06	-3.09	0.61	168.67	-33.00	-0.92	2.24
	L_9-L_{10}	425.89	-126.53	1.93	-0.92	-6.05	-0.66	62.54	-74.63	-65.27	-7.15
	L_{10}-L_{11}	120.44	-115.99	4.19	-3.50	-2.08	-5.19	45.22	-37.69	-22.38	-55.95
	L_{11}-L_{12}	120.44	-115.99	4.19	-3.50	-2.08	-5.19	45.22	-37.69	-22.38	-55.95
	L_{12}-L_{13}	-45.24	-121.26	2.43	-0.37	-7.44	-8.15	26.24	-3.98	-80.23	-87.92
	L_{13}-L_{14}	96.32	-264.98	1.53	-17.34	-10.02	-12.23	81.22	-186.95	-108.01	-181.90
	L_{14}-L_{15}	96.32	-264.98	1.53	-17.34	-10.02	-12.23	81.22	-186.95	-108.01	-181.90
	L_{15}-L_{16}	-191.89	-319.35	0.79	0.38	-16.81	-6.10	8.50	-6.14	-181.21	-68.73
	L_{16}-L_{17}	-339.58	44.88	0.70	7.52	-1.29	-13.07	7.52	-1.29	-153.21	-14.21
	L_{17}-L_{18}	-154.59	-31.26	0.91	3.84	-2.22	-105.34	3.84	-2.22	-105.34	-13.35
	L_{18}-L_{19}	-215.80	145.76	0.53	1.66	-4.29	-133.16	1.66	-4.29	-133.16	-33.64
	L_{19}-L_{20}	-136.32	49.67	0.40	4.29	-2.34	-104.84	4.29	-2.34	-104.84	-11.49
	L_{20}-L_{21}

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
Condition: As-Built

Vehicle Load Factors		Pedestrian Load Factors	
DL Factor:	1.00	DL Factor:	1.00
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_1–L_1	-29.84	-49.00	0.85	-0.91	4.64	4.49	0.00	0.00	0.00	0.00
	U_1–L_2	-9.06	15.16	0.72	-0.78	-3.71	3.53	0.00	0.00	0.00	0.00
	U_1–U_2	10.00	9.71	0.00	-0.73	-2.56	3.22	0.00	0.00	0.00	0.00
	L_1–L_2	33.43	-34.38	2.06	-1.88	-2.52	2.53	0.00	0.00	0.00	0.00
	L_1–U_2	41.60	-42.42	2.44	-2.13	-3.14	10.05	0.00	0.00	0.00	0.00
	L_2–U_2	45.52	-51.05	2.99	-3.25	-0.30	-0.01	0.00	0.00	0.00	0.00
	L_2–U_3	34.16	-36.57	3.42	-3.64	-2.67	-1.30	0.00	0.00	0.00	0.00
	L_2–L_3	46.21	-55.82	3.36	-3.46	-0.47	0.31	0.00	0.00	0.00	0.00
	U_2–L_3	110.34	-114.53	3.88	-3.56	-0.44	0.19	0.00	0.00	0.00	0.00
	U_2–U_3	121.24	-131.08	6.18	-6.21	-0.53	-0.19	0.00	0.00	0.00	0.00
	L_3–U_3	134.20	-173.18	6.16	-6.66	-0.51	-0.06	0.00	0.00	0.00	0.00
	L_3–L_4	114.26	168.30	1.03	-0.18	-7.92	7.75	0.00	0.00	0.00	0.00
	L_3–U_4	124.38	133.15	0.98	-1.05	-5.96	5.71	0.00	0.00	0.00	0.00
	U_3–U_4	113.84	113.84	0.98	-1.13	-5.96	5.71	0.00	0.00	0.00	0.00
	U_3–L_4	56.00	62.15	0.66	-0.70	-3.12	3.10	0.00	0.00	0.00	0.00
	U_4–L_4	56.00	62.15	0.66	-0.70	-3.12	3.10	0.00	0.00	0.00	0.00
	U_4–L_5	-7.05	12.30	0.61	-1.58	-3.03	3.05	0.00	0.00	0.00	0.00
	L_4–L_5	15.85	-15.58	2.17	-2.08	-2.73	2.72	0.00	0.00	0.00	0.00
	L_4–U_5	38.85	-44.93	2.77	-2.50	-2.65	-14.30	0.00	0.00	0.00	0.00
	L_5–U_5	86.89	-96.05	4.75	-4.70	-1.34	-1.36	0.00	0.00	0.00	0.00
	L_5–L_6	155.08	-159.44	1.26	-1.21	-1.26	1.82	0.00	0.00	0.00	0.00
	L_5–U_6	141.21	-149.39	5.37	-5.56	-0.84	0.43	0.00	0.00	0.00	0.00
	U_5–U_6	192.53	-192.81	5.23	-5.36	-0.58	0.21	0.00	0.00	0.00	0.00
	L_6–U_6	147.09	-146.79	5.57	-5.77	-0.60	0.21	0.00	0.00	0.00	0.00
	U_6–L_6	203.50	-203.15	8.79	-9.50	-0.49	0.52	0.00	0.00	0.00	0.00
	L_6–L_7	60.02	-59.49	0.78	-0.78	7.24	7.24	0.00	0.00	0.00	0.00
	L_6–U_7	-109.87	162.82	0.83	-0.87	4.69	4.25	0.00	0.00	0.00	0.00
	U_6–L_7	-113.84	168.63	0.88	-0.87	4.69	4.25	0.00	0.00	0.00	0.00
	U_6–U_7	-130.37	-127.18	0.84	-0.82	-6.17	6.06	0.00	0.00	0.00	0.00
	L_7–U_7	-113.07	114.60	0.94	-0.96	-5.89	5.95	0.00	0.00	0.00	0.00
	L_7–L_8	-44.77	47.68	0.67	-0.74	-4.70	4.36	0.00	0.00	0.00	0.00
	L_7–U_8	-44.77	46.58	0.68	-0.74	-4.70	4.36	0.00	0.00	0.00	0.00
	U_7–L_8	-30.50	34.19	0.67	-0.74	-3.39	3.32	0.00	0.00	0.00	0.00
	U_7–U_8	-3.70	4.34	1.52	-1.95	-2.19	2.21	0.00	0.00	0.00	0.00
	L_8–U_8	22.84	25.73	3.38	-3.26	-2.68	2.68	0.00	0.00	0.00	0.00
Structure 2	U_8–L_8	36.00	-36.84	13.89	-11.04	0.00	0.00	0.00	0.00	0.00	0.00
	U_8–L_9	88.55	-57.48	4.18	-1.03	0.74	0.00	0.00	0.00	0.00	0.00
	L_8–L_9	44.00	-43.31	-10.79	11.74	0.00	0.00	0.00	0.00	0.00	0.00
	L_8–U_9	138.22	-138.66	7.03	-7.14	-5.78	0.77	0.00	0.00	0.00	0.00
	U_9–L_9	138.22	-138.66	7.03	-7.14	-5.78	0.77	0.00	0.00	0.00	0.00
	L_9–U_9	173.80	-176.10	7.52	-7.22	-0.44	0.39	0.00	0.00	0.00	0.00
	L_9–L_{10}	2.19	2.67	7.79	-7.51	-0.45	0.39	0.00	0.00	0.00	0.00
	U_9–L_{10}	-167.09	167.27	-0.85	4.16	5.86	0.00	0.00	0.00	0.00	0.00
	U_9–U_{10}	-116.04	109.89	0.70	-0.57	4.95	0.00	0.00	0.00	0.00	0.00
	L_{10}–U_{10}	-119.83	124.38	0.52	-0.41	-5.57	4.97	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	-79.51	88.86	1.08	-1.00	-4.41	4.36	0.00	0.00	0.00	0.00
	L_{10}–L_{11}	-43.96	51.93	1.19	-1.28	-2.33	2.50	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	-44.77	46.58	0.68	-0.74	-4.70	4.36	0.00	0.00	0.00	0.00
	U_{10}–U_{11}	-5.57	1.81	3.11	-3.30	-1.83	1.57	0.00	0.00	0.00	0.00
	L_{11}–U_{11}	22.84	25.73	3.38	-3.26	-2.68	2.68	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	55.25	-61.09	3.39	-3.47	-0.64	0.65	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	88.55	-57.48	4.18	-1.03	0.74	0.00	0.00	0.00	0.00	0.00
	L_{11}–L_{12}	137.13	-150.74	6.55	-6.57	-0.84	0.85	0.00	0.00	0.00	0.00
	L_{11}–U_{12}	165.72	-206.83	6.12	-7.33	-0.62	0.83	0.00	0.00	0.00	0.00
	U_{11}–U_{12}	114.26	168.30	1.03	-0.18	-7.92	7.75	0.00	0.00	0.00	0.00
	L_{12}–U_{12}	-109.81	112.88	0.49	-0.40	-5.40	5.27	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	-90.99	94.01	0.00	-0.00	-4.54	4.52	0.00	0.00	0.00	0.00
	L_{12}–L_{13}	-38.40	48.11	0.34	-0.36	-3.06	3.07	0.00	0.00	0.00	0.00
	U_{12}–L_{13}	-44.77	47.68	0.67	-0.74	-4.70	4.36	0.00	0.00	0.00	0.00
	U_{12}–U_{13}	-7.78	8.39	1.62	-1.68	-3.06	3.07	0.00	0.00	0.00	0.00
	L_{13}–U_{13}	25.87	-28.68	2.50	-2.51	-1.95	1.96	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	34.04	-39.79	3.61	-3.73	-0.37	0.38	0.00	0.00	0.00	0.00
	U_{13}–L_{14}	79.35	-76.96	4.02	-4.04	-0.59	0.63	0.00	0.00	0.00	0.00
	L_{13}–L_{14}	82.27	-85.87	4.21	-4.82	-0.23	0.15	0.00	0.00	0.00	0.00
	L_{13}–U_{14}	142.63	-166.10	5.70	-6.27	-0.66	0.67	0.00	0.00	0.00	0.00
	U_{13}–U_{14}	122.62	-143.90	4.93	-5.42	-0.57	0.58	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	-81.19	89.90	0.02	-0.02	-4.54	4.52	0.00	0.00	0.00	0.00
	L_{14}–U_{14}	-38.98	42.96	0.11	-0.10	-2.69	2.79	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	-39.90	40.31	0.95	-0.73	-2.44	2.28	0.00	0.00	0.00	0.00
	L_{14}–L_{15}	-37.48	38.73	2.25	-2.47	-2.46	2.49	0.00	0.00	0.00	0.00
	L_{14}–U_{15}	-10.29	11.13	3.20	-3.63	-1.37	1.29	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	3.53	-11.97	4.01	-3.83	-0.76	0.74	0.00	0.00	0.00	0.00
	U_{15}–L_{15}	44.79	-53.89	3.81	-4.90	-0.52	0.70	0.00	0.00	0.00	0.00

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{bb} (in^3)	S_b (in^3)	S_Z (in^3)	J (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_{bb}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(x)}$	$C_{b(xx)}$
Structure 1	U_1–L_1	0.00	0.00	109.88	128.71	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1–L_2	0.00	0.00	27.32	-28.13	-29.65	34.77	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1–U_2	0.00	0.00	73.30	-71.99	7.04	-8.06	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	L_1–L_2	0.00	0.00	89.38	-92.26	-42.07	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	L_1–U_2	0.00	0.00	4.90	-11.27	9.45	8.25	0.00	0.00	0.00	0.00	5	907.0	1.54	986	1.5	958.8
	L_2–U_2	0.00	0.00	132.45	-127.91	64.94	-66.61	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	L_2–U_3	0.00	0.00	30.91	-10.23	0.46	-0.67	0.00	0.00	0.00	0.00	4	1076.0	1.67	1016	1.5	913.3
	L_2–L_3	0.00	0.00	30.91	10.23	0.46	-0.67	0.00	0.00	0.00	0.00	4	1076.0	1.67	1016	1.5	913.3
	U_2–L_3	0.00	0.00	1020.9	1.67	1016	1.5	913.3	-0.916	0.23	0.23	-100.29	35.53	2.78	0.92	0.04
	U_2–U_3	0.00	0.00	20.00	2.66	0.01	0.27	0.00	0.00	0.00	0.00	5	5360.9	-0.751	0.25	0.25	5303.1
	L_3–U_3	0.00	0.00	61.17	-76.46	86.10	110.37	107.1	107.13	107.11	162.71	26	20598.9	1.52	5369	1.5	5302.3
	L_3–L_4	0.00	0.00	1020.9	1.67	1016	1.5	913.3	-0.916	0.23	0.23	-100.29	35.53	2.78	0.92	0.04	-0.01
	L_3–U_4	0.00	0.00	185.25	-205.49	118.27	-132.05	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5	913.3
	U_3–U_4	0.00	0.00	53.59	-56.22	-0.23	-0.27	0.00	0.00	0.00	0.00	5	5360.9	-0.751	0.25	0.25	5303.1
	U_3–L_4	0.00	0.00	67.58	-79.99	-53.39	63.73	107.1	107.13	107.11	162.71	26	20598.9	1.52	5369	1.5	5302.3
	L_4–U_4	0.00	0.00	-135.19	155.81	0.20	-0.26	-244.74	276.50	33.1	33.05	32.91	54.51	14	1409.8	1.65	1799
	U_4–L_4	0.00	0.00	-88.41	88.14	0.01	-0.07	-3.85	3.52	0.10	-0.70	-41.52	42.29	0.00	0.00	0.00	0.00
	L_4–L_5	0.00	0.00	-91.03	91.03	0.41	0.51	-4.52	4.37	5.39	-46.82	45.46	0.00	0.00	0.00	0.00	0.00
	L_4–U_5	0.00	0.00	-79.50	78.32	0.77	-0.40	4.04	3.87	8.30	-4.36	-43.08	41.67	0.00	0.00	0.00	0.00
	U_4–L_5	0.00	0.00	-49.20	60.09	1.09	-1.01	-3.59	3.63	11.72	-10.88	-38.71	39.10	0.00	0.00	0.00	0.00
	U_4–U_5	0.00	0.00	-29.73	34.16	0.79	-0.79	-2.68	2.60	11.72	-13.32	-39.91	39.88	0.00	0.00	0.00	0.00
	L_5–U_5	0.00	0.00	-1.46	-2.70	3.16	-3.28	-2.02	1.92	34.09	-35.40	-21.74	20.67	0.00	0.00	0.00	0.00
	L_5–L_6	0.00	0.00	34.16	-36.57	3.42	-3.64	-2.67	-1.30	46.21	-55.82	3.36	-3.46	-0.47	0.31	0.00	0.00
	L_5–U_6	0.00	0.00	46.21	-55.82	3.36	-3.46	-0.47	0.31	36.23	-37.29	-0.09	3.37	0.00	0.00	0.00	0.00
	U_5–U_6	0.00	0.00	110.34	-114.53	3.88	-3.56	-0.44	0.19	23.36	-24.40	-1.71	1.71	0.00	0.00	0.00	0.00
	L_6–U_6	0.00	0.00	121.24	-131.08	6.18	-6.21	-0.53	-0.19	66.58	-66.91	-5.74	-2.05	0.00	0.00	0.00	0.00
	U_6–L_6	0.00	0.00	134.20	-173.18	6.16	-6.66	-0.51	-0.06	66.46	-71.83	-5.54	-0.69	0.00	0.00	0.00	0.00
	L_6–L_7	0.00	0.00	114.26	168.30	1.03	-0.18	-7.92	7.75	7.06	-7.44	-33.19	33.01	0.00	0.00	0.00	0.00
	L_6–U_7	0.00	0.00	124.38	133.15	0.98	-1.05	-5.96	5.71	10.47	-11.16	-63.49	60.82	0.00	0.00	0.00	0.00
	U_6–L_7	0.00	0.00	113.84	113.84	0.98	-1.13	-5.96	5.71	11.97	-12.76	-63.49	61.11	0.00	0.00	0.00	0.00
	U_6–U_7	0.00	0.00	56.00	62.15	0.66	-0.70	-3.12	3.10	7.06	-7.44	-33.19	33.01	0.00	0.00	0.00	0.00
	L_7–U_7	0.00	0.00	56.00	62.15	0.66	-0.70	-3.12	3.10	6.73	-7.09	-35.22	32.81	0.00	0.00	0.00	0.00
	U_7–L_8	0.00	0.00	-7.05	12.30	0.61	-1.58	-3.03	3.05	13.12	-5.94	-51.07	58.80	15.4	15.42	15.42	23.71
	L_7–L_8	0.00	0.00	15.85	-15.58	2.17	-2.08	-2.73	2.72	23.09	-22.11	-29.07	28.99	15.4	15.42	15.42	23.71
	L_7–U_8	0.00	0.00	38.85	-44.93	2.77	-2.50	-2.65	-14.30	50.62	-49.01	-17.19	17.43	15.4	15.42	15.42	23.71
	L_8–U_8	0.00	0.00	86.89	-96.05	4.75	-4.70	-1.34	-1.36	50.57	-50.05	-16.44	14.48	0.00	0.00	0.00	0.00
	U_8–L_8	0.00	0.00	155.08	-159.44	1.26	-1.21	-1.26	1.82	25.72	-25.63	-2.06	8.76	0.00	0.00	0.00	0.00
	L_8–U_8	0.00	0.00	141.21	-149.39	5.37	-5.56	-0.84	0.43	57.21	-59.17	-8.90	6.46	0.00	0.00	0.00	0.00
	U_8–U_9	0.00	0.00	192.53	-192.81	5.23	-5.36	-0.58	0.21	55.67	-57.04	-9.09	-270.20	190.37	-193.13	43.0	43.24
	L_8–U_9	0.00	0.00	147.09	-146.79	5.57	-5.77	-0.60	0.21	72.25	-69.19	-5.26	5.55	0.00	0.00	0.00	0.00
	U_9–L_9	0.00	0.00	203.50	-203.15	8.79	-9.50	-0.49	0.52	72.25	-69.19	-5.26	5.55	0.00	0.00	0.00	0.00
	L_9–U_9	0.00	0.00	60.02	-59.49	0.78	-0.78	7.24	7.24	8.72	-9.14	-70.42	66.16	0.00	0.00	0.00	0.00
	L_9–L_{10}	0.00	0.00	-109.87	162.82	0.83	-0.87	4.69	4.25	8.72	-9.14	-70.42	66.16	0.00	0.00	0.00	0.00
	U_9–L_{10}	0.00	0.00	-113.84	168.63	0.88	-0.87	4.69	4.25	8.81	-8.60	-64.93	63.72	0.00	0.00	0.00	0.00
	L_{10}–U_{10}	0.00	0.00	-130.37	-127.18	0.84	-0.82	-6.17	6.06	8.81	-8.60	-64.93	63.72	0.00	0.00	0.00	0.00
	U_{10}–L_{10}	0.00	0.00	-113.07	114.60	0.94	-0.96	-5.89	5.95	9.64	-10.10	-61.95	62.57	0.00	0.00	0.00	0.00
	L_{10}–L_{11}	0.00	0.00	-44.77	46.58	0.68	-0.74	-4.70	4.36	11.52	-10.93	-39.65	39.08	0.00	0.00	0.00	0.00
	U_{10}–L_{11}	0.00	0.00	-44.77	47.68	0.67	-0.74	-4.70	4.36	11.52	-10.93	-39.65	39.08	0.00	0.00	0.00	0.00
	L_{11}–U_{11}	0.00	0.00	-30.50	34.19	0.67	-0.74	-3.39	3.32	20.21	-20.55	-23.00	23.27	0.00	0.00	0.00	0.00
	U_{11}–L_{11}	0.00	0.00	22.84	25.73	3.38	-3.26	-2.68	2.68	20.21	-20.55	-23.00	23.27	0.00	0.00	0.00	0.00
	L_{11}–U_{12}	0.00	0.00	88.55	-57.48	4.18	-1.03	0.74	0.00	36.00	-36.84	-13.89	11.04	0.00	0.00	0.00	0.00
	U_{11}–L_{12}	0.00	0.00	44.00	-43.31	-10.79	11.74	0.00	0.00	44.00	-43.31	-10.79	11.74	0.00	0.00	0.00	0.00
	L_{12}–U_{12}	0.00	0.00	138.22	-138.66	7.03	-7.14	-5.78	0.77	73.53	-75.10	-8.21	8.10	0.00	0.00	0.00	0.00
	U_{12}–L_{12}	0.00	0.00	138.22	-138.66	7.03	-7.14	-5.78	0.77	73.53	-75.10	-8.21	8.10	0.00	0.00	0.00	0.00
	L_{12}–U_{13}	0.00	0.00	173.80	-176.10	7.52	-7.22	-0.44	0.39	78.93	-75.98	-4.63	4.05	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	0.00	0.00	2.19	2.67	7.79	-7.51	-0.45	0.39	78.93	-75.98	-4.63	4.05	0.00	0.00	0.00	0.00
	L_{13}–U_{13}	0.00	0.00	-167.09	167.27	-0.85	4.16	5.86	0.00	8.19	-8.07	-65.54	62.35	0.00	0.00	0.00	0.00
	U_{13}–L_{13}	0.00	0.00	-116.04	109.89	0.70	-0.57	4.95	0.00	4.27	-7.45	-53.93	52.71	0.00	0.00	0.00	0.00
	L_{13}–U_{14}	0.00	0.00	-119.83	124.38	0.52	-0.41	-5.57	4.97	5.53	-4.37	-54.00	52.94	0.00	0.00	0.00	0.00
	U_{14}–L_{14}	0.00	0.00	-79.51	88.86	1.08	-1.00	-4.41	4.36	11.50	-10.62	-46.94	45.81	0.00	0.00	0.00	0.00
	L_{14}–U_{14}	0.00	0.00	-43.96	51.93	1.19	-1.28	-2.33	2.50	12.65	-13.62	-24.80	26.64	0.00	0.00	0.00	0.00
	U_{14}–L_{15}	0.00	0.00	-44.77	46.58	0.68	-0.74	-4.70	4.36	11.52	-10.93	-39.65	39.08	0.00	0.00	0.00	0.00
	L_{15}–U_{15}	0.00	0.00	-5.57	1.81	3.11	-3.30	-1.83	1.57	35.85	-43.34	-32.60	24.06	15.4	15.42	15.42	23.71
	U_{15}–L_{15}	0.00	0.00	22.84	25.73	3.38	-3.26	-2.68	2.68	20.21	-20.55	-23.00	23.27	0.00	0.00	0.00	0.00
	L_{15}–U_{16}	0.00	0.00	55.25	-61.09	3.39	-3.47	-0.64	0.65	36.04	-36.91	-6.80	6.95	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	0.00	0.00	88.55	-57.48	4.18	-1.03	0.74	0.00	68.13	-68.96	-10.08	10.08	0.00	0.00	0.00	0.00
	L_{15}–L_{16}	0.00	0.00	137.13	-150.74	6.55	-6.57	-0.84	0.85	69.71	-69.92	-8.96	9.09	0.00	0.00	0.00	0.00
	L_{15}–U_{16}	0.00	0.00	165.72	-206.83	6.12	-7.33	-0.62	0.83	65.20	-78.06	-6.58	8.81	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	0.00	0.00	114.26	168.30	1.03	-0.18	-7.92	7.75	7.06	-7.44	-33.19	33.01	0.00	0.00	0.00	0.00
	L_{16}–U_{16}	0.00	0.00	-109.81	112.88	0.49	-0.40	-5.40	5.27	4.99	-5.32	-58.27	56.78	0.00	0.00	0.00	0.00
	U_{16}–L_{16}	0.00	0.00	-90.99	94.01	0.00	-0.00	-4.54	4.52	3.64	-3.91	-33.03	33.10	0.00	0.00	0.00	0.00
	L_{16}–L_{17}	0.00	0.00	-38.40	48.11	0.34	-0.36	-3.06	3.07	3.64	-3.91	-33.03	33.10	0.00	0.00	0.00	0.00
	U_{16}–L_{17}	0.00	0.00	-44.77	47.68	0.67	-0.74	-4.70	4.36	11.52	-10.93	-39.65	39.08	0.00	0.00	0.00	0.00
	U_{16}–U_{17}	0.00	0.00	-7.78	8.39	1.62	-1.68	-3.06	3.07	17.43	-18.07	-32.95	33.14	15.4	15.42	15.42	23.71
	L_{17}–U_{17}	0.00	0.00	25.87	-28.68	2.50	-2.51	-1.95	1.96	26.91	-27.26	-21.00	21.09	0.00	0.00	0.00	0.00
	U_{17}–L_{17}	0.00	0.00	34.04	-39.79	3.61	-3.73	-0.37	0.38	34.04	-39.79	-3.61	3.73	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	0.00	0.00	79.35	-76.96	4.02	-4.04	-0.59	0.63	43.29	-43.53	-10.72	8.95	0.00	0.00	0.00	0.00
	L_{17}–L_{18}	0.00	0.00	82.27	-85.87	4.21	-4.82	-0.23	0.15	45.34	-49.77	-2.51	1.63	0.00	0.00	0.00	0.00
	L_{17}–U_{18}	0.00	0.00	142.63	-166.10	5.70	-6.27	-0.66	0.67	61.48	-67.60	-0.68	0.83	0.00	0.00	0.00	0.00
	U_{17}–L_{18}	0.00	0.00	122.62	-143.90	4.93	-5.42	-0.57	0.58	44.64	-52.59	-8.48	8.23	0.00	0.00	0.00	0.00
	U_{18}–L_{18}	0.00	0.00	-81.19	89.90	0.02	-0.02	-4.54	4.52	0.23	-0.24	-50.52	53.69	0.00	0.00	0.00	0.00
	L_{18}–U_{18}	0.00	0.00	-38.98	42.96	0.11	-0.10	-2.69	2.79	10.62	-8.17	-27.11	25.42	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: SC1
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
Gusset Plates Evaluated for Shrinkage 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-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	-12.55	3.37	0.42	-0.24	-2.73	1.30	4.70	-2.64	-30.35	14.46
	U_0-L_1	-1.68	-7.06	0.28	-0.07	-1.28	0.16	3.16	-0.79	-14.26	1.78
	U_0-L_1	-4.77	11.64	0.32	-0.06	-0.25	0.04	1.50	-0.15	-10.73	0.27
	U_0-L_1	9.78	-11.75	0.33	0.03	-0.86	-0.61	3.66	0.37	-9.53	-6.78
	U_1-L_1	-10.32	17.59	0.23	0.04	-1.76	0.46	2.97	0.14	-15.42	-2.57
	U_1-L_2	-26.82	58.45	0.62	0.17	-2.68	1.32	9.59	2.83	-29.83	14.72
	U_1-L_2	-39.76	86.80	0.53	0.15	-2.68	1.32	7.95	1.47	-29.83	14.72
	U_2-L_2	8.32	13.42	0.75	1.21	-1.92	3.39	8.32	13.42	-21.35	37.69
	U_2-L_3	-9.60	109.51	1.46	1.28	-1.37	3.09	13.83	11.43	-14.74	33.29
	U_2-L_3	-74.77	111.64	0.52	0.40	-3.50	3.25	3.40	3.25	-35.07	20.92
	U_2-L_3	-56.82	54.75	0.37	0.66	-2.52	1.19	4.00	7.05	-27.19	12.79
	U_3-L_3	-56.82	54.75	0.37	0.66	-2.52	1.19	4.00	7.05	-27.19	12.79
	U_3-L_4	-55.23	39.04	0.31	0.45	-2.24	1.32	3.30	-4.85	-24.16	14.24
	U_3-L_4	-20.96	7.36	0.40	0.51	-1.40	0.46	4.31	-0.49	-15.06	4.92
	U_4-L_4	1.19	-30.25	0.14	0.14	-0.45	0.22	1.19	-0.25	-4.45	2.21
	U_4-L_5	-19.01	4.12	0.67	0.83	-1.54	0.69	7.25	-8.94	-16.55	7.43
	U_4-L_5	-39.45	88.64	0.53	0.38	-2.68	1.32	7.95	-1.47	-29.83	14.72
	U_5-L_5	-89.28	58.13	0.33	0.28	-4.11	2.69	3.58	-3.06	-44.31	28.96
	U_5-L_6	-89.28	61.33	0.58	0.38	-4.11	3.07	6.24	-6.38	-44.31	33.14
	U_5-L_6	-105.04	88.64	0.38	0.51	-5.10	3.47	4.12	0.14	-54.93	37.41
	U_6-L_6	-82.69	87.74	0.84	-0.77	-5.94	4.59	8.91	-8.18	-83.25	-48.89
	U_6-L_7	-87.97	71.76	0.92	-0.74	-6.30	4.59	8.52	-7.15	-88.70	-48.89
	U_6-L_7	-81.28	63.04	0.88	-0.72	-4.13	2.83	8.40	-7.24	-83.97	-30.17
	U_7-L_7	-17.36	7.21	0.55	-0.65	-1.79	1.20	5.87	-6.95	-19.09	12.76
	U_7-L_8	-17.36	7.21	0.55	-0.65	-1.79	1.20	5.87	-6.95	-19.09	12.76
	U_8-L_8	-7.42	-11.45	0.87	-0.92	-1.54	0.96	9.25	-10.75	-26.39	9.17
	U_8-L_9	-7.42	-23.91	1.03	1.41	-1.32	0.32	10.91	-14.98	-14.05	3.38
	U_9-L_9	-44.31	35.87	0.75	-1.06	-2.35	0.89	7.66	-11.26	-25.06	9.45
	U_9-L_{10}	-66.38	68.64	0.52	-0.96	-3.52	1.32	9.59	-13.61	-33.58	12.39
	U_9-L_{10}	-88.54	73.82	0.49	-0.61	-3.55	1.53	5.23	-6.49	-37.84	20.58
	U_{10}-L_{10}	-88.45	68.64	0.52	-0.62	-3.52	2.23	5.23	-6.49	-37.84	24.36
	U_{10}-L_{11}	-108.36	116.66	0.67	-0.10	-4.29	3.15	7.12	-1.08	-45.65	33.53
	U_{11}-L_{11}	-154.28	139.69	0.52	-0.19	-5.74	4.48	5.58	-1.91	-61.15	47.70
	U_{11}-L_{12}	-86.62	148.32	0.24	0.45	-3.07	2.36	5.58	-1.91	-38.81	50.15
	U_{12}-L_{12}	-24.74	100.99	1.06	0.53	-3.32	4.05	11.18	5.62	-34.92	42.61
	U_{12}-L_{13}	-98.29	39.79	0.72	-0.42	-7.46	4.48	7.46	-4.38	-61.15	40.73
	U_{13}-L_{13}	-74.15	95.51	0.48	-0.55	-4.37	3.86	5.08	-5.82	-46.01	40.59
	U_{13}-L_{14}	-55.45	68.85	0.58	-0.55	-3.58	2.42	3.44	-4.39	-34.50	31.70
	U_{14}-L_{14}	-55.45	68.85	0.58	-0.55	-3.58	2.42	6.07	-5.79	-37.67	25.99
	U_{14}-L_{15}	-32.97	39.97	0.49	-0.43	-2.56	1.73	5.12	-4.53	-26.89	18.23
	U_{15}-L_{15}	-10.33	4.39	0.83	0.87	-1.52	0.47	6.60	-9.15	-16.62	4.91
	U_{15}-L_{16}	-10.33	4.39	0.83	0.87	-1.52	0.47	6.60	-9.15	-16.62	4.91
	U_{16}-L_{16}	-6.26	-2.96	0.89	0.93	-1.16	0.29	6.90	-9.28	-14.13	2.96
	U_{16}-L_{17}	-17.07	16.15	0.66	-0.88	-1.72	1.05	6.90	-9.28	-18.13	11.09
	U_{17}-L_{17}	-55.66	63.11	0.61	-0.74	-3.78	2.31	6.49	-8.72	-27.42	18.44
	U_{17}-L_{18}	-55.66	63.11	0.61	-0.74	-3.78	2.31	6.45	-7.47	-39.80	24.27
	U_{18}-L_{18}	-69.18	80.37	0.50	-0.25	-4.12	3.08	5.22	-2.59	-43.29	32.43
	U_{18}-L_{19}	-106.02	102.50	0.39	-0.39	-5.31	4.58	3.68	-4.10	-55.89	48.19
	U_{19}-L_{19}	-106.02	102.50	0.39	-0.39	-5.31	4.58	3.68	-4.10	-55.89	48.19
	U_{19}-L_{20}	-59.07	106.47	0.15	-0.05	-3.07	2.85	11.54	-5.63	-49.29	42.63
	U_{20}-L_{20}	-47.57	127.97	1.37	0.51	-3.63	4.65	14.59	5.40	-38.66	49.54
	U_{20}-L_{21}	-89.45	99.26	0.56	0.07	-4.10	3.20	8.83	-3.76	-57.62	45.56
	U_{21}-L_{21}	-89.45	99.26	0.56	0.07	-4.10	3.20	5.99	0.72	-43.67	34.11
	U_{21}-L_{22}	-86.48	82.53	0.53	0.37	-3.66	2.31	5.59	3.94	-39.95	24.61
	U_{22}-L_{22}	-60.13	67.65	0.51	0.73	-3.68	2.52	5.59	3.94	-39.95	21.74
	U_{22}-L_{23}	-60.13	67.65	0.51	0.73	-3.68	2.52	5.41	-7.81	-39.22	21.50
	U_{23}-L_{23}	-12.59	26.40	1.24	1.33	-1.25	0.11	13.17	-14.19	-13.31	1.20
	U_{23}-L_{24}	-12.59	26.40	1.24	1.33	-1.25	0.11	13.17	-14.19	-13.31	1.20
	U_{24}-L_{24}	-6.51	17.79	1.01	-1.18	-1.48	0.66	10.75	-12.52	-15.79	7.03
	U_{24}-L_{25}	-17.88	0.88	0.92	-1.00	-1.11	0.19	10.75	-12.52	-15.79	7.03
	U_{25}-L_{25}	-38.91	20.55	0.49	-0.41	-2.31	1.31	5.23	-4.33	-24.62	13.98
	U_{25}-L_{26}	-38.91	20.55	0.49	-0.41	-2.31	1.31	7.91	-8.47	-24.62	13.98
	U_{26}-L_{26}	-98.49	71.14	0.65	-0.55	-4.72	3.25	6.92	-5.86	-50.23	35.01
	U_{26}-L_{27}	-98.49	71.14	0.65	-0.55	-4.72	3.25	6.92	-5.86	-50.23	35.01
	U_{27}-L_{27}	-70.17	69.10	0.42	-0.34	-4.46	4.31	4.55	-3.67	-69.66	46.42
	U_{27}-L_{28}	-86.86	56.37	0.39	-0.29	-4.02	2.58	4.18	-3.14	-43.29	27.80
	U_{28}-L_{28}	-86.86	56.37	0.39	-0.29	-4.02	2.58	4.74	-3.56	-47.45	28.53
	U_{28}-L_{29}	-26.09	12.70	0.26	-0.19	-2.04	1.17	2.78	-2.06	-21.97	12.57
	U_{29}-L_{29}	-26.09	12.70	0.26	-0.19	-2.04	1.17	2.78	-2.06	-21.97	12.57
	U_{29}-L_{30}	-8.06	17.58	0.52	0.02	-1.26	-0.27	1.35	0.18	-14.03	-3.24
	U_{30}-L_{30}	-8.06	17.58	0.52	0.02	-1.26	-0.27	1.35	0.18	-14.03	-3.24
	U_{30}-L_{31}	-0.12	-8.77	0.39	-0.16	-1.05	-0.36	4.39	-1.73	-11.69	-4.04
	U_{31}-L_{31}	-23.22	7.61	0.52	-0.06	-2.28	1.05	5.73	-6.63	-25.34	12.01

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_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	U_0-L_1	-10.21	0.95	-55.77	23.18	15.6	15.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.416	0.43	0.43
	U_0-L_1	1.33	-10.20	-20.72	-6.86	15.4	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.331	0.73	0.73
	U_0-L_1	5.87	-12.32	-14.00	-13.96	15.4	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	0.331	0.73	0.73
	U_0-L_1	3.66	0.37	-9.53	-6.78	0.00	0.00	0.00	0.00	0	17.47	14.60	0.32	-24.09	15.4	15.42	15.42	23.71
	U_1-L_1	-10.32	17.59	0.23	0.04	-1.76	0.46	2.97	0.14	-15.42	-2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_2	-26.82	58.45	0.62	0.17	-2.68	1.32	9.59	2.83	-29.83	14.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_2	-39.76	86.80	0.53	0.15	-2.68	1.32	7.95	1.47	-29.83	14.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_2-L_2	8.32	13.42	-21.35	37.69	0.00	0.00	0.00	2.54	132.92	-36.03	164.47	35.1	35.09	35.09	53.13	4
	U_2-L_3	-9.60	109.51	1.46	1.28	-1.37	3.09	13.83	11.43	-14.74	33.29	0.00	0.00	0.00	7.96	160.34	-31.64	185.64
	U_2-L_3	-74.77	111.64	0.52	0.40	-3.50	3.25	3.40	3.25	-35.07	20.92	0.00	0.00	0.00	-82.78	89.50	-142.79	111.88
	U_3-L_3	-56.82	54.75	0.37	0.66	-2.52	1.19	4.00	7.05	-27.19	12.79	0.00	0.00	0.00	-68.67	80.26	-109.22	87.79
	U_3-L_3	-56.82	54.75	0.37	0.66	-2.52	1.19	4.00	7.05	-27.19	12.79	0.00	0.00	0.00	-68.67	80.26	-109.22	87.79
	U_3-L_4	-55.23	39.04	0.31	0.45	-2.24	1.32	3.30	-4.85	-24.16	14.24	0.00	0.00	0.00	-67.49	44.44	-102.19	69.27
	U_3-L_4	-20.96	7.36	0.40	0.51	-1.40	0.46	4.31	-0.49	-15.06	4.92	0.00	0.00	0.00	-21.64	2.44	-46.83	15.96
	U_4-L_4	1.19	-30.25	0.14	0.14	-0.45	0.22	1.19	-0.25	-4.45	2.21	0.00	0.00	0.00	13.57	-40.16	-19.32	27.09
	U_4-L_5	-19.01	4.12	0.67	0.83	-1.54	0.69	7.25	-8.94	-16.55	7.43	0.00	0.00	0.00	-15.29	-6.27	-46.23	15.01
	U_4-L_5	-39.45	88.64	0.53	0.38	-2.68	1.32	7.95	-1.47	-29.83	14.72	0.00	0.00	0.00	-32.30	9.05	-66.94	33.49
	U_5-L_5	-89.28	58.13	0.33	0.28	-4.11	2.69	3.58	-3.06	-44.31	28.96	0.00	0.00	0.00	-111.40	71.19	-173.67	113.22
	U_5-L_6	-89.28	61.33	0.58	0.38	-4.11	3.07	6.24	-6.38	-44.31	33.14	0.00	0.00	0.00	-113.06	75.79	-182.25	120.95
	U_5-L_6	-105.04	88.64	0.38	0.51	-5.10	3.47	4.12	0.14	-54.93	37.41	0.00	0.00	0.00	-131.20	115.67	-207.97	164.13
	U_6-L_6	-82.69	87.74	0.84	-0.77	-5.94	4.59	8.91	-8.18	-83.25	-48.89	0.00	0.00	0.00	-95.91	103.43	-189.72	177.62
	U_6-L_7	-87.97	71.76	0.92	-0.74	-6.30	4.59	8.52	-7.15	-88.70	-48.89	0.00	0.00	0.00	-116.26	83.39	-202.33	189.52
	U_6-L_7	-81.28	63.04	0.88	-0.72	-4.13	2.83	8.40	-7.24	-83.97	-30.17	0.00	0.00	0.00	-83.48	72.04	-162.83	121.18
	U_7-L_7	-17.36	7.21	0.55	-0.65	-1.79	1.20	5.87	-6.95	-19.09	12.76	0.00	0.00	0.00	-17.36	7.21	-55.65	23.17
	U_7-L_8	-17.36	7.21	0.55	-0.65	-1.79	1.20	5.87	-6.95	-19.09	12.76	0.00	0.00	0.00	-14.86	0.07	-47.31	25.69
	U_8-L_8	-7.42	-11.45	0.87	-0.92	-1.54	0.96	9.25	-10.75	-26.39	9.17	0.00	0.00	0.00	-7.42	-11.45	-26.39	9.17
	U_8-L_9	-7.42	-23.91	1.03	1.41	-1.32	0.32	10.91	-14.98	-14.05	3.38	0.00	0.00	0.00	-23.83	-0.56	-8.62	-26.70
	U_9-L_9	-44.31	35.87	0.75	-1.06	-2.35	0.89	7.66	-11.26	-25.06	9.45	0.00	0.00	0.00	-47.25	31.99	-80.18	58.92
	U_9-L_{10}	-66.38	68.64	0.52	-0.96	-3.52	1.32	9.59	-13.61	-33.58	12.39	0.00	0.00	0.00	-70.91	53.57	-116.69	76.24
	U_9-L_{10}	-88.54	73.82	0.49	-0.61	-3.55	1.53	5.23	-6.49	-37.84	20.58	0.00	0.00	0.00	-108.31	87.52	-164.30	122.72
	U_{10}-L_{10}	-88.45	68.64	0.52	-0.62	-3.52	2.23	5.23	-6.49	-37.84	24.36	0.00	0.00	0.00	-124.24	120.49	-186.93	164.39
	U_{10}-L_{11}	-108.36	116.66	0.67	-0.10	-4.29	3.15	7.12	-1.08	-45.65	33.53	0.00	0.00	0.00	-131.61	148.96	-292.22	193.95
	U_{11}-L_{11}	-154.28	139.69	0.52	-0.19	-5.74	4.48	5.58	-1.91	-61.15	47.70	0.00	0.00	0.00	-193.29	179.04	-280.03	243.61
	U_{11}-L_{12}	-86.62	148.32	0.24	0.45	-3.07	2.36	5.58	-1.91	-38.81	50.15	0.00	0.00	0.00	-65.54	158.37	-127.22	207.76
	U_{12}-L_{12}	-24.74	100.99	1.06	0.53	-3.32	4.05	11.18	5.62	-34.92	42.61	0.00	0.00	0.00	-17.62	138.07	-77.56	186.16
	U_{12}-L_{13}	-98.29	39.79	0.72	-0.42	-7.46	4.48	7.46	-4.38	-61.15	40.73	0.00	0.00	0.00	-118.07	73.19	-191.77	114.42
	U_{13}-L_{13}	-74.15	95.51	0.48	-0.55	-4.37	3.86	5.08	-5.82	-46.01	40.59	0.00	0.00	0.00	-88.78	116.60	-156.20	176.93
	U_{13}-L_{14}	-55.45	68.85	0.58	-0.55	-3.58	2.42	3.44	-4.39	-34.50	31.70	0.00	0.00	0.00	-66.54	85.62	-117.20	129.70
	U_{14}-L_{14}	-55.45	68.85	0.58	-0.55	-3.58	2.42	6.07	-5.79	-37.67	25.99	0.00	0.00	0.00	-64.19	81.98	-121.05	122.77
	U_{14}-L_{15}	-32.97	39.97	0.49	-0.43	-2.56	1.73	5.12	-4.53	-26.89	18.23	0.00	0.00	0.00	-38.20	46.07	-77.82	75.67
	U_{15}-L_{15}	-10.33	4.39	0.83	0.87	-1.52	0.47	6.60	-9.15	-16.62	4.91	0.00	0.00	0.00	-20.31	0.65	-46.04	15.01
	U_{15}-L_{16}	-10.33	4.39	0.83	0.87	-1.52	0.47	6.60	-9.15	-16.62	4.91	0.00	0.00	0.00	-4.85	-6.19	-34.25	12.10
	U_{16}-L_{16}	-6.26	-2.96	0.89	0.93	-1.16	0.29	6.90	-9.28	-14.13	2.96	0.00	0.00	0.00	-3.98	-2.96	-33.92	9.29
	U_{16}-L_{17}	-17.07	16.15	0.66	-0.88	-1.72	1.05	6.90	-9.28	-18.13	11.09	0.00	0.00	0.00	-13.22	8.93	-45.76	35.36
	U_{17}-L_{17}	-55.66	63.11	0.61	-0.74	-3.78	2.31	6.49	-8.72	-27.42	18.44	0.00	0.00	0.00	-43.63	54.00	-93.35	74.02
	U_{17}-L_{18}	-55.66	63.11	0.61	-0.74	-3.78	2.31	6.45	-7.47	-39.80	24.27	0.00	0.00	0.00	-63.98	74.93	-124.10	116.19
	U_{18}-L_{18}	-69.18	80.37	0.50	-0.25	-4.12	3.08	5.22	-2.59	-43.29	32.43	0.00	0.00	0.00	-83.15	101.11	-146.22	148.63
	U_{18}-L_{19}	-106.02	102.50	0.39	-0.39	-5.31	4.58	3.68	-4.10	-55.89	48.19	0.00	0.00	0.00	-133.03	127.92	-210.47	195.89
	U_{19}-L_{19}	-106.02	102.50	0.39	-0.39	-5.31	4.58	3.68	-4.10	-55.89	48.19	0.00	0.00	0.00	-133.03	127.92	-210.47	195.89
	U_{19}-L_{20}	-59.07	106.47	0.15	-0.05	-3.07	2.85	11.54	-5.63	-49.29	42.63	0.00	0.00	0.00	-42.88	70.38	-148.32	127.97
	U_{20}-L_{20}	-47.57	127.97	1.37	0.51	-3.63	4.65	14.59	5.40	-38.66	49.54	0.00	0.00	0.00	-24.13	15.28	-117.40	58.22
	U_{20}-L_{21}	-89.45	99.26	0.56	0.07	-4.10	3.20	8.83	-3.76	-57.62	45.56	0.00	0.00	0.00	-108.50	129.98	-173.07	173.38
	U_{21}-L_{21}	-89.45	99.26	0.56	0.07	-4.10	3.20	5.99	0.72	-43.67	34.11	0.00	0.00	0.00	-105.16	112.41	-163.05	139.97
	U_{21}-L_{22}	-86.48	82.53	0.53	0.37	-3.66	2.31	5.59	3.94	-39.95	24.61	0.00	0.00	0.00	-103.16	112.41	-163.05	139.97
	U_{22}-L_{22}	-60.13	67.65	0.51	0.73	-3.68	2.52	5.59	3.94	-39.95	21.74	0.00	0.00	0.00	-86.07	96.98	-147.14	126.23
	U_{22}-L_{23}	-60.13	67.65	0.51	0.73	-3.68	2.52	5.41	-7.81	-39.22	21.50	0.00	0.00	0.00	-110.16	77.79	-168.18	115.89
	U_{23}-L_{23}	-12.59	26.40	1.24	1.33	-1.25	0.11	13.17	-14.19	-13.31	1.20	0.00	0.00	0.00	-12.59	26.40	-13.31	1.20
	U_{23}-L_{24}	-12.59	26.40	1.24	1.33	-1.25	0.11	13.17	-14.19	-13.31	1.20	0.00	0.00	0.00	-33.49	52.77	-59.34	32.75
	U_{24}-L_{24}	-6.51	17.79	1.01	-1.18	-1.48	0.66	10.75	-12.52	-15.79	7.03	0.00	0.00	0.00	-22.44	-39.40	-12.06	-13.99
	U_{24}-L_{25}	-17.88	0.88	0.92	-1.00	-1.11	0.19	10.75	-12.52	-15.79	7.03	0.00	0.00	0.00	-61.50	8.23	-82.56	20.04
	U_{25}-L_{25}	-38.91	20.55	0.49	-0.41	-2.31	1.31	5.23	-4.33	-24.62	13.98	0.00	0.00	0.00	-69.61	36.69	-96.63	61.67
	U_{25}-L_{26}	-38.91	20.55	0.49	-0.41	-2.31	1.31	7.91	-8.47	-24.62	13.98	0.00	0.00	0.00	-71.36	25.95	-120.34	33.54
	U_{26}-L_{26}	-98.49	71.14	0.65	-0.55	-4.72	3.25	6.92	-5.86	-50.23	35.01	0.00	0.00	0.00	-119.04	84.87	-193.34	137.99
	U_{26}-L_{27}	-98.49	71.14	0.65	-0.55	-4.72	3.25	6.92	-5.86	-50.23	35.01	0.00	0.00	0.00	-119.04	84.87	-193.34	137.99
	U_{27}-L_{27}	-70.17	69.10	0.42	-0.34	-4.46	4.31	4.55	-3.67	-69.66	46.42	0.00	0.00	0.00	-85.31	85.56	-158.71	150.17
	U_{27}-L_{28}	-86.86	56.37	0.39	-0.29	-4.02	2.58	4.18	-3.14	-43.29	27.80	0.00	0.00	0.00	-107.48	69.20	-168.19	109.41
	U_{28}-L_{28}	-86.86	56.37	0.39	-0.29	-4.02	2.58	4.74	-3.56	-47.45	28.53	0.00	0.00	0.00	-107.48	69.20	-168.19	109.41
	U_{28}-L_{29}	-26.09	12.70	0.26	-0.19	-2.04	1.17	2.78	-2.06	-21.97	12.57	0.00	0.00	0.00	-30.30	13.83	-42.48	32.65
	U_{29}-L_{29}	-26.09	12.70	0.26	-0.19	-2.04	1.17	2.78	-2.06	-21.97	12.57	0.00	0.00	0.00	-30.30	13.83	-42.48	32.65
	U_{29}-L_{30}	-8.06	17.58	0.52	0.02	-1.26	-0.27	1.35	0.18	-14.03	-3.24	0.00	0.00	0.00	-9.17	35.72	-17.33	20.87
	U_{30}-L_{30}	-8.06	17.58	0.52	0.02	-1.26	-0.27	1.35	0.18	-14.03	-3.24	0.00	0.00	0.00	-10.16	23.08	-30.14	18.94
	U_{30}-L_{31}	-0.12	-8.77	0.39	-0.16	-1.05	-0.36	4.39	-1.73	-11.69	-4.04	0.00	0.00	0.00	-5.86	-13.65	-13.93	-16.66
	U_{31}-L_{31}	-23.22	7.61	0.52	-0.06	-2.28	1.05	5.73	-6.63	-25.34	12.01	0.00	0.00	0.00	-22.74	9.07	-63.13	25.64

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	-0.79	0.21	-3.47	1.65	0.31	-0.17	0.30	-0.17	-1.94	0.93
	U_0-L_1	-0.11	-0.45	0.02	-0.00	-0.08	0.01	0.20	-0.05	-0.91	0.11
	U_0-L_1	-0.30	0.74	0.02	-0.00	-0.02	0.00	0.10	-0.01	-

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

| Location | Member | ZZ Axis Moments from STAAD | | |

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: 5C1
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 6.6.2.1-1, 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

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 Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	Mxx: Max. Moments Start (k-in)	Mxx: Max. Moments End (k-in)	S_{top} (in^3)	S_b (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_{top}	M_z (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Factor A	B	C	C_{MOD}	Dead Load (Max) Start (k-in)	Dead Load (Max) 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 Start (k-in)	Lane Reduction & Impact Live Load End (k-in)	Impact Pedestrian Load Start (k-in)	Impact Pedestrian Load End (k-in)	Mxx: Max. Moments Start (k-in)	Mxx: Max. Moments End (k-in)	Mxx: Neg. Mom. Start (k-in)	Mxx: 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)	P_{crit} (kip)	Formula 1.8 Term * F$_y$/S_{top}	M_y (k-in)	Equivalent Mom. Factor A	B	C	C_{MOD}	Pass
Structure 1	L_0-L_1	-19.48	-91.71	3.11	-3.34	-0.70	0.74	0.30	-0.64	-0.11	0.13	41.56	-44.67	-0.34	9.83	3.54	-7.68	-1.37	1.50	28.71	-177.30	39.24	-10.99	83.6	83.68	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.162	0.54	0.54	36.69	129.06	-2.80	-10.29	0.08	0.28	0.46	1.68	-0.03	-0.11	-37.41	-137.48	1.00	3.69	6.78	24.94	-0.48	-1.68	3.01	-10.95	46.32	48.23	128.3	128.29	121.83	141.18	626.8	1.10	4659	----	0.99805042	4225.3	0.960	0.98	0.98	----	----	----

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:	3C1
Condition:	As-Built

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) 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 (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 (Min) 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)	J (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_top	M_2 (k-in)	Equivalent Mom. Factor	
																							$C_{m(x)}$	$C_{m(y)}$
Structure 1	U_0–L_1	-15.70	54.51	0.47	-0.50	2.65	2.90	0.03	-0.13	-0.04	0.43	6.33	-6.65	-38.43	38.78	0.34	-1.55	-0.48	5.10	-11.74	60.21	-86.47	121.29	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.548	0.38
	U_1–L_2	-27.61	29.28	0.98	-0.91	-2.26	2.22	0.20	-0.18	-0.57	0.52	13.15	-12.10	-30.19	29.62	2.40	-2.14	-0.82	6.19	-18.81	22.32	-75.15	76.56	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.982	0.21
	U_2–L_3	-39.51	6.24	1.35	-1.26	-1.50	1.58	0.20	-0.23	-0.25	0.35	12.05	-14.09	-17.34	21.13	2.34	-2.76	-3.13	4.21	-26.66	-8.31	-11.38	20.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.995	0.20
	U_3–L_4	-50.81	-16.61	1.35	-1.26	-0.75	0.79	-1.60	1.52	0.61	-0.76	3.61	-3.70	2.20	0.00	0.00	0.00	-13.26	1.14	-37.92	-32.52	73.05	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.21
	U_4–L_5	-64.44	-72.22	1.56	-1.77	-0.10	0.11	-0.42	0.47	0.00	0.00	20.79	-23.70	-1.30	2.20	5.02	-5.65	0.00	0.00	-110.79	-124.70	82.09	-91.03	15.4	15.42	15.42	23.71	2	907.0	1.54	986	1.5	958.8	-0.895	0.24
	U_5–L_6	-78.23	-68.74	1.87	-2.06	-0.34	0.38	-0.50	0.60	0.00	0.00	24.98	-27.57	-3.62	5.48	12.53	-14.12	0.00	0.00	-126.43	-126.51	98.10	-112.99	15.4	15.42	15.42	23.71	2	1076.1	1.67	1144	1.5	1028.6	-0.999	0.20
	U_6–L_7	-109.00	-121.38	2.21	-2.26	-0.80	0.85	0.74	-0.81	0.00	0.00	29.58	-30.18	-10.67	11.34	8.90	-9.76	0.00	0.00	-180.16	-196.99	127.63	-143.01	18.5	18.45	18.36	30.78	3	1020.9	1.67	1016	1.5	913.3	-0.915	0.23
	U_7–L_8	-42.62	47.12	2.70	-3.23	-3.55	4.24	0.77	-0.93	-0.77	0.93	36.02	-43.16	-47.36	56.63	9.24	-11.11	-9.29	11.14	-8.58	5.14	-116.97	134.87	107.1	107.13	107.11	162.71	26	2056.9	1.52	5369	1.5	5302.3	-0.835	0.23
	U_8–L_9	-181.51	205.10	0.14	-0.13	-3.62	3.81	0.00	0.00	-0.94	1.08	1.84	-1.73	-47.63	73.76	-41.82	49.28	0.00	0.00	-11.24	12.90	-233.66	264.37	-296.84	330.73	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0	-0.998	0.24
	U_9–L_{10}	-123.92	126.16	0.05	-0.13	-2.62	2.98	0.00	0.00	-0.65	0.66	0.61	-1.66	-33.87	38.56	0.00	0.00	-7.75	7.94	-160.30	161.85	-205.13	214.12	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2	-0.958	0.22
	U_{10}–L_{11}	-227.70	170.40	0.01	-0.01	-2.77	3.20	0.00	0.00	-0.68	0.69	2.16	-2.10	-55.89	43.09	0.00	0.00	-8.12	10.22	-165.87	227.45	212.87	142.67	42.74	42.74	42.74	65.30	19	1389.6	1.53	2155	1.5	2115.6	-0.764	0.29
	U_{11}–L_{12}	-106.29	107.56	0.03	-1.10	-2.20	2.27	0.00	0.00	-0.52	0.55	0.41	-1.28	-28.50	29.38	0.00	0.00	-6.18	6.60	-137.64	141.49	-173.23	178.02	21.1	21.09	21.09	35.46	10	1170.1	1.68	1170	1.5	1044.0	-0.984	0.21
	U_{12}–L_{13}	-66.48	79.89	0.24	-0.16	-1.68	1.81	0.00	0.00	-0.33	0.40	3.07	-2.34	-21.72	23.39	0.00	0.00	-4.24	4.62	-82.44	100.91	-114.66	134.26	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.894	0.25
	U_{13}–L_{14}	-31.84	39.78	0.13	-0.10	-0.76	0.82	-0.13	0.15	-0.15	0.18	1.50	-1.16	-10.74	11.66	0.00	0.00	-2.11	2.30	-39.29	49.34	-54.64	65.30	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.995	0.20
	U_{14}–L_{15}	-17.16	-23.69	1.83	-1.34	-0.45	0.56	0.27	-0.30	-0.10	0.11	23.66	-25.10	-5.64	4.90	3.18	-3.58	-1.20	1.31	-51.02	-53.67	-14.72	-24.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.837	0.27
	U_{15}–L_{16}	-60.46	-54.15	2.42	-2.26	-0.43	0.49	-0.41	0.49	0.00	0.00	26.59	-28.59	-5.55	4.65	-4.50	4.50	-1.08	1.08	-114.61	-112.34	-76.18	76.18	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.902	0.22
	U_{16}–L_{17}	-74.44	-85.11	2.05	-2.14	-0.32	0.33	0.43	-0.46	0.00	0.00	-28.61	-27.68	-4.13	4.23	5.15	-5.53	-0.72	0.73	-131.24	-146.62	-91.37	-105.14	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.895	0.24
	U_{17}–L_{18}	-107.77	-162.63	1.38	-1.48	-0.44	0.44	0.63	-0.67	-0.08	0.08	17.08	-16.70	-1.47	-0.40	3.67	9.52	-0.53	1.01	-151.87	-269.52	197.76	-264.09	19.3	19.37	19.37	29.87	3	1182.1	1.67	1166	1.5	1137.2	-0.970	0.21
	U_{18}–L_{19}	-164.37	-173.76	3.00	-3.40	-0.38	0.39	0.91	-0.95	-0.07	0.07	42.64	-43.56	-4.92	-2.97	12.93	-15.79	-0.92	0.93	-179.75	-182.47	-129.79	-132.47	19.4	19.37	19.37	29.87	3	1182.1	1.67	1166	1.5	1137.2	-0.970	0.21
	U_{19}–L_{20}	-194.92	-235.55	2.87	-3.43	-0.29	-0.52	1.06	-1.17	-0.06	0.07	37.09	-44.42	-3.70	-0.25	-12.73	-14.04	-0.77	0.88	-301.62	-360.94	248.59	-306.54	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.829	0.27
	U_0–L_1	-133.48	294.38	0.70	-0.43	1.94	2.13	0.01	-0.11	-0.29	0.32	9.28	-9.77	-38.43	38.78	0.34	-1.55	-0.48	5.10	-164.40	282.98	-86.47	121.29	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.548	0.38
	U_1–L_2	-201.32	204.79	0.95	-0.90	-4.61	4.53	0.15	-0.14	-0.81	0.88	12.07	-11.49	-58.85	57.89	1.81	-1.68	-10.88	10.92	-245.99	251.30	-338.19	341.48	86.7	86.71	86.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.990	0.20
	U_2–L_3	-269.31	126.19	0.76	-0.76	-4.61	4.53	0.00	0.00	-0.94	1.08	1.84	-1.73	-47.63	73.76	-41.82	49.28	0.00	0.00	-11.24	12.90	-233.66	264.37	-296.84	330.73	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0	-0.998	0.24
	U_3–L_4	-79.54	88.71	0.63	-0.66	-2.21	2.28	0.10	-0.10	-0.37	0.41	8.10	-8.37	-28.26	29.12	1.18	-1.21	-4.46	4.87	-82.89	104.44	-140.19	153.17	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.915	0.23
	U_4–L_5	-47.01	54.58	0.72	-0.72	-2.21	2.28	0.00	0.00	-0.37	0.41	1.99	-2.01	-21.72	23.39	0.00	0.00	-4.24	4.62	-82.44	100.91	-114.66	134.26	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.894	0.25
	U_5–L_6	-4.04	12.92	0.78	-0.82	-1.49	1.65	0.13	-0.13	-0.17	0.21	9.91	-10.46	-19.01	21.03	1.51	-1.60	-2.09	2.30	-6.98	2.65	-30.62	43.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.702	0.32
	U_6–L_7	27.52	-27.99	1.11	-1.11	-1.09	1.13	0.10	-0.12	-0.04	0.05	14.16	-14.16	-13.88	14.44	1.22	-1.39	-0.43	0.60	54.18	-54.82	17.74	-17.61	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.999	0.20
	U_7–L_8	59.94	-69.39	1.36	-1.35	0.00	0.00	0.00	0.00	0.00	0.00	17.26	-19.09	-4.32	4.62	0.00	0.00	-0.23	0.00	102.45	-132.49	-34.04	45.63	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.999	0.20
	U_8–L_9	130.31	-141.80	2.74	-2.90	-0.24	0.17	0.47	-0.50	0.00	0.00	35.06	-37.50	-3.09	2.17	5.58	-5.94	0.00	0.00	-214.98	-232.44	-165.39	-181.52	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.925	0.23
	U_9–L_{10}	216.58	-221.45	2.74	-2.90	-0.03	0.00	0.72	-0.73	0.00	0.00	54.12	-54.12	-2.22	0.00	8.61	-8.61	0.00	0.00	-332.00	-347.23	-154.97	-159.57	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.925	0.23
	U_{10}–L_{11}	193.18	-200.19	3.47	-3.67	-0.24	0.26	0.67	-0.68	0.00	0.00	44.33	-46.93	-3.05	4.61	8.02	-8.10	0.00	0.00	-308.76	-321.25	-247.16	-254.25	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.961	0.22
	U_{11}–L_{12}	-194.78	-194.55	3.40	-3.48	-0.45	0.56	0.65	-0.65	0.00	0.00	43.43	-44.40	-6.76	7.62	7.81	-7.82	0.00	0.00	-309.57	-310.63	-240.72	-243.66	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.997	0.21
	U_{12}–L_{13}	-173.03	-170.02	3.00	-3.01	-0.45	0.56	0.57	-0.57	0.00	0.00	39.72	-37.47	-7.16	9.24	9.20	-9.19	0.00	0.00	-276.98	-271.37	-233.74	-229.03	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.997	0.21
	U_{13}–L_{14}	-231.65	-230.62	3.11	-2.93	-1.34	1.35	0.77	-0.77	0.00	0.00	49.72	-47.47	-17.15	17.24	9.20	-9.19	0.00	0.00	-352.78	-348.52	-278.84	-277.40	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.989	0.20
	U_{14}–L_{15}	-225.22	26.62	2.39	-2.39	-1.34	1.35	0.00	0.00	-0.94	1.08	1.84	-1.73	-47.63	73.76	-41.82	49.28	0.00	0.00	-11.24	12.90	-233.66	264.37	-296.84	330.73	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0	-0.998	0.24
	U_{15}–L_{16}	-220.23	219.22	0.38	-0.46	-4.47	4.11	0.02	-0.03	-0.83	0.81	4.73	-5.82	-56.49	51.88	0.19	0.27	-9.92	9.76	-278.88	277.51	-359.73	352.43	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.980	0.21
	U_{16}–L_{17}	-182.78	182.69	0.32	-0.32	-3.62	3.18	0.02	-0.02	-0.67	0.66	3.83	-4.72	-45.80	42.06	0.15	0.22	-8.04	7.91	-226.22	225.00	-291.58	285.74	31.8	31.77	31.72	51.34	11	1129.0	1.62	1694	1.5	1571.8	-0.980	0.21
	U_{17}–L_{18}	-159.35	160.90	0.84	-0.84	-4.31	4.30	0.05	-0.09	-0.74	0.76	10.54	-10.56	-51.91	54.26	0.58	-1.10	-8.84	9.07	-193.45	199.34	-274.64	283.61	38.8	38.83	38.83	59.23	6	1284.6	1.53	1955	1.5	1822.1	-0.968	0.21
	U_{18}–L_{19}	-136.71	136.92	0.84	-0.84	-3.44	3.44	0.05	-0.09	-0.74	0.76	10.54	-10.56	-51.91	54.26	0.58	-1.10	-8.84	9.07	-193.45	199.34	-274.64	283.61	38.8	38.83	38.83	59.23	6	1284.6	1.53	1955	1.5	1822.1	-0.968	0.21
	U_{19}–L_{20}	-69.51	63.36	0.64	-0.64	-1.79	1.92	0.00	-0.01	-0.34	0.43	8.25	-8.08	-22.62	24.00	0.02	-0.12	-4.02	4.24	-66.94	71.86	-106.78	113.57	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.940	0.22
	U_{20}–L_{21}	-37.52	42.74	0.64	-0.64	-1.79	1.92	0.00	-0.01	-0.34	0.43	8.25	-8.08	-22.62	24.00	0.02	-0.12	-4.02	4.24	-66.94	71.86	-106.78	113.57	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.940	0.22
	U_{21}–L_{22}	-13.51	21.11	1.23	-0.83	0.87	0.13	-0.14	-0.07	0.09	14.03	-15.52	10.53	12.52	-1.52	-1.73	-0.89	1.06	0.15	-28.53	-7.76	7.69	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.904	0.24
	U_{22}–L_{23}	28.59	-55.09	2.19	-1.23	0.87	0.13	-0.14	-0.07	0.09	14.03	-15.52	10.53	12.52	-1.52	-1.73	-0.89	1.06	0.15	-28.53	-7.76	7.69	15.4	15.42	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.904	0.24
	U_{23}–L_{24}	70.77	-74.09	2.23	-2.30	-0.72	0.72	0.40	-0.41	0.05	0.05	28.15	-28.99	-5.14	9.10	4.75	-4.93	-0.61	0.61	-128.60	-133.99	80.12	-84.48	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.960	0.22
	U_{24}–L_{25}	104.65	-105.00	2.79	-2.76	-0.68	0.66	0.52	-0.51	-0.06	0.06	35.22	-34.85	-8.60	8.28	6.19	-6.12	-0.66	0.70	-181.64	-181.80	-124.87	-125.73	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-1.000	0.20
	U_{25}–L_{26}	139.58	-139.71	3.44	-3.44	-0.68	0.66	0.69	-0.68	-0.06	0.06	46.89	-46.41	-8.60	8.28	6.19	-6.12	-0.66	0.70	-241.86	-241.73	-166.27	-167.44	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-1.000	0.20
	U_{26}–L_{27}	189.58	-191.05	4.26	-4.29	-0.68	0.66	0.80	-0.81	-0.06	0.06	53.63	-54.20	-8.57	8.32	9.58	-9.77	-0.72	0.65	-316.42	-318.82	-238.31	-237.55	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20
	U_{27}–L_{28}	233.53	-237.73	4.26	-4.29	-0.68	0.66	0.80	-0.81	-0.06	0.06	53.63	-54.20	-8.57	8.32	9.58	-9.77	-0.72	0.65	-316.42	-318.82	-238.31	-237.55	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20
	U_{28}–L_{29}	207.01	-210.59	3.36	-3.11	-1.43	1.44	0.81	-0.81	0.00	0.00	42.41	-39.30	-18.09	18.13	9.72	-9.71	0.00	0.00	-324.24	-324.86	-249.59	-250.19	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.998	0.20
	U_{29}–L_{30}	64.68	-65.32	3.70	-3.70	-0.68	0.66	0.69	-0.68	-0.06	0.06	46.89	-46.41	-8.60	8.28	6.19	-6.12	-0.66	0.70	-241.86	-241.73	-166.27	-167.44	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-1.000	0.20
	U_{30}–L_{31}	-251.15	245.51	0.43	-0.42	4.10	3.80	0.00	0.00	0.82	0.82	42.41	-39.30	-18.09	18.13	9.72	-9.71	0.00	0.00	-324.24	-324.86	-249.59	-250.19	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.998	0.20
	U_{31}–L_{32}	-185.39	178.08	0.38	-0.67	-3.54	3.63	0.05	-0.10	-0.83	0.83	4.83	-6.81	-45.28	46.38	-0.56	1.25	-7.94	8.27	-234.72	220.31	-299.87	291.80	43.2	43.24	43.16	70.66	19	1516.6	1.63	2332	1.5	2140.4	-0.973	0.21
	U_{32}–L_{33}	-154.48	160.88	0.38	-0.67	-3.54	3.63	0.00	0.00	-0.83	0.83	4.83	-6.81	-45.28	46.38	-0.56	1.25	-7.94	8.27	-234.72	220.31	-299.87	291.80	43.2	43.24	43.16	70.66	19	1516.6	1.63	2332	1.5	2140.4	-0.973	0.21
	U_{33}–L_{34}	-185.34	192.19	0.06	0.01	-3.51	3.65	0.00	0.00	-0.64	0.64	0.73	0.15	-44.82	46.58	0.00	0.00	-7.62	7.72	-239.96	250.05	-299.20	310.41	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.964	0.21
	U_{34}–L_{35}	-220.26	213.13	0.06	0.01	-3.51	3.65	0.00	0.00	-0.64	0.64	0.73	0.15	-44.82	46.58	0.00	0.00	-7.62	7.72	-239.96	250.05	-299.20	310.41	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.964	0.21
	U_{35}–L_{36}	-116.39	129.36	0.23	-0.14	-2.37	2.44	0.00	0.00	-0.42	0.45	2.96	-1.81	-30.27	31.20	0.00	0.00	-5.04	5.24	-147.54	165.81	-192.66	208.23	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.933	0.23
	U_{36}–L_{37}	-52.79	62.48	0.46	-0.51	-1.13	1.25	0.00	0.00	-0.18	0.22	5.89	-6.46	-14.46	15.96	0.00	0.00	-2.18	2.58	-60.97	72.82	-90.27	107.53	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.893	0.25
	U_{37}–L_{38}	-19.17	29.05	1.74	-1.19	-0.45	0.56	0.38	-0.43	-0.14	0.17	23.66	-25.10	-5.64	4.90	3.18	-3.58	-1.20	1.31	-51.02	-53.67	-14.72	-24.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.837	0.27
	U_{38}–L_{39}	18.83	-25.55	1.87	-2.00	-0.81	0.84	0.22	-0.25	-0.14	0.14	23.92	-25.59	-10.32	10.68	2.66	-3.02	-1.67	1.73	-55.57	-66.48	-11.06	-19.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.781	0.29
	U_{39}–L_{40}	55.52	-60.55	2.29	-2.31	-0.81	0.84	0.22	-0.25	-0.14	0.14	23.92	-25.59	-10.32	10.68	2.66	-3.02	-1.67	1.73	-55.57	-66.48	-11.06	-19.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.781	0.29
	U_{40}–L_{41}	95.02	-96.90	2.23	-2.30	-0.61	0.62	0.37	-0.40	-0.10	0.10	28.43	-29.37	-7.79	7.80	4.48	-4.75	-1.16	1.16	-153.98	-164.16	-106.90	-115.71	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	-0.938	0.22
	U_{41}–L_{42}	177.21	-183.34	3.44	-3.44	-0.61	0.62	0.61	-0.61	-0.10	0.10	46.89	-46.41	-8.60	8.28	6.19	-6.12	-0.66	0.70	-241.86	-241.73	-166.27	-167.44	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-1.000	0.20
	U_{42}–L_{43}	189.59	-202.30	3.51	-3.55	-0.75	0.75	0.78	-0.81	-0.12	0.11	44.81	-45.41	-8.68	9.33	9.40	-9.72	-1.40	1.34	-324.72	-322.02	-234.01	-250.86	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.946	0.22
	U_{43}–L_{44}	214.89	-210.10	2.74	-3.60	-0.52	0.58	0.72	-0.93	-0.06	0.10	34.94	-45.93	-6.52	6.74	7.46	-8.59	-1.11	0.67	-315.14	-324.78	-410.84	270.75	34.1	34.13	34.07	56.21	10	1711.0	1.53	2357	1.5	2312.1	-0.781	0.28
	U_{44}–L_{45}	177.21	-183.34	3.44	-3.44	-0.61	0.62	0.61	-0.61	-0.10	0.10	46.89	-46.41	-8.60	8.28	6.19	-6.12	-0.66	0.70	-241.86	-241.73	-166.27	-167.44	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-1.000	0.20
	U_{45}–L_{46}	189.59	-202.30	3.51	-3.55	-0.75	0.75	0.78	-0.81	-0.12	0.11	44.81	-45.41	-8.68	9.33	9.40	-9.72	-1.40	1.34	-324.72	-322.02	-234.01	-250.86	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.781	0.28
	U_{46}–L_{47}	214.89	-210.10	2.74	-3.60	-0.52	0.58	0.72	-0.93	-0.06	0.10	34.94	-45.93	-6.52	6.74	7.46	-8.59	-1.11	0.67	-315.14	-324.78	-410.84	270.75	34.1	34.13	34.07	56.21	10	1711.0	1.53	2357	1.5	2312.1	-0.781	0.28
	U_{47}–L_{48}	177.21	-183.34	3.44	-3.44	-0.61	0.62	0.61	-0.61	-0.10	0.10	46.89	-46.41	-8.60	8.28	6.19	-6.12	-0.66	0.70	-241.86	-241.73	-166.27	-167.44	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-1.000	0.20
	U_{48}–

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: SC1
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

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 (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)	Mxx Rec. Mom. Start (k-in)	Mxx Rec. 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_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_m	Equivalent Mom. Factor C_{corr}	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) 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)	Myy Rec. Mom. Start (k-in)	Myy Rec. Mom. End (k-in)	S_{bb} (in^3)	S_{tb} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Shape Factor	M_p (k-in)	P_{crit} (kips)	Formula 1.8 Term * F_y/M_{cr}	M_{cr} (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_m	Equivalent Mom. Factor C_{corr}	Axial Stress	Moment Stress	Total	Pass	Axial Stress	Moment Stress	Total	Pass	Axial Stress	Moment Stress	Total	Pass
Structure 1		U_0–L_1	3.65	-1.42	0.22	-0.12	-1.52	0.77	0.15	0.01	-0.03	-0.02	2.89	-1.59	-17.58	10.29	1.75	0.12	-0.34	-0.23	8.50	3.91	-18.55	17.82	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.951	0.22	0.22	-84.92	-28.02	-0.05	0.19	-14.09	-0.61	-1.09	-0.56	0.65	0.50	-0.64	2.44	-188.26	-75.00	-16.17	-8.33	8.12	7.42	-111.23	33.25	-344.59	-198.25	100.5	100.60	150.48	126.29	66.1	1.20	3970	144	0.94257576	3126.1	0.575	0.83	0.83	0.241	0.108	0.35	Yes	0.146	0.000	0.21	Yes
		U_1–L_1	-11.48	-3.33	0.39	-0.16	-0.82	0.02	0.08	-0.04	-0.25	0.07	5.25	-2.11	-10.97	0.27	-0.06	-0.47	-2.95	0.84	-8.09	-7.07	-29.18	-3.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.136	0.65	0.65	122.21	23.62	3.23	2.51	-15.12	-7.94	0.49	0.45	1.18	-0.11	43.08	33.47	-202.02	-106.12	7.33	6.64	17.52	-7.60	214.88	74.21	-323.76	-107.24	94.0	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257577	2947.1	0.375	0.74	0.74	0.181	0.100	0.26	Yes	0.063	0.055	0.14	Yes	0.005	0.079	0.09	Yes	0.005	0.037	0.05	Yes
		U_2–L_2	-13.10	-3.83	-0.13	-0.05	-0.03	-0.13	-0.05	-0.01	-0.10	-0.03	5.99	-2.43	-12.52	0.31	-0.07	-0.54	-3.37	0.96	-9.23	-8.07	-33.29	-4.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.155	0.65	0.65	139.74	26.92	3.69	2.86	-17.26	-9.05	0.56	0.51	1.35	-0.13	49.15	38.17	-230.39	-121.05	8.36	7.57	19.98	-8.67	245.04	84.61	-369.23	-122.29	107.1	106.99	106.99	119.28	74.4	1.11	3454	171	0.94257577	2947.1	0.375	0.74	0.74	0.206	0.114	0.32	Yes	0.072	0.063	0.16	Yes	0.005	0.079	0.09	Yes	0.005	0.037	0.05	Yes
		U_3–L_3	9.81	-15.01	0.34	0.10	-0.38	-0.53	0.08	0.01	-0.08	-0.12	4.57	1.35	-5.05	-7.03	0.90	0.13	-0.94	-1.40	18.70	-17.75	6.19	-28.64	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.216	0.51	0.51	206.47	91.61	2.68	1.79	-13.06	-4.87	0.12	0.19	2.20	0.58	35.84	23.82	-174.46	-65.06	1.71	2.85	32.60	8.09	315.01	150.06	41.61	34.51	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.95180787	2952.4	0.476	0.79	0.79	—	—	—	—	0.380	0.116	0.5	Yes	0.352	0.037	0.39	Yes
		U_4–L_3	-16.21	-25.06	0.20	-0.12	-0.17	-0.11	0.01	0.01	-0.02	-0.01	2.61	0.40	-11.26	1.62	-1.27	0.36	1.42	-0.35	-17.68	5.62	-7.27	0.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.432	0.43	0.43	-154.31	8.15	0.65	0.05	3.99	2.32	0.24	0.20	-2.83	8.75	16.30	17.91	-138.46	-119.69	113.4	113.37	133.37	53.0	1.12	3454	171	0.95173746	3005.2	0.568	0.83	0.83	0.372	0.086	0.46	Yes	0.204	0.047	0.25	Yes
		U_5–L_5	-34.06	79.08	0.39	0.28	-1.63	0.93	0.06	0.21	-0.33	0.22	5.26	3.69	-22.49	26.47	12.44	0.67	2.96	-4.00	2.69	-37.43	107.20	-76.08	24.61	25.1	25.1	38.6	4	1183.7	1.51	1753	1.5	1737.0	-0.240	0.44	0.44	-192.51	23.27	3.07	0.60	1.29	3.84	0.05	0.10	-1.76	-0.47	41.00	8.06	12.22	12.85	0.70	1.43	-26.17	-6.90	-196.56	40.72	-261.82	-152.60	148.0	147.96	147.96	167.25	221.8	1.13	5519	262	0.95584852	4728.8	0.736	0.89	0.89	0.371	0.109	0.48	Yes	0.204	0.060	0.27	Yes
		U_6–L_5	-39.98	73.10	0.37	0.26	-1.53	0.87	0.06	0.20	-0.31	0.21	4.95	3.48	-21.19	24.95	11.72	0.63	2.79	-3.77	2.53	-35.26	100.97	-71.70	23.18	23.67	23.67	36.4	4	1183.7	1.51	1753	1.5	1737.0	-0.226	0.46	0.46	-181.40	21.92	2.89	0.57	1.21	3.62	0.05	0.10	-1.66	-0.44	38.63	7.59	11.52	12.11	0.66	1.35	-24.66	-6.50	-185.23	38.39	-246.74	-143.82	139.5	139.48	139.48	157.65	209.1	1.13	5519	247	0.95584852	4728.8	0.736	0.89	0.89	0.350	0.103	0.45	Yes	0.192	0.057	0.25	Yes
		U_7–L_7	-12.27	-139.07	0.73	0.34	-0.93	2.30	0.21	0.13	-0.18	0.58	9.39	4.32	-12.48	46.59	21.87	2.47	1.56	-2.32	6.95	-3.74	184.56	-134.44	33.4	34.1	34.1	52.4	5	1763.1	1.51	2651	1.5	2714.7	-0.144	0.54	0.54	251.60	97.15	2.76	2.09	-9.49	-4.52	0.58	0.41	1.03	-0.05	37.76	27.03	-71.07	-115.71	31.12	8.63	-3.05	0.98	373.57	161.43	234.68	-24.12	20.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.96384651	6452.3	0.432	0.77	0.77	0.474	0.145	0.62	Yes	0.269	0.082	0.36	Yes
		U_8–L_7	-100.92	90.29	0.25	0.30	-2.29	1.61	0.03	0.08	-0.54	0.43	3.23	3.82	-29.62	29.79	20.74	0.60	0.98	-6.43	5.10	-126.99	122.34	-169.78	144.41	40.7	40.7	40.7	40.44	67.92	25	1661.0	1.67	2241	1.5	2714.7	-0.951	0.26	0.26	225.29	59.61	4.30	2.70	-10.67	-11.27	0.65	1.62	0.25	0.52	34.93	-132.62	-149.68	9.33	2.19	23.30	3.54	365.19	122.90	93.17	-117.92	20.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.96384651	6452.3	0.432	0.77	0.77	0.464	0.111	0.57	Yes	0.263	0.063	0.33	Yes
		U_9–L_9	-73.43	69.78	0.32	0.52	-1.84	0.86	0.06	0.14	-0.38	0.21	4.19	6.70	-23.77	11.18	0.77	1.68	-4.54	2.56	-60.03	99.43	-122.25	-77.60	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	0.557	0.83	0.83	82.46	-78.50	2.69	1.75	-11.88	-10.39	0.29	0.26	-1.20	0.04	34.82	22.63	-153.41	-134.38	4.17	3.77	18.70	0.59	126.47	-72.63	-93.92	-92.72	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.96831336	6309.9	-0.574	0.37	0.37	0.430	0.078	0.51	Yes	0.266	0.044	0.31	Yes
		U_{10}–L_9	-7.12	-127.97	0.73	0.34	-0.94	2.34	0.12	0.13	-0.18	0.59	9.52	4.39	-12.43	47.32	22.19	2.51	1.58	-2.35	7.05	-3.79	187.42	-136.47	33.9	34.6	34.6	53.2	5	1763.1	1.53	2155	1.5	2715.6	-0.343	0.46	0.46	249.63	-87.17	2.80	1.77	-9.63	-4.59	0.57	0.41	1.03	-0.05	38.33	27.43	-72.15	-117.45	31.59	8.76	-3.10	0.99	379.17	163.84	238.16	-24.48	21.2	205.94	193.29	242.14	260.7	1.18	7872	228	0.96384651	6452.3	0.432	0.77	0.77	0.481	0.147	0.63	Yes	0.273	0.083	0.36	Yes
		U_{11}–L_{11}	-69.90	47.85	0.08	0.00	-1.40	0.73	0.00	0.00	-0.31	0.21	1.02	-0.03	-18.53	9.32	0.00	0.00	-3.79	2.56	-55.85	82.17	-114.96	74.32	20.8	20.80	20.67	34.66	3	1070.0	1.67	1444	1.5	1329.6	-0.646	0.34	0.34	0.00	1.94	0.69	0.17	-13.87	-108.34	-102.65	0.00	0.00	0.00	0.00	59.92	29.21	-93.97	-198.87	-246.74	133.5	133.45	123.27	155.40	188.8	1.14	5128	176	0.95303181	4196.9	0.806	0.92	0.92	0.384	0.149	0.54	Yes	0.242	0.084	0.33	Yes
		U_{12}–L_{11}	-27.40	6.37	0.05	-0.31	-0.70	0.05	0.00	0.00	-0.15	0.03	0.58	-4.05	-8.11	0.67	0.00	0.00	-1.70	0.34	-34.86	3.01	-47.46	9.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.193	0.52	0.52	59.25	-19.65	-5.54	-1.55	-13.10	-4.49	0.00	0.00	2.35	0.79	-11.68	-20.04	-169.48	-71.02	0.00	0.00	33.81	11.41	-16.15	-129.59	-142.29	-195.86	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237155	2925.7	0.732	0.89	0.89	0.358	0.117	0.48	Yes	0.197	0.065	0.27	Yes
		U_{13}–L_{13}	-5.38	-32.24	0.10	-0.10	-0.14	-0.10	0.00	0.00	-0.03	-0.03	0.10	-0.85	-1.61	0.14	0.00	0.00	-0.34	0.07	-6.91	0.63	-9.41	1.92	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.040	0.64	0.64	-20.28	-163.04	3.44	0.35	6.48	4.49	0.10	0.09	-0.70	-0.16	-4.00	-6.87	-274.63	-92.22	0.00	0.00	11.59	3.91	-5.53	-44.41	-48.74	-67.09	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93372256	2894.2	0.221	0.66	0.66	0.122	0.040	0.16	Yes	0.067	0.022	0.09	Yes
		U_{14}–L_{13}	-31.05	12.71	0.22	-0.19	-1.07	0.65	0.05	-0.04	-0.19	0.11	2.90	-2.47	-13.82	8.35	0.56	-0.52	-2.29	1.32	39.55	-19.85	-39.98	-0.29	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.449	0.41	0.41	59.23	-19.65	-5.54	-1.55	-13.10	-4.49	0.00	0.00	2.35	0.79	-11.68	-20.04	-169.48	-71.02	0.00	0.00	33.81	11.41	-16.15	-129.59	-142.29	-195.86	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93372256	2894.2	0.221	0.66	0.66	0.122	0.040	0.16	Yes	0.067	0.022	0.09	Yes
		U_{15}–L_{15}	-46.66	27.26	0.23	-0.18	-1.15	0.72	0.05	-0.04	-0.24	-0.28	3.81	-3.77	-17.75	11.90	0.00	0.00	-3.48	3.31	-52.92	29.62	-63.76	32.91	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.306	0.52	0.52	90.68	-30.06	-8.48	-2.36	-20.05	-6.87	0.00	0.00	3.59	1.21	-17.87	-30.66	-259.16	-108.62	0.00	0.00	51.72	17.45	-24.71	-198.28	-217.72	-299.64	94.0	93.99	93.99	104.66	65.3	1.11	3454	184	0.94257577	2947.1	0.375	0.74	0.74	0.309	0.101	0.41	Yes	0.169	0.055	0.22	Yes
		U_{16}–L_{15}	-118.88	85.32	0.31	-0.29	-2.49	1.76	0.06	-0.05	-0.55	0.42	4.64	-3.74	-32.20	22.81	0.67	-0.62	-6.59	5.04	-149.04	106.05	-196.15	140.66	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.717	0.31	0.31	301.40	-67.04	-0.11	-0.32	2.62	3.52	0.03	0.05	-3.12	-1.47	-4.10	37.79	45.56	0.39	0.78	-46.00	-20.41	-393.74	-62.49	-342.69	-37.93	148.0	147.96	147.96	167.25	221.8	1.13	5519	207	0.96021995	4688.3	0.235	0.69	0.69	0.414	0.182	0.60	Yes	0.228	0.100	0.33	Yes
		U_{17}–L_{17}	-119.21	87.78	0.26	-0.24	-2.49	1.80	0.04	-0.04	-0.57	0.48	3.38	-3.72	-31.98	23.50	0.57	-0.60	-6.83	5.47	-149.36	110.39	-194.45	145.29	35.8	36.83	36.83	55.23	4	1264.6	1.53	1955	1.5	1922.1	-0.731	0.32	0.32	297.12	-100.44	0.11	-0.10	1.44	-1.39	-0.01	0.02	-3.22	1.47	-5.35	38.91	19.02	-51.17	-222.37	-482.02	-237.57	148.0	147.96	147.96	167.25	221.8	1.13	5519	207	0.96021995	4688.3	0.235	0.69	0.69	0.415	0.176	0.61	Yes	0.228	0.097	0.34	Yes
		U_{18}–L_{17}	-146.00	120.15	0.17	-0.18	-2.36	2.07	0.04	-0.04	-0.77	0.62	2.19	-2.30	-30.00	-0.46	-9.29	7.49	-186.95	153.20	229.44	191.81	-38.83	38.83	39.23	39.23	39.23	58.85	4	1264.6	1.53	1955	1.5	1922.1	-0.833	0.22	0.22	-196.50	-108.61	0.02	0.07	1.69	-0.02	0.01	-0.01	1.77	-1.03	-0.12	31.81	21.89	-229.07	0.15	-25.45	-14.74	-259.62	-141.26	-241.40	-112.57	160.6	160.57	160.57	184.25	223.9	1.15	6080	156	0.94617776	5078.9	0.824	0.92	0.92	0.444	0.160	0.61	Yes	0.244	0.088	0.34	Yes
		L_1–L_3	-86.84	116.71	0.46	-0.31	-3.05	2.85	0.01	-0.06	-0.13	-0.38	5.81	-3.90	-38.96	36.40	0.14	-0.70	-1.51	4.57	-105.33	146.05	-165.50	-59.63	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	0.360	0.74	0.74	-189.77	-31.06	-1.48	-0.95	-17.53	-5.93	0.41	0.20	-1.06	-0.10	-18.96	-12.14	-224.00	-75.80	5.79	2.83	-15.09	-1.36	-271.35	-56.16	-557.51	-347.02	173.7	173.70	173.70	202.71	247.5	1.17	6890	180	0.95421621	5469.3	0.622	0.85	0.85	0.473	0.160	0.64	Yes	0.260	0.088	0.35	Yes
		L_2–L_4	-154.13	114.46	0.23	0.12	-0.10	-0.69	0.03	0.04	-0.16	-0.17	4.43	-4.35	-32.29	32.29	0.42	-0.42	-4.23	4.23	-188.14	138.23	-208.17	-153.50	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.259	0.74	0.74	-240.26	-41.58	-2.76	-1.76	-11.30	-11.98	0.26	0.26	-0.26	-0.26	-11.92	-12.92	-135.55	-88.98	7.69	7.69	12.02	-3.55	86.98	19.60	139.40	88.50	173.7	173.70	173.70	202.71	247.5	1.17	6890	209	0.95424341	5505.3	0.424	0.77	0.77	0.472	0.165	0.64	Yes	0.259	0.091	0.35	Yes
		L_3–L_5	-118.22	92.25	0.76	-0.67	-2.94	2.18	0.11	-0.10	-0.52	0.43	9.70	-8.55	-37.92	27.88	1.37	-1.25	-6.28	5.11	-141.08	108.01	-202.63	156.18	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.772	0.29	0.29	32.87	-71.75	1.75	1.40	-14.04	-10.32	0.26	1.01	0.01	-0.21	52.61	37.91	-179.36	-131.83	4.71	3.62	14.32	0.16	71.88	-69.99	-190.44	-264.69	148.0	147.96	147.96	167.25	221.8	1.13	5519	217	0.96189757	4696.6	0.720	0.89	0.89	0.441	0.163	0.61	Yes	0.243	0.089	0.34	Yes
		L_4–L_6	-34.32	8.60	0.46	-0.37	-1.14	0.72	0.07	-0.06	-0.18	-0.11	5.81	-4.78	-14.58	9.17	0.86	-0.72	-2.14	1.27	-24.06	4.97	-50.57	23.01	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.457	0.42	0.42	88.14	-32.22	-1.63	1.05	-5.99	-7.85	0.21	0.24	-0.49	0.29	20.88	13.45	-76.57	-100.47	3.04	1.92	20.43	4.07	141.72	-25.05	15.04	-172.15	94.0	93.99	93.99	104.66	65.3	1.11	3454	96	0.91239827	2834.9	-0.087	0.57	0.57	0.221	0.115	0.34	Yes	0.121	0.063	0.19	Yes
		L_5–L_7	-1.48	-18.42	0.46	-0.37	-1.14	0.72	0.07	-0.06	-0.18	-0.11	5.81	-4.78	-14.58	9.17	0.86	-0.72	-2.14	1.27	-24.06	4.97	-50.57	23.01	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.457	0.42	0.42	88.14	-32.22	-1.63	1.05	-5.99	-7.85	0.21	0.24	-0.49	0.29	20.88	13.45	-76.57	-100.47	3.04	1.92	20.43	4.07	141.72	-25.05	15.04	-172.15	94.0	93.99	93.99	104.66	65.3	1.11	3454	96	0.91239827	2834.9	-0.087	0.57	0.57	0.221	0.115	0.34	Yes	0.121	0.063	0.19	Yes
		L_6–L_8	-13.33	-37.03	0.47	-0.83	-0.56	0.93	0.06	-0.04	-0.03	-0.09	6.03	-10.58	-14.13	0.31	0.71	-0.44	-2.34	-1.03	25.57	41.89	8.04	-47.71	17.2	17.24	17.24	26.54	8	824.7	1.54	878	1.5	853.4	-0.407	0.44	0.44	131.93	1.78	-8.31	-0.60	-2.01	-0.44	0.11	0.10	1.93	0.58	-21.73	-25.71	-82.32	1.49	1.45	27.38	8.28	33.06	-7.81	-137.65	-104.70	103.1	103.08	133.08	116.41	73.3	1.13	3841	126	0.93435071	3179.0	-0.761	0.30	0.30	0.435	0.071	0.51	Yes
		L_7–L_9	-66.01	54.01	0.08	-0.29	-1.53	0.76	0.00	0.00	-0.23	0.07	1.03	-3.68	-19.56	9.91	0.00	0.00	-2.80	2.04	-84.47	65.43	-111.24	83.10	20.5	20.51	20.40	33.89	8	1012.2	1.65	1118	1.5	1016.2	-0.747	0.30	0.30	-243.32	-138.08	1.97	0.31	6.72	5.58	0.00	0.00	-1.76	-0.67	25.13	3.91	85.94	71.34	0.00	0.00	-24.96	-8.45	-283.91	-174.43	-204.98	-86.76	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.94859435	4011.5	0.614	0.85	0.85	0.426	0.157	0.59	Yes	0.268	0.090	0.36	Yes
		L_8–L_{10}	-133.76	104.05	0.27	-0.23	-2.29	1.75	0.06	-0.05	-0.48	0.43	3.23	-3.82	-29.62	29.79	20.74	0.60	-6.43	5.10	-126.99	122.34	-169.78	144.41	40.7	40.7	40.7	40.44	67.92	25	1661.0	1.67	2241	1.5	2714.7	-0.951	0.26	0.26	-222.79	-150.80	-0.26	0.26	3.54	3.54	0.05	0.05	-1.33	0.67	40.93	22.64	-237.47	-137.79	31.12	8.63	-3.05	0.98	373.57	161.43	234.68	-24.12	20.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.96384651	6452.3	0.432	0.77	0.77	0.464	0.111	0.57	Yes	0.263	0.063	0.33	Yes
		L_9–L_{11}	-116.16	105.67	0.42	-0.31	-2.45	1.46	0.04	0.11	-0.41	0.24	5.37	-3.52	-31.31	33.19	0.48	-0.58	-5.39	4.70	-144.03	142.47	-188.98	-123.14	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.621	0.85	0.85	-153.52	-20.51	0.34	0.80	5.18	5.27	0.21	0.03	-1.88	-0.39	-4.32	-14.26	66.12	67.32	3.02	0.45	-26.72	-5.39	-193.86	-13.32	-148.34	-119.08	173.7	173.70	173.70	202.71	247.5	1.17	6890	234	0.95473158	5505.3	0.669	0.83	0.83	0.512	0.121	0.64	Yes	0.282	0.067	0.35	Yes
		L_{10}–L_{12}	-138.38	100.29	0.25	-0.23	-2.29	1.75	0.06	-0.05	-0.48	0.43	3.23	-3.82	-29.62	29.79	20.74	0.60	-6.43	5.10	-126.99	122.34	-169.78	144.41	40.7	40.7	40.7	40.44	67.92	25	1661.0	1.67	2241	1.5	2714.7	-0.951	0.26	0.26	-222.79	-150.80	-0.26	0.26	3.54	3.54	0.05	0.05	-1.33	0.67	40.93	22.64	-237.47	-137.79	31.12	8.63	-3.05	0.98	373.57	161.43	234.68	-24.12	20.9	202.86	190.44	238.56	256.9	1.18	7872	228	0.96384651	6452.3	0.432	0.77	0.77	0.464	0.111	0.57	Yes	0.263	0.063	0.33	Yes
		L_{11}–L_{13}	-131.93	101.03	0.65	-0.34	-2.69	2.27	0.05	0.08	-0.49	0.43	8.34	-4.29	-30.27	-33.07	29.03	0.58	-5.94	-5.20	-160.66	190.76	-214.49	234.08	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.916	0.23	0.23	-229.23	1.03	-2.76	0.99	1.14	5.12	0.08	-0.02	-2.25	-0.56	-29.26	-21.61	-14.57	65.39	1.09	-0.31	-31.96	-7.91	-468.64	17.73	-403.87	86.34	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.91184445	6323.0	-0.038	0.98	0.98	0.512	0.163	0.68	Yes	0.282	0.090	0.38	Yes
		L_{12}–L_{14}	-179.29	162.92	1.09	-0.78	-2.80	2.51	0.04	-0.02	-0.64	0.56	13.95	-9.91	-35.83	32.04	0.42	-0

Moment (Start) AB Operating

Operating Loads - 5C1

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
			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	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.251	1.00	Yes	0.735	0.231	0.97	Yes	1.00	**4.16**
North Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-544.72	53	-733	-971	-193	-55	88	561	-528	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.256	1.00	Yes	0.734	0.132	0.87	Yes	1.00	**4.16**
		U_1 - U_2	-----	-544.68	-9	-91	-554	-501	-317	41	-466	16	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1.00	Yes	0.805	0.178	0.99	Yes	1.00	**2.79**
		U_2 - U_3	151.75	-596.94	-118	272	-751	-240	11	24	-124	146	0.174	0.203	0.38	Yes	0.117	0.132	0.25	Yes	0.793	0.170	0.97	Yes	0.786	0.205	1.00	Yes	1.00	**3.69**
		U_3 - U_4	421.68	-583.15	110	364	-861	-77	-14	29	39	30	0.483	0.211	0.70	Yes	0.332	0.145	0.48	Yes	0.779	0.203	0.99	Yes	0.772	0.224	1.00	Yes	1.00	**3.20**
		U_4 - U_5	372.61	-572.82	136	304	-940	-174	15	-33	44	-47	0.427	0.231	0.66	Yes	0.293	0.159	0.46	Yes	0.779	0.203	0.99	Yes	0.772	0.224	1.00	Yes	1.00	**3.20**
		U_5 - U_6	658.51	-387.27	248	464	-834	214	-142	-64	263	-1	0.755	0.243	1.00	Yes	0.509	0.158	0.67	Yes	0.527	0.245	0.78	Yes	0.522	0.198	0.73	Yes	1.00	**3.90**
		U_6 - U_7	847.72	-----	372	226	-603	-62	-291	-112	411	-140	0.811	0.185	1.00	Yes	0.567	0.127	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		U_7 - U_8	955.49	-----	45	1066	-1105	1911	-427	10	144	-287	0.662	0.333	1.00	Yes	0.462	0.227	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		U_8 - U_9	674.08	-----	2112	-799	683	-64	-632	-86	-743	-216	0.552	0.445	1.00	Yes	0.378	0.303	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		U_9 - U_{10}	125.18	-469.25	1331	-939	-1073	-537	-87	1044	-1541	1378	0.136	0.546	0.69	Yes	0.092	0.366	0.46	Yes	0.604	0.389	1.00	Yes	0.599	0.298	0.90	Yes	1.00	**23.88**
		U_{10} - U_{11}	-----	-618.66	406	-898	-30	-542	238	44	73	194	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.151	0.95	Yes	0.789	0.201	1.00	Yes	1.00	**4.63**
		U_{11} - U_{12}	127.57	-861.38	368	-22	-350	-687	55	395	102	746	0.102	0.203	0.31	Yes	0.069	0.136	0.21	Yes	0.815	0.183	1.00	Yes	0.808	0.114	0.93	Yes	1.00	**4.75**
		U_{12} - U_{13}	-----	-1226.14	54	-218	-655	-680	322	205	492	397	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.165	1.00	Yes	0.819	0.094	0.92	Yes	1.00	**3.52**
		U_{13} - U_{14}	-----	-1374.94	-119	-360	-938	-1077	207	163	322	558	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.201	1.00	Yes	0.788	0.119	0.91	Yes	1.00	**3.16**
		U_{14} - U_{15}	-----	-1327.32	-264	-245	-1474	-604	207	29	531	186	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.229	1.00	Yes	0.761	0.163	0.93	Yes	1.00	**2.48**
		U_{15} - U_{16}	-----	-1361.71	-156	-432	-1103	-798	85	36	428	176	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1.00	Yes	0.781	0.122	0.91	Yes	1.00	**2.27**
		U_{16} - U_{17}	-----	-1358.77	-337	-193	-1420	-477	156	-49	611	63	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.208	1.00	Yes	0.779	0.157	0.94	Yes	1.00	**2.57**
		U_{17} - U_{18}	-----	-994.82	-195	-87	-1181	-21	-22	-59	410	21	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1.00	Yes	0.778	0.192	0.98	Yes	1.00	**3.63**
		U_{18} - U_{19}	-----	-708.79	-201	-69	-869	-91	24	-121	428	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.191	1.00	Yes	0.797	0.175	0.98	Yes	1.00	**2.54**
		U_{19} - U_{20}	-----	-544.56	-249	145	-1902	1386	-113	-35	464	-757	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.216	0.84	Yes	0.613	0.383	1.00	Yes	1.00	**5.98**
	Structure 2	U_0 - U_1	-----	-634.71	664	-1420	-663	-1062	-53	18	600	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.206	0.97	Yes	0.750	0.241	1.00	Yes	1.00	**6.42**
		U_1 - U_2	-----	-884.82	91	-623	-416	-648	-93	-251	-181	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.133	1.00	Yes	0.854	0.098	0.96	Yes	1.00	**4.09**
		U_2 - U_3	-----	-1202.34	161	-911	-665	-990	-10	52	-202	494	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.139	1.00	Yes	0.853	0.101	0.96	Yes	1.00	**3.68**
		U_3 - U_4	-----	-1394.97	-406	-389	-1326	-960	309	451	142	236	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.199	1.00	Yes	0.794	0.118	0.92	Yes	1.00	**2.94**
		U_4 - U_5	-----	-1468.85	-412	-391	-1762	-1397	371	120	393	263	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.231	1.00	Yes	0.754	0.146	0.91	Yes	1.00	**3.48**
		U_5 - U_6	-----	-1527.02	-385	97	-2014	-695	179	-250	223	375	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.207	1.00	Yes	0.784	0.167	0.96	Yes	1.00	**3.31**
		U_6 - U_7	-----	-1395.56	-238	-59	-1637	-830	-161	-201	235	166	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1.00	Yes	0.795	0.146	0.95	Yes	1.00	**2.78**
		U_7 - U_8	-----	-1365.01	-183	-161	-1771	-854	-111	-188	182	37	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**2.45**
		U_8 - U_9	-----	-1171.04	-271	122	-1540	-381	-96	-200	348	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1.00	Yes	0.794	0.164	0.96	Yes	1.00	**2.42**
		U_9 - U_{10}	176.79	-956.31	-59	365	-1340	-132	-146	-155	259	-52	0.130	0.191	0.33	Yes	0.088	0.130	0.22	Yes	0.830	0.167	1.00	Yes	0.825	0.163	0.99	Yes	1.00	**2.87**
		U_{10} - U_{11}	550.66	-764.61	213	404	-1476	-215	-191	-167	460	-61	0.465	0.264	0.73	Yes	0.317	0.172	0.49	Yes	0.764	0.232	1.00	Yes	0.760	0.208	0.97	Yes	1.00	**3.83**
		U_{11} - U_{12}	842.62	-327.18	254	546	-1550	257	-353	-126	527	23	0.712	0.283	1.00	Yes	0.478	0.189	0.67	Yes	0.327	0.181	0.51	Yes	0.325	0.219	0.55	Yes	1.00	**4.37**
		U_{12} - U_{13}	1165.03	-----	488	161	-1201	-550	-436	-379	563	-313	0.787	0.205	1.00	Yes	0.561	0.140	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		U_{13} - U_{14}	1192.08	-----	58	1789	-2209	3755	-764	-392	13	-864	0.586	0.407	1.00	Yes	0.415	0.267	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		U_{14} - U_{15}	854.34	-----	5396	-2292	1166	-23	-1108	-320	-559	-519	0.420	0.575	1.00	Yes	0.297	0.377	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.36**
		U_{15} - U_{16}	1201.62	-----	599	201	-1752	-120	-495	481	-769	805	0.726	0.267	1.00	Yes	0.517	0.181	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.49**
		U_{16} - U_{17}	153.62	-562.01	3884	-2231	-2483	-2416	1053	66	762	1014	0.113	0.599	0.72	Yes	0.075	0.394	0.47	Yes	0.490	0.506	1.00	Yes	0.487	0.488	0.98	Yes	1.00	**27.55**
		U_{17} - U_{18}	-----	-588.21	1051	-944	-1197	-848	61	870	-45	1162	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.297	1.00	Yes	0.695	0.203	0.90	Yes	1.00	**11.10**
		U_{18} - U_{19}	805.79	-530.32	699	369	-418	-718	33	99	411	396	0.809	0.182	1.00	Yes	0.531	0.116	0.65	Yes	0.630	0.179	0.81	Yes	0.626	0.122	0.75	Yes	1.00	**5.69**
		U_{19} - U_{20}	442.11	-705.34	415	298	-795	-652	-12	-18	101	451	0.415	0.188	0.61	Yes	0.275	0.123	0.40	Yes	0.783	0.208	1.00	Yes	0.778	0.127	0.91	Yes	1.00	**4.06**
	Structure 3	U_{20} - U_{21}	298.01	-857.28	269	-12	-1022	-462	-67	-79	288	237	0.231	0.179	0.42	Yes	0.162	0.116	0.28	Yes	0.788	0.207	1.00	Yes	0.782	0.148	0.94	Yes	1.00	**4.00**
		U_{21} - U_{22}	124.10	-845.45	-12	32	-1040	-633	-20	60	48	345	0.096	0.188	0.29	Yes	0.068	0.126	0.20	Yes	0.777	0.221	1.00	Yes	0.772	0.151	0.93	Yes	1.00	**3.10**
		U_{22} - U_{23}	93.30	-797.50	85	-27	-1270	-599	53	-2	384	88	0.072	0.226	0.30	Yes	0.051	0.152	0.21	Yes	0.733	0.258	1.00	Yes	0.728	0.184	0.92	Yes	1.00	**2.69**
		U_{23} - U_{24}	74.17	-846.22	129	-65	-1200	-340	-47	9	356	65	0.058	0.213	0.28	Yes	0.040	0.138	0.18	Yes	0.778	0.214	1.00	Yes	0.772	0.174	0.95	Yes	1.00	**3.01**
		U_{24} - U_{25}	365.58	-714.54	231	333	-1239	-257	-82	-87	370	-15	0.343	0.248	0.60	Yes	0.227	0.163	0.40	Yes	0.793	0.199	1.00	Yes	0.788	0.198	0.99	Yes	1.00	**3.53**
		U_{25} - U_{26}	567.65	-667.20	229	498	-1248	144	-172	-77	352	-77	0.570	0.263	0.84	Yes	0.374	0.168	0.55	Yes	0.793	0.166	0.96	Yes	0.788	0.212	1.00	Yes	1.00	**3.96**
		U_{26} - U_{27}	733.46	-356.28	353	404	-1177	238	-241	-69	417	-153	0.736	0.261	1.00	Yes	0.490	0.173	0.67	Yes	0.423	0.144	0.57	Yes	0.421	0.200	0.63	Yes	1.00	**4.05**
		U_{27} - U_{28}	1064.85	-----	331	575	-1358	308	-372	-11	273	59	0.785	0.210	1.00	Yes	0.522	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		U_{28} - U_{29}	1255.22	-----	501	170	-1657	-470	-390	-266	557	-267	0.759	0.236	1.00	Yes	0.540	0.158	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		U_{29} - U_{30}	1224.64	-----	199	1710	-2144	3755	-689	-360	93	-571	0.602	0.395	1.00	Yes	0.426	0.259	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		U_{30} - U_{31}	807.73	-----	5625	-1421	817	-240	-1185	-289	-147	12	0.397	0.602	1.00	Yes	0.281	0.395	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.22**
		U_{31} - U_{32}	995.01	-----	395	63	-2024	-158	-317	537	-568	723	0.672	0.324	1.00	Yes	0.479	0.220	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.92**
		U_{32} - U_{33}	-----	-569.16	2285	-3039	-1358	-1499	1209	696	436	963	-----	-----	-----	-----	-----	-----	-----	-----	0.569	0.349	0.92	Yes	0.566	0.429	1.00	Yes	1.00	**21.39**
		U_{33} - U_{34}	887.90	-545.83	477	363	-487	-918	-38	209	297	941	0.750	0.244	1.00	Yes	0.510	0.162	0.68	Yes	0.546	0.230	0.78	Yes	0.542	0.130	0.68	Yes	1.00	**5.43**
		U_{34} - U_{35}	661.81	-925.90	541	227	-713	-1036	101	116	483	570	0.485	0.188	0.68	Yes	0.329	0.127	0.46	Yes	0.804	0.193	1.00	Yes	0.799	0.126	0.93	Yes	1.00	**5.27**
		U_{35} - U_{36}	364.03	-1176.02	306	-51	-1032	-964	52	74	264	554	0.210	0.156	0.37	Yes	0.147	0.103	0.26	Yes	0.803	0.194	1.00	Yes	0.798	0.110	0.91	Yes	1.00	**4.58**
		U_{36} - U_{37}	57.85	-1425.35	-6	86	-1350	-875	72	-9	272	294	0.028	0.141	0.17	Yes	0.020	0.096	0.12	Yes	0.817	0.174	1.00	Yes	0.812	0.120	0.94	Yes	1.00	**3.55**
		U_{37} - U_{38}	-----	-1303.01	146	-129	-1781	-1099	43	19	331	266	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.252	1.00	Yes	0.742	0.159	0.91	Yes	1.00	**3.09**
		U_{38} - U_{39}	-----	-1468.21	133	-285	-1701	-1325	132	-30	667	201	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.237	1.00	Yes	0.754	0.141	0.90	Yes	1.00	**3.10**
		U_{39} - U_{40}	-----	-1408.57	-157	-329	-2370	-1122	28	-14	423	233	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.267	1.00	Yes	0.723	0.196	0.92	Yes	1.00	**3.64**
		U_{40} - U_{41}	-----	-1324.35	-239	-335	-1941	-989	49	-112	520	1	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1.00	Yes	0.754	0.173	0.93	Yes	1.00	**2.87**
		U_{41} - U_{42}	-----	-1113.70	-143	-134	-1668	-205	-68	-99	398	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.197	1.00	Yes	0.790	0.170	0.97	Yes	1.00	**3.08**
		U_{42} - U_{43}	-----	-816.44	-127	-61	-1154	-241	-39	-90	379	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.198	1.00	Yes	0.788	0.175	0.97	Yes	1.00	**3.36**
		U_{43} - U_{44}	-----	-538.92	11	-246	-2139	1042	-63	49	331	-565	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.299	0.94	Yes	0.636	0.363	1.00	Yes	1.00	**5.88**
	Structure 3	U_0 - U_1	-----	-672.87	736	-1185	-881	-1140	-103	-183	960	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.201	0.97	Yes	0.757	0.238	1.00	Yes	1.00	**8.05**
		U_1 - U_2	-----	-744.08	140	-709	-161	-485	-54	-273	-241	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.151	1.00	Yes	0.837	0.143	0.98	Yes	1.00	**3.22**
		U_2 - U_3	-----	-1055.80	140	-958	-304	-521	25	283	-265	451	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.163	1.00	Yes	0.826	0.156	0.99	Yes	1.00	**3.00**
		U_3 - U_4	-----	-1363.00	-155	-580	-1054	-1013	166	124	349	717	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1.00	Yes	0.781	0.116	0.90	Yes	1.00	**4.55**
		U_4 - U_5	-----	-1414.15	-372	-133	-1100	-574	509	154	261	180	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1.00	Yes	0.811	0.121	0.94	Yes	1.00	**2.90**
		U_5 - U_6	-----	-1402.95	-174	-263	-1072	-694	136	-157	136	344	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.179	1.00	Yes	0.804	0.118	0.93	Yes	1.00	**2.88**
		U_6 - U_7	-----	-1340.10	-378	-104	-1587	-468	-89	-187	352	41	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.215	1.00	Yes	0.768	0.175	0.95	Yes	1.00	**2.45**
		U_7 - U_8	-----	-1213.84	-167	-7	-933	-388	-58	-174	271	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.171	1.00	Yes	0.811	0.129	0.94	Yes	1.00	**2.46**
		U_8 - U_9	-----	-896.90	-105	171	-866	-44	-29	-154	282	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.150	1.00	Yes	0.841	0.144	0.99	Yes	1.00	**2.19**
		U_9 - U_{10}	140.32	-618.00	-80	222	-925	114	-97	-102	239	-80	0.152	0.246	0.40	Yes	0.101	0.157	0.26	Yes	0.796	0.195	1.00	Yes	0.789	0.207	1.00	Yes	1.00	**2.63**
		U_{10} - U_{11}	674.02	-382.62	315	212	-836	123	-239	-146	493	-306	0.731	0.267	1.00	Yes	0.495	0.179	0.68	Yes	0.493	0.149	0.65	Yes	0.488	0.187	0.68	Yes	1.00	**5.24**
		U_{11} - U_{12}	798.84	-----	-40	939	-1311	1679	-410	-115	233	-490	0.655	0.342	1.00	Yes	0.448	0.233	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		U_{12} - U_{13}	717.03	-----	2826	-1585	522	163	-546	52	-699	-373	0.497	0.499	1.00	Yes	0.347	0.341	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.42**
		U_{13} - U_{14}	894.42	-----	240	453	-298	80	-352	-231	-317	299	0.855	0.145	1.00	Yes	0.598	0.099	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		U_{14} - U_{15}	744.68	-71.15	483	348	-21	-244	-157	-39	45	37	0.854	0.141	1.00	Yes	0.576	0.092	0.67	Yes	0.097	0.160	0.26	Yes	0.096	0.115	0.22	Yes	1.00	**4.25**
		U_{15} - U_{16}	682.83	-514.01	517	363	-546	-508	-123	106	-51	507	0.783	0.215	1.00	Yes	0.537	0.147	0.69	Yes	0.699	0.223	0.93	Yes	0.693	0.130	0.83	Yes	1.00	**5.32**
		U_{16} - U_{17}	562.49	-555.11	506	196	-797	-369	44	70	382	240	0.645	0.254	0.90	Yes	0.442	0.174	0.62	Yes	0.755	0.244	1.00	Yes	0.749	0.189	0.94	Yes	1.00	**4.26**
		U_{17} - U_{18}	230.00	-548.70	338	-63	-646	-477	-60	71	266	207	0.264	0.199	0.47	Yes	0.178	0.130	0.31	Yes	0.747	0.245	1.00	Yes	0.740	0.154	0.90	Yes	1.00	**2.70**
		U_{18} - U_{19}	92.95	-523.10	168	-38	-795	-334	-39	31	460	2	0.107	0.267	0.38	Yes	0.073	0.182	0.26	Yes	0.712	0.281	1.00	Yes	0.705	0.189	0.90	Yes	1.00	**2.50**
		U_{19} - U_{20}	73.52	-439.51	255	-417	-1686	1035	-166	174	281	343	0.084	0.459	0.55	Yes	0.058	0.315	0.38	Yes	0.598	0.269	0.87	Yes	0.593	0.401	1.00	Yes	1.00	**5.39**

Operating Loads - 5C1

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			-----	-92.69	1803	-2770	-478	310	-315	-1159	-39	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.168	0.773	0.95	Yes	0.167	0.832	1.00	Yes	1.00	**25.01**
		L_1 - L_2			439.97	-----	354	-915	-169	-569	-165	-78	208	-96	0.673	0.319	1.00	Yes	0.411	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		L_2 - L_3			702.80	-74.94	-3	57	-751	-592	-38	34	-29	-21	0.809	0.187	1.00	Yes	0.468	0.113	0.59	Yes	0.102	0.223	0.33	Yes	0.101	0.181	0.29	Yes	1.00	**3.26**
		L_3 - L_4			683.24	-191.09	99	297	-712	-361	77	69	214	28	0.786	0.206	1.00	Yes	0.467	0.133	0.60	Yes	0.261	0.200	0.47	Yes	0.259	0.172	0.44	Yes	1.00	**3.13**
		L_4 - L_5			156.50	-513.53	105	598	-797	499	54	37	-138	155	0.203	0.239	0.45	Yes	0.122	0.157	0.28	Yes	0.790	0.167	0.96	Yes	0.782	0.211	1.00	Yes	1.00	**2.79**
		L_5 - L_6			-----	-735.29	167	603	-395	319	72	121	162	124	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.142	1.00	Yes	0.848	0.133	0.99	Yes	1.00	**2.89**
		L_6 - L_7			-----	-1084.47	208	174	-790	439	116	-99	20	260	-----	-----	-----	-----	-----	-----	-----	-----	0.883	0.045	0.93	Yes	0.873	0.124	1.00	Yes	1.00	**4.01**
		L_7 - L_8			-----	-1220.83	81	983	-407	1640	64	193	234	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.209	1.00	Yes	0.773	0.217	1.00	Yes	1.00	**4.30**
		L_8 - L_9			-----	-1205.21	1631	-167	571	-32	-239	-226	-121	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.221	1.00	Yes	0.763	0.216	0.98	Yes	1.00	**4.87**
		L_9 - L_{10}			-----	-1032.07	1071	-851	-430	-73	-408	-492	629	270	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.127	0.97	Yes	0.831	0.168	1.00	Yes	1.00	**8.06**
		L_{10} - L_{11}			-----	-562.45	539	-4	148	-403	145	49	143	86	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.097	0.97	Yes	0.857	0.143	1.00	Yes	1.00	**3.96**
		L_{11} - L_{12}			557.88	-----	656	-855	69	-723	-213	-213	264	26	0.722	0.273	1.00	Yes	0.433	0.178	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_{12} - L_{13}			1052.28	-22.46	193	-60	-493	-703	14	28	313	331	0.830	0.163	1.00	Yes	0.531	0.098	0.63	Yes	0.021	0.169	0.20	Yes	0.021	0.125	0.15	Yes	1.00	**4.42**
		L_{13} - L_{14}			1269.49	-----	587	-1643	-231	-1396	-15	-81	294	99	0.747	0.251	1.00	Yes	0.484	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		L_{14} - L_{15}			1496.08	-----	-329	-26	-2069	-301	-117	-69	-186	94	0.731	0.262	1.00	Yes	0.475	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_{15} - L_{16}			1597.83	-----	-181	-400	-1546	-1108	-87	-34	5	-384	0.781	0.213	1.00	Yes	0.501	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		L_{16} - L_{17}			1121.81	-----	-419	85	-1619	244	-84	-59	-521	144	0.709	0.284	1.00	Yes	0.460	0.175	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_{17} - L_{18}			856.93	-----	-177	-48	-1099	84	-54	14	45	-278	0.746	0.247	1.00	Yes	0.478	0.148	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.21**
		L_{18} - L_{19}			153.47	-----	-184	275	-1874	1007	-11	-38	-941	299	0.235	0.758	1.00	Yes	0.159	0.479	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.31**
		L_{19} - L_{20}			95.39	-394.48	-86	-37	-940	440	-25	-6	327	74	0.146	0.350	0.50	Yes	0.089	0.234	0.33	Yes	0.717	0.220	0.94	Yes	0.710	0.282	1.00	Yes	1.00	**5.30**
	Structure 2	L_0 - L_1			29.97	-236.68	1098	-3217	-141	64	-304	-1055	-26	-91	0.036	0.828	0.87	Yes	0.022	0.528	0.55	Yes	0.340	0.567	0.91	Yes	0.338	0.655	1.00	Yes	1.00	**17.81**
		L_1 - L_2			545.97	-----	723	-1456	34	-771	-185	-175	-223	157	0.663	0.333	1.00	Yes	0.394	0.214	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		L_2 - L_3			1010.90	-----	398	-873	-489	-1165	-136	-229	57	283	0.797	0.199	1.00	Yes	0.522	0.119	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		L_3 - L_4			1379.64	-----	334	-1316	-646	-1200	-360	-162	254	145	0.811	0.183	1.00	Yes	0.546	0.114	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		L_4 - L_5			1701.35	-----	-216	-1354	-1804	-1396	114	-483	-82	69	0.793	0.203	1.00	Yes	0.525	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.03**
		L_5 - L_6			1859.09	-----	-132	-312	-1540	-2124	128	-17	223	48	0.798	0.202	1.00	Yes	0.535	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		L_6 - L_7			1810.98	-----	-394	-38	-2285	-1366	-174	43	21	438	0.766	0.228	1.00	Yes	0.509	0.134	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		L_7 - L_8			1357.23	-88.10	-168	376	-1874	-396	-129	11	78	-99	0.778	0.217	1.00	Yes	0.511	0.127	0.64	Yes	0.060	0.194	0.26	Yes	0.059	0.207	0.27	Yes	1.00	**3.78**
		L_8 - L_9			1077.18	-415.46	-18	600	-1559	456	-17	19	-238	294	0.753	0.238	1.00	Yes	0.508	0.149	0.66	Yes	0.344	0.121	0.47	Yes	0.342	0.210	0.56	Yes	1.00	**4.47**
		L_9 - L_{10}			628.67	-721.05	-68	802	-1486	309	29	107	166	-137	0.561	0.258	0.82	Yes	0.327	0.161	0.49	Yes	0.762	0.137	0.90	Yes	0.757	0.238	1.00	Yes	1.00	**4.91**
		L_{10} - L_{11}			19.03	-693.44	97	532	-1035	578	58	-1	-314	182	0.019	0.223	0.25	Yes	0.011	0.140	0.16	Yes	0.820	0.071	0.90	Yes	0.815	0.181	1.00	Yes	1.00	**3.33**
		L_{11} - L_{12}			-----	-1035.62	100	989	-1074	794	79	231	217	46	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.125	0.99	Yes	0.849	0.146	1.00	Yes	1.00	**4.26**
		L_{12} - L_{13}			-----	-1362.41	322	-352	-1436	-644	176	-134	-92	126	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.171	1.00	Yes	0.815	0.143	0.96	Yes	1.00	**5.35**
		L_{13} - L_{14}			-----	-1336.45	-251	1290	-1896	3671	-99	-96	196	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.217	0.90	Yes	0.672	0.321	1.00	Yes	1.00	**5.75**
		L_{14} - L_{15}			-----	-1288.83	3998	-1360	1079	-443	-377	-299	-319	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.252	0.91	Yes	0.649	0.349	1.00	Yes	1.00	**6.52**
		L_{15} - L_{16}			-----	-1367.09	34	214	-1778	-146	-401	-283	260	269	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.165	0.99	Yes	0.818	0.177	1.00	Yes	1.00	**5.38**
		L_{16} - L_{17}			-----	-1053.03	1880	-986	466	-34	-372	-471	215	3	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.189	0.97	Yes	0.767	0.232	1.00	Yes	1.00	**7.16**
		L_{17} - L_{18}			-----	-631.83	1793	-2076	-398	-663	-741	-374	291	55	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.264	0.94	Yes	0.663	0.332	1.00	Yes	1.00	**11.35**
		L_{18} - L_{19}			25.75	-646.61	670	117	29	-389	-3	33	168	186	0.029	0.158	0.19	Yes	0.017	0.094	0.12	Yes	0.867	0.129	1.00	Yes	0.862	0.129	1.00	Yes	1.00	**3.21**
		L_{19} - L_{20}			639.79	-----	765	-1096	-330	-984	7	-221	383	-2	0.725	0.270	1.00	Yes	0.429	0.171	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.59**
		L_{20} - L_{21}			964.74	-586.97	675	97	-1077	-1273	-118	-121	179	366	0.769	0.225	1.00	Yes	0.505	0.135	0.64	Yes	0.555	0.211	0.77	Yes	0.551	0.186	0.74	Yes	1.00	**5.88**
		L_{21} - L_{22}			917.83	-310.61	292	-30	-980	-1543	-105	-42	308	96	0.732	0.258	1.00	Yes	0.490	0.162	0.66	Yes	0.293	0.237	0.54	Yes	0.291	0.225	0.52	Yes	1.00	**4.59**
		L_{22} - L_{23}			806.09	-94.31	63	52	-2177	-400	13	-31	-81	278	0.643	0.348	1.00	Yes	0.430	0.218	0.65	Yes	0.089	0.270	0.36	Yes	0.088	0.318	0.41	Yes	1.00	**4.47**
		L_{23} - L_{24}			856.97	-435.64	66	537	-1889	-385	18	100	292	-89	0.683	0.307	1.00	Yes	0.448	0.183	0.64	Yes	0.412	0.264	0.68	Yes	0.409	0.276	0.69	Yes	1.00	**6.42**
		L_{24} - L_{25}			439.99	-542.78	322	432	-1431	0	83	0	-314	519	0.498	0.356	0.86	Yes	0.295	0.225	0.52	Yes	0.728	0.191	0.92	Yes	0.723	0.276	1.00	Yes	1.00	**5.85**
		L_{25} - L_{26}			-----	-601.13	101	657	-1000	338	37	119	149	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.155	0.97	Yes	0.801	0.193	1.00	Yes	1.00	**4.57**
		L_{26} - L_{27}			-----	-756.82	329	383	-1224	702	168	59	-425	136	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.076	0.88	Yes	0.795	0.196	1.00	Yes	1.00	**5.02**
		L_{27} - L_{28}			-----	-1100.38	218	1120	-1463	943	273	557	169	-468	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.186	1.00	Yes	0.801	0.180	0.99	Yes	1.00	**7.32**
		L_{28} - L_{29}			-----	-1333.01	385	-593	-1415	-607	410	-129	-389	167	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.193	1.00	Yes	0.797	0.141	0.94	Yes	1.00	**6.66**
		L_{29} - L_{30}			-----	-1190.64	-223	1310	-3242	4529	-466	-1009	424	44	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.283	0.89	Yes	0.599	0.395	1.00	Yes	1.00	**10.99**
		L_{30} - L_{31}			-----	-1220.03	4409	-1658	776	-334	-271	-174	-115	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.265	0.89	Yes	0.614	0.385	1.00	Yes	1.00	**7.82**
		L_{31} - L_{32}			-----	-1314.71	208	-159	-1896	-256	-266	219	418	133	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.199	1.00	Yes	0.786	0.188	0.98	Yes	1.00	**6.51**
		L_{32} - L_{33}			146.16	-913.58	1799	-1754	119	-295	218	-56	181	-24	0.102	0.266	0.37	Yes	0.068	0.158	0.23	Yes	0.755	0.131	0.89	Yes	0.749	0.245	1.00	Yes	1.00	**10.36**
		L_{33} - L_{34}			163.66	-442.82	2244	-2707	-791	-789	-672	-575	713	87	0.163	0.570	0.74	Yes	0.096	0.357	0.46	Yes	0.524	0.204	0.73	Yes	0.520	0.474	1.00	Yes	1.00	**19.93**
		L_{34} - L_{35}			625.53	-810.97	789	118	-408	-863	-70	55	195	342	0.558	0.179	0.74	Yes	0.325	0.111	0.44	Yes	0.857	0.140	1.00	Yes	0.852	0.138	0.99	Yes	1.00	**6.95**
		L_{35} - L_{36}			1058.91	-----	654	-1425	-409	-1223	60	-107	632	153	0.741	0.252	1.00	Yes	0.499	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		L_{36} - L_{37}			1368.19	-200.21	385	106	-1058	-1597	-119	-4	33	358	0.784	0.206	1.00	Yes	0.515	0.122	0.64	Yes	0.136	0.210	0.35	Yes	0.135	0.176	0.32	Yes	1.00	**5.03**
		L_{37} - L_{38}			1854.55	-----	220	-292	-2240	-2010	18	-47	209	-81	0.785	0.210	1.00	Yes	0.522	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		L_{38} - L_{39}			1764.68	-----	-186	-143	-2529	-885	-53	3	-153	161	0.757	0.234	1.00	Yes	0.508	0.142	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_{39} - L_{40}			1710.54	-----	-111	-383	-1791	-1295	-20	-35	15	-362	0.797	0.194	1.00	Yes	0.528	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		L_{40} - L_{41}			1268.29	-----	-289	-53	-1820	-76	-52	-13	-420	206	0.745	0.247	1.00	Yes	0.502	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		L_{41} - L_{42}			984.14	-----	-108	-141	-1386	92	-32	-41	173	-43	0.776	0.219	1.00	Yes	0.509	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		L_{42} - L_{43}			481.39	-----	-179	-16	-1665	497	-79	-86	-447	304	0.585	0.412	1.00	Yes	0.348	0.264	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_{43} - L_{44}			242.20	-278.22	-41	-27	-2583	747	-172	-50	1067	312	0.294	0.701	1.00	Yes	0.175	0.446	0.63	Yes	0.400	0.447	0.85	Yes	0.398	0.526	0.93	Yes	1.00	**11.69**
	Structure 3	L_0 - L_1			144.66	-335.73	776	-1288	3	-97	-30	-135	-8	-37	0.221	0.415	0.64	Yes	0.135	0.281	0.42	Yes	0.610	0.214	0.83	Yes	0.604	0.387	1.00	Yes	1.00	**8.39**
		L_1 - L_2			306.04	-----	1079	-1586	46	-478	-71	33	-6	244	0.468	0.527	1.00	Yes	0.317	0.328	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.96**
		L_2 - L_3			815.71	-----	464	-1040	-303	-625	-21	96	364	641	0.710	0.283	1.00	Yes	0.455	0.171	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		L_3 - L_4			1194.50	-----	415	-1474	-416	-1017	-183	-21	276	138	0.755	0.241	1.00	Yes	0.490	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_4 - L_5			1634.06	-----	-317	-204	-1514	-1156	73	99	71	239	0.798	0.199	1.00	Yes	0.512	0.116	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		L_5 - L_6			1561.40	-----	24	-1746	-904	-1388	-106	-58	251	17	0.763	0.228	1.00	Yes	0.496	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		L_6 - L_7			1239.51	-----	-392	256	-1769	221	-185	18	-89	250	0.729	0.265	1.00	Yes	0.472	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		L_7 - L_8			1062.27	-----	-77	130	-821	-359	-27	41	134	-9	0.838	0.161	1.00	Yes	0.536	0.096	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_8 - L_9			533.46	-166.85	-157	360	-923	315	-10	43	-206	335	0.691	0.303	1.00	Yes	0.414	0.198	0.62	Yes	0.256	0.141	0.40	Yes	0.254	0.244	0.50	Yes	1.00	**3.49**
		L_9 - L_{10}			32.89	-503.92	-7	474	-850	245	64	130	284	124	0.043	0.275	0.32	Yes	0.025	0.165	0.20	Yes	0.775	0.153	0.93	Yes	0.768	0.225	1.00	Yes	1.00	**4.44**
		L_{10} - L_{11}			-----	-1001.55	212	88	-1213	523	144	-146	-174	429	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.093	0.91	Yes	0.806	0.191	1.00	Yes	1.00	**6.93**
		L_{11} - L_{12}			-----	-1235.21	54	900	-522	1559	-103	-66	116	-369	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1.00	Yes	0.782	0.206	0.99	Yes	1.00	**5.29**
		L_{12} - L_{13}			-----	-1135.22	1782	-111	465	-21	-477	-404	-246	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.263	1.00	Yes	0.719	0.236	0.96	Yes	1.00	**5.27**
		L_{13} - L_{14}			-----	-1073.32	755	-513	-691	4	-481	-304	282	224	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.118	1.00	Yes	0.864	0.119	0.99	Yes	1.00	**7.59**
		L_{14} - L_{15}			-----	-747.23	574	167	155	-202	147	-10	175	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.123	1.00	Yes	0.862	0.127	0.99	Yes	1.00	**2.75**
		L_{15} - L_{16}			79.08	-570.31	435	206	78	-376	20	-58	89	14	0.102	0.131	0.24	Yes	0.061	0.086	0.15	Yes	0.877	0.121	1.00	Yes	0.869	0.115	0.99	Yes	1.00	**2.62**
		L_{16} - L_{17}			671.83	-429.92	522	81	-789	-328	91	-69	197	90	0.773	0.222	1.00	Yes	0.459	0.143	0.61	Yes	0.587	0.168	0.76	Yes	0.582	0.191	0.78	Yes	1.00	**4.52**
		L_{17} - L_{18}			656.22	-191.56	149	22	-868	-531	-3	14	177	-21	0.755	0.238	1.00	Yes	0.437	0.143	0.58	Yes	0.262	0.256	0.52	Yes	0.259	0.210	0.47	Yes	1.00	**3.63**
		L_{18} - L_{19}			422.95	-51.18	94	-14	-924	115	38	-134	-129	308	0.647	0.343	1.00	Yes	0.395	0.229	0.63	Yes	0.093	0.197	0.29	Yes	0.092	0.277	0.37	Yes	1.00	**3.51**
		L_{19} - L_{20}			64.68	-81.23	160	-275	-2471	552	-5	-1	730	199	0.099	0.898	1.00	Yes	0.058	0.547	0.61	Yes	0.147	0.659	0.81	Yes	0.146	0.742	0.89	Yes	1.00	**15.85**

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

DL Factor: 1.300 1.300
LL Factor: 1.300 1.300

				Operating Loads - 5C1																															
				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	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.305	1.00	Yes	0.656	0.301	0.96	Yes	1.00	**1.89**
North Truss - Verticals	Structure 1	U_0 - L_0		-----	-310.06	-50	82	-195	235	-50	-16	-713	-229																				
		U_1 - L_1		39.74	-320.76	39	-28	-246	247	0	-11	-124	-14	0.071	0.351	0.43	Yes	0.039	0.193	0.24	Yes	0.701	0.111	0.82	Yes	0.679	0.315	1.00	Yes	1.00	**3.68**
		U_2 - L_2		130.11	-285.29	112	-124	-266	307	121	43	-167	19	0.234	0.441	0.68	Yes	0.129	0.243	0.38	Yes	0.623	0.153	0.78	Yes	0.604	0.393	1.00	Yes	1.00	**5.45**
		U_3 - L_3		209.05	-245.09	370	-331	-302	330	359	251	-225	-22	0.376	0.577	0.96	Yes	0.207	0.318	0.53	Yes	0.537	0.204	0.75	Yes	0.519	0.473	1.00	Yes	1.00	**11.56**
		U_4 - L_4		-----	-233.89	393	-383	-33	8	-216	-72	14	201	-----	-----	-----	-----	-----	-----	-----	-----	0.514	0.192	0.71	Yes	0.495	0.503	1.00	Yes	1.00	**8.98**
		U_5 - L_5		-----	-422.48	230	-262	75	-90	33	-100	-17	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.106	0.88	Yes	0.729	0.266	1.00	Yes	1.00	**2.98**
		U_6 - L_6		-----	-520.46	263	-283	85	-79	207	-9	-242	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.118	0.91	Yes	0.746	0.247	1.00	Yes	1.00	**2.70**
		U_7 - L_7		-----	-438.42	301	-323	133	-150	224	39	-153	25	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.141	0.88	Yes	0.676	0.318	1.00	Yes	1.00	**1.80**
		U_8 - L_8		-----	-1186.41	398	-482	-335	392	1057	320	39	29	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.136	1.00	Yes	0.823	0.090	0.92	Yes	1.00	**3.90**
		U_9 - L_9		-----	-660.66	-171	202	-400	444	-345	-108	-439	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.159	0.95	Yes	0.746	0.247	1.00	Yes	1.00	**2.81**
		U_{10} - L_{10}		-----	-709.49	-123	104	-363	360	-888	-481	-1096	-721	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.257	1.00	Yes	0.700	0.188	0.89	Yes	1.00	**3.48**
		U_{11} - L_{11}		-----	-655.45	-144	203	-392	499	-317	-243	-610	-485	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.187	0.98	Yes	0.763	0.232	1.00	Yes	1.00	**3.41**
		U_{12} - L_{12}		-----	-515.02	-106	108	-343	338	-298	-189	-309	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.156	0.91	Yes	0.707	0.293	1.00	Yes	1.00	**3.49**
		U_{13} - L_{13}		-----	-359.63	-48	68	-244	269	-184	-1	-72	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.132	0.86	Yes	0.689	0.307	1.00	Yes	1.00	**2.82**
		U_{14} - L_{14}		-----	-172.88	206	-219	-470	491	4	-39	436	333	-----	-----	-----	-----	-----	-----	-----	-----	0.386	0.296	0.69	Yes	0.366	0.627	1.00	Yes	1.00	**11.48**
		U_{15} - L_{15}		113.51	-309.06	242	-265	-84	72	247	-106	29	69	0.204	0.410	0.62	Yes	0.112	0.226	0.34	Yes	0.693	0.160	0.86	Yes	0.654	0.339	1.00	Yes	1.00	**4.36**
		U_{16} - L_{16}		-----	-320.35	236	-246	26	-41	314	-139	34	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.134	0.86	Yes	0.678	0.314	1.00	Yes	1.00	**2.99**
		U_{17} - L_{17}		-----	-436.08	222	-242	60	-75	138	-169	-122	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.116	0.94	Yes	0.752	0.246	1.00	Yes	1.00	**2.22**
		U_{18} - L_{18}		-----	-534.67	425	-439	144	-151	207	-207	-133	-121	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.092	0.88	Yes	0.744	0.248	1.00	Yes	1.00	**2.31**
		U_{19} - L_{19}		-----	-639.46	535	-523	172	-170	247	-97	-115	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.111	0.91	Yes	0.744	0.248	1.00	Yes	1.00	**2.62**
		U_{20} - L_{20}		-----	-593.56	345	-516	156	-285	487	64	-143	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1.00	Yes	0.691	0.239	0.94	Yes	1.00	**1.99**
	Structure 2	U_0 - L_0		-----	-694.32	-157	204	-458	588	-53	-9	-332	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.159	1.00	Yes	0.744	0.250	1.00	Yes	1.00	**3.04**
		U_1 - L_1		-----	-718.85	-107	115	-529	536	-111	-13	-166	18	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.080	0.91	Yes	0.770	0.227	1.00	Yes	1.00	**3.92**
		U_2 - L_2		-----	-584.77	-97	107	-495	496	-102	-40	-236	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.101	0.89	Yes	0.745	0.254	1.00	Yes	1.00	**3.36**
		U_3 - L_3		-----	-489.76	-51	58	-236	248	87	-45	-81	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.090	0.93	Yes	0.768	0.226	1.00	Yes	1.00	**2.86**
		U_4 - L_4		-----	-336.66	-5	13	-223	222	270	82	-202	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.160	0.93	Yes	0.712	0.285	1.00	Yes	1.00	**3.23**
		U_5 - L_5		92.67	-320.94	71	-59	-229	247	-68	105	-85	-46	0.167	0.347	0.52	Yes	0.092	0.191	0.29	Yes	0.725	0.142	0.87	Yes	0.679	0.316	1.00	Yes	1.00	**4.17**
		U_6 - L_6		321.61	-293.25	196	-202	-267	275	166	138	220	-4	0.578	0.416	1.00	Yes	0.318	0.229	0.55	Yes	0.660	0.167	0.83	Yes	0.620	0.352	0.98	Yes	1.00	**6.83**
		U_7 - L_7		-----	-265.24	306	-337	-80	84	420	58	-60	160	-----	-----	-----	-----	-----	-----	-----	-----	0.599	0.235	0.84	Yes	0.561	0.431	1.00	Yes	1.00	**7.60**
		U_8 - L_8		-----	-469.72	351	-368	68	-91	206	-126	0	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.109	0.80	Yes	0.677	0.322	1.00	Yes	1.00	**3.21**
		U_9 - L_9		-----	-691.26	593	-602	173	-187	276	-132	-15	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.088	0.86	Yes	0.741	0.255	1.00	Yes	1.00	**3.66**
		U_{10} - L_{10}		-----	-796.37	545	-572	174	-201	355	-170	5	0	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.107	0.90	Yes	0.745	0.252	1.00	Yes	1.00	**3.67**
		U_{11} - L_{11}		-----	-813.21	514	-528	185	-187	132	-183	-175	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.099	0.92	Yes	0.760	0.233	1.00	Yes	1.00	**3.29**
		U_{12} - L_{12}		-----	-882.29	522	-531	154	-131	299	-33	-150	10	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.117	0.97	Yes	0.765	0.228	1.00	Yes	1.00	**3.27**
		U_{13} - L_{13}		-----	-736.23	568	-548	209	-206	358	43	-165	21	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.179	1.00	Yes	0.710	0.272	0.99	Yes	1.00	**2.72**
		U_{14} - L_{14}		-----	-1193.51	749	-715	-524	485	666	409	-88	200	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.120	1.00	Yes	0.791	0.133	0.93	Yes	1.00	**5.15**
		U_{15} - L_{15}		-----	-702.53	-107	116	-614	578	-345	2	-583	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.217	1.00	Yes	0.677	0.294	0.98	Yes	1.00	**4.83**
		U_{16} - L_{16}		-----	-648.26	-84	56	-504	469	-837	-263	-1234	-527	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.249	1.00	Yes	0.695	0.214	0.91	Yes	1.00	**3.95**
		U_{17} - L_{17}		-----	-633.29	-117	115	-557	544	-275	-181	-665	-464	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.195	0.98	Yes	0.737	0.259	1.00	Yes	1.00	**3.76**
		U_{18} - L_{18}		-----	-579.84	-87	87	-495	504	-115	-125	-263	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.126	0.90	Yes	0.739	0.258	1.00	Yes	1.00	**3.38**
		U_{19} - L_{19}		-----	-467.40	-47	51	-306	299	-67	-30	-226	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.121	0.83	Yes	0.698	0.295	1.00	Yes	1.00	**3.26**
		U_{20} - L_{20}		-----	-374.03	-12	13	-242	244	-69	-8	-90	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.103	0.87	Yes	0.717	0.278	1.00	Yes	1.00	**3.19**
	Structure 3	U_{21} - L_{21}		39.61	-319.15	18	-12	-236	250	-106	38	34	-32	0.071	0.350	0.43	Yes	0.039	0.192	0.24	Yes	0.721	0.114	0.84	Yes	0.675	0.319	1.00	Yes	1.00	**3.50**
		U_{22} - L_{22}		-----	-288.35	249	-257	-280	299	621	157	9	181	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.250	0.90	Yes	0.610	0.382	1.00	Yes	1.00	**9.05**
		U_{23} - L_{23}		71.59	-317.18	238	-253	-51	39	253	-37	50	115	0.129	0.397	0.53	Yes	0.071	0.218	0.29	Yes	0.717	0.116	0.84	Yes	0.671	0.324	1.00	Yes	1.00	**3.71**
		U_{24} - L_{24}		-----	-372.61	234	-246	13	-19	309	-40	-64	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.126	0.89	Yes	0.714	0.281	1.00	Yes	1.00	**2.90**
		U_{25} - L_{25}		-----	-470.32	303	-298	35	-35	321	-64	-92	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.100	0.81	Yes	0.702	0.291	1.00	Yes	1.00	**2.80**
		U_{26} - L_{26}		-----	-568.18	502	-525	61	-65	339	-72	-128	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.123	0.89	Yes	0.724	0.269	1.00	Yes	1.00	**3.16**
		U_{27} - L_{27}		-----	-628.76	557	-562	81	-82	403	-39	-139	3	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.118	0.90	Yes	0.732	0.261	1.00	Yes	1.00	**3.24**
		U_{28} - L_{28}		-----	-714.27	548	-541	72	-70	502	-8	-159	17	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.120	0.95	Yes	0.765	0.232	1.00	Yes	1.00	**3.42**
		U_{29} - L_{29}		-----	-693.87	615	-591	117	-122	533	51	-121	27	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.220	1.00	Yes	0.669	0.294	0.97	Yes	1.00	**3.76**
		U_{30} - L_{30}		-----	-1186.43	763	-753	-669	601	954	14	184	362	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.126	1.00	Yes	0.787	0.135	0.93	Yes	1.00	**6.10**
		U_{31} - L_{31}		-----	-745.89	-101	101	-519	493	-324	-41	-217	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.160	1.00	Yes	0.719	0.248	0.97	Yes	1.00	**4.23**
		U_{32} - L_{32}		-----	-781.14	-77	53	-456	434	-696	-276	-1017	-475	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.245	1.00	Yes	0.677	0.195	0.88	Yes	1.00	**4.07**
		U_{33} - L_{33}		-----	-818.01	-117	104	-489	485	-482	-363	-524	-507	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.172	1.00	Yes	0.765	0.216	0.99	Yes	1.00	**4.15**
		U_{34} - L_{34}		-----	-801.55	-115	123	-542	551	-176	-145	-461	-423	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.143	0.94	Yes	0.749	0.243	1.00	Yes	1.00	**4.77**
		U_{35} - L_{35}		-----	-697.26	-112	128	-588	581	-161	6	-196	-184	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.089	0.87	Yes	0.747	0.249	1.00	Yes	1.00	**4.26**
		U_{36} - L_{36}		-----	-479.22	-54	67	-333	345	-52	60	98	3	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.096	0.80	Yes	0.690	0.302	1.00	Yes	1.00	**3.35**
		U_{37} - L_{37}		-----	-110.47	121	-133	-528	595	-264	62	-199	232	-----	-----	-----	-----	-----	-----	-----	-----	0.250	0.300	0.55	Yes	0.234	0.761	1.00	Yes	1.00	**12.92**
		U_{38} - L_{38}		348.12	-213.72	179	-188	-245	246	195	-110	106	147	0.626	0.372	1.00	Yes	0.344	0.204	0.55	Yes	0.481	0.103	0.59	Yes	0.452	0.315	0.77	Yes	1.00	**5.81**
		U_{39} - L_{39}		68.97	-328.08	214	-236	-99	75	287	-90	191	116	0.124	0.385	0.51	Yes	0.068	0.212	0.28	Yes	0.741	0.134	0.88	Yes	0.694	0.302	1.00	Yes	1.00	**4.37**
		U_{40} - L_{40}		10.01	-343.09	210	-211	-14	8	241	-112	17	-31	0.018	0.339	0.36	Yes	0.010	0.187	0.20	Yes	0.778	0.095	0.88	Yes	0.726	0.270	1.00	Yes	1.00	**3.04**
		U_{41} - L_{41}		-----	-488.52	242	-255	23	-27	219	-120	11	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.092	0.93	Yes	0.766	0.232	1.00	Yes	1.00	**2.95**
		U_{42} - L_{42}		-----	-582.95	477	-487	56	-65	293	-147	13	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.078	0.86	Yes	0.743	0.249	1.00	Yes	1.00	**3.02**
		U_{43} - L_{43}		-----	-707.12	557	-558	75	-88	380	-22	-50	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.098	0.91	Yes	0.758	0.237	1.00	Yes	1.00	**3.25**
		U_{44} - L_{44}		-----	-641.49	368	-510	115	-130	892	151	-139	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.226	1.00	Yes	0.687	0.216	0.91	Yes	1.00	**2.72**
	Structure 4	U_0 - L_0		-----	-594.85	-145	193	-431	492	-58	-8	-647	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.211	1.00	Yes	0.692	0.229	0.93	Yes	1.00	**2.45**
		U_1 - L_1		-----	-659.63	-113	124	-480	489	-120	-4	136	135	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.082	0.91	Yes	0.768	0.227	1.00	Yes	1.00	**3.59**
		U_2 - L_2		-----	-535.40	-107	113	-441	445	-145	-44	-276	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.110	0.90	Yes	0.745	0.252	1.00	Yes	1.00	**3.39**
		U_3 - L_3		-----	-440.80	-44	57	-217	231	46	-63	-129	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.113	0.94	Yes	0.760	0.234	1.00	Yes	1.00	**2.84**
		U_4 - L_4		-----	-324.56	-19	24	-235	241	222	47	-40	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.144	0.88	Yes	0.687	0.308	1.00	Yes	1.00	**3.22**
		U_5 - L_5		106.38	-304.82	77	-71	-256	274	-84	108	-138	-27	0.191	0.390	0.59	Yes	0.105	0.215	0.32	Yes	0.683	0.161	0.85	Yes	0.645	0.350	1.00	Yes	1.00	**4.98**
		U_6 - L_6		-----	-226.91	382	-406	-275	280	62	-28	-17	202	-----	-----	-----	-----	-----	-----	-----	-----	0.506	0.195	0.71	Yes	0.480	0.519	1.00	Yes	1.00	**11.26**
		U_7 - L_7		-----	-363.92	240	-260	28	-48	70	-141	91	2	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.113	0.85	Yes	0.697	0.297	1.00	Yes	1.00	**2.88**
		U_8 - L_8		-----	-515.68	333	-337	88	-92	203	-132	6	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.105	0.85	Yes	0.708	0.288	1.00	Yes	1.00	**3.25**
		U_9 - L_9		-----	-650.85	398	-508	127	-194	138	-169	28	11	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.100	0.89	Yes	0.758	0.236	1.00	Yes	1.00	**3.36**
		U_{10} - L_{10}		-----	-778.83	396	-433	119	-117	327	-6	-203	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.127	0.94	Yes	0.768	0.224	1.00	Yes	1.00	**3.44**
		U_{11} - L_{11}		-----	-647.93	424	-469	169	-194	372	76	-140	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.137	0.91	Yes	0.732	0.261	1.00	Yes	1.00	**2.39**
		U_{12} - L_{12}		-----	-1172.67	513	-667	-398	430	825	406	35	90	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.147	1.00	Yes	0.813	0.124	0.94	Yes	1.00	**4.78**
		U_{13} - L_{13}		-----	-456.85	-63	73	-289	299	-320	-20	-445	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.196	0.96	Yes	0.705	0.294	1.00	Yes	1.00	**3.09**
		U_{14} - L_{14}		-----	-501.35	-43	25	-227	240	-794	-369	-579	-414	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.232	1.00	Yes	0.719	0.210	0.93	Yes	1.00	**3.43**
		U_{15} - L_{15}		-----	-429.27	-46	50	-236	251	-254	-177	-526	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1.00	Yes	0.741	0.254	1.00	Yes	1.00	**4.30**
		U_{16} - L_{16}		-----	-249.38	13	19	-369	354	-314	-189	-1012	-365	-----	-----	-----	-----	-----	-----	-----	-----	0.548	0.412	0.97	Yes	0.528	0.471	1.00	Yes	1.00	**8.60**
		U_{17} - L_{17}		287.04	-270.74	202	-231	-308	315	-79	-162	-277	58	0.516	0.483	1.00	Yes	0.284	0.266	0.55	Yes	0.593	0.160	0.76	Yes	0.573	0.403	0.98	Yes	1.00	**8.22**
		U_{18} - L_{18}		143.75	-301.42	233	-280	-133	149	243	-59	-135	24	0.259	0.429	0.69	Yes	0.142	0.236	0.38	Yes	0.659	0.157	0.82	Yes	0.638	0.358	1.00	Yes	1.00	**5.05**
		U_{19} - L_{19}		57.12	-315.17	255	-239	-64	52	126	-35	-90	1	0.103	0.362	0.47	Yes	0.057	0.199	0.26	Yes	0.689	0.109	0.80	Yes	0.667	0.326	1.00	Yes	1.00	**2.99**
		U_{20} - L_{20}		-----	-320.22	99	-182	-11	-61	604	194	-585	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.279	1.00	Yes	0.678	0.233	0.92	Yes	1.00	**1.63**

Moment (Start) AB Operating

Operating Loads - 5C1

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 - Diagonals	Structure 1	$U_0 - L_1$	445.34	-29.64	-9	-6	-172	77	9	35	-825	-125	0.584	0.409	1.00	Yes	0.353	0.225	0.58	Yes	0.051	0.289	0.35	Yes	0.046	0.201	0.25	Yes	1.00	**4.17**
		$U_1 - L_2$	394.99	-123.98	23	-22	-103	-3	13	0	-541	-276	0.710	0.288	1.00	Yes	0.391	0.158	0.55	Yes	0.284	0.277	0.57	Yes	0.262	0.131	0.40	Yes	1.00	**4.36**
		$U_2 - L_3$	-----	-299.42	60	-33	-143	-47	56	36	283	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.689	0.304	1.00	Yes	0.634	0.183	0.82	Yes	1.00	**7.27**
		$U_3 - L_4$	-----	-365.35	49	-8	-66	-86	103	104	305	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.163	1.00	Yes	0.773	0.111	0.89	Yes	1.00	**5.35**
		$U_4 - L_4$	535.67	-----	-7	68	-113	4	52	7	-342	-402	0.786	0.208	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_5 - L_5$	665.73	-----	-23	164	-226	198	241	104	-426	-361	0.787	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_5 - L_6$	635.64	-----	-74	123	-310	232	384	186	-372	-314	0.751	0.246	1.00	Yes	0.413	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		$U_6 - L_7$	624.76	-----	27	162	-95	300	459	211	-172	-123	0.739	0.254	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.50**
		$U_8 - L_8$	973.92	-----	101	239	-96	349	452	56	431	463	0.779	0.214	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_9 - L_{10}$	959.37	-----	-71	87	-323	241	123	115	555	637	0.767	0.225	1.00	Yes	0.475	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{10} - L_{11}$	982.40	-----	-55	156	-238	179	128	190	-14	400	0.830	0.162	1.00	Yes	0.514	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		$U_{11} - L_{12}$	829.78	-----	-71	54	-263	82	36	130	86	347	0.821	0.174	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_{12} - L_{13}$	629.54	-----	-78	57	-225	136	-94	-74	117	134	0.767	0.223	1.00	Yes	0.483	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{13} - L_{14}$	455.80	-----	-20	-11	-98	28	-167	-170	-59	30	0.820	0.175	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		$U_{15} - L_{14}$	243.98	-278.86	49	-106	-114	-27	-276	-141	-559	-415	0.439	0.307	0.75	Yes	0.241	0.169	0.42	Yes	0.653	0.340	1.00	Yes	0.590	0.145	0.74	Yes	1.00	**5.48**
		$U_{16} - L_{15}$	375.70	-45.33	-9	-25	-138	83	-307	-153	-509	-328	0.676	0.324	1.00	Yes	0.372	0.178	0.55	Yes	0.107	0.237	0.35	Yes	0.096	0.177	0.28	Yes	1.00	**3.78**
		$U_{17} - L_{16}$	489.43	-----	-34	13	-144	81	-107	-128	-550	-450	0.718	0.274	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		$U_{18} - L_{17}$	587.30	-----	-112	76	-322	237	-111	-118	-656	-528	0.694	0.301	1.00	Yes	0.382	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{19} - L_{18}$	661.29	-----	-132	88	-352	251	-67	-107	-609	-501	0.716	0.280	1.00	Yes	0.394	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.42**
		$U_{20} - L_{19}$	633.85	-----	-77	100	-264	249	29	-89	-1069	-118	0.687	0.311	1.00	Yes	0.378	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
	Structure 2	$U_0 - L_1$	804.55	-----	-109	95	-385	365	-59	-44	-159	-111	0.796	0.202	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		$U_1 - L_2$	796.64	-----	-89	66	-395	309	-95	-23	-172	34	0.788	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		$U_2 - L_3$	649.07	-----	-79	60	-338	255	-18	94	-186	114	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_3 - L_4$	594.05	-----	-32	11	-194	125	117	67	-108	56	0.792	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		$U_4 - L_5$	421.71	-39.25	3	-13	-133	92	84	-92	-217	70	0.758	0.232	1.00	Yes	0.417	0.128	0.55	Yes	0.097	0.095	0.20	Yes	0.083	0.170	0.26	Yes	1.00	**3.43**
		$U_5 - L_6$	418.50	-173.10	50	-77	-129	52	-258	-182	-173	163	0.753	0.239	1.00	Yes	0.414	0.132	0.55	Yes	0.409	0.211	0.63	Yes	0.366	0.165	0.54	Yes	1.00	**4.79**
		$U_6 - L_7$	26.57	-383.04	49	-102	-60	-20	-22	-306	-65	-71	0.043	0.196	0.24	Yes	0.024	0.108	0.14	Yes	0.820	0.179	1.00	Yes	0.734	0.116	0.86	Yes	1.00	**3.29**
		$U_8 - L_7$	537.66	-----	-28	-23	-226	102	-309	-215	-528	-513	0.686	0.310	1.00	Yes	0.432	0.176	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_8 - L_8$	667.62	-----	-121	108	-343	197	-40	-83	-601	-531	0.723	0.274	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{10} - L_9$	763.33	-----	-92	128	-321	208	8	-56	-586	-515	0.755	0.237	1.00	Yes	0.415	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{11} - L_{10}$	841.09	-----	-97	149	-344	272	171	35	-604	-530	0.766	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{12} - L_{11}$	842.82	-----	-106	165	-374	335	309	134	-519	-474	0.768	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		$U_{13} - L_{12}$	742.38	-----	-149	152	-444	379	349	136	-348	-244	0.734	0.258	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
		$U_{14} - L_{13}$	762.57	-----	3	173	-276	430	240	154	-287	-172	0.754	0.243	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_{14} - L_{15}$	639.38	-----	74	129	-220	345	133	-88	131	220	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{15} - L_{16}$	615.11	-----	-56	64	-378	340	-59	13	-60	286	0.727	0.266	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{16} - L_{17}$	714.29	-----	-56	99	-320	339	-176	117	-270	320	0.774	0.226	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{17} - L_{18}$	644.32	-----	-64	77	-289	272	-29	100	-31	384	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_{18} - L_{19}$	655.35	-----	-45	63	-290	251	26	15	144	305	0.775	0.220	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_{19} - L_{20}$	606.64	-----	-14	21	-193	162	-39	-35	67	252	0.774	0.224	1.00	Yes	0.425	0.126	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_{20} - L_{21}$	437.69	-----	-3	5	-127	100	-71	-49	-2	149	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{21} - L_{22}$	419.41	-148.79	25	-55	-139	38	-188	-196	95	217	0.754	0.240	1.00	Yes	0.415	0.132	0.55	Yes	0.351	0.184	0.54	Yes	0.315	0.177	0.50	Yes	1.00	**5.00**
		$U_{23} - L_{22}$	293.69	-263.86	51	-90	-131	11	-216	-45	-540	-422	0.528	0.324	0.86	Yes	0.291	0.178	0.47	Yes	0.628	0.365	1.00	Yes	0.558	0.168	0.73	Yes	1.00	**5.30**
		$U_{24} - L_{23}$	394.33	-16.59	6	-3	-130	87	41	14	-415	-306	0.709	0.287	1.00	Yes	0.390	0.158	0.55	Yes	0.040	0.183	0.23	Yes	0.035	0.167	0.21	Yes	1.00	**3.58**
		$U_{25} - L_{24}$	550.80	-----	-8	23	-202	157	88	19	-574	-432	0.702	0.298	1.00	Yes	0.386	0.170	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{26} - L_{25}$	628.98	-----	-24	35	-286	254	127	52	-490	-394	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{27} - L_{26}$	624.05	-----	-42	54	-299	264	186	76	-463	-406	0.738	0.254	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{28} - L_{27}$	689.55	-----	-44	62	-352	349	210	118	-432	-340	0.747	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_{29} - L_{28}$	614.54	-----	-71	82	-372	342	271	137	-308	-195	0.727	0.266	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**
		$U_{30} - L_{29}$	612.78	-----	39	101	-212	345	420	161	-253	-150	0.724	0.272	1.00	Yes	0.398	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{30} - L_{31}$	757.08	-----	79	148	-295	427	206	-5	293	261	0.749	0.242	1.00	Yes	0.412	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{31} - L_{32}$	744.21	-----	-54	63	-482	409	-9	38	194	256	0.736	0.262	1.00	Yes	0.405	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{32} - L_{33}$	870.50	-----	-56	95	-354	331	-155	140	-304	375	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{33} - L_{34}$	855.31	-----	-62	92	-353	266	27	209	102	496	0.779	0.217	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{34} - L_{35}$	823.45	-----	-60	82	-305	230	84	96	53	267	0.815	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_{35} - L_{36}$	729.24	-----	-85	86	-340	223	-9	8	21	197	0.790	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{36} - L_{37}$	594.96	-----	-31	7	-217	137	-177	-199	-6	108	0.759	0.235	1.00	Yes	0.478	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{38} - L_{37}$	-----	-375.02	66	-97	-45	-19	-213	-86	-277	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.186	1.00	Yes	0.718	0.111	0.83	Yes	1.00	**3.33**
		$U_{39} - L_{38}$	378.35	-294.31	76	-113	-120	59	-385	-119	-464	-329	0.680	0.288	0.97	Yes	0.374	0.158	0.54	Yes	0.701	0.291	1.00	Yes	0.623	0.153	0.78	Yes	1.00	**5.48**
		$U_{40} - L_{39}$	371.83	-85.78	19	-22	-144	86	-55	-49	-490	-367	0.669	0.326	1.00	Yes	0.368	0.179	0.55	Yes	0.205	0.248	0.46	Yes	0.182	0.184	0.37	Yes	1.00	**4.18**
		$U_{41} - L_{40}$	537.39	-----	-14	-1	-177	120	-87	-73	-540	-410	0.716	0.274	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{42} - L_{41}$	593.94	-----	-43	27	-333	241	-60	-57	-594	-527	0.702	0.296	1.00	Yes	0.386	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_{43} - L_{42}$	716.93	-----	-61	41	-398	290	-1	-42	-665	-548	0.709	0.284	1.00	Yes	0.390	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		$U_{44} - L_{43}$	737.63	-----	-90	84	-285	317	-9	-11	-782	-397	0.730	0.264	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
	Structure 3	$U_0 - L_1$	596.33	-----	-114	95	-419	316	-60	-51	-822	51	0.646	0.350	1.00	Yes	0.355	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_1 - L_2$	726.23	-----	-97	66	-365	253	-123	-43	-78	29	0.787	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_2 - L_3$	648.43	-----	-96	62	-331	244	-47	79	-243	87	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		$U_3 - L_4$	552.40	-----	-28	10	-155	96	74	49	-132	62	0.810	0.188	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_4 - L_5$	418.29	-31.49	-7	-9	-147	83	51	-103	-181	71	0.752	0.240	1.00	Yes	0.414	0.132	0.55	Yes	0.075	0.108	0.19	Yes	0.067	0.188	0.26	Yes	1.00	**4.13**
		$U_5 - L_6$	278.55	-313.77	44	-110	-143	-15	-324	-348	154	18	0.501	0.284	0.79	Yes	0.276	0.156	0.44	Yes	0.735	0.264	1.00	Yes	0.664	0.183	0.85	Yes	1.00	**6.85**
		$U_7 - L_6$	409.29	-22.05	-9	-36	-108	12	-339	-216	-381	-415	0.736	0.258	1.00	Yes	0.405	0.142	0.55	Yes	0.051	0.211	0.27	Yes	0.047	0.138	0.19	Yes	1.00	**3.75**
		$U_8 - L_7$	575.25	-----	-64	27	-209	122	-333	-223	-556	-464	0.701	0.291	1.00	Yes	0.441	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_8 - L_8$	755.16	-----	-62	80	-278	47	-94	-140	-789	-742	0.747	0.247	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**
		$U_{10} - L_9$	920.48	-----	-47	126	-271	145	77	-16	-700	-704	0.778	0.218	1.00	Yes	0.481	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{11} - L_{10}$	952.71	-----	-77	120	-322	236	326	168	-715	-576	0.762	0.234	1.00	Yes	0.472	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_{12} - L_{11}$	963.42	-----	74	177	-108	357	312	213	-509	-339	0.770	0.224	1.00	Yes	0.477	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{12} - L_{13}$	670.44	-----	77	154	-109	285	-11	-136	170	242	0.793	0.206	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{13} - L_{14}$	642.72	-----	-17	57	-303	233	-52	31	61	349	0.760	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		$U_{14} - L_{15}$	679.61	-----	14	170	-245	189	-13	130	126	285	0.803	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{15} - L_{16}$	489.92	-----	16	109	-163	26	232	296	463	305	0.718	0.273	1.00	Yes	0.395	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.83**
		$U_{17} - L_{16}$	-----	-363.53	70	3	-81	-81	242	227	-238	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.167	1.00	Yes	0.769	0.103	0.88	Yes	1.00	**7.08**
		$U_{18} - L_{17}$	198.33	-285.28	61	-32	-110	-56	298	196	-490	-332	0.357	0.282	0.64	Yes	0.196	0.155	0.36	Yes	0.657	0.338	1.00	Yes	0.604	0.140	0.75	Yes	1.00	**5.93**
		$U_{19} - L_{18}$	388.69	-154.20	31	-22	-107	1	196	152	-532	-456	0.699	0.291	1.00	Yes	0.384	0.160	0.55	Yes	0.354	0.296	0.65	Yes	0.326	0.137	0.47	Yes	1.00	**3.58**
		$U_{20} - L_{19}$	363.89	-----	133	-10	-157	82	926	32	-1315	-491	0.477	0.515	1.00	Yes	0.288	0.284	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**

Moment (Start) AB Operating

Operating Loads - 5C1 | 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.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Yield				Fracture				Buckle				Yield				Controlling Bi-Axial Moment & Axial Value	Rating
					Tension	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	$U_0 - U_1$			-----	-443.38	663	-635	-1451	-98	120	-186	612	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.387	1	Yes	0.598	0.345	0.95	Yes	1.00	**5.93**
		$U_1 - U_2$			-----	-558.08	20	-396	-730	-291	247	-87	96	257	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1	Yes	0.753	0.174	0.93	Yes	1.00	**4.66**
		$U_2 - U_3$			232.82	-580.54	-53	342	-873	-262	-45	-89	158	-72	0.267	0.234	0.51	Yes	0.180	0.152	0.34	Yes	0.790	0.184	0.98	Yes	0.783	0.208	1.00	Yes	1.00	**4.40**
		$U_3 - U_4$			491.57	-545.31	175	372	-1085	173	-161	-99	30	-230	0.563	0.297	0.87	Yes	0.387	0.203	0.60	Yes	0.742	0.176	0.92	Yes	0.735	0.258	1.00	Yes	1.00	**5.81**
		$U_4 - U_5$			391.74	-548.62	140	298	-1072	-165	-211	-9	-126	-131	0.449	0.291	0.74	Yes	0.308	0.199	0.51	Yes	0.746	0.240	0.99	Yes	0.740	0.255	1.00	Yes	1.00	**4.47**
		$U_5 - U_6$			605.78	-355.14	242	389	-1008	169	-353	-14	-138	-313	0.694	0.299	1.00	Yes	0.468	0.196	0.67	Yes	0.483	0.320	0.81	Yes	0.479	0.240	0.72	Yes	1.00	**4.90**
		$U_6 - U_7$			647.56	-----	609	-1037	-1389	59	-479	-79	-554	-198	0.619	0.371	1.00	Yes	0.433	0.255	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.14**
		$U_7 - U_8$			890.91	-----	36	976	-1578	2164	-161	465	-304	91	0.617	0.375	1.00	Yes	0.431	0.256	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		$U_8 - U_9$			617.18	-----	2565	-1254	604	-115	-35	484	-2	144	0.506	0.490	1.00	Yes	0.346	0.333	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.08**
		$U_9 - U_{10}$			-----	-312.52	1599	-508	-2091	-983	1106	1081	222	1127	-----	-----	-----	-----	-----	-----	-----	-----	0.402	0.596	1	Yes	0.399	0.468	0.87	Yes	1.00	**34.99**
		$U_{10} - U_{11}$			-----	-618.07	484	-928	-244	-670	533	-21	336	221	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.188	0.99	Yes	0.789	0.208	1.00	Yes	1.00	**7.52**
		$U_{11} - U_{12}$			-----	-899.80	263	-290	-445	-680	308	-119	324	159	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.148	1	Yes	0.844	0.113	0.96	Yes	1.00	**4.94**
		$U_{12} - U_{13}$			-----	-1168.46	98	-146	-884	-654	270	-357	469	56	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.207	1	Yes	0.780	0.122	0.91	Yes	1.00	**4.86**
		$U_{13} - U_{14}$			-----	-1397.54	-92	-339	-1118	-845	150	80	239	27	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.184	1	Yes	0.801	0.123	0.93	Yes	1.00	**4.26**
		$U_{14} - U_{15}$			-----	-1311.59	-216	-863	-1789	-455	141	-197	233	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1	Yes	0.752	0.197	0.95	Yes	1.00	**3.78**
		$U_{15} - U_{16}$			-----	-1411.47	38	-1408	-1489	-805	-50	-296	192	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1	Yes	0.809	0.164	0.98	Yes	1.00	**3.73**
		$U_{16} - U_{17}$			-----	-1267.06	-301	-170	-1974	-587	146	-228	-119	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.262	1	Yes	0.726	0.218	0.95	Yes	1.00	**4.67**
		$U_{17} - U_{18}$			-----	-994.77	-167	-102	-1052	-81	-158	-233	-140	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1	Yes	0.778	0.171	0.95	Yes	1.00	**3.15**
		$U_{18} - U_{19}$			-----	-690.53	-189	-254	-857	-37	-214	-303	-48	-226	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.777	0.172	0.95	Yes	1.00	**3.02**
		$U_{19} - U_{20}$			-----	-570.23	14	-1352	-1594	280	-146	-636	431	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.344	1	Yes	0.642	0.321	0.97	Yes	1.00	**6.77**
	Structure 2	$U_0 - U_1$			-----	-595.69	1325	-1396	-1706	-619	171	114	819	78	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.263	0.98	Yes	0.703	0.290	1.00	Yes	1.00	**8.97**
		$U_1 - U_2$			-----	-838.51	242	-427	-703	-727	205	274	357	325	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.179	1	Yes	0.809	0.110	0.92	Yes	1.00	**5.84**
		$U_2 - U_3$			-----	-1128.04	306	-738	-872	-1096	952	22	411	83	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.189	1	Yes	0.801	0.112	0.92	Yes	1.00	**4.93**
		$U_3 - U_4$			-----	-1319.32	-333	-227	-1862	-1257	97	-348	288	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.240	1	Yes	0.751	0.166	0.92	Yes	1.00	**4.66**
		$U_4 - U_5$			-----	-1410.68	-296	-719	-2043	-1377	-25	-637	243	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.263	1	Yes	0.724	0.169	0.90	Yes	1.00	**4.42**
		$U_5 - U_6$			-----	-1483.17	-344	74	-2276	-654	-141	-319	78	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.225	1	Yes	0.761	0.189	0.96	Yes	1.00	**4.10**
		$U_6 - U_7$			-----	-1358.06	-187	-6	-1927	-774	-132	-286	-82	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.218	1	Yes	0.773	0.172	0.95	Yes	1.00	**4.17**
		$U_7 - U_8$			-----	-1296.79	-142	-179	-2134	-788	-195	-224	-128	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1	Yes	0.738	0.190	0.93	Yes	1.00	**3.33**
		$U_8 - U_9$			-----	-1156.90	-265	129	-1745	-421	-246	-188	-50	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1	Yes	0.785	0.186	0.98	Yes	1.00	**3.57**
		$U_9 - U_{10}$			192.23	-906.90	-49	329	-1711	-182	-305	-133	-131	-161	0.141	0.241	0.39	Yes	0.095	0.164	0.26	Yes	0.787	0.210	1	Yes	0.783	0.208	1.00	Yes	1.00	**3.95**
		$U_{10} - U_{11}$			599.02	-759.68	166	429	-1692	-310	-149	-41	-136	-243	0.506	0.268	0.78	Yes	0.344	0.173	0.52	Yes	0.760	0.232	1	Yes	0.755	0.239	1.00	Yes	1.00	**5.64**
		$U_{11} - U_{12}$			819.62	-275.99	194	523	-1704	229	-337	-154	-202	-482	0.692	0.299	1.00	Yes	0.465	0.200	0.67	Yes	0.276	0.194	0.48	Yes	0.274	0.240	0.52	Yes	1.00	**5.53**
		$U_{12} - U_{13}$			1105.90	-----	340	68	-1372	-711	-448	-54	-750	-521	0.747	0.244	1.00	Yes	0.532	0.167	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		$U_{13} - U_{14}$			1158.08	-----	-82	1877	-2718	4162	-198	412	-537	-165	0.569	0.422	1.00	Yes	0.403	0.276	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		$U_{14} - U_{15}$			858.21	-----	5616	-1067	1284	-95	-256	716	-259	138	0.422	0.569	1.00	Yes	0.299	0.373	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		$U_{15} - U_{16}$			1092.07	-----	348	191	-2234	-429	709	898	362	971	0.660	0.336	1.00	Yes	0.470	0.227	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.72**
		$U_{16} - U_{17}$			-----	-604.09	3206	-1190	-2858	-2081	1187	666	1306	747	-----	-----	-----	-----	-----	-----	-----	-----	0.527	0.463	1	Yes	0.524	0.403	0.93	Yes	1.00	**25.97**
		$U_{17} - U_{18}$			-----	-609.64	1030	-759	-1598	-764	323	-328	210	343	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.262	0.99	Yes	0.720	0.271	1.00	Yes	1.00	**13.01**
		$U_{18} - U_{19}$			-----	-718.85	770	-276	-858	-884	137	-240	272	10	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.140	1	Yes	0.849	0.150	1.00	Yes	1.00	**7.74**
		$U_{19} - U_{20}$			354.75	-662.44	379	217	-1060	-603	-25	168	217	97	0.333	0.199	0.54	Yes	0.221	0.131	0.36	Yes	0.735	0.255	1	Yes	0.731	0.170	0.91	Yes	1.00	**5.38**
		$U_{20} - U_{21}$			211.53	-838.32	229	-11	-1289	-503	0	-15	226	-29	0.164	0.211	0.38	Yes	0.115	0.136	0.26	Yes	0.771	0.229	1	Yes	0.765	0.187	0.96	Yes	1.00	**5.63**
		$U_{21} - U_{22}$			126.03	-829.70	32	65	-1442	-208	-42	-65	119	-42	0.098	0.222	0.32	Yes	0.069	0.147	0.22	Yes	0.763	0.229	1	Yes	0.757	0.209	0.97	Yes	1.00	**4.83**
		$U_{22} - U_{23}$			-----	-780.86	62	-1115	-1487	-630	10	-207	67	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.275	1	Yes	0.713	0.215	0.93	Yes	1.00	**3.90**
		$U_{23} - U_{24}$			31.19	-796.16	145	-93	-1487	-356	-109	-32	-12	-193	0.024	0.236	0.27	Yes	0.017	0.152	0.17	Yes	0.732	0.262	1	Yes	0.727	0.215	0.95	Yes	1.00	**4.07**
		$U_{24} - U_{25}$			278.17	-671.54	160	297	-1460	-316	-277	-22	-132	-180	0.261	0.271	0.54	Yes	0.173	0.178	0.36	Yes	0.746	0.249	1	Yes	0.741	0.234	0.98	Yes	1.00	**4.58**
		$U_{25} - U_{26}$			458.94	-619.56	206	442	-1557	60	-296	45	-78	-118	0.461	0.308	0.77	Yes	0.302	0.196	0.50	Yes	0.736	0.194	0.93	Yes	0.732	0.264	1.00	Yes	1.00	**5.15**
		$U_{26} - U_{27}$			700.97	-400.75	268	456	-1574	124	-186	46	-143	-162	0.704	0.294	1.00	Yes	0.468	0.195	0.67	Yes	0.476	0.159	0.64	Yes	0.473	0.267	0.75	Yes	1.00	**6.06**
		$U_{27} - U_{28}$			943.82	-80.33	244	584	-1997	420	-292	5	-324	-463	0.695	0.300	1.00	Yes	0.463	0.197	0.67	Yes	0.070	0.273	0.35	Yes	0.070	0.251	0.33	Yes	1.00	**6.86**
		$U_{28} - U_{29}$			857.35	-----	784	-3312	-3421	-1267	-920	-184	-1033	-662	0.518	0.476	1.00	Yes	0.369	0.320	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.86**
		$U_{29} - U_{30}$			1101.01	-----	29	1952	-2820	4422	31	667	-424	104	0.541	0.455	1.00	Yes	0.383	0.298	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		$U_{30} - U_{31}$			927.18	-----	5265	-1317	1365	54	-51	744	-401	-136	0.456	0.538	1.00	Yes	0.323	0.353	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		$U_{31} - U_{32}$			1047.51	-----	170	516	-1634	-120	-108	160	391	829	0.707	0.285	1.00	Yes	0.504	0.194	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.02**
		$U_{32} - U_{33}$			-----	-752.41	1771	-1329	-1303	-1303	987	134	857	623	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.247	1	Yes	0.748	0.250	1.00	Yes	1.00	**17.89**
		$U_{33} - U_{34}$			966.28	-746.62	618	417	-1022	-917	81	275	285	187	0.816	0.179	1.00	Yes	0.555	0.116	0.68	Yes	0.746	0.174	0.93	Yes	0.742	0.144	0.89	Yes	1.00	**8.27**
		$U_{34} - U_{35}$			518.51	-979.80	562	148	-908	-1094	76	42	315	4	0.380	0.167	0.55	Yes	0.257	0.113	0.38	Yes	0.851	0.142	1	Yes	0.846	0.133	0.98	Yes	1.00	**6.49**
		$U_{35} - U_{36}$			208.51	-1197.66	304	-154	-1242	-873	80	160	297	59	0.120	0.157	0.28	Yes	0.084	0.103	0.19	Yes	0.818	0.181	1	Yes	0.812	0.132	0.95	Yes	1.00	**5.62**
		$U_{36} - U_{37}$			-----	-1423.75	-43	5	-1550	-598	123	-63	341	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.811	0.138	0.95	Yes	1.00	**4.67**
		$U_{37} - U_{38}$			-----	-1279.43	84	-207	-2074	-970	19	26	203	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.729	0.185	0.92	Yes	1.00	**3.64**
		$U_{38} - U_{39}$			-----	-1496.11	206	-585	-1853	-1455	109	-367	233	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.225	1	Yes	0.768	0.154	0.93	Yes	1.00	**3.95**
		$U_{39} - U_{40}$			-----	-1413.87	-305	-461	-2391	-1077	-116	-131	-79	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.268	1	Yes	0.726	0.198	0.93	Yes	1.00	**3.46**
		$U_{40} - U_{41}$			-----	-1293.96	-389	-426	-1982	-1067	-90	-126	-147	-306	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1	Yes	0.737	0.177	0.92	Yes	1.00	**3.25**
		$U_{41} - U_{42}$			-----	-1121.35	-260	-180	-1859	-309	-91	50	-82	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.198	1	Yes	0.796	0.189	0.99	Yes	1.00	**3.49**
		$U_{42} - U_{43}$			-----	-803.32	-259	-56	-1373	-171	128	-47	80	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1	Yes	0.775	0.208	0.99	Yes	1.00	**3.78**
		$U_{43} - U_{44}$			-----	-540.52	-10	-1303	-1735	181	-102	-544	291	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.352	1	Yes	0.638	0.295	0.94	Yes	1.00	**6.24**
	Structure 3	$U_0 - U_1$			-----	-588.65	1254	-1400	-1635	-508	52	-300	804	2	-----	-----	-----	-----	-----	-----	-----	-----	0.668	0.261	0.93	Yes	0.662	0.329	1.00	Yes	1.00	**8.66**
		$U_1 - U_2$			-----	-743.47	216	-568	-420	-455	249	31	352	293	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.153	1	Yes	0.836	0.114	0.96	Yes	1.00	**4.56**
		$U_2 - U_3$			-----	-987.83	177	-1036	-436	-530	834	23	443	4	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1	Yes	0.773	0.169	0.95	Yes	1.00	**3.91**
		$U_3 - U_4$			-----	-1340.43	-59	-204	-1289	-981	292	-456	240	7	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1	Yes	0.768	0.142	0.92	Yes	1.00	**5.84**
		$U_4 - U_5$			-----	-1351.09	-253	-183	-1480	-484	22	-617	283	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1	Yes	0.775	0.163	0.94	Yes	1.00	**4.37**
		$U_5 - U_6$			-----	-1352.59	-130	-198	-1412	-306	-69	-225	-25	-274	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.216	1	Yes	0.775	0.156	0.94	Yes	1.00	**4.54**
		$U_6 - U_7$			-----	-1315.27	-251	-589	-1815	-473	-35	-347	1	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.237	1	Yes	0.754	0.200	0.96	Yes	1.00	**3.64**
		$U_7 - U_8$			-----	-1150.15	-124	-133	-1295	-299	89	-188	-100	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.221	1	Yes	0.768	0.179	0.95	Yes	1.00	**3.44**
		$U_8 - U_9$			-----	-872.52	-108	154	-994	-74	-193	-122	-94	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.170	1	Yes	0.819	0.165	0.99	Yes	1.00	**3.36**
		$U_9 - U_{10}$			120.80	-588.94	-79	198	-1074	109	-274	-142	-136	-246	0.131	0.285	0.42	Yes	0.087	0.182	0.27	Yes	0.758	0.226	0.99	Yes	0.752	0.241	1.00	Yes	1.00	**3.89**
		$U_{10} - U_{11}$			482.89	-513.37	365	-392	-1516	-43	-442	-66	-583	-315	0.524	0.433	0.96	Yes	0.355	0.291	0.65	Yes	0.661	0.322	0.99	Yes	0.655	0.340	1.00	Yes	1.00	**10.17**
		$U_{11} - U_{12}$			734.79	-----	-96	904	-1781	2007	-247	151	-449	-79	0.602	0.392	1.00	Yes	0.412	0.267	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		$U_{12} - U_{13}$			601.84	-----	3551	-2587	640	-36	-146	416	-139	56	0.417	0.580	1.00	Yes	0.291	0.395	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.11**
		$U_{13} - U_{14}$			839.41	-----	239	384	-626	-32	-171	287	114	454	0.803	0.195	1.00	Yes	0.561	0.134	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		$U_{14} - U_{15}$			-----	-546.31	780	-216	-458	-615	518	-162	535	198	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1	Yes	0.737	0.185	0.93	Yes	1.00	**10.27**
		$U_{15} - U_{16}$			508.91	-579.28	392	218	-681	-246	-56	188	183	122	0.583	0.194	0.78	Yes	0.400	0.133	0.54	Yes	0.788	0.207	1	Yes	0.781	0.162	0.95	Yes	1.00	**6.21**
		$U_{16} - U_{17}$			-----	-559.46	448	-798	-1008	-179	28	-78	185	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.092	0.86	Yes	0.754	0.240	1.00	Yes	1.00	**5.17**
		$U_{17} - U_{18}$			148.54	-555.83	270	-120	-752	-409	-73	178	0	-145	0.170	0.209	0.38	Yes	0.115	0.136	0.26	Yes	0.756	0.236	1	Yes	0.750	0.179	0.93	Yes	1.00	**3.29**
		$U_{18} - U_{19}$			43.12	-554.14	69	-26	-885	-252	181	38	59	-10	0.049	0.241	0.30	Yes	0.034	0.165	0.20	Yes	0.754	0.245	1	Yes	0.747	0.210	0.96	Yes	1.00	**3.22**
		$U_{19} - U_{20}$			16.92	-490.05	172	-403	-1423	192	-38	41	367	93	0.019	0.400	0.42	Yes	0.013	0.275	0.29	Yes	0.667	0.289	0.96	Yes	0.661	0.338	1.00	Yes	1.00	**6.00**

Moment (Start) AB Operating

Operating Loads - 5C1

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			164.46	-74.22	1188	-1654	-275	171	-309	-1134	44	161	0.252	0.740	1.00	Yes	0.148	0.447	0.60	Yes	0.135	0.489	0.63	Yes	0.134	0.496	0.64	Yes	1.00	**17.62**
		L_1 - L_2			433.67	-----	317	-861	-429	-591	96	-18	-342	30	0.664	0.332	1.00	Yes	0.405	0.221	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		L_2 - L_3			654.42	-139.50	1	119	-942	-490	1	-15	-76	25	0.753	0.240	1.00	Yes	0.436	0.144	0.58	Yes	0.191	0.242	0.44	Yes	0.189	0.227	0.42	Yes	1.00	**4.95**
		L_3 - L_4			644.73	-----	118	-789	-950	-442	-132	46	-127	174	0.742	0.258	1.00	Yes	0.441	0.167	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_4 - L_5			126.82	-502.05	108	456	-867	393	139	-126	-96	18	0.164	0.254	0.42	Yes	0.099	0.167	0.27	Yes	0.772	0.177	0.95	Yes	0.765	0.230	1.00	Yes	1.00	**3.96**
		L_5 - L_6			-----	-750.39	144	582	-585	272	5	55	-45	89	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.119	1	Yes	0.866	0.129	1.00	Yes	1.00	**4.44**
		L_6 - L_7			-----	-1065.82	182	78	-855	196	165	20	69	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.076	0.95	Yes	0.858	0.134	1.00	Yes	1.00	**5.58**
		L_7 - L_8			-----	-1179.75	48	954	-720	1883	230	345	78	124	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.240	1	Yes	0.747	0.249	1.00	Yes	1.00	**6.08**
		L_8 - L_9			-----	-1184.45	1841	-299	547	-30	37	-26	53	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.223	0.99	Yes	0.750	0.244	1.00	Yes	1.00	**5.87**
		L_9 - L_{10}			-----	-976.05	1156	-1312	-808	-274	273	17	154	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.083	0.88	Yes	0.786	0.206	1.00	Yes	1.00	**11.82**
		L_{10} - L_{11}			488.67	-363.29	801	-688	-163	-949	39	81	-280	-642	0.633	0.363	1.00	Yes	0.369	0.217	0.59	Yes	0.558	0.217	0.78	Yes	0.553	0.251	0.81	Yes	1.00	**10.97**
		L_{11} - L_{12}			590.44	-----	555	-790	-112	-672	-96	12	90	114	0.765	0.229	1.00	Yes	0.459	0.151	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{12} - L_{13}			1070.42	-----	118	-184	-600	-751	-166	-101	-16	37	0.845	0.153	1.00	Yes	0.540	0.091	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		L_{13} - L_{14}			1283.77	-----	620	-1600	-532	-1265	-268	50	-135	222	0.755	0.243	1.00	Yes	0.489	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		L_{14} - L_{15}			1537.97	-----	-332	-80	-1945	-514	-63	-51	-148	111	0.751	0.245	1.00	Yes	0.488	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_{15} - L_{16}			1593.83	-----	-181	-381	-1708	-943	-77	12	-51	99	0.779	0.213	1.00	Yes	0.500	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{16} - L_{17}			1214.96	-----	-390	36	-1492	121	-32	-63	-114	41	0.768	0.229	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_{17} - L_{18}			911.56	-----	-172	-57	-993	60	-72	-11	-71	-75	0.794	0.201	1.00	Yes	0.508	0.120	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_{18} - L_{19}			435.60	-----	-244	173	-955	401	-3	-32	-185	140	0.667	0.325	1.00	Yes	0.451	0.203	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		L_{19} - L_{20}			69.27	-180.51	-93	18	-2244	1080	-36	-8	934	209	0.106	0.867	0.98	Yes	0.065	0.578	0.65	Yes	0.328	0.505	0.84	Yes	0.325	0.673	1.00	Yes	1.00	**15.16**
	Structure 2	L_0 - L_1			78.08	-0.81	1146	-3121	-193	142	-462	-1606	17	59	0.095	0.899	1.00	Yes	0.056	0.569	0.63	Yes	0.001	0.628	0.63	Yes	0.001	0.635	0.64	Yes	1.00	**18.67**
		L_1 - L_2			539.27	-----	705	-1473	-101	-898	111	215	-157	123	0.655	0.335	1.00	Yes	0.390	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		L_2 - L_3			973.78	-----	443	-1261	-521	-830	131	236	389	8	0.767	0.224	1.00	Yes	0.503	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.55**
		L_3 - L_4			1347.02	-----	515	-1524	-930	-1158	-17	118	9	289	0.791	0.201	1.00	Yes	0.533	0.125	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.12**
		L_4 - L_5			1755.23	-----	44	-1512	-1723	-1439	-195	-99	215	-109	0.818	0.177	1.00	Yes	0.542	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_5 - L_6			1851.74	-----	-4	-242	-1831	-2166	-91	57	0	173	0.795	0.203	1.00	Yes	0.533	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_6 - L_7			1839.03	-----	-329	-37	-2348	-1630	54	-25	63	178	0.778	0.217	1.00	Yes	0.517	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		L_7 - L_8			1305.03	-121.84	-129	330	-2153	-108	-59	79	-150	159	0.748	0.251	1.00	Yes	0.492	0.146	0.64	Yes	0.083	0.211	0.3	Yes	0.082	0.238	0.32	Yes	1.00	**5.31**
		L_8 - L_9			1083.45	-429.86	-33	565	-1658	460	55	-150	-27	167	0.758	0.239	1.00	Yes	0.510	0.149	0.66	Yes	0.356	0.125	0.49	Yes	0.354	0.224	0.58	Yes	1.00	**6.24**
		L_9 - L_{10}			665.18	-698.11	-41	674	-1633	262	-37	26	-29	92	0.594	0.272	0.87	Yes	0.346	0.170	0.52	Yes	0.738	0.154	0.9	Yes	0.733	0.261	1.00	Yes	1.00	**6.61**
		L_{10} - L_{11}			64.16	-686.02	13	561	-1085	544	123	-58	-46	-4	0.064	0.206	0.28	Yes	0.038	0.130	0.17	Yes	0.811	0.059	0.87	Yes	0.806	0.190	1.00	Yes	1.00	**4.48**
		L_{11} - L_{12}			-----	-1019.36	7	969	-1182	820	15	55	69	75	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.113	0.96	Yes	0.836	0.161	1.00	Yes	1.00	**5.44**
		L_{12} - L_{13}			-----	-1302.10	172	-316	-1633	-773	90	49	-31	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.205	1	Yes	0.779	0.162	0.95	Yes	1.00	**6.82**
		L_{13} - L_{14}			-----	-1263.75	-300	1477	-2519	4116	-430	-410	8	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.248	0.89	Yes	0.636	0.359	1.00	Yes	1.00	**7.13**
		L_{14} - L_{15}			-----	-1250.05	4171	-1578	1237	-547	-123	-98	-255	-174	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.248	0.89	Yes	0.629	0.364	1.00	Yes	1.00	**6.14**
		L_{15} - L_{16}			-----	-1276.52	-132	184	-2299	-391	183	157	-56	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.220	1	Yes	0.764	0.229	1.00	Yes	1.00	**7.11**
		L_{16} - L_{17}			-----	-1005.37	2170	-1660	260	-492	-126	-101	361	28	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.203	0.95	Yes	0.732	0.268	1.00	Yes	1.00	**10.57**
		L_{17} - L_{18}			98.14	-537.52	2220	-2667	-1107	-716	-160	-31	111	292	0.088	0.462	0.55	Yes	0.051	0.288	0.34	Yes	0.568	0.265	0.84	Yes	0.564	0.427	1.00	Yes	1.00	**17.78**
		L_{18} - L_{19}			649.52	-99.56	1075	-1087	-637	-1024	-139	-117	102	-306	0.736	0.257	1.00	Yes	0.425	0.152	0.58	Yes	0.134	0.128	0.27	Yes	0.133	0.210	0.35	Yes	1.00	**9.20**
		L_{19} - L_{20}			663.01	-----	729	-1100	-465	-1096	-212	4	-95	178	0.751	0.245	1.00	Yes	0.444	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_{20} - L_{21}			989.99	-482.24	496	45	-1148	-1337	-6	-59	58	83	0.789	0.204	1.00	Yes	0.518	0.121	0.64	Yes	0.456	0.197	0.66	Yes	0.452	0.195	0.65	Yes	1.00	**7.18**
		L_{21} - L_{22}			903.86	-----	292	-1708	-1295	-1049	-210	23	-166	126	0.721	0.272	1.00	Yes	0.482	0.170	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_{22} - L_{23}			843.41	-100.45	-20	53	-2129	-326	4	-50	-49	91	0.673	0.321	1.00	Yes	0.450	0.200	0.65	Yes	0.095	0.257	0.36	Yes	0.094	0.311	0.41	Yes	1.00	**5.62**
		L_{23} - L_{24}			875.06	-480.96	56	438	-1919	-186	5	74	91	154	0.698	0.297	1.00	Yes	0.458	0.176	0.64	Yes	0.454	0.238	0.7	Yes	0.451	0.280	0.74	Yes	1.00	**7.13**
		L_{24} - L_{25}			504.35	-549.61	157	498	-1349	246	109	-100	-2	50	0.571	0.277	0.85	Yes	0.338	0.178	0.52	Yes	0.737	0.099	0.84	Yes	0.732	0.260	1.00	Yes	1.00	**6.00**
		L_{25} - L_{26}			101.35	-611.54	68	574	-942	299	11	78	51	46	0.115	0.194	0.31	Yes	0.066	0.116	0.19	Yes	0.820	0.130	0.95	Yes	0.815	0.182	1.00	Yes	1.00	**4.87**
		L_{26} - L_{27}			-----	-778.91	153	494	-1080	653	132	-20	0	32	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.076	0.9	Yes	0.818	0.173	1.00	Yes	1.00	**5.00**
		L_{27} - L_{28}			-----	-1125.11	85	1087	-1424	1112	87	155	19	61	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.112	0.94	Yes	0.819	0.176	1.00	Yes	1.00	**6.96**
		L_{28} - L_{29}			-----	-1301.49	228	-596	-1646	-1008	214	190	-21	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.215	1	Yes	0.779	0.164	0.95	Yes	1.00	**7.77**
		L_{29} - L_{30}			-----	-1254.22	-242	1267	-2970	4201	-330	-413	-29	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.238	0.88	Yes	0.631	0.367	1.00	Yes	1.00	**8.00**
		L_{30} - L_{31}			-----	-1233.15	4310	-1628	1179	-299	-41	-22	-312	-225	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.265	0.9	Yes	0.621	0.376	1.00	Yes	1.00	**6.69**
		L_{31} - L_{32}			-----	-1167.07	-35	-537	-2504	-496	357	471	130	31	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.290	1	Yes	0.698	0.249	0.95	Yes	1.00	**8.53**
		L_{32} - L_{33}			-----	-819.90	2231	-2366	4	-1189	-46	164	501	-214	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.220	0.9	Yes	0.672	0.322	1.00	Yes	1.00	**15.52**
		L_{33} - L_{34}			353.84	-----	2451	-3345	-1232	-718	-162	178	292	437	0.353	0.644	1.00	Yes	0.207	0.406	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.73**
		L_{34} - L_{35}			814.54	-800.12	785	22	-408	-999	-14	-57	149	-240	0.727	0.189	0.92	Yes	0.423	0.117	0.55	Yes	0.846	0.101	0.95	Yes	0.840	0.160	1.00	Yes	1.00	**7.22**
		L_{35} - L_{36}			1060.19	-----	957	-1643	-637	-897	-332	-31	-77	296	0.742	0.253	1.00	Yes	0.499	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		L_{36} - L_{37}			1431.14	-179.63	426	-11	-1003	-1510	34	-25	57	-97	0.821	0.175	1.00	Yes	0.539	0.102	0.65	Yes	0.122	0.174	0.3	Yes	0.121	0.167	0.29	Yes	1.00	**5.66**
		L_{37} - L_{38}			1790.71	-----	152	-344	-2585	-1622	-60	36	-140	212	0.758	0.240	1.00	Yes	0.504	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_{38} - L_{39}			1751.67	-----	-290	-52	-2555	-765	-5	-69	53	247	0.752	0.242	1.00	Yes	0.504	0.147	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		L_{39} - L_{40}			1671.15	-----	-207	-370	-2217	-787	-68	-5	-6	95	0.779	0.216	1.00	Yes	0.516	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{40} - L_{41}			1312.88	-----	-390	17	-1829	-51	-5	-7	-97	77	0.771	0.222	1.00	Yes	0.519	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		L_{41} - L_{42}			1000.22	-----	-165	-103	-1364	62	24	79	103	64	0.788	0.208	1.00	Yes	0.517	0.123	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		L_{42} - L_{43}			539.89	-----	-274	160	-1473	411	60	15	-79	214	0.656	0.335	1.00	Yes	0.390	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{43} - L_{44}			22.68	-53.89	0	-87	-3342	887	-64	-19	1747	510	0.028	0.967	1.00	Yes	0.016	0.612	0.63	Yes	0.077	0.667	0.75	Yes	0.077	0.680	0.76	Yes	1.00	**18.73**
	Structure 3	L_0 - L_1			29.59	-----	1359	-2221	-62	2	-297	-1349	1	3	0.045	0.946	1.00	Yes	0.028	0.626	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.86**
		L_1 - L_2			435.12	-----	504	-918	33	-377	-51	281	-10	93	0.666	0.334	1.00	Yes	0.450	0.209	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		L_2 - L_3			871.51	-----	378	-796	-361	-462	98	231	652	267	0.759	0.237	1.00	Yes	0.486	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.11**
		L_3 - L_4			1188.56	-----	476	-1479	-631	-959	2	158	-13	286	0.752	0.243	1.00	Yes	0.488	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.54**
		L_4 - L_5			1654.49	-----	-233	-289	-1451	-980	-140	-102	6	-181	0.808	0.188	1.00	Yes	0.519	0.109	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_5 - L_6			1587.55	-----	160	-1626	-1127	-1518	-255	122	-74	335	0.776	0.220	1.00	Yes	0.504	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_6 - L_7			1241.10	-----	-325	172	-1815	281	-15	-52	-4	197	0.730	0.266	1.00	Yes	0.473	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_7 - L_8			1008.16	-----	-79	72	-1011	-202	-19	73	7	205	0.796	0.203	1.00	Yes	0.509	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_8 - L_9			560.18	-138.56	-174	325	-919	307	63	-122	-5	34	0.725	0.265	1.00	Yes	0.435	0.174	0.61	Yes	0.213	0.126	0.34	Yes	0.211	0.243	0.46	Yes	1.00	**4.63**
		L_9 - L_{10}			89.20	-500.48	-34	463	-872	262	-38	-2	92	112	0.116	0.250	0.37	Yes	0.067	0.152	0.22	Yes	0.769	0.124	0.9	Yes	0.762	0.231	1.00	Yes	1.00	**5.86**
		L_{10} - L_{11}			-----	-986.33	87	39	-1283	469	83	-27	80	-241	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.099	0.91	Yes	0.794	0.202	1.00	Yes	1.00	**8.37**
		L_{11} - L_{12}			-----	-1184.92	28	867	-734	1793	-372	-366	0	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.231	1	Yes	0.750	0.237	0.99	Yes	1.00	**6.98**
		L_{12} - L_{13}			-----	-1149.03	1975	-206	554	-32	-115	-128	-127	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.254	1	Yes	0.728	0.262	0.99	Yes	1.00	**5.59**
		L_{13} - L_{14}			-----	-1026.82	886	-878	-1051	-249	99	53	-128	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.087	0.93	Yes	0.827	0.165	1.00	Yes	1.00	**10.75**
		L_{14} - L_{15}			-----	-745.21	579	137	29	-300	-5	-67	20	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.123	1	Yes	0.860	0.128	0.99	Yes	1.00	**4.43**
		L_{15} - L_{16}			458.24	-----	813	-1363	-325	-740	-146	173	-132	242	0.593	0.404	1.00	Yes	0.356	0.265	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.60**
		L_{16} - L_{17}			655.12	-246.94	355	28	-925	-448	45	-86	-37	37	0.754	0.237	1.00	Yes	0.448	0.154	0.61	Yes	0.337	0.263	0.61	Yes	0.334	0.223	0.56	Yes	1.00	**5.28**
		L_{17} - L_{18}			635.47	-94.31	89	-53	-1008	-465	33	109	33	151	0.731	0.268	1.00	Yes	0.423	0.161	0.59	Yes	0.129	0.287	0.42	Yes	0.128	0.243	0.38	Yes	1.00	**4.95**
		L_{18} - L_{19}			445.24	-15.60	7	25	-952	77	54	-75	33	125	0.681	0.313	1.00	Yes	0.416	0.211	0.63	Yes	0.028	0.193	0.23	Yes	0.028	0.286	0.32	Yes	1.00	**4.54**
		L_{19} - L_{20}			-----	-52.21	155	-235	-2997	1287	-189	-51	1091	297	-----	-----	-----	-----	-----	-----	-----	-----	0.095	0.739	0.84	Yes	0.094	0.899	1.00	Yes	1.00	**21.91**

Moment (Start) AB Operating

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-294.04	-12	35	-184	205	-75	-24	-893	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.334	1	Yes	0.622	0.262	0.89	Yes	1.00	**2.17**
		$U_1 - L_1$			51.21	-303.33	39	-36	-276	278	80	36	499	224	0.092	0.500	0.60	Yes	0.051	0.275	0.33	Yes	0.663	0.231	0.9	Yes	0.642	0.355	1.00	Yes	1.00	**4.92**
		$U_2 - L_2$			-----	-276.49	113	-87	-291	323	-217	-65	275	177	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.179	0.79	Yes	0.585	0.413	1.00	Yes	1.00	**7.09**
		$U_3 - L_3$			243.31	-231.35	375	-347	-361	362	246	174	68	261	0.438	0.554	1.00	Yes	0.241	0.305	0.55	Yes	0.507	0.156	0.67	Yes	0.490	0.479	0.97	Yes	1.00	**11.10**
		$U_4 - L_4$			26.35	-239.90	379	-358	-95	65	-95	-90	-64	79	0.047	0.512	0.56	Yes	0.026	0.282	0.31	Yes	0.527	0.138	0.67	Yes	0.508	0.484	1.00	Yes	1.00	**9.20**
		$U_5 - L_5$			-----	-426.33	229	-251	42	-67	-125	-104	-102	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.103	0.88	Yes	0.736	0.255	1.00	Yes	1.00	**3.93**
		$U_6 - L_6$			-----	-520.43	272	-289	55	-69	71	57	-83	57	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.084	0.88	Yes	0.746	0.253	1.00	Yes	1.00	**3.91**
		$U_7 - L_7$			-----	-444.47	294	-317	118	-132	-29	80	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.122	0.87	Yes	0.686	0.312	1.00	Yes	1.00	**2.52**
		$U_8 - L_8$			-----	-1291.59	442	-527	-397	469	-218	-50	-157	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.050	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.33**
		$U_9 - L_9$			-----	-659.34	-167	191	-407	452	-226	-159	-538	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.182	0.97	Yes	0.745	0.251	1.00	Yes	1.00	**3.36**
		$U_{10} - L_{10}$			-----	-797.80	-114	110	-400	405	-203	-146	-242	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.103	0.93	Yes	0.787	0.210	1.00	Yes	1.00	**5.29**
		$U_{11} - L_{11}$			-----	-659.40	-91	196	-396	483	-191	-56	1	92	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.099	0.9	Yes	0.767	0.224	1.00	Yes	1.00	**4.82**
		$U_{12} - L_{12}$			-----	-501.67	-54	76	-361	348	-28	78	-33	124	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.100	0.83	Yes	0.688	0.308	1.00	Yes	1.00	**4.54**
		$U_{13} - L_{13}$			-----	-359.84	-6	25	-254	270	-100	76	-19	147	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.112	0.84	Yes	0.689	0.308	1.00	Yes	1.00	**3.78**
		$U_{14} - L_{14}$			-----	-227.19	204	-197	-389	402	-143	-52	44	101	-----	-----	-----	-----	-----	-----	-----	-----	0.507	0.176	0.69	Yes	0.481	0.513	1.00	Yes	1.00	**9.66**
		$U_{15} - L_{15}$			186.70	-316.52	239	-254	-156	143	12	-176	-152	-140	0.336	0.375	0.72	Yes	0.185	0.206	0.40	Yes	0.709	0.163	0.88	Yes	0.670	0.325	1.00	Yes	1.00	**5.44**
		$U_{16} - L_{16}$			70.25	-319.60	244	-249	-32	14	-125	-203	-108	-85	0.126	0.377	0.51	Yes	0.069	0.208	0.28	Yes	0.720	0.164	0.89	Yes	0.676	0.319	1.00	Yes	1.00	**4.16**
		$U_{17} - L_{17}$			-----	-440.35	215	-232	38	-58	-161	-156	-118	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.130	0.96	Yes	0.760	0.235	1.00	Yes	1.00	**3.28**
		$U_{18} - L_{18}$			-----	-532.05	435	-445	121	-141	96	-52	-107	68	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.081	0.87	Yes	0.740	0.252	1.00	Yes	1.00	**3.54**
		$U_{19} - L_{19}$			-----	-650.21	505	-519	128	-181	245	16	-14	305	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.097	0.91	Yes	0.757	0.241	1.00	Yes	1.00	**4.01**
		$U_{20} - L_{20}$			-----	-578.90	416	-486	154	-228	768	101	215	28	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.674	0.225	0.90	Yes	1.00	**2.79**
	Structure 2	$U_0 - L_0$			-----	-613.94	-108	172	-439	524	-262	-44	-1114	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.256	1	Yes	0.658	0.222	0.89	Yes	1.00	**2.87**
		$U_1 - L_1$			-----	-708.00	-96	103	-559	554	60	-63	61	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.072	0.89	Yes	0.759	0.237	1.00	Yes	1.00	**4.82**
		$U_2 - L_2$			-----	-582.29	-70	78	-493	491	108	47	-61	53	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.084	0.87	Yes	0.742	0.252	1.00	Yes	1.00	**4.33**
		$U_3 - L_3$			-----	-489.52	-36	42	-246	253	27	135	80	194	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.112	0.95	Yes	0.768	0.231	1.00	Yes	1.00	**4.02**
		$U_4 - L_4$			40.38	-326.28	14	1	-235	229	-101	63	-41	148	0.073	0.343	0.42	Yes	0.040	0.189	0.23	Yes	0.740	0.103	0.85	Yes	0.690	0.300	1.00	Yes	1.00	**4.16**
		$U_5 - L_5$			166.18	-315.78	115	-106	-243	254	-109	96	-45	170	0.299	0.374	0.68	Yes	0.164	0.206	0.38	Yes	0.713	0.124	0.84	Yes	0.668	0.325	1.00	Yes	1.00	**5.57**
		$U_6 - L_6$			323.88	-287.97	258	-247	-278	278	-111	111	33	188	0.583	0.410	1.00	Yes	0.320	0.225	0.55	Yes	0.648	0.122	0.78	Yes	0.609	0.355	0.97	Yes	1.00	**7.90**
		$U_7 - L_7$			-----	-229.36	355	-397	-138	138	-135	-83	-123	7	-----	-----	-----	-----	-----	-----	-----	-----	0.518	0.185	0.71	Yes	0.485	0.507	1.00	Yes	1.00	**10.16**
		$U_8 - L_8$			-----	-464.46	360	-370	33	-54	-198	-186	-140	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.125	0.8	Yes	0.669	0.323	1.00	Yes	1.00	**3.76**
		$U_9 - L_9$			-----	-694.64	579	-590	122	-149	-225	-207	-162	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.093	0.87	Yes	0.744	0.250	1.00	Yes	1.00	**4.58**
		$U_{10} - L_{10}$			-----	-798.16	543	-566	128	-166	-3	-72	-95	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.084	0.88	Yes	0.746	0.250	1.00	Yes	1.00	**4.83**
		$U_{11} - L_{11}$			-----	-822.41	512	-521	172	-183	-111	-41	-53	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.079	0.91	Yes	0.769	0.230	1.00	Yes	1.00	**4.38**
		$U_{12} - L_{12}$			-----	-886.79	527	-535	156	-165	144	113	-34	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.090	0.95	Yes	0.769	0.230	1.00	Yes	1.00	**4.35**
		$U_{13} - L_{13}$			-----	-745.36	573	-560	242	-240	66	91	-90	42	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.113	0.95	Yes	0.719	0.274	1.00	Yes	1.00	**3.29**
		$U_{14} - L_{14}$			-----	-1301.48	598	-573	-493	454	40	87	-129	26	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.042	1	Yes	0.863	0.106	0.97	Yes	1.00	**5.30**
		$U_{15} - L_{15}$			-----	-712.99	-154	155	-645	622	-66	-35	-300	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.182	0.98	Yes	0.687	0.308	1.00	Yes	1.00	**4.77**
		$U_{16} - L_{16}$			-----	-708.56	-102	92	-566	531	-148	-82	-269	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.119	0.94	Yes	0.759	0.240	1.00	Yes	1.00	**4.89**
		$U_{17} - L_{17}$			-----	-637.79	-119	116	-544	533	-93	-30	-139	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.088	0.88	Yes	0.742	0.252	1.00	Yes	1.00	**4.44**
		$U_{18} - L_{18}$			-----	-577.48	-91	91	-502	508	-78	-9	-31	50	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.074	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.41**
		$U_{19} - L_{19}$			-----	-467.88	-40	47	-312	297	-156	-16	-106	44	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.099	0.81	Yes	0.699	0.300	1.00	Yes	1.00	**4.18**
		$U_{20} - L_{20}$			16.30	-369.38	4	1	-251	251	-156	12	-72	80	0.027	0.327	0.36	Yes	0.015	0.180	0.20	Yes	0.757	0.111	0.87	Yes	0.708	0.287	1.00	Yes	1.00	**4.17**
		$U_{21} - L_{21}$			75.45	-319.86	52	-47	-240	248	-148	31	-42	87	0.136	0.360	0.50	Yes	0.075	0.198	0.28	Yes	0.723	0.123	0.85	Yes	0.677	0.317	1.00	Yes	1.00	**4.45**
		$U_{22} - L_{22}$			22.73	-272.55	278	-282	-326	331	84	19	-53	18	0.041	0.448	0.49	Yes	0.022	0.246	0.27	Yes	0.613	0.131	0.75	Yes	0.577	0.423	1.00	Yes	1.00	**10.76**
		$U_{23} - L_{23}$			119.36	-320.18	238	-248	-90	78	-128	-124	-98	-51	0.215	0.354	0.57	Yes	0.118	0.195	0.32	Yes	0.723	0.132	0.86	Yes	0.677	0.317	1.00	Yes	1.00	**4.51**
		$U_{24} - L_{24}$			-----	-377.12	230	-237	-16	0	-117	-102	-42	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.109	0.89	Yes	0.722	0.271	1.00	Yes	1.00	**3.80**
		$U_{25} - L_{25}$			-----	-473.83	296	-294	35	-51	-13	-37	-98	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.084	0.8	Yes	0.708	0.285	1.00	Yes	1.00	**3.66**
		$U_{26} - L_{26}$			-----	-569.63	507	-532	99	-134	-125	-48	-96	30	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.089	0.85	Yes	0.726	0.272	1.00	Yes	1.00	**3.99**
		$U_{27} - L_{27}$			-----	-630.71	549	-556	139	-140	4	37	-151	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.083	0.87	Yes	0.734	0.258	1.00	Yes	1.00	**3.85**
		$U_{28} - L_{28}$			-----	-712.20	551	-547	135	-149	109	100	-48	83	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.072	0.9	Yes	0.763	0.234	1.00	Yes	1.00	**3.90**
		$U_{29} - L_{29}$			-----	-710.47	639	-626	202	-208	53	82	-118	23	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.121	0.92	Yes	0.685	0.306	1.00	Yes	1.00	**4.02**
		$U_{30} - L_{30}$			-----	-1287.63	589	-584	-538	478	-100	-49	-182	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.056	1	Yes	0.854	0.104	0.96	Yes	1.00	**5.49**
		$U_{31} - L_{31}$			-----	-726.36	-175	171	-551	535	-113	-56	-397	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1	Yes	0.700	0.264	0.97	Yes	1.00	**3.92**
		$U_{32} - L_{32}$			-----	-890.12	-122	92	-518	502	-188	-98	-283	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.130	0.99	Yes	0.772	0.222	1.00	Yes	1.00	**5.24**
		$U_{33} - L_{33}$			-----	-827.08	-157	156	-503	495	-156	-70	-26	49	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.087	0.92	Yes	0.773	0.222	1.00	Yes	1.00	**5.26**
		$U_{34} - L_{34}$			-----	-792.11	-114	128	-567	565	-183	-37	-76	101	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.087	0.87	Yes	0.741	0.250	1.00	Yes	1.00	**5.86**
		$U_{35} - L_{35}$			-----	-694.53	-106	127	-590	584	-175	45	-73	141	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.073	0.85	Yes	0.744	0.250	1.00	Yes	1.00	**5.25**
		$U_{36} - L_{36}$			-----	-471.27	-42	59	-353	359	-143	71	12	160	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.096	0.78	Yes	0.679	0.314	1.00	Yes	1.00	**4.09**
		$U_{37} - L_{37}$			-----	-221.79	107	-109	-379	414	-169	-24	-87	62	-----	-----	-----	-----	-----	-----	-----	-----	0.501	0.195	0.7	Yes	0.469	0.529	1.00	Yes	1.00	**9.99**
		$U_{38} - L_{38}$			350.95	-174.13	168	-166	-241	242	-153	-184	-101	-104	0.631	0.362	1.00	Yes	0.347	0.199	0.55	Yes	0.392	0.138	0.53	Yes	0.368	0.309	0.68	Yes	1.00	**5.50**
		$U_{39} - L_{39}$			128.75	-328.79	214	-232	-137	114	-132	-170	-83	-64	0.232	0.346	0.58	Yes	0.127	0.190	0.32	Yes	0.743	0.160	0.91	Yes	0.696	0.297	1.00	Yes	1.00	**5.13**
		$U_{40} - L_{40}$			52.84	-339.20	219	-220	-31	8	-35	-110	-107	-78	0.095	0.313	0.41	Yes	0.052	0.172	0.23	Yes	0.769	0.120	0.89	Yes	0.718	0.281	1.00	Yes	1.00	**3.95**
		$U_{41} - L_{41}$			-----	-485.96	247	-258	39	-46	-113	-101	-105	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.105	0.94	Yes	0.762	0.235	1.00	Yes	1.00	**3.73**
		$U_{42} - L_{42}$			-----	-580.41	496	-502	96	-106	144	-12	-85	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.090	0.87	Yes	0.740	0.257	1.00	Yes	1.00	**3.90**
		$U_{43} - L_{43}$			-----	-707.94	536	-555	132	-149	432	57	-43	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.127	0.94	Yes	0.759	0.235	1.00	Yes	1.00	**3.95**
		$U_{44} - L_{44}$			-----	-648.60	465	-567	190	-235	799	135	-39	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.216	1	Yes	0.695	0.241	0.94	Yes	1.00	**2.94**
	Structure 3	$U_0 - L_0$			-----	-554.23	-102	166	-425	481	-251	-33	-943	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.261	1	Yes	0.645	0.223	0.87	Yes	1.00	**3.00**
		$U_1 - L_1$			-----	-657.34	-106	113	-506	506	8	-73	44	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.076	0.9	Yes	0.765	0.235	1.00	Yes	1.00	**4.86**
		$U_2 - L_2$			-----	-531.49	-86	91	-457	454	87	34	-14	62	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.081	0.86	Yes	0.739	0.259	1.00	Yes	1.00	**4.61**
		$U_3 - L_3$			-----	-440.71	-32	43	-217	230	2	120	-9	175	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.114	0.94	Yes	0.760	0.233	1.00	Yes	1.00	**3.89**
		$U_4 - L_4$			56.73	-321.30	24	-14	-246	247	-163	81	-20	224	0.102	0.381	0.49	Yes	0.056	0.209	0.27	Yes	0.724	0.116	0.85	Yes	0.680	0.316	1.00	Yes	1.00	**4.54**
		$U_5 - L_5$			209.44	-299.82	140	-138	-275	284	-150	72	-122	160	0.377	0.409	0.79	Yes	0.207	0.225	0.44	Yes	0.672	0.136	0.81	Yes	0.634	0.363	1.00	Yes	1.00	**6.33**
		$U_6 - L_6$			6.19	-224.94	397	-403	-250	247	-234	-95	-89	72	0.011	0.582	0.60	Yes	0.006	0.320	0.33	Yes	0.502	0.192	0.7	Yes	0.476	0.515	1.00	Yes	1.00	**10.38**
		$U_7 - L_7$			-----	-366.76	242	-259	-7	-11	-126	-166	-145	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.139	0.89	Yes	0.703	0.296	1.00	Yes	1.00	**3.57**
		$U_8 - L_8$			-----	-511.00	343	-341	44	-51	-239	-220	-174	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.135	0.88	Yes	0.701	0.293	1.00	Yes	1.00	**4.26**
		$U_9 - L_9$			-----	-659.20	399	-500	93	-161	-196	-136	-98	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.107	0.9	Yes	0.767	0.232	1.00	Yes	1.00	**4.44**
		$U_{10} - L_{10}$			-----	-788.21	396	-428	105	-115	104	124	-85	13	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.078	0.9	Yes	0.778	0.222	1.00	Yes	1.00	**4.68**
		$U_{11} - L_{11}$			-----	-648.00	416	-469	183	-213	81	137	-45	65	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.103	0.88	Yes	0.732	0.261	1.00	Yes	1.00	**2.88**
		$U_{12} - L_{12}$			-----	-1290.22	404	-536	-379	401	70	80	-114	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.046	0.98	Yes	0.895	0.100	1.00	Yes	1.00	**5.06**
		$U_{13} - L_{13}$			-----	-438.61	-105	116	-300	324	-141	-95	-157	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.149	0.89	Yes	0.677	0.319	1.00	Yes	1.00	**2.96**
		$U_{14} - L_{14}$			-----	-512.66	-62	58	-295	290	-162	-134	-238	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.132	0.91	Yes	0.735	0.258	1.00	Yes	1.00	**5.10**
		$U_{15} - L_{15}$			-----	-429.12	-43	49	-240	252	-179	-95	-159	8	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.114	0.9	Yes	0.740	0.256	1.00	Yes	1.00	**4.88**
		$U_{16} - L_{16}$			-----	-249.35	72	-43	-367	348	-267	-166	-41	75	-----	-----	-----	-----	-----	-----	-----	-----	0.548	0.187	0.74	Yes	0.528	0.469	1.00	Yes	1.00	**8.95**
		$U_{17} - L_{17}$			291.74	-230.22	191	-213	-311	316	-101	-189	-219	-94	0.525	0.467	1.00	Yes	0.289	0.257	0.55	Yes	0.504	0.153	0.66	Yes	0.487	0.404	0.90	Yes	1.00	**7.37**
		$U_{18} - L_{18}$			70.29	-286.81	267	-304	-133	128	-209	-157	17	-1	0.126	0.448	0.58	Yes	0.070	0.247	0.32	Yes	0.627	0.169	0.8	Yes	0.607	0.388	1.00	Yes	1.00	**6.06**
		$U_{19} - L_{19}$			29.66	-322.75	245	-245	-41	29	-6	-52	-171	-94	0.053	0.362	0.42	Yes	0.029	0.199	0.23	Yes	0.705	0.135	0.85	Yes	0.683	0.313	1.00	Yes	1.00	**4.14**
		$U_{20} - L_{20}$			-----	-340.96	170	-214	43	-50	478	153	-189	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.229	1	Yes	0.721	0.273	1.00	Yes	1.00	**2.03**

Moment (Start) AB Operating

Operating Loads - 5C1

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	$U_0 - L_1$			400.57	-64.39	16	-14	-223	103	-36	-11	-817	-174	0.526	0.467	1.00	Yes	0.317	0.257	0.58	Yes	0.110	0.321	0.44	Yes	0.099	0.261	0.37	Yes	1.00	**5.25**
		$U_1 - L_2$			178.69	-224.31	39	-19	-186	14	105	90	-814	-306	0.321	0.474	0.80	Yes	0.177	0.260	0.44	Yes	0.515	0.476	1	Yes	0.475	0.238	0.72	Yes	1.00	**9.92**
		$U_2 - L_3$			420.64	-226.65	48	-22	-112	-35	103	78	-265	-333	0.757	0.240	1.00	Yes	0.416	0.132	0.55	Yes	0.522	0.294	0.82	Yes	0.480	0.143	0.63	Yes	1.00	**8.04**
		$U_3 - L_4$			-----	-361.89	42	-12	-65	-70	46	178	-146	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.163	1	Yes	0.766	0.090	0.86	Yes	1.00	**6.25**
		$U_4 - L_4$			556.26	-----	5	24	-121	8	249	154	-107	-178	0.816	0.181	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		$U_4 - L_5$			684.57	-----	12	88	-236	175	277	189	-14	-130	0.809	0.185	1.00	Yes	0.445	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_5 - L_6$			634.86	-----	-73	106	-326	230	345	223	343	144	0.751	0.249	1.00	Yes	0.413	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_6 - L_7$			649.79	-----	32	180	-111	297	321	250	312	200	0.768	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_8 - L_9$			1003.60	-----	89	231	-107	357	232	228	283	278	0.802	0.195	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_9 - L_{10}$			985.05	-----	-68	113	-401	266	98	119	245	178	0.787	0.210	1.00	Yes	0.488	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		$U_{10} - L_{11}$			1009.21	-----	-46	120	-263	160	12	4	-101	-165	0.852	0.143	1.00	Yes	0.528	0.080	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		$U_{11} - L_{12}$			818.25	-----	-61	75	-292	72	-104	-75	-340	-356	0.810	0.189	1.00	Yes	0.445	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{12} - L_{13}$			620.10	-----	-56	27	-190	121	-266	-221	-358	-328	0.756	0.236	1.00	Yes	0.476	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{13} - L_{14}$			440.21	-----	-9	-14	-93	31	-247	-261	-305	-298	0.792	0.207	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_{15} - L_{14}$			207.38	-319.41	72	-107	-102	-19	-191	-312	-372	-421	0.373	0.259	0.64	Yes	0.205	0.142	0.35	Yes	0.748	0.251	1	Yes	0.676	0.137	0.82	Yes	1.00	**5.83**
		$U_{16} - L_{15}$			391.62	-166.86	32	-64	-154	63	-177	-178	-319	-305	0.704	0.289	1.00	Yes	0.387	0.159	0.55	Yes	0.396	0.230	0.63	Yes	0.353	0.197	0.55	Yes	1.00	**6.00**
		$U_{17} - L_{16}$			524.52	-----	-16	-16	-163	89	-142	-135	-181	-250	0.769	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{18} - L_{17}$			629.50	-----	-96	59	-363	237	7	-44	-238	-206	0.744	0.249	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_{19} - L_{18}$			703.47	-----	-88	63	-374	258	-86	-12	-240	-163	0.762	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{20} - L_{19}$			554.70	-----	-113	116	-447	327	-74	201	-983	-64	0.601	0.390	1.00	Yes	0.330	0.215	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
	Structure 2	$U_0 - L_1$			683.26	-----	-62	72	-430	363	-119	54	-813	-75	0.676	0.321	1.00	Yes	0.372	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_1 - L_2$			795.33	-----	-77	50	-415	300	54	15	-42	-134	0.787	0.212	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_2 - L_3$			644.42	-----	-56	41	-341	243	-71	-180	-214	-249	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_3 - L_4$			561.87	-----	-25	9	-186	117	-236	-217	-350	-306	0.749	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_4 - L_5$			412.54	-52.20	9	-28	-125	78	-250	-185	-320	-278	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	0.129	0.177	0.31	Yes	0.110	0.160	0.28	Yes	1.00	**4.14**
		$U_5 - L_6$			393.59	-298.88	66	-107	-118	51	-371	-254	-470	-271	0.708	0.287	1.00	Yes	0.389	0.158	0.55	Yes	0.706	0.283	0.99	Yes	0.632	0.151	0.79	Yes	1.00	**5.52**
		$U_6 - L_7$			31.41	-372.75	55	-94	-49	-17	-297	-264	-320	-246	0.051	0.191	0.25	Yes	0.028	0.105	0.14	Yes	0.798	0.197	1	Yes	0.714	0.107	0.83	Yes	1.00	**3.23**
		$U_8 - L_7$			574.27	-13.38	-4	-30	-227	111	-167	-250	-181	-301	0.732	0.265	1.00	Yes	0.461	0.149	0.62	Yes	0.022	0.133	0.16	Yes	0.020	0.203	0.23	Yes	1.00	**5.21**
		$U_8 - L_9$			706.55	-----	-86	31	-368	224	-56	-118	-182	-232	0.765	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		$U_{10} - L_9$			811.95	-----	-83	56	-346	222	31	-25	-107	-191	0.803	0.189	1.00	Yes	0.442	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		$U_{11} - L_{10}$			866.23	-----	-97	113	-381	268	317	181	24	-78	0.789	0.205	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_{12} - L_{11}$			844.75	-----	-104	145	-376	323	466	267	127	30	0.770	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{13} - L_{12}$			749.68	-----	-177	173	-460	384	277	158	247	127	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{14} - L_{13}$			753.84	-----	-5	217	-280	443	268	184	260	145	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_{14} - L_{15}$			638.16	-----	28	161	-221	361	205	132	164	98	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{15} - L_{16}$			625.91	-----	-95	102	-367	325	46	65	245	63	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{16} - L_{17}$			753.76	-----	-68	92	-350	348	4	1	6	-10	0.816	0.181	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{17} - L_{18}$			676.76	-----	-58	74	-317	283	-63	-37	-98	-88	0.800	0.197	1.00	Yes	0.440	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{18} - L_{19}$			669.09	-----	-36	55	-295	241	-98	-73	-202	-143	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_{19} - L_{20}$			607.20	-----	-14	26	-196	156	-121	-70	-228	-196	0.774	0.222	1.00	Yes	0.426	0.125	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{20} - L_{21}$			428.74	-1.86	0	-6	-119	91	-173	-127	-237	-146	0.771	0.221	1.00	Yes	0.424	0.121	0.55	Yes	0.004	0.112	0.12	Yes	0.004	0.152	0.16	Yes	1.00	**3.74**
		$U_{21} - L_{22}$			409.29	-222.97	37	-64	-135	43	-292	-255	-294	-234	0.736	0.257	1.00	Yes	0.405	0.142	0.55	Yes	0.527	0.213	0.74	Yes	0.472	0.172	0.65	Yes	1.00	**5.82**
		$U_{23} - L_{22}$			340.87	-318.74	75	-97	-149	28	-162	-262	-175	-274	0.613	0.270	0.89	Yes	0.337	0.149	0.49	Yes	0.759	0.235	1	Yes	0.674	0.191	0.87	Yes	1.00	**6.82**
		$U_{24} - L_{23}$			430.45	-117.34	23	-40	-142	94	-109	-96	-104	-144	0.774	0.223	1.00	Yes	0.426	0.123	0.55	Yes	0.281	0.086	0.37	Yes	0.248	0.182	0.44	Yes	1.00	**5.09**
		$U_{25} - L_{24}$			593.33	-----	7	-14	-229	159	21	-37	-70	-144	0.757	0.234	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{26} - L_{25}$			671.55	-----	-31	36	-329	241	82	42	31	-46	0.794	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{27} - L_{26}$			639.42	-----	-62	91	-320	277	297	150	129	22	0.756	0.235	1.00	Yes	0.416	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{28} - L_{27}$			704.11	-----	-73	122	-364	350	252	174	153	74	0.763	0.227	1.00	Yes	0.419	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_{29} - L_{28}$			622.68	-----	-122	116	-379	341	215	108	236	126	0.736	0.257	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_{30} - L_{29}$			628.95	-----	10	160	-213	364	244	156	227	124	0.744	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{30} - L_{31}$			757.45	-----	20	197	-279	444	220	144	261	-44	0.749	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{31} - L_{32}$			777.77	-----	-122	126	-462	386	37	48	105	-3	0.769	0.230	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{32} - L_{33}$			893.74	-----	-80	133	-377	333	-17	11	-135	-106	0.814	0.179	1.00	Yes	0.448	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{33} - L_{34}$			881.43	-----	-76	133	-363	266	-53	-14	-289	-222	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{34} - L_{35}$			816.17	-----	-81	119	-298	211	-87	-62	-301	-303	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{35} - L_{36}$			697.12	-----	-87	44	-338	209	-309	-226	-410	-331	0.755	0.240	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{36} - L_{37}$			579.53	-----	-27	-1	-205	126	-322	-304	-335	-325	0.739	0.251	1.00	Yes	0.465	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{38} - L_{37}$			-----	-385.52	81	-104	-49	-28	-158	-244	-183	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.161	1	Yes	0.739	0.118	0.86	Yes	1.00	**3.76**
		$U_{39} - L_{38}$			270.48	-337.20	92	-121	-115	32	-194	-199	-265	-272	0.486	0.233	0.72	Yes	0.268	0.128	0.40	Yes	0.803	0.196	1	Yes	0.713	0.154	0.87	Yes	1.00	**6.00**
		$U_{40} - L_{39}$			417.07	-134.60	36	-57	-144	90	-69	-102	-168	-222	0.750	0.249	1.00	Yes	0.413	0.137	0.55	Yes	0.322	0.161	0.49	Yes	0.285	0.184	0.47	Yes	1.00	**5.34**
		$U_{41} - L_{40}$			573.85	-----	-17	-1	-207	115	24	-10	-144	-185	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{42} - L_{41}$			641.86	-----	-64	41	-367	246	-2	0	-178	-145	0.759	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{43} - L_{42}$			762.06	-----	-88	59	-415	293	-6	-32	-343	-164	0.754	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{44} - L_{43}$			727.33	-----	-134	117	-415	370	37	3	-579	-90	0.720	0.279	1.00	Yes	0.396	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
	Structure 3	$U_0 - L_1$			606.33	-----	-69	72	-426	313	-133	50	-749	-146	0.657	0.341	1.00	Yes	0.361	0.188	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_1 - L_2$			719.67	-----	-86	53	-393	253	39	12	-39	-73	0.779	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		$U_2 - L_3$			643.06	-----	-76	47	-331	225	-73	-167	-213	-285	0.760	0.239	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_3 - L_4$			518.37	-----	-19	5	-153	84	-214	-201	-352	-340	0.760	0.237	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_4 - L_5$			387.39	-118.08	9	-38	-133	69	-314	-219	-435	-297	0.697	0.296	1.00	Yes	0.383	0.163	0.55	Yes	0.280	0.232	0.52	Yes	0.250	0.170	0.42	Yes	1.00	**4.92**
		$U_5 - L_6$			372.59	-297.17	58	-99	-108	-6	-374	-333	-492	-414	0.670	0.281	0.96	Yes	0.369	0.154	0.53	Yes	0.696	0.302	1	Yes	0.629	0.138	0.77	Yes	1.00	**6.27**
		$U_7 - L_6$			425.52	-27.64	7	-30	-109	28	-84	-229	-146	-307	0.765	0.229	1.00	Yes	0.421	0.126	0.55	Yes	0.064	0.149	0.22	Yes	0.058	0.140	0.20	Yes	1.00	**4.49**
		$U_8 - L_7$			617.56	-----	-36	2	-217	124	-85	-133	-238	-294	0.753	0.247	1.00	Yes	0.474	0.139	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_8 - L_9$			828.10	-----	-45	22	-308	65	218	105	-86	-227	0.819	0.177	1.00	Yes	0.451	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{10} - L_9$			952.30	-----	-37	81	-281	141	467	268	73	-70	0.804	0.191	1.00	Yes	0.498	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		$U_{11} - L_{10}$			986.60	-----	-93	120	-353	245	350	239	365	220	0.789	0.204	1.00	Yes	0.489	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{12} - L_{11}$			978.97	-----	81	204	-106	371	315	280	398	284	0.783	0.216	1.00	Yes	0.485	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_{12} - L_{13}$			665.44	-----	41	182	-111	290	243	198	187	116	0.787	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{13} - L_{14}$			660.46	-----	-55	103	-314	219	140	176	206	160	0.781	0.217	1.00	Yes	0.429	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{14} - L_{15}$			712.50	-----	-11	105	-222	176	167	133	-38	-29	0.842	0.157	1.00	Yes	0.463	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		$U_{15} - L_{16}$			477.55	-----	6	25	-203	-18	49	75	-392	-337	0.700	0.297	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.48**
		$U_{17} - L_{16}$			-----	-381.25	53	-60	-56	-68	-26	-106	-152	-231	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.124	1	Yes	0.807	0.087	0.90	Yes	1.00	**5.43**
		$U_{18} - L_{17}$			393.20	-276.44	54	-33	-143	-61	119	219	-254	-369	0.707	0.290	1.00	Yes	0.389	0.160	0.55	Yes	0.636	0.318	0.96	Yes	0.585	0.183	0.77	Yes	1.00	**9.45**
		$U_{19} - L_{18}$			441.58	-34.89	29	-42	-118	1	-78	-92	-131	-163	0.794	0.198	1.00	Yes	0.437	0.109	0.55	Yes	0.080	0.150	0.24	Yes	0.074	0.151	0.23	Yes	1.00	**5.92**
		$U_{20} - L_{19}$			313.49	-----	24	4	-269	124	-63	56	-1060	-75	0.411	0.581	1.00	Yes	0.248	0.320	0.57	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.26**

Moment (Start) AB Operating

Operating Loads - 5C1

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 | | | | | | | |

Moment (Start) AB Operating

Operating Loads - 5C1

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	25.73	-105.27	806	-1013	-239	107	-702	-2581	56	208	0.039	0.858	0.90	Yes	0.023	0.508	0.54	Yes	0.191	0.803	1	Yes	0.190	0.304	0.50	Yes	1.00	**15.38**
		L_1 - L_2	346.24	-----	183	-708	-313	-512	-180	304	-1167	305	0.530	0.463	1.00	Yes	0.323	0.298	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_2 - L_3	632.54	-168.06	-12	112	-738	-543	-191	137	80	-562	0.728	0.269	1.00	Yes	0.421	0.159	0.59	Yes	0.230	0.240	0.47	Yes	0.227	0.178	0.41	Yes	1.00	**4.84**
		L_3 - L_4	582.54	-296.89	19	348	-623	-354	313	-250	-1068	-70	0.670	0.322	1.00	Yes	0.398	0.200	0.60	Yes	0.406	0.180	0.59	Yes	0.402	0.150	0.56	Yes	1.00	**4.47**
		L_4 - L_5	23.46	-562.57	107	465	-503	342	-80	210	-6	-116	0.030	0.171	0.21	Yes	0.018	0.111	0.13	Yes	0.865	0.117	0.99	Yes	0.857	0.133	1.00	Yes	1.00	**3.12**
		L_5 - L_6	-----	-748.12	126	589	-221	381	173	-229	-67	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.122	1	Yes	0.863	0.130	1.00	Yes	1.00	**3.00**
		L_6 - L_7	-----	-1173.37	288	-69	-316	232	-245	360	62	152	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.041	1	Yes	0.944	0.050	1.00	Yes	1.00	**4.74**
		L_7 - L_8	-----	-1205.32	-3	638	-240	1416	530	294	9	333	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.218	1	Yes	0.763	0.187	0.96	Yes	1.00	**3.68**
		L_8 - L_9	-----	-1274.83	1119	-81	661	-27	480	361	222	394	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.181	1	Yes	0.807	0.148	0.96	Yes	1.00	**2.94**
		L_9 - L_{10}	-----	-1060.65	887	-811	-8	-86	635	699	-22	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.093	0.96	Yes	0.854	0.139	1.00	Yes	1.00	**8.24**
		L_{10} - L_{11}	33.41	-563.79	520	-46	107	-498	-284	39	35	-572	0.043	0.238	0.29	Yes	0.025	0.141	0.17	Yes	0.867	0.103	0.97	Yes	0.859	0.138	1.00	Yes	1.00	**6.88**
		L_{11} - L_{12}	475.15	-----	417	-798	117	-635	-189	315	-936	232	0.615	0.375	1.00	Yes	0.369	0.239	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		L_{12} - L_{13}	1056.74	-----	76	-147	-479	-597	-160	120	-22	-485	0.834	0.163	1.00	Yes	0.533	0.099	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_{13} - L_{14}	1289.85	-----	269	-1293	-284	-1099	-41	183	-662	345	0.759	0.233	1.00	Yes	0.491	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_{14} - L_{15}	1550.32	-----	-499	-170	-1745	-374	-180	93	-121	-341	0.757	0.234	1.00	Yes	0.492	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		L_{15} - L_{16}	1655.96	-----	-283	-440	-1181	-1004	-3	-186	-659	48	0.809	0.189	1.00	Yes	0.519	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		L_{16} - L_{17}	1229.60	-----	-423	54	-1315	85	-128	173	55	-304	0.777	0.220	1.00	Yes	0.504	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.77**
		L_{17} - L_{18}	869.29	-----	-226	-15	-831	119	84	-114	-604	-79	0.757	0.237	1.00	Yes	0.485	0.144	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.26**
		L_{18} - L_{19}	424.39	-----	-253	227	-997	523	-164	111	213	-51	0.650	0.343	1.00	Yes	0.439	0.214	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		L_{19} - L_{20}	35.37	-314.16	-181	78	-1292	830	130	29	92	21	0.054	0.415	0.47	Yes	0.033	0.281	0.32	Yes	0.571	0.427	1	Yes	0.566	0.388	0.96	Yes	1.00	**12.36**
	Structure 2	L_0 - L_1	55.97	-300.37	688	-2080	-84	-82	-638	-2214	38	134	0.068	0.787	0.86	Yes	0.040	0.491	0.54	Yes	0.432	0.567	1	Yes	0.429	0.423	0.86	Yes	1.00	**14.70**
		L_1 - L_2	473.16	-----	673	-1556	47	-698	-436	640	-621	308	0.575	0.422	1.00	Yes	0.342	0.268	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.79**
		L_2 - L_3	985.12	-----	281	-865	-385	-692	-28	118	893	253	0.776	0.220	1.00	Yes	0.509	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		L_3 - L_4	1285.84	-----	183	-1541	-326	-1295	-43	621	-736	430	0.756	0.239	1.00	Yes	0.509	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.57**
		L_4 - L_5	1762.52	-----	-418	-384	-1572	-1381	-69	171	405	-433	0.822	0.178	1.00	Yes	0.544	0.106	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_5 - L_6	1818.68	-----	-211	-456	-1058	-1880	197	-96	-776	20	0.780	0.215	1.00	Yes	0.524	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.65**
		L_6 - L_7	1827.51	-----	-547	-188	-2130	-1151	-163	221	-19	-567	0.773	0.222	1.00	Yes	0.514	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		L_7 - L_8	1357.69	-102.39	-264	453	-1470	-304	237	-143	-652	148	0.778	0.216	1.00	Yes	0.511	0.129	0.65	Yes	0.070	0.152	0.23	Yes	0.069	0.162	0.24	Yes	1.00	**4.86**
		L_8 - L_9	1074.82	-465.06	-50	622	-1367	430	-85	192	151	-607	0.752	0.242	1.00	Yes	0.506	0.152	0.66	Yes	0.386	0.107	0.5	Yes	0.383	0.184	0.57	Yes	1.00	**5.55**
		L_9 - L_{10}	521.63	-767.46	-122	838	-1171	332	145	-163	-756	-78	0.466	0.278	0.75	Yes	0.271	0.170	0.45	Yes	0.811	0.129	0.95	Yes	0.806	0.187	1.00	Yes	1.00	**5.63**
		L_{10} - L_{11}	-----	-746.22	20	563	-704	608	-85	87	127	32	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.050	0.94	Yes	0.877	0.123	1.00	Yes	1.00	**3.46**
		L_{11} - L_{12}	-----	-1035.48	-72	1098	-599	903	60	-374	-46	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.122	0.98	Yes	0.849	0.150	1.00	Yes	1.00	**3.68**
		L_{12} - L_{13}	-----	-1507.33	238	-770	-676	-397	-394	163	125	141	-----	-----	-----	-----	-----	-----	-----	-----	0.909	0.082	1	Yes	0.902	0.077	0.98	Yes	1.00	**5.52**
		L_{13} - L_{14}	-----	-1449.11	-437	1351	-1437	3009	716	610	-231	98	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.222	0.96	Yes	0.729	0.263	1.00	Yes	1.00	**4.54**
		L_{14} - L_{15}	-----	-1481.18	2897	-995	1417	-430	315	198	414	362	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.194	0.95	Yes	0.745	0.253	1.00	Yes	1.00	**4.48**
		L_{15} - L_{16}	-----	-1339.67	-59	-65	-1430	-222	453	-380	-267	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.190	1	Yes	0.801	0.142	0.95	Yes	1.00	**7.28**
		L_{16} - L_{17}	-----	-1154.34	1276	-542	620	-129	-268	-244	-181	75	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.126	0.98	Yes	0.841	0.157	1.00	Yes	1.00	**5.53**
		L_{17} - L_{18}	-----	-791.25	1035	-1005	172	-479	-30	778	-835	185	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.155	1	Yes	0.831	0.166	1.00	Yes	1.00	**7.75**
		L_{18} - L_{19}	141.31	-642.17	719	35	-1	-554	-211	60	40	-460	0.160	0.209	0.37	Yes	0.092	0.123	0.22	Yes	0.861	0.117	0.98	Yes	0.856	0.139	1.00	Yes	1.00	**4.66**
		L_{19} - L_{20}	592.71	-563.30	564	191	-138	-909	152	-190	-1000	370	0.671	0.328	1.00	Yes	0.397	0.203	0.61	Yes	0.755	0.150	0.91	Yes	0.751	0.176	0.93	Yes	1.00	**6.48**
		L_{20} - L_{21}	1014.57	-381.93	502	-39	-991	-1003	-196	66	384	-379	0.809	0.188	1.00	Yes	0.531	0.113	0.65	Yes	0.361	0.160	0.53	Yes	0.358	0.146	0.51	Yes	1.00	**6.81**
		L_{21} - L_{22}	881.24	-76.23	128	-275	-709	-1348	137	-105	-879	19	0.703	0.291	1.00	Yes	0.470	0.185	0.66	Yes	0.072	0.218	0.29	Yes	0.072	0.197	0.27	Yes	1.00	**4.53**
		L_{22} - L_{23}	860.80	-30.76	-163	-42	-2001	-380	-122	155	46	-155	0.686	0.309	1.00	Yes	0.459	0.193	0.66	Yes	0.029	0.336	0.37	Yes	0.029	0.292	0.33	Yes	1.00	**5.29**
		L_{23} - L_{24}	908.19	-437.88	-11	560	-1400	-364	177	-144	-629	255	0.724	0.272	1.00	Yes	0.475	0.165	0.64	Yes	0.414	0.173	0.59	Yes	0.411	0.204	0.62	Yes	1.00	**7.30**
		L_{24} - L_{25}	446.69	-586.13	223	542	-1110	386	-105	150	307	-427	0.506	0.279	0.79	Yes	0.299	0.176	0.48	Yes	0.786	0.158	0.95	Yes	0.781	0.214	1.00	Yes	1.00	**6.57**
		L_{25} - L_{26}	-----	-640.24	28	726	-613	471	101	-169	-355	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.118	0.98	Yes	0.853	0.140	1.00	Yes	1.00	**4.59**
		L_{26} - L_{27}	-----	-841.93	199	496	-679	638	-51	227	121	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.073	0.97	Yes	0.884	0.109	1.00	Yes	1.00	**4.67**
		L_{27} - L_{28}	-----	-1149.47	55	1291	-699	1277	250	-38	-237	126	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.132	0.98	Yes	0.837	0.159	1.00	Yes	1.00	**6.15**
		L_{28} - L_{29}	-----	-1474.87	521	-584	-592	-792	-35	994	-45	15	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.104	1	Yes	0.882	0.079	0.97	Yes	1.00	**7.51**
		L_{29} - L_{30}	-----	-1435.43	-535	1320	-1620	3147	809	891	-146	149	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.234	0.97	Yes	0.722	0.275	1.00	Yes	1.00	**5.02**
		L_{30} - L_{31}	-----	-1498.22	2758	-883	1608	-462	359	303	596	470	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.203	0.97	Yes	0.754	0.241	1.00	Yes	1.00	**3.53**
		L_{31} - L_{32}	-----	-1370.05	15	-384	-1190	-426	577	-424	-269	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.166	1	Yes	0.820	0.118	0.94	Yes	1.00	**7.01**
		L_{32} - L_{33}	-----	-1046.37	1012	-483	568	-312	-151	105	-533	46	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.134	1	Yes	0.858	0.138	1.00	Yes	1.00	**3.92**
		L_{33} - L_{34}	-----	-632.46	1124	-1455	258	-759	-112	1164	-1013	482	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.195	0.95	Yes	0.743	0.254	1.00	Yes	1.00	**9.52**
		L_{34} - L_{35}	583.27	-786.66	862	-87	-135	-1052	-221	93	263	-831	0.521	0.268	0.79	Yes	0.303	0.164	0.47	Yes	0.832	0.119	0.96	Yes	0.826	0.168	1.00	Yes	1.00	**7.11**
		L_{35} - L_{36}	1040.20	-543.87	704	-21	-170	-1094	182	-164	-1281	375	0.728	0.268	1.00	Yes	0.490	0.172	0.67	Yes	0.451	0.139	0.6	Yes	0.448	0.148	0.60	Yes	1.00	**7.88**
		L_{36} - L_{37}	1372.32	-----	352	-224	-842	-1463	-212	147	83	-596	0.787	0.210	1.00	Yes	0.517	0.126	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_{37} - L_{38}	1798.08	-----	-86	-607	-1833	-1949	67	-207	-1062	343	0.761	0.237	1.00	Yes	0.506	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		L_{38} - L_{39}	1807.23	-----	-540	-223	-2273	-798	-123	184	220	-288	0.775	0.220	1.00	Yes	0.520	0.134	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_{39} - L_{40}	1718.15	-----	-379	-427	-1722	-930	121	-159	-452	329	0.801	0.193	1.00	Yes	0.530	0.116	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_{40} - L_{41}	1340.91	-----	-452	26	-1576	-79	-39	279	165	-320	0.788	0.210	1.00	Yes	0.531	0.130	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		L_{41} - L_{42}	959.63	-----	-239	-69	-1206	92	145	-67	-587	77	0.756	0.237	1.00	Yes	0.496	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		L_{42} - L_{43}	528.86	-----	-257	209	-1366	548	150	356	455	125	0.642	0.353	1.00	Yes	0.382	0.225	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.00**
		L_{43} - L_{44}	-----	-331.33	-153	-1	-1999	727	525	153	-159	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.476	0.515	1	Yes	0.473	0.407	0.89	Yes	1.00	**16.28**
	Structure 3	L_0 - L_1	-----	-405.98	459	-826	45	-161	-122	-552	27	121	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.254	1	Yes	0.731	0.248	0.98	Yes	1.00	**5.80**
		L_1 - L_2	203.34	-----	916	-1450	84	-428	-166	1183	-406	231	0.311	0.680	1.00	Yes	0.211	0.435	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.36**
		L_2 - L_3	826.97	-----	326	-705	-244	-560	178	-236	1066	293	0.720	0.272	1.00	Yes	0.461	0.168	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.94**
		L_3 - L_4	1161.70	-----	311	-1293	-286	-1055	-57	795	-780	469	0.735	0.261	1.00	Yes	0.477	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.85**
		L_4 - L_5	1610.23	-----	-373	-259	-1336	-962	-30	230	87	-646	0.787	0.206	1.00	Yes	0.505	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.84**
		L_5 - L_6	1548.32	-----	-139	-486	-686	-1474	253	-51	-870	157	0.756	0.239	1.00	Yes	0.492	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_6 - L_7	1260.87	-----	-497	240	-1586	184	-54	254	-37	-448	0.742	0.256	1.00	Yes	0.480	0.157	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		L_7 - L_8	1003.95	-15.22	-104	160	-704	-173	138	-173	-640	-52	0.792	0.200	1.00	Yes	0.507	0.121	0.63	Yes	0.014	0.146	0.17	Yes	0.014	0.125	0.14	Yes	1.00	**5.46**
		L_8 - L_9	541.66	-317.72	-159	437	-908	412	-112	158	286	-161	0.701	0.290	1.00	Yes	0.421	0.190	0.62	Yes	0.488	0.119	0.61	Yes	0.484	0.240	0.73	Yes	1.00	**6.03**
		L_9 - L_{10}	-----	-554.82	-66	519	-571	332	144	-154	-161	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.079	0.94	Yes	0.845	0.151	1.00	Yes	1.00	**5.15**
		L_{10} - L_{11}	-----	-1096.61	183	-120	-698	514	-329	-48	358	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.045	0.94	Yes	0.883	0.110	1.00	Yes	1.00	**8.50**
		L_{11} - L_{12}	-----	-1215.70	1	750	-297	1418	598	242	-388	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.211	1	Yes	0.770	0.188	0.96	Yes	1.00	**5.77**
		L_{12} - L_{13}	-----	-1230.47	1406	-103	691	-4	446	239	50	327	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.779	0.186	0.97	Yes	1.00	**4.23**
		L_{13} - L_{14}	-----	-1096.68	551	-705	-276	-5	-122	304	-568	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.089	0.99	Yes	0.883	0.111	1.00	Yes	1.00	**8.11**
		L_{14} - L_{15}	-----	-740.85	580	115	183	-261	-261	83	-65	-487	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.135	1	Yes	0.855	0.128	0.99	Yes	1.00	**4.01**
		L_{15} - L_{16}	150.52	-551.55	479	136	111	-458	264	-218	-1038	185	0.195	0.312	0.51	Yes	0.117	0.195	0.32	Yes	0.848	0.149	1	Yes	0.840	0.127	0.97	Yes	1.00	**4.38**
		L_{16} - L_{17}	687.62	-204.06	336	-50	-726	-436	-176	185	55	-199	0.791	0.207	1.00	Yes	0.470	0.134	0.61	Yes	0.279	0.217	0.5	Yes	0.276	0.175	0.46	Yes	1.00	**4.97**
		L_{17} - L_{18}	652.41	-62.59	36	-99	-716	-510	110	-112	-434	85	0.751	0.243	1.00	Yes	0.434	0.144	0.58	Yes	0.086	0.229	0.32	Yes	0.085	0.173	0.26	Yes	1.00	**5.01**
		L_{18} - L_{19}	443.00	-19.71	-4	-27	-847	63	-104	202	101	-311	0.678	0.321	1.00	Yes	0.414	0.214	0.63	Yes	0.036	0.203	0.24	Yes	0.035	0.254	0.29	Yes	1.00	**6.03**
		L_{19} - L_{20}	82.06	-75.60	175	-288	-1796	1313	135	37	-1530	-416	0.126	0.867	1.00	Yes	0.074	0.522	0.60	Yes	0.137	0.783	0.93	Yes	0.136	0.539	0.68	Yes	1.00	**26.92**

Moment (Start) AB Operating

Operating Loads - 5C1

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	-----	-280.80	-5	52	-100	158	172	55	-1007	-323	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.370	1	Yes	0.594	0.202	0.80	Yes	1.00	**1.73**
		U_1 - L_1	59.28	-320.76	58	-48	-251	249	631	208	-726	-262	0.107	0.531	0.64	Yes	0.059	0.292	0.36	Yes	0.701	0.276	0.98	Yes	0.679	0.321	1.00	Yes	1.00	**5.48**
		U_2 - L_2	130.86	-214.46	116	-130	-140	177	882	247	-1807	-596	0.235	0.750	0.99	Yes	0.129	0.412	0.55	Yes	0.469	0.529	1	Yes	0.454	0.227	0.69	Yes	1.00	**6.70**
		U_3 - L_3	132.96	-60.64	202	-189	-64	70	-1731	-829	-175	16	0.239	0.759	1.00	Yes	0.132	0.417	0.55	Yes	0.133	0.496	0.63	Yes	0.128	0.258	0.39	Yes	1.00	**8.71**
		U_4 - L_4	-----	-185.30	264	-259	56	-64	-1856	-848	1059	336	-----	-----	-----	-----	-----	-----	-----	-----	0.407	0.585	1	Yes	0.392	0.337	0.73	Yes	1.00	**8.40**
		U_5 - L_5	-----	-363.32	181	-205	78	-84	-68	141	1079	613	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.336	1	Yes	0.627	0.208	0.84	Yes	1.00	**3.59**
		U_6 - L_6	-----	-398.77	199	-206	75	-64	637	365	1639	768	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.389	1	Yes	0.572	0.180	0.76	Yes	1.00	**3.22**
		U_7 - L_7	-----	-387.35	261	-280	98	-112	472	183	1197	295	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.347	1	Yes	0.598	0.276	0.88	Yes	1.00	**3.12**
		U_8 - L_8	-----	-1227.58	226	-276	-425	503	-257	-162	-1036	-621	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.112	1	Yes	0.851	0.094	0.95	Yes	1.00	**6.00**
		U_9 - L_9	-----	-660.20	-229	260	-413	453	604	231	-278	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.179	0.97	Yes	0.746	0.252	1.00	Yes	1.00	**2.91**
		U_{10} - L_{10}	-----	-762.36	-158	155	-347	375	620	285	-870	-253	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.209	1	Yes	0.752	0.194	0.95	Yes	1.00	**4.21**
		U_{11} - L_{11}	-----	-655.88	-165	221	-387	489	614	382	17	253	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.177	0.97	Yes	0.763	0.227	1.00	Yes	1.00	**4.73**
		U_{12} - L_{12}	-----	-520.92	-136	148	-318	326	-105	98	-412	9	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.168	0.93	Yes	0.715	0.278	1.00	Yes	1.00	**4.86**
		U_{13} - L_{13}	-----	-373.59	-68	90	-214	242	15	58	-530	86	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1	Yes	0.716	0.276	1.00	Yes	1.00	**4.53**
		U_{14} - L_{14}	-----	-191.31	120	-122	-240	254	-1923	-673	-41	-582	-----	-----	-----	-----	-----	-----	-----	-----	0.427	0.566	1	Yes	0.405	0.325	0.73	Yes	1.00	**12.55**
		U_{15} - L_{15}	2.73	-280.81	209	-229	-24	8	-1178	-240	26	-358	0.005	0.634	0.64	Yes	0.003	0.349	0.36	Yes	0.629	0.366	1	Yes	0.594	0.293	0.89	Yes	1.00	**6.07**
		U_{16} - L_{16}	-----	-321.12	239	-248	46	-51	-559	-100	473	107	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.242	0.97	Yes	0.679	0.318	1.00	Yes	1.00	**4.46**
		U_{17} - L_{17}	-----	-420.46	204	-222	80	-94	108	105	505	201	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.212	1	Yes	0.725	0.225	0.96	Yes	1.00	**3.10**
		U_{18} - L_{18}	-----	-531.83	433	-446	176	-182	-69	-19	682	173	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.183	0.97	Yes	0.740	0.253	1.00	Yes	1.00	**4.01**
		U_{19} - L_{19}	-----	-648.79	489	-510	182	-195	-165	-8	588	113	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.158	0.97	Yes	0.755	0.237	1.00	Yes	1.00	**4.97**
		U_{20} - L_{20}	-----	-582.75	430	-517	236	-307	230	30	692	91	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.222	1	Yes	0.678	0.240	0.92	Yes	1.00	**3.65**
	Structure 2	U_0 - L_0	-----	-624.67	-155	273	-310	459	-17	-3	-1038	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1	Yes	0.669	0.195	0.87	Yes	1.00	**2.08**
		U_1 - L_1	-----	-712.80	-203	210	-548	548	628	159	-290	26	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.147	0.97	Yes	0.764	0.233	1.00	Yes	1.00	**3.74**
		U_2 - L_2	-----	-598.80	-149	165	-437	459	626	282	-577	154	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.178	0.98	Yes	0.763	0.235	1.00	Yes	1.00	**3.47**
		U_3 - L_3	-----	-459.42	-70	81	-219	234	551	262	145	264	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1	Yes	0.720	0.214	0.94	Yes	1.00	**3.15**
		U_4 - L_4	-----	-323.37	-12	23	-195	203	570	231	-253	126	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.263	1	Yes	0.684	0.260	0.95	Yes	1.00	**4.08**
		U_5 - L_5	83.76	-264.17	68	-62	-148	173	564	177	-1076	24	0.151	0.533	0.69	Yes	0.083	0.293	0.38	Yes	0.597	0.403	1	Yes	0.559	0.222	0.79	Yes	1.00	**5.74**
		U_6 - L_6	294.50	-77.03	182	-183	-108	113	-798	-338	-247	31	0.530	0.465	1.00	Yes	0.291	0.256	0.55	Yes	0.173	0.267	0.45	Yes	0.163	0.234	0.40	Yes	1.00	**7.97**
		U_7 - L_7	-----	-200.36	276	-308	29	-40	-1713	-571	-440	-375	-----	-----	-----	-----	-----	-----	-----	-----	0.453	0.540	1	Yes	0.424	0.394	0.82	Yes	1.00	**8.78**
		U_8 - L_8	-----	-473.30	331	-355	155	-174	-486	-98	539	56	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.173	0.86	Yes	0.682	0.310	1.00	Yes	1.00	**3.54**
		U_9 - L_9	-----	-690.40	580	-591	268	-289	-176	80	733	42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.155	0.93	Yes	0.740	0.251	1.00	Yes	1.00	**4.54**
		U_{10} - L_{10}	-----	-750.87	506	-530	234	-234	-224	166	1190	708	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.258	1	Yes	0.702	0.234	0.94	Yes	1.00	**4.42**
		U_{11} - L_{11}	-----	-730.65	453	-457	227	-220	398	474	1193	676	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.683	0.202	0.89	Yes	1.00	**3.54**
		U_{12} - L_{12}	-----	-716.86	411	-404	186	-168	930	494	1500	649	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.305	1	Yes	0.621	0.176	0.80	Yes	1.00	**3.44**
		U_{13} - L_{13}	-----	-607.69	480	-468	224	-222	411	179	1281	293	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.313	1	Yes	0.586	0.230	0.82	Yes	1.00	**3.46**
		U_{14} - L_{14}	-----	-1221.22	478	-459	-605	561	774	-68	-663	-537	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.100	1	Yes	0.810	0.107	0.92	Yes	1.00	**7.44**
		U_{15} - L_{15}	-----	-675.54	-259	255	-602	575	773	106	-102	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.243	1	Yes	0.651	0.288	0.94	Yes	1.00	**4.30**
		U_{16} - L_{16}	-----	-723.78	-184	172	-521	504	671	192	-299	29	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.161	1	Yes	0.776	0.221	1.00	Yes	1.00	**4.09**
		U_{17} - L_{17}	-----	-646.56	-193	194	-520	524	594	193	-667	91	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.167	0.97	Yes	0.753	0.243	1.00	Yes	1.00	**3.89**
		U_{18} - L_{18}	-----	-580.75	-151	157	-483	501	619	211	4	134	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.167	0.95	Yes	0.740	0.256	1.00	Yes	1.00	**4.09**
		U_{19} - L_{19}	-----	-481.86	-82	84	-290	289	519	192	-291	117	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.168	0.9	Yes	0.720	0.279	1.00	Yes	1.00	**3.90**
		U_{20} - L_{20}	-----	-362.45	-36	41	-194	207	518	179	-658	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.252	1	Yes	0.694	0.236	0.94	Yes	1.00	**3.98**
		U_{21} - L_{21}	38.97	-318.18	29	-19	-234	250	-119	-172	-123	110	0.070	0.370	0.44	Yes	0.039	0.203	0.25	Yes	0.719	0.146	0.87	Yes	0.673	0.320	1.00	Yes	1.00	**6.45**
		U_{22} - L_{22}	-----	-191.84	305	-338	-196	203	-108	-222	-1659	-964	-----	-----	-----	-----	-----	-----	-----	-----	0.432	0.559	1	Yes	0.406	0.432	0.84	Yes	1.00	**14.77**
		U_{23} - L_{23}	-----	-321.96	224	-242	8	-11	-606	-44	523	165	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.681	0.310	1.00	Yes	1.00	**4.47**
		U_{24} - L_{24}	-----	-368.68	224	-232	49	-54	51	85	583	203	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1	Yes	0.706	0.265	0.98	Yes	1.00	**3.60**
		U_{25} - L_{25}	-----	-475.41	298	-297	96	-98	-79	120	588	223	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.183	0.9	Yes	0.710	0.287	1.00	Yes	1.00	**3.54**
		U_{26} - L_{26}	-----	-574.14	495	-519	165	-173	50	240	707	300	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.189	0.96	Yes	0.732	0.266	1.00	Yes	1.00	**3.94**
		U_{27} - L_{27}	-----	-634.92	553	-557	198	-201	397	429	769	312	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.193	0.98	Yes	0.739	0.259	1.00	Yes	1.00	**4.38**
		U_{28} - L_{28}	-----	-610.35	456	-440	155	-128	716	371	1675	560	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.291	1	Yes	0.654	0.193	0.85	Yes	1.00	**3.92**
		U_{29} - L_{29}	-----	-606.71	559	-543	145	-150	283	152	1319	183	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.319	1	Yes	0.585	0.268	0.86	Yes	1.00	**5.27**
		U_{30} - L_{30}	-----	-1230.83	319	-332	-627	556	482	-189	-660	-393	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.099	1	Yes	0.816	0.111	0.93	Yes	1.00	**6.54**
		U_{31} - L_{31}	-----	-713.39	-304	296	-542	519	518	94	-246	33	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1	Yes	0.688	0.259	0.95	Yes	1.00	**3.17**
		U_{32} - L_{32}	-----	-846.82	-218	191	-455	451	611	186	-691	3	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.734	0.195	0.93	Yes	1.00	**3.63**
		U_{33} - L_{33}	-----	-824.19	-246	233	-509	503	441	199	-159	182	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.140	0.97	Yes	0.771	0.224	1.00	Yes	1.00	**4.28**
		U_{34} - L_{34}	-----	-807.73	-236	251	-525	545	553	340	-708	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.184	0.99	Yes	0.755	0.241	1.00	Yes	1.00	**4.87**
		U_{35} - L_{35}	-----	-686.78	-254	269	-542	564	631	379	-1178	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1	Yes	0.736	0.239	0.98	Yes	1.00	**4.61**
		U_{36} - L_{36}	-----	-474.18	-134	158	-329	351	210	156	-28	141	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.122	0.81	Yes	0.683	0.307	1.00	Yes	1.00	**4.51**
		U_{37} - L_{37}	-----	-171.72	0	6	-262	296	-750	-248	-199	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.388	0.610	1	Yes	0.363	0.378	0.75	Yes	1.00	**8.91**
		U_{38} - L_{38}	223.00	-165.03	162	-172	-137	139	-1300	-348	29	-352	0.401	0.596	1.00	Yes	0.221	0.328	0.55	Yes	0.371	0.362	0.74	Yes	0.349	0.219	0.57	Yes	1.00	**8.17**
		U_{39} - L_{39}	65.31	-323.73	219	-241	-59	54	-568	-63	533	157	0.117	0.473	0.60	Yes	0.065	0.260	0.33	Yes	0.731	0.266	1	Yes	0.685	0.308	1.00	Yes	1.00	**6.25**
		U_{40} - L_{40}	-----	-325.17	213	-218	32	-40	-169	-19	599	172	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.688	0.278	0.97	Yes	1.00	**3.79**
		U_{41} - L_{41}	-----	-461.11	233	-246	85	-94	97	104	579	192	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.224	0.95	Yes	1.00	**3.15**
		U_{42} - L_{42}	-----	-576.89	492	-499	167	-176	220	118	668	170	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.172	0.95	Yes	0.735	0.255	1.00	Yes	1.00	**4.10**
		U_{43} - L_{43}	-----	-710.52	537	-557	184	-203	411	215	620	186	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.153	0.97	Yes	0.761	0.236	1.00	Yes	1.00	**4.98**
		U_{44} - L_{44}	-----	-656.24	461	-590	245	-312	579	98	733	124	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.214	1	Yes	0.703	0.250	0.96	Yes	1.00	**4.00**
	Structure 3	U_0 - L_0	-----	-563.34	-135	238	-280	400	109	14	-882	-116	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.250	1	Yes	0.656	0.185	0.85	Yes	1.00	**2.01**
		U_1 - L_1	-----	-645.95	-204	225	-521	506	738	139	-56	126	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.182	0.99	Yes	0.752	0.242	1.00	Yes	1.00	**3.86**
		U_2 - L_2	-----	-543.28	-158	169	-398	416	662	307	-271	189	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.195	1	Yes	0.756	0.236	1.00	Yes	1.00	**3.48**
		U_3 - L_3	-----	-407.37	-69	84	-177	199	565	271	-378	186	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1	Yes	0.703	0.202	0.91	Yes	1.00	**2.75**
		U_4 - L_4	-----	-316.53	-26	32	-225	235	626	223	-253	131	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.277	1	Yes	0.670	0.300	0.97	Yes	1.00	**5.23**
		U_5 - L_5	79.30	-279.61	63	-52	-213	233	-220	-157	-919	14	0.143	0.564	0.71	Yes	0.078	0.310	0.39	Yes	0.627	0.369	1	Yes	0.592	0.298	0.89	Yes	1.00	**7.90**
		U_6 - L_6	-----	-176.92	229	-243	-29	27	-2073	-674	288	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.395	0.604	1	Yes	0.374	0.311	0.69	Yes	1.00	**8.06**
		U_7 - L_7	-----	-367.76	229	-254	82	-101	-527	-120	529	14	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.218	0.97	Yes	0.705	0.290	1.00	Yes	1.00	**3.60**
		U_8 - L_8	-----	-515.72	334	-336	146	-151	-588	-159	469	180	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.198	0.95	Yes	0.708	0.287	1.00	Yes	1.00	**4.28**
		U_9 - L_9	-----	-630.57	380	-479	180	-229	261	360	1057	615	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.242	1	Yes	0.734	0.222	0.96	Yes	1.00	**4.30**
		U_{10} - L_{10}	-----	-606.09	304	-316	153	-141	977	628	1862	957	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.366	1	Yes	0.598	0.164	0.77	Yes	1.00	**3.43**
		U_{11} - L_{11}	-----	-588.88	384	-433	190	-221	575	391	1291	575	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.291	1	Yes	0.665	0.240	0.91	Yes	1.00	**3.35**
		U_{12} - L_{12}	-----	-1132.09	302	-408	-338	354	683	182	-1571	-544	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.175	1	Yes	0.785	0.076	0.87	Yes	1.00	**6.19**
		U_{13} - L_{13}	-----	-448.98	-153	167	-285	302	682	107	-397	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.244	1	Yes	0.693	0.297	0.99	Yes	1.00	**2.82**
		U_{14} - L_{14}	-----	-509.22	-95	85	-243	256	795	225	-560	-229	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.226	1	Yes	0.730	0.224	0.96	Yes	1.00	**4.59**
		U_{15} - L_{15}	-----	-405.07	-79	84	-198	224	784	256	-680	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.259	1	Yes	0.699	0.227	0.93	Yes	1.00	**4.72**
		U_{16} - L_{16}	-----	-165.61	-46	56	-234	232	-827	-371	1111	212	-----	-----	-----	-----	-----	-----	-----	-----	0.364	0.636	1	Yes	0.350	0.299	0.65	Yes	1.00	**7.14**
		U_{17} - L_{17}	134.62	-181.88	135	-157	-188	184	-1779	-655	158	-265	0.242	0.756	1.00	Yes	0.133	0.416	0.55	Yes	0.399	0.499	0.9	Yes	0.385	0.241	0.63	Yes	1.00	**9.45**
		U_{18} - L_{18}	122.75	-296.67	247	-289	-128	139	-671	-366	446	142	0.221	0.564	0.79	Yes	0.121	0.310	0.44	Yes	0.648	0.292	0.95	Yes	0.628	0.370	1.00	Yes	1.00	**8.31**
		U_{19} - L_{19}	8.78	-329.24	228	-236	-38	22	131	86	418	216	0.016	0.423	0.44	Yes	0.009	0.233	0.25	Yes	0.719	0.209	0.93	Yes	0.697	0.302	1.00	Yes	1.00	**5.57**
		U_{20} - L_{20}	-----	-322.28	194	-242	75	-85	289	93	602	193	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.273	1	Yes	0.682	0.309	1.00	Yes	1.00	**3.19**

Moment (Start) AB Operating

			Operating Loads - 5C1																													
			Axial Force		ZZ Axis Bending				YY Axis Bending				Calc: BKC Date: 10/28/2009																			
													Check: NRF Date: 11/2/2009																			
	Vehicle	Pedestrian	Max.	Max.	Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Tension								Compression											
DL Factor:	1.300	1.300	Tension	Comp.	Start	End	Start	End	Start	End	Start	End	Yield			Pass	Fracture			Pass	Buckle			Pass	Yield			Pass	Controlling Bi-Axial Moment & Axial Value	Rating		
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		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total					
South Truss - Diagonals	Structure 1	U_0 - L_1	438.08	-----	22	-11	-103	59	-114	-22	-1198	-444	0.575	0.422	1.00	Yes	0.347	0.233	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**		
		U_1 - L_2	301.58	-139.12	20	-18	-88	-3	445	253	-1181	-673	0.542	0.454	1.00	Yes	0.298	0.250	0.55	Yes	0.319	0.408	0.73	Yes	0.294	0.112	0.41	Yes	1.00	**5.10**		
		U_2 - L_3	100.05	-271.55	56	-31	-83	-39	577	311	-818	-641	0.180	0.343	0.53	Yes	0.099	0.189	0.29	Yes	0.625	0.369	1	Yes	0.575	0.107	0.69	Yes	1.00	**7.56**		
		U_3 - L_4	-----	-275.52	45	-10	-23	-69	521	287	-959	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.630	0.367	1	Yes	0.583	0.088	0.68	Yes	1.00	**5.41**		
		U_4 - L_5	518.12	-----	-1	82	-123	22	-134	135	176	489	0.760	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**		
		U_5 - L_6	670.43	-----	-3	132	-235	221	70	93	-320	377	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**		
		U_6 - L_7	598.29	-----	-28	82	-276	238	-706	-51	-70	277	0.707	0.286	1.00	Yes	0.389	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**		
		U_7 - L_8	646.85	-----	76	196	-96	309	256	-149	134	275	0.765	0.226	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**		
		U_8 - L_9	958.34	-----	40	207	-88	357	539	287	-94	-560	0.766	0.230	1.00	Yes	0.475	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**		
		U_9 - L_{10}	957.53	-----	-113	139	-298	235	607	275	-574	-767	0.765	0.231	1.00	Yes	0.474	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**		
		U_{10} - L_{11}	885.53	-----	-70	132	-268	175	294	36	-742	-920	0.748	0.245	1.00	Yes	0.463	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**		
		U_{11} - L_{12}	678.93	-----	-91	77	-244	64	193	-26	-1375	-920	0.672	0.319	1.00	Yes	0.369	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**		
		U_{12} - L_{13}	528.92	-----	-85	62	-197	116	105	-33	-899	-705	0.645	0.347	1.00	Yes	0.406	0.200	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**		
		U_{13} - L_{14}	337.48	-----	-32	-16	-90	12	-354	-224	-942	-530	0.607	0.388	1.00	Yes	0.334	0.213	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**		
		U_{15} - L_{14}	302.08	-230.64	26	-99	-137	-44	260	-179	795	543	0.543	0.405	0.95	Yes	0.299	0.223	0.53	Yes	0.540	0.458	1	Yes	0.488	0.175	0.67	Yes	1.00	**10.33**		
		U_{16} - L_{15}	397.81	-3.34	-17	-3	-152	84	-289	-127	-102	208	0.715	0.278	1.00	Yes	0.394	0.153	0.55	Yes	0.008	0.162	0.17	Yes	0.007	0.194	0.21	Yes	1.00	**6.20**		
		U_{17} - L_{16}	523.85	-----	-47	23	-149	95	-304	-104	-164	16	0.768	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**		
		U_{18} - L_{17}	616.25	-----	-131	89	-342	244	-400	-111	-171	179	0.729	0.266	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**		
		U_{19} - L_{18}	692.38	-----	-134	97	-336	253	-456	-203	-356	-91	0.750	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**		
		U_{20} - L_{19}	701.28	-----	-176	142	-384	327	-260	-141	-171	-2	0.760	0.239	1.00	Yes	0.418	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**		
	Structure 2	U_0 - L_1	669.64	-----	-89	136	-279	320	-325	-90	-1229	-357	0.662	0.332	1.00	Yes	0.364	0.183	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**		
		U_1 - L_2	710.98	-----	-161	115	-384	282	147	-27	-538	-737	0.703	0.288	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**		
		U_2 - L_3	577.38	-----	-111	82	-319	243	141	-14	-747	-674	0.683	0.316	1.00	Yes	0.375	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**		
		U_3 - L_4	532.78	-----	-49	23	-170	110	180	17	-314	-617	0.710	0.285	1.00	Yes	0.391	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**		
		U_4 - L_5	344.38	-58.15	7	-21	-130	73	255	48	-400	-717	0.619	0.373	1.00	Yes	0.341	0.205	0.55	Yes	0.144	0.230	0.38	Yes	0.123	0.166	0.29	Yes	1.00	**5.17**		
		U_5 - L_6	348.17	-235.26	67	-68	-108	31	401	125	-426	-788	0.626	0.367	1.00	Yes	0.344	0.202	0.55	Yes	0.556	0.281	0.84	Yes	0.498	0.138	0.64	Yes	1.00	**8.67**		
		U_6 - L_7	-----	-399.12	50	-106	-22	-46	-409	-39	31	-447	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.141	1	Yes	0.765	0.121	0.89	Yes	1.00	**4.20**		
		U_8 - L_7	585.07	-----	-79	46	-213	135	-153	-154	242	284	0.746	0.249	1.00	Yes	0.470	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**		
		U_8 - L_9	716.31	-----	-161	157	-341	241	-296	-84	-2	116	0.776	0.223	1.00	Yes	0.427	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**		
		U_{10} - L_9	798.92	-----	-123	158	-343	251	-176	28	9	301	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**		
		U_{11} - L_{10}	864.26	-----	-128	194	-345	293	-248	61	36	438	0.787	0.206	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**		
		U_{12} - L_{11}	838.57	-----	-130	175	-337	342	-600	65	-350	329	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**		
		U_{13} - L_{12}	711.38	-----	-158	162	-407	372	-691	-56	-316	132	0.704	0.292	1.00	Yes	0.387	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**		
		U_{14} - L_{13}	759.53	-----	44	206	-260	439	291	-112	-19	137	0.751	0.247	1.00	Yes	0.413	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**		
		U_{14} - L_{15}	596.95	-----	-14	171	-192	344	499	230	105	-287	0.706	0.285	1.00	Yes	0.388	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**		
		U_{15} - L_{16}	587.40	-----	-170	167	-346	317	599	185	197	-298	0.694	0.304	1.00	Yes	0.382	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.75**		
		U_{16} - L_{17}	679.83	-----	-126	152	-330	343	374	110	-76	-494	0.736	0.257	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**		
		U_{17} - L_{18}	623.06	-----	-108	123	-290	274	361	92	-515	-480	0.737	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**		
		U_{18} - L_{19}	618.90	-----	-79	93	-272	243	294	81	-62	-607	0.732	0.264	1.00	Yes	0.402	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**		
		U_{19} - L_{20}	545.20	-----	-38	43	-187	143	301	89	-417	-661	0.695	0.302	1.00	Yes	0.382	0.173	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**		
		U_{20} - L_{21}	359.10	-----	-7	7	-127	88	256	84	-651	-516	0.646	0.351	1.00	Yes	0.355	0.193	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**		
		U_{21} - L_{22}	344.58	-113.26	19	-24	-110	21	326	193	-192	-805	0.620	0.374	1.00	Yes	0.341	0.206	0.55	Yes	0.268	0.311	0.58	Yes	0.240	0.141	0.39	Yes	1.00	**7.11**		
		U_{23} - L_{22}	374.06	-101.95	16	-21	-134	35	-293	-105	515	365	0.673	0.320	1.00	Yes	0.370	0.176	0.55	Yes	0.243	0.239	0.49	Yes	0.216	0.171	0.39	Yes	1.00	**6.76**		
		U_{24} - L_{23}	418.85	-----	-15	15	-127	103	-257	-64	-44	153	0.753	0.237	1.00	Yes	0.414	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**		
		U_{25} - L_{24}	595.97	-----	-38	46	-197	174	-302	-83	131	169	0.760	0.238	1.00	Yes	0.418	0.134	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**		
		U_{26} - L_{25}	649.67	-----	-77	95	-288	264	-255	-58	88	339	0.768	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**		
		U_{27} - L_{26}	643.37	-----	-100	143	-289	291	-401	127	-92	290	0.761	0.237	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**		
		U_{28} - L_{27}	672.22	-----	-93	148	-304	342	-567	45	-384	251	0.728	0.268	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**		
		U_{29} - L_{28}	564.18	-----	-90	105	-339	318	-737	-36	-145	220	0.667	0.325	1.00	Yes	0.367	0.179	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.17**		
		U_{30} - L_{29}	623.41	-----	57	160	-190	356	310	-125	-128	77	0.737	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**		
		U_{30} - L_{31}	733.26	-----	-51	232	-256	428	460	203	22	-493	0.725	0.272	1.00	Yes	0.399	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**		
		U_{31} - L_{32}	730.57	-----	-231	218	-425	372	510	146	-137	-406	0.723	0.274	1.00	Yes	0.398	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.79**		
		U_{32} - L_{33}	827.07	-----	-155	200	-347	333	447	131	-726	-655	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**		
		U_{33} - L_{34}	833.26	-----	-144	177	-319	267	350	84	-398	-745	0.759	0.237	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**		
		U_{34} - L_{35}	755.18	-----	-131	139	-293	218	145	-6	-471	-728	0.747	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.64**		
		U_{35} - L_{36}	641.20	-----	-156	137	-315	203	170	30	-857	-690	0.694	0.302	1.00	Yes	0.382	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**		
		U_{36} - L_{37}	524.35	-----	-77	31	-192	121	-316	-227	-666	-773	0.669	0.329	1.00	Yes	0.421	0.189	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**		
		U_{38} - L_{37}	-----	-376.77	53	-102	-63	-39	-43	-227	71	103	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.177	1	Yes	0.722	0.117	0.84	Yes	1.00	**6.85**		
		U_{39} - L_{38}	404.86	-180.45	50	-59	-123	53	-376	-89	-109	95	0.728	0.266	1.00	Yes	0.400	0.147	0.55	Yes	0.430	0.228	0.66	Yes	0.382	0.158	0.54	Yes	1.00	**7.68**		
		U_{40} - L_{39}	393.58	-23.04	-2	-12	-137	90	-385	-103	-47	140	0.708	0.287	1.00	Yes	0.389	0.158	0.55	Yes	0.055	0.168	0.23	Yes	0.049	0.175	0.23	Yes	1.00	**5.11**		
		U_{41} - L_{40}	558.04	-----	-53	28	-182	121	-417	-182	-135	90	0.744	0.253	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**		
		U_{42} - L_{41}	624.17	-----	-117	87	-331	261	-404	-173	-259	82	0.738	0.261	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**		
		U_{43} - L_{42}	769.17	-----	-132	100	-382	307	-375	-195	-218	42	0.761	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**		
		U_{44} - L_{43}	801.15	-----	-159	152	-372	371	-171	11	-107	61	0.793	0.198	1.00	Yes	0.436	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**		
	Structure 3	U_0 - L_1	564.94	-----	-72	107	-280	276	-233	-56	-1440	-203	0.612	0.380	1.00	Yes	0.337	0.209	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**		
		U_1 - L_2	654.36	-----	-159	109	-342	241	160	-43	-398	-705	0.709	0.291	1.00	Yes	0.390	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**		
		U_2 - L_3	572.41	-----	-124	85	-312	230	132	-28	-560	-798	0.677	0.321	1.00	Yes	0.372	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.60**		
		U_3 - L_4	454.87	-----	-41	19	-136	79	159	-22	-823	-596	0.667	0.329	1.00	Yes	0.367	0.181	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**		
		U_4 - L_5	324.15	-20.58	-11	-7	-130	69	210	16	-852	-664	0.583	0.413	1.00	Yes	0.321	0.227	0.55	Yes	0.049	0.309	0.36	Yes	0.044	0.167	0.22	Yes	1.00	**5.93**		
		U_5 - L_6	238.19	-270.18	32	-114	-100	-38	-675	-268	-890	-1076	0.428	0.457	0.89	Yes	0.236	0.251	0.49	Yes	0.633	0.363	1	Yes	0.572	0.146	0.72	Yes	1.00	**9.49**		
		U_7 - L_6	421.76	-----	-28	-8	-108	19	-148	-112	348	238	0.759	0.238	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**		
		U_8 - L_7	615.74	-----	-84	76	-214	140	-290	-103	50	263	0.751	0.244	1.00	Yes	0.472	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**		
		U_8 - L_9	828.99	-----	-76	95	-306	113	-200	14	-129	246	0.820	0.179	1.00	Yes	0.451	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**		
		U_{10} - L_9	975.72	-----	-49	123	-244	191	86	150	-122	415	0.824	0.168	1.00	Yes	0.510	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**		
		U_{11} - L_{10}	948.85	-----	-63	100	-306	254	-757	-187	374	629	0.759	0.233	1.00	Yes	0.470	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**		
		U_{12} - L_{11}	973.39	-----	103	233	-84	372	401	4	83	359	0.778	0.217	1.00	Yes	0.482	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**		
		U_{13} - L_{12}	600.96	-----	23	171	-86	288	660	337	-109	-359	0.710	0.284	1.00	Yes	0.391	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**		
		U_{13} - L_{14}	543.81	-----	-94	135	-277	220	764	327	-1066	-343	0.643	0.351	1.00	Yes	0.354	0.193	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**		
		U_{14} - L_{15}	629.04	-----	-25	163	-199	176	652	307	-355	-759	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**		
		U_{15} - L_{16}	492.93	-----	-10	76	-99	3	501	256	-726	-745	0.723	0.274	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**		
		U_{17} - L_{16}	-----	-360.79	60	-7	-76	-95	-230	20	221	243	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.175	1	Yes	0.763	0.121	0.89	Yes	1.00	**9.18**		
		U_{18} - L_{17}	310.46	-344.72	68	-42	-145	-33	-177	-68	-158	46	0.558	0.237	0.80	Yes	0.307	0.130	0.44	Yes	0.793	0.203	1	Yes	0.729	0.186	0.92	Yes	1.00	**11.31**		
		U_{19} - L_{18}	455.23	-134.28	24	-23	-95	8	-198	-113	-167	-132	0.819	0.178	1.00	Yes	0.450	0.098	0.55	Yes	0.308	0.159	0.47	Yes	0.284	0.121	0.41	Yes	1.00	**6.76**		
		U_{20} - L_{19}	577.03	-----	-24	10	-141	91	172	27	-291	-44	0.757	0.238	1.00	Yes	0.457	0.131	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**		

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: 5C1
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

* 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
North Truss - Upper Chord	Structure 1	U$_1$ - U$_2$	-71.64	19.48	-75.19			0.90	1.24	21.68	-83.71	0.00	0.00	Vehicle	Vehicle	-----	-201.94	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	-----	-----	5.90	5.90
		U$_2$ - U$_3$	-90.83	39.29	-128.85			0.90	1.24	43.74	-143.45	0.00	0.00	Vehicle	Vehicle	-----	-304.56	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	-----	-----	3.31	3.31
		U$_3$ - U$_4$	-61.13	58.34	-138.01			0.90	1.24	64.94	-153.64	0.00	0.00	Vehicle	Vehicle	4.96	-279.20	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	11.27	11.27	3.28	3.28
		U$_4$ - U$_5$	10.71	76.41	-127.77			0.90	1.24	85.06	-142.25	0.00	0.00	Vehicle	Vehicle	124.50	-171.01	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	7.76	7.76	4.05	4.05
		U$_5$ - U$_6$	12.86	76.81	-119.51			0.90	1.24	85.52	-133.04	0.00	0.00	Vehicle	Vehicle	127.89	-156.24	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	7.70	7.70	4.35	4.35
		U$_6$ - U$_7$	121.37	88.82	-25.60			0.90	1.24	98.89	-28.50	0.00	0.00	Vehicle	Vehicle	286.34	-----	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	-----	-----	5.56	5.56	-----	-----
		U$_7$ - U$_8$	249.49	96.24	-31.12			0.90	1.24	107.15	-34.64	0.00	0.00	Vehicle	Vehicle	463.63	-----	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	-----	-----	5.18	5.18	-----	-----
		U$_8$ - U$_9$	376.92	20.19	0.08			0.90	1.24	22.48	0.09	0.00	0.00	Vehicle	Vehicle	519.22	-----	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	-----	-----	32.62	32.62	-----	-----
		U$_9$ - U$_{10}$	319.74	8.86	11.95			0.90	1.20	12.88	9.56	0.00	0.00	Vehicle	Vehicle	432.40	-----	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	-----	-----	48.06	48.06	-----	-----
		U$_{10}$ - U$_{11}$	128.77	84.69	-37.17			0.90	1.20	91.32	-40.08	0.00	0.00	Vehicle	Vehicle	286.11	-----	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	-----	-----	6.36	6.36	-----	-----
		U$_{11}$ - U$_{12}$	-70.90	76.66	-101.63			0.90	1.20	82.65	-109.57	0.00	0.00	Vehicle	Vehicle	15.28	-234.62	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	9.44	9.44	4.81	4.81
		U$_{12}$ - U$_{13}$	-252.96	68.52	-155.77			0.90	1.20	73.87	-167.95	0.00	0.00	Vehicle	Vehicle	-----	-547.19	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	-----	-----	3.33	3.33
		U$_{13}$ - U$_{14}$	-391.95	59.18	-192.43			0.90	1.20	63.81	-207.48	0.00	0.00	Vehicle	Vehicle	-----	-779.25	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	-----	-----	3.59	3.59
		U$_{14}$ - U$_{15}$	-482.99	48.96	-200.29			0.90	1.20	52.79	-215.96	0.00	0.00	Vehicle	Vehicle	-----	-908.63	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	-----	-----	3.91	3.91
		U$_{15}$ - U$_{16}$	-454.44	49.56	-208.64			0.90	1.20	53.43	-224.96	0.00	0.00	Vehicle	Vehicle	-----	-922.22	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	-----	-----	3.75	3.75
		U$_{16}$ - U$_{17}$	-502.02	21.87	-213.50			0.90	1.20	23.58	-230.20	0.00	0.00	Vehicle	Vehicle	-----	-951.89	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	-----	-----	3.59	3.59
		U$_{17}$ - U$_{18}$	-467.99	-97.02	-97.71			0.90	1.20	-104.61	-105.36	0.00	0.00	Vehicle	Vehicle	-----	-745.34	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	-----	-----	8.16	8.16
		U$_{18}$ - U$_{19}$	-368.86	-126.77	-74.28			0.90	1.20	-80.09	-136.69	0.00	0.00	Vehicle	Vehicle	-----	-657.21	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	-----	-----	4.40	4.40
		U$_{19}$ - U$_{20}$	-251.56	-101.11	-49.74			0.90	1.20	-53.62	-109.02	0.00	0.00	Vehicle	Vehicle	-----	-468.75	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	-----	-----	3.91	3.91
		U$_{13}$ - U$_{20}$	-117.89	-42.32	-6.33			0.90	1.20	-6.82	-45.63	0.00	0.00	Vehicle	Vehicle	-----	-212.57	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	-----	-----	12.27	12.27
	Structure 2	U$_1$ - U$_2$	-118.23	7.84	-50.65			0.90	1.18	8.35	-53.93	0.00	0.00	Vehicle	Vehicle	-----	-223.80	4.88	30.19	25.3075	996.19	131.71	10.6328	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	-----	-----	9.81	9.81
		U$_1$ - U$_2$	-239.56	17.96	-114.37			0.90	1.18	19.12	-121.77	0.00	0.00	Vehicle	Vehicle	-----	-469.73	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	-----	-----	4.53	4.53
		U$_2$ - U$_3$	-350.44	29.93	-165.74			0.90	1.18	31.87	-176.46	0.00	0.00	Vehicle	Vehicle	-----	-684.98	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	-----	-----	4.12	4.12
		U$_3$ - U$_4$	-449.15	27.88	-206.00			0.90	1.18	29.69	-219.32	0.00	0.00	Vehicle	Vehicle	-----	-869.01	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	-----	-----	4.07	4.07
		U$_4$ - U$_5$	-483.26	58.01	-219.44			0.90	1.18	63.21	-233.46	0.00	0.00	Vehicle	Vehicle	-----	-922.59	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	-----	-----	4.50	4.50
		U$_5$ - U$_6$	-485.85	75.04	-224.51			0.90	1.18	79.89	-239.04	0.00	0.00	Vehicle	Vehicle	-----	-942.36	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	-----	-----	4.19	4.19
		U$_6$ - U$_7$	-428.85	88.80	-212.09			0.90	1.18	94.55	-225.81	0.00	0.00	Vehicle	Vehicle	-----	-851.06	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	-----	-----	4.04	4.04
		U$_7$ - U$_8$	-428.37	89.01	-231.26			0.90	1.18	94.77	-246.22	0.00	0.00	Vehicle	Vehicle	-----	-876.96	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	-----	-----	3.71	3.71
		U$_8$ - U$_9$	-335.42	101.96	-130.15			0.90	1.18	108.56	-138.57	0.00	0.00	Vehicle	Vehicle	-----	-616.18	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	-----	-----	5.71	5.71
		U$_9$ - U$_{10}$	-200.29	110.17	-101.88			0.90	1.18	117.30	-108.47	0.00	0.00	Vehicle	Vehicle	-----	-401.39	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	-----	-----	6.32	6.32
		U$_{10}$ - U$_{11}$	-52.14	116.81	-118.73			0.90	1.18	124.37	-126.41	0.00	0.00	Vehicle	Vehicle	93.89	-232.12	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	7.74	7.74	5.67	5.67
		U$_{11}$ - U$_{12}$	107.02	-33.24	-6.75			0.90	1.18	-7.19	-35.39	0.00	0.00	Vehicle	Vehicle	129.77	-----	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	109.33	21.11			0.90	1.18	116.41	22.47	0.00	0.00	Vehicle	Vehicle	488.46	-----	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	-----	-----	7.56	7.56	-----	-----
		U$_{13}$ - U$_{14}$	391.98	36.67	-22.31			0.90	1.18	39.04	-23.75	0.00	0.00	Vehicle	Vehicle	560.33	-----	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	-----	-----	30.03	30.03	-----	-----
		U$_{14}$ - U$_{15}$	439.40	8.86	33.17			0.90	1.17	34.90	9.32	0.00	0.00	Vehicle	Vehicle	616.59	-----	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	-----	-----	32.24	32.24	-----	-----
		U$_{15}$ - U$_{16}$	369.66	107.29	3.32			0.90	1.17	112.88	3.49	0.00	0.00	Vehicle	Vehicle	627.31	-----	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	-----	-----	8.00	8.00	-----	-----
		U$_{16}$ - U$_{17}$	271.39	104.98	-41.59			0.90	1.17	110.45	-43.75	0.00	0.00	Vehicle	Vehicle	496.39	-----	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	-----	-----	6.99	6.99	-----	-----
		U$_{17}$ - U$_{18}$	171.75	99.08	-69.46			0.90	1.17	104.25	-73.08	0.00	0.00	Vehicle	Vehicle	358.80	-----	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	-----	-----	5.70	5.70	-----	-----
		U$_{18}$ - U$_{19}$	72.78	91.33	-111.56			0.90	1.17	96.08	-117.37	0.00	0.00	Vehicle	Vehicle	219.52	-57.96	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	7.22	7.22	6.14	6.14
		U$_{13}$ - U$_{20}$	-8.11	80.91	-148.11			0.90	1.17	85.12	-155.83	0.00	0.00	Vehicle	Vehicle	100.11	-213.12	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	9.73	9.73	4.39	4.39
	Structure 3	U$_{20}$ - U$_{21}$	-60.13	38.04	-163.86			0.90	1.17	40.02	-172.40	0.00	0.00	Vehicle	Vehicle	-----	-302.28	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	-----	-----	4.50	4.50
		U$_{21}$ - U$_{22}$	-82.18	52.83	-174.63			0.90	1.17	55.59	-183.73	0.00	0.00	Vehicle	Vehicle	-----	-345.69	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	-----	-----	4.11	4.11
		U$_{22}$ - U$_{23}$	-82.40	54.35	-181.22			0.90	1.17	57.18	-190.66	0.00	0.00	Vehicle	Vehicle	-----	-354.99	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	-----	-----	3.96	3.96
		U$_{23}$ - U$_{24}$	-65.94	67.57	-123.16			0.90	1.17	71.09	-129.58	0.00	0.00	Vehicle	Vehicle	6.69	-254.18	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	14.88	14.88	5.95	5.95
		U$_{24}$ - U$_{25}$	-112.43	81.37	-112.43			0.90	1.17	84.71	-118.39	0.00	0.00	Vehicle	Vehicle	86.85	-177.13	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	9.89	9.89	5.71	5.71
		U$_{25}$ - U$_{26}$	55.02	-81.33	-63.64			0.90	1.17	-66.96	-86.20	0.00	0.00	Vehicle	Vehicle	-----	-40.53	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	-----	-----	8.15	8.15
		U$_{26}$ - U$_{27}$	136.02	-39.69	-40.15			0.90	1.17	-41.75	-42.25	0.00	0.00	Vehicle	Vehicle	122.54	-----	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	-----	-----	-----	-----	-----	-----
		U$_{27}$ - U$_{28}$	216.87	-12.95	-12.91			0.90	1.17	-13.58	-13.63	0.00	0.00	Vehicle	Vehicle	264.27	-----	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$_{28}$ - U$_{29}$	293.76	61.35	-7.62			0.90	1.17	64.55	-8.02	0.00	0.00	Vehicle	Vehicle	465.79	-----	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	-----	-----	15.16	15.16	-----	-----
		U$_{29}$ - U$_{30}$	358.11	52.66	-26.70			0.90	1.17	55.41	-28.09	0.00	0.00	Vehicle	Vehicle	537.58	-----	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	-----	-----	21.77	21.77	-----	-----
		U$_{30}$ - U$_{31}$	339.33	27.01	28.86			0.90	1.18	30.73	28.76	0.00	0.00	Vehicle	Vehicle	481.07	-----	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	-----	-----	39.86	39.86	-----	-----
		U$_{31}$ - U$_{32}$	251.17	116.97	-6.80			0.90	1.18	124.53	-7.24	0.00	0.00	Vehicle	Vehicle	488.41	-----	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

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: 5C1 — 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	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	4.85	-2.74	-0.76			0.90	1.24	-0.85	-3.04	0.00	0.00	Vehicle	Vehicle	5.20	-----	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	-22.61	63.96			0.90	1.24	71.20	-25.17	0.00	0.00	Vehicle	Vehicle	189.11	-----	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	-----	-----	**6.02**	**6.02**	-----	-----
	L_2 - L_3	97.77	-42.60	96.94			0.90	1.24	107.93	-47.43	0.00	0.00	Vehicle	Vehicle	267.40	-----	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	-----	-----	**5.29**	**5.29**	-----	-----
	L_3 - L_4	66.93	-51.54	111.34			0.90	1.24	123.96	-68.52	0.00	0.00	Vehicle	Vehicle	248.15	-2.06	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	**4.85**	**4.85**	**9.19**	**9.19**
	L_4 - L_5	-108.46	-97.42	59.84			0.90	1.24	66.62	-102.89	0.00	0.00	Vehicle	Vehicle	-----	-274.76	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	-----	-----	**3.81**	**3.81**
	L_5 - L_6	-237.28	-102.00	44.75			0.90	1.24	49.82	-113.56	0.00	0.00	Vehicle	Vehicle	-----	-456.09	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	-----	-----	**3.72**	**3.72**
	L_6 - L_7	-362.27	-42.40	-46.23			0.90	1.24	-47.20	-51.47	0.00	0.00	Vehicle	Vehicle	-----	-537.86	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	-----	-----	**11.32**	**11.32**
	L_7 - L_8	-478.66	-82.02	-0.15			0.90	1.20	-0.16	-91.31	0.00	0.00	Vehicle	Vehicle	-----	-740.96	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	-----	-----	**7.89**	**7.89**
	L_8 - L_9	-477.02	-66.67	-82.87			0.90	1.20	-71.89	-89.35	0.00	0.00	Vehicle	Vehicle	-----	-736.28	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	-----	-----	**8.09**	**8.09**
	L_9 - L_{10}	-301.43	-86.80	-40.12			0.90	1.20	-43.26	-93.59	0.00	0.00	Vehicle	Vehicle	-----	-513.52	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	-----	-----	**6.88**	**6.88**
	L_{10} - L_{11}	-104.46	-77.27	-7.71			0.90	1.20	-8.32	-83.31	0.00	0.00	Vehicle	Vehicle	-----	-244.10	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	-----	-----	**4.75**	**4.75**
	L_{11} - L_{12}	97.11	-69.18	53.95			0.90	1.20	58.17	-74.59	0.00	0.00	Vehicle	Vehicle	201.86	-----	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	-----	-----	**8.54**	**8.54**	-----	-----
	L_{12} - L_{13}	268.74	-60.04	102.32			0.90	1.20	110.32	-64.73	0.00	0.00	Vehicle	Vehicle	492.79	-----	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	-----	-----	**6.40**	**6.40**	-----	-----
	L_{13} - L_{14}	405.66	-50.75	115.64			0.90	1.20	124.69	-54.71	0.00	0.00	Vehicle	Vehicle	689.45	-----	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	-----	-----	**7.24**	**7.24**	-----	-----
	L_{14} - L_{15}	502.77	71.88	178.61			0.90	1.20	192.58	77.50	0.00	0.00	Vehicle	Vehicle	903.96	-----	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	-----	-----	**5.56**	**5.56**	-----	-----
	L_{15} - L_{16}	469.25	-21.85	163.42			0.90	1.20	176.20	-23.56	0.00	0.00	Vehicle	Vehicle	839.07	-----	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	-----	-----	**6.27**	**6.27**	-----	-----
	L_{16} - L_{17}	365.43	55.51	80.79			0.90	1.20	87.11	59.85	0.00	0.00	Vehicle	Vehicle	588.29	-----	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	-----	-----	**9.77**	**9.77**	-----	-----
	L_{17} - L_{18}	248.67	16.93	37.92			0.90	1.20	40.88	18.26	0.00	0.00	Vehicle	Vehicle	376.42	-----	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	-----	-----	**15.53**	**15.53**	-----	-----
	L_{18} - L_{19}	112.99	-21.90	16.78			0.90	1.20	18.10	-23.62	0.00	0.00	Vehicle	Vehicle	170.41	-----	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	-----	-----	**21.53**	**21.53**	-----	-----
	L_{19} - L_{20}	-14.26	-62.27	15.33			0.90	1.20	16.53	-67.14	0.00	0.00	Vehicle	Vehicle	2.96	-105.82	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	**31.26**	**31.26**	**6.10**	**6.10**
Structure 2	L_0 - L_1	15.26	0.41	-10.40			0.90	1.18	0.44	-11.08	0.00	0.00	Vehicle	Vehicle	20.40	-----	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	-----	-----	**1412.48**	**1412.48**	-----	-----
	L_1 - L_2	136.12	-7.72	44.18			0.90	1.18	47.04	-8.22	0.00	0.00	Vehicle	Vehicle	238.11	-----	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	-----	-----	**10.57**	**10.57**	-----	-----
	L_2 - L_3	262.92	-16.18	81.41			0.90	1.18	86.68	-17.23	0.00	0.00	Vehicle	Vehicle	454.48	-----	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	-----	-----	**8.23**	**8.23**	-----	-----
	L_3 - L_4	373.32	-20.37	127.01			0.90	1.18	135.22	-21.69	0.00	0.00	Vehicle	Vehicle	661.11	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
	L_4 - L_5	456.80	-42.43	165.66			0.90	1.18	176.38	-45.17	0.00	0.00	Vehicle	Vehicle	823.33	-----	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	-----	-----	**6.77**	**6.77**	-----	-----
	L_5 - L_6	489.63	-57.23	197.80			0.90	1.18	210.59	-60.94	0.00	0.00	Vehicle	Vehicle	910.28	-----	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	-----	-----	**6.19**	**6.19**	-----	-----
	L_6 - L_7	479.27	-72.51	171.60			0.90	1.18	182.70	-77.20	0.00	0.00	Vehicle	Vehicle	860.57	-----	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	-----	-----	**7.32**	**7.32**	-----	-----
	L_7 - L_8	330.30	-98.88	151.53			0.90	1.18	161.34	-105.28	0.00	0.00	Vehicle	Vehicle	639.13	-----	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	-----	-----	**6.27**	**6.27**	-----	-----
	L_8 - L_9	189.19	86.65	121.14			0.90	1.18	128.98	92.26	0.00	0.00	Vehicle	Vehicle	413.62	-----	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	-----	-----	**7.06**	**7.06**	-----	-----
	L_9 - L_{10}	39.95	-113.67	85.82			0.90	1.18	91.37	-121.02	0.00	0.00	Vehicle	Vehicle	170.72	-105.39	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	**9.00**	**9.00**	**6.34**	**6.34**
	L_{10} - L_{11}	-127.23	6.20	28.66			0.90	1.18	30.52	6.60	0.00	0.00	Vehicle	Vehicle	-----	-156.81	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	-46.10	-1.67			0.90	1.18	-1.77	-49.08	0.00	0.00	Vehicle	Vehicle	-----	-431.07	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	-----	-----	**13.21**	**13.21**
	L_{12} - L_{13}	-426.62	-101.57	-33.25			0.90	1.18	-35.40	-108.14	0.00	0.00	Vehicle	Vehicle	-----	-695.19	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	-----	-----	**7.85**	**7.85**
	L_{13} - L_{14}	-536.34	-114.88	14.13			0.90	1.18	15.05	-122.31	0.00	0.00	Vehicle	Vehicle	-----	-856.25	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	-----	-----	**8.00**	**8.00**
	L_{14} - L_{15}	-537.64	-92.18	-60.56			0.90	1.17	-63.72	-96.99	0.00	0.00	Vehicle	Vehicle	-----	-825.02	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	-----	-----	**10.08**	**10.08**
	L_{15} - L_{16}	-475.53	-116.78	-32.73			0.90	1.17	-34.43	-122.87	0.00	0.00	Vehicle	Vehicle	-----	-777.91	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	-----	-----	**6.51**	**6.51**
	L_{16} - L_{17}	-384.21	-108.68	-37.99			0.90	1.17	-39.97	-114.34	0.00	0.00	Vehicle	Vehicle	-----	-648.11	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	-----	-----	**5.80**	**5.80**
	L_{17} - L_{18}	-281.70	-104.48	-17.11			0.90	1.17	-18.00	-109.92	0.00	0.00	Vehicle	Vehicle	-----	-509.11	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	-----	-----	**4.06**	**4.06**
	L_{18} - L_{19}	-174.99	-95.42	19.21			0.90	1.17	20.21	-100.39	0.00	0.00	Vehicle	Vehicle	-----	-357.99	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	-----	-----	**3.97**	**3.97**
	L_{19} - L_{20}	-76.34	-86.34	85.54			0.90	1.17	89.99	-90.84	0.00	0.00	Vehicle	Vehicle	17.74	-217.33	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	**8.39**	**8.39**	**5.47**	**5.47**
	L_{20} - L_{21}	4.59	-73.76	69.15			0.90	1.17	72.75	-77.60	0.00	0.00	Vehicle	Vehicle	100.55	-94.91	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	**13.20**	**13.20**	**10.55**	**10.55**
	L_{21} - L_{22}	56.15	-14.65	95.35			0.90	1.17	100.32	-15.41	0.00	0.00	Vehicle	Vehicle	203.41	-----	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	-----	-----	**9.06**	**9.06**	-----	-----
	L_{22} - L_{23}	63.16	-38.98	135.64			0.90	1.17	142.70	-41.02	0.00	0.00	Vehicle	Vehicle	267.63	-----	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	-----	-----	**6.32**	**6.32**	-----	-----
	L_{23} - L_{24}	15.68	-51.95	101.85			0.90	1.17	107.16	-54.65	0.00	0.00	Vehicle	Vehicle	159.69	-50.66	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.86**	**8.86**	**15.19**	**15.19**
	L_{24} - L_{25}	-55.90	8.45	75.54			0.90	1.17	79.48	8.89	0.00	0.00	Vehicle	Vehicle	30.65	-61.12	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	**9.25**	**9.25**	-----	-----
	L_{25} - L_{26}	-136.32	-19.05	45.42			0.90	1.17	47.79	-20.04	0.00	0.00	Vehicle	Vehicle	-----	-203.26	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	-----	-----	**21.82**	**21.82**
	L_{26} - L_{27}	-217.71	-73.27	21.58			0.90	1.17	22.71	-77.08	0.00	0.00	Vehicle	Vehicle	-----	-383.23	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	-----	-----	**6.61**	**6.61**
	L_{27} - L_{28}	-296.28	-116.04	39.15			0.90	1.17	41.19	-122.09	0.00	0.00	Vehicle	Vehicle	-----	-543.87	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	-----	-----	**6.15**	**6.15**
	L_{28} - L_{29}	-364.24	-173.19	-24.93			0.90	1.17	-26.23	-182.21	0.00	0.00	Vehicle	Vehicle	-----	-710.38	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	-----	-----	**5.00**	**5.00**
	L_{29} - L_{30}	-418.31	-64.79	50.57			0.90	1.17	53.21	-68.16	0.00	0.00	Vehicle	Vehicle	-----	-632.41	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	-----	-----	**16.09**	**16.09**
	L_{30} - L_{31}	-350.66	-80.42	-63.54			0.90	1.18	-67.66	-85.62	0.00	0.00	Vehicle	Vehicle	-----	-567.17	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	-----	-----	**13.60**	**13.60**
	L_{31} - L_{32}	-275.63	-54.58	-41.27			0.90	1.18	-43.94	-58.12	0.00	0.00	Vehicle	Vehicle	-----	-433.87	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	-----	-----	**17.20**	**17.20**
	L_{32}

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: 5C1 — 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	-79.28	17.55			0.90	1.24	19.54	-88.26	0.00	0.00	Vehicle	Vehicle	------	-215.10	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	------	------	------	------	------	3.03	3.03
		U$_1$ - L$_1$	-33.88	-51.96	15.73			0.90	1.24	17.52	-57.85	0.00	0.00	Vehicle	Vehicle	------	-119.25	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$_2$	10.41	-37.89	14.78			0.90	1.24	16.46	-42.18	0.00	0.00	Vehicle	Vehicle	34.92	-41.31	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	------	------	------	25.36	25.36	8.59	8.59
		U$_3$ - L$_3$	44.37	-27.84	9.05			0.90	1.24	10.07	-30.99	0.00	0.00	Vehicle	Vehicle	70.78	------	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	------	------	------	------	------	38.05	38.05	------	------
		U$_4$ - L$_4$	-16.71	-2.13	-16.33			0.90	1.24	-2.37	-18.17	0.00	0.00	Vehicle	Vehicle	------	-45.35	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	------	------	------	------	------	18.33	18.33
		U$_5$ - L$_5$	-109.52	-1.92	-64.85			0.90	1.24	-2.14	-72.20	0.00	0.00	Vehicle	Vehicle	------	-236.23	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	------	------	------	------	------	4.37	4.37
		U$_6$ - L$_6$	-143.61	-0.51	-85.40			0.90	1.24	-0.57	-95.07	0.00	0.00	Vehicle	Vehicle	------	-310.28	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	------	------	------	------	------	3.83	3.83
		U$_7$ - L$_7$	-142.76	2.65	-97.18			0.90	1.24	2.95	-108.19	0.00	0.00	Vehicle	Vehicle	------	-326.23	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	------	------	------	------	------	2.93	2.93
		U$_8$ - L$_8$	-391.96	-97.82	-119.86			0.90	1.24	-108.90	-133.44	0.00	0.00	Vehicle	Vehicle	------	-683.01	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	------	------	------	------	------	5.05	5.05
		U$_9$ - L$_9$	-223.26	-94.03	9.59			0.90	1.20	10.34	-101.38	0.00	0.00	Vehicle	Vehicle	------	-422.03	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	------	------	------	------	------	4.16	4.16
		U$_{10}$ - L$_{10}$	-225.85	-85.17	6.77			0.90	1.20	7.30	-91.83	0.00	0.00	Vehicle	Vehicle	------	-412.98	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	------	------	------	------	------	5.63	5.63
		U$_{11}$ - L$_{11}$	-198.80	-83.16	4.04			0.90	1.20	4.36	-89.66	0.00	0.00	Vehicle	Vehicle	------	-375.00	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	------	------	------	------	------	4.94	4.94
		U$_{12}$ - L$_{12}$	-154.81	-74.99	3.59			0.90	1.20	3.87	-80.86	0.00	0.00	Vehicle	Vehicle	------	-306.36	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	------	------	------	------	------	4.67	4.67
		U$_{13}$ - L$_{13}$	-109.06	-55.18	13.30			0.90	1.20	14.34	-59.50	0.00	0.00	Vehicle	Vehicle	------	-219.12	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	------	------	------	------	------	4.56	4.56
		U$_{14}$ - L$_{14}$	-12.31	-9.46	9.75			0.90	1.20	-10.20	-10.51	0.00	0.00	Vehicle	Vehicle	------	-29.66	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	------	------	------	------	------	31.64	31.64
		U$_{15}$ - L$_{15}$	-5.62	19.79	-49.42			0.90	1.20	21.33	-53.28	0.00	0.00	Vehicle	Vehicle	20.43	-76.57	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	------	------	------	20.31	20.31	6.34	6.34
		U$_{16}$ - L$_{16}$	-51.73	10.96	-60.34			0.90	1.20	11.82	-65.06	0.00	0.00	Vehicle	Vehicle	------	-151.83	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	------	------	------	------	------	4.45	4.45
		U$_{17}$ - L$_{17}$	-127.32	11.45	-86.82			0.90	1.20	12.34	-93.60	0.00	0.00	Vehicle	Vehicle	------	-287.19	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	------	------	------	------	------	3.03	3.03
		U$_{18}$ - L$_{18}$	-159.94	10.56	-100.79			0.90	1.20	11.39	-108.67	0.00	0.00	Vehicle	Vehicle	------	-349.20	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	------	------	------	------	------	3.36	3.36
		U$_{19}$ - L$_{19}$	-191.17	8.98	-106.44			0.90	1.20	9.68	-114.76	0.00	0.00	Vehicle	Vehicle	------	-397.71	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	------	------	------	------	------	3.70	3.70
		U$_{20}$ - L$_{20}$	-212.33	9.04	-113.91			0.90	1.20	9.75	-122.82	0.00	0.00	Vehicle	Vehicle	------	-435.69	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	------	------	------	------	------	3.01	3.01
	Structure 2	U$_0$ - L$_0$	-206.69	-101.00	13.36			0.90	1.18	14.22	-107.53	0.00	0.00	Vehicle	Vehicle	------	-408.49	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	------	------	------	------	------	4.05	4.05
		U$_1$ - L$_1$	-188.76	-93.78	13.70			0.90	1.18	14.59	-99.85	0.00	0.00	Vehicle	Vehicle	------	-375.19	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	------	------	------	------	------	4.84	4.84
		U$_2$ - L$_2$	-155.92	-82.19	14.42			0.90	1.18	15.35	-87.51	0.00	0.00	Vehicle	Vehicle	------	-316.46	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	------	------	------	------	------	4.78	4.78
		U$_3$ - L$_3$	-134.58	-78.61	16.32			0.90	1.18	17.37	-84.77	0.00	0.00	Vehicle	Vehicle	------	-285.14	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	------	------	------	------	------	3.74	3.74
		U$_4$ - L$_4$	-64.49	-56.60	15.53			0.90	1.18	16.53	-60.26	0.00	0.00	Vehicle	Vehicle	------	-162.18	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	------	------	------	------	------	4.56	4.56
		U$_5$ - L$_5$	-19.94	-51.15	20.56			0.90	1.18	21.89	-54.46	0.00	0.00	Vehicle	Vehicle	2.54	-96.72	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	------	------	------	20.45	20.45	5.89	5.89
		U$_6$ - L$_6$	40.08	-36.52	28.50			0.90	1.18	30.34	-38.88	0.00	0.00	Vehicle	Vehicle	91.55	------	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	------	------	------	------	------	12.78	12.78	------	------
		U$_7$ - L$_7$	-26.04	-1.63	-22.00			0.90	1.18	-1.74	-23.42	0.00	0.00	Vehicle	Vehicle	------	-64.30	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	------	------	------	------	------	13.43	13.43
		U$_8$ - L$_8$	-125.25	14.24	-69.09			0.90	1.18	15.16	-73.56	0.00	0.00	Vehicle	Vehicle	------	-258.45	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	------	------	------	------	------	5.51	5.51
		U$_9$ - L$_9$	-174.53	4.08	-91.79			0.90	1.18	4.34	-97.73	0.00	0.00	Vehicle	Vehicle	------	-353.94	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	------	------	------	------	------	5.29	5.29
		U$_{10}$ - L$_{10}$	-202.66	-1.00	-104.86			0.90	1.18	-1.07	-111.64	0.00	0.00	Vehicle	Vehicle	------	-408.59	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	------	------	------	------	------	5.16	5.16
		U$_{11}$ - L$_{11}$	-229.53	2.96	-113.50			0.90	1.18	3.15	-120.85	0.00	0.00	Vehicle	Vehicle	------	-455.49	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	------	------	------	------	------	4.43	4.43
		U$_{12}$ - L$_{12}$	-250.85	2.32	-122.78			0.90	1.18	2.46	-130.72	0.00	0.00	Vehicle	Vehicle	------	-496.04	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	------	------	------	------	------	4.21	4.21
		U$_{13}$ - L$_{13}$	-223.32	12.57	-118.44			0.90	1.18	13.38	-126.11	0.00	0.00	Vehicle	Vehicle	------	-454.26	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	------	------	------	------	------	3.70	3.70
		U$_{14}$ - L$_{14}$	-343.31	-73.53	-104.85			0.90	1.18	-78.29	-111.64	0.00	0.00	Vehicle	Vehicle	------	-591.43	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	------	------	------	------	------	6.35	6.35
		U$_{15}$ - L$_{15}$	-123.14	-82.05	13.58			0.90	1.17	14.28	-86.32	0.00	0.00	Vehicle	Vehicle	------	-272.30	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	------	------	------	------	------	6.57	6.57
		U$_{16}$ - L$_{16}$	-156.70	-93.61	9.73			0.90	1.17	10.23	-98.49	0.00	0.00	Vehicle	Vehicle	------	-331.74	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	------	------	------	------	------	5.17	5.17
		U$_{17}$ - L$_{17}$	-147.91	-85.73	10.04			0.90	1.17	10.56	-90.20	0.00	0.00	Vehicle	Vehicle	------	-309.55	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	------	------	------	------	------	5.27	5.27
		U$_{18}$ - L$_{18}$	-142.22	-85.53	12.59			0.90	1.17	13.25	-89.99	0.00	0.00	Vehicle	Vehicle	------	-301.87	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	------	------	------	------	------	4.83	4.83
		U$_{19}$ - L$_{19}$	-111.48	-83.39	14.07			0.90	1.17	14.81	-87.73	0.00	0.00	Vehicle	Vehicle	------	-258.98	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	------	------	------	------	------	4.56	4.56
		U$_{20}$ - L$_{20}$	-76.55	-63.01	14.95			0.90	1.17	15.73	-66.30	0.00	0.00	Vehicle	Vehicle	------	-185.70	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	------	------	------	------	------	4.50	4.50
		U$_{21}$ - L$_{21}$	-44.31	-54.67	20.32			0.90	1.17	21.38	-57.51	0.00	0.00	Vehicle	Vehicle	------	-132.37	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	------	------	------	------	------	5.15	5.15
		U$_{22}$ - L$_{22}$	-21.25	-0.42	-3.79			0.90	1.17	-0.44	-3.99	0.00	0.00	Vehicle	Vehicle	------	-32.81	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	------	------	------	------	------	80.31	80.31
		U$_{23}$ - L$_{23}$	-39.07	24.13	-53.20			0.90	1.17	25.38	-55.98	0.00	0.00	Vehicle	Vehicle	------	-123.56	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	------	------	------	------	------	5.39	5.39
		U$_{24}$ - L$_{24}$	-74.84	17.32	-59.44			0.90	1.17	18.22	-73.05	0.00	0.00	Vehicle	Vehicle	------	-192.26	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	------	------	------	------	------	4.11	4.11
		U$_{25}$ - L$_{25}$	-103.27	17.25	-87.88			0.90	1.17	18.14	-92.46	0.00	0.00	Vehicle	Vehicle	------	-254.44	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	------	------	------	------	------	4.41	4.41
		U$_{26}$ - L$_{26}$	-120.22	16.27	-95.32			0.90	1.17	17.11	-100.29	0.00	0.00	Vehicle	Vehicle	------	-286.66	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	------	------	------	------	------	4.56	4.56
		U$_{27}$ - L$_{27}$	-123.93	13.46	-105.65			0.90	1.17	14.16	-111.16	0.00	0.00	Vehicle	Vehicle	------	-305.62	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	------	------	------	------	------	4.49	4.49
		U$_{28}$ - L$_{28}$	-135.60	12.24	-114.87			0.90	1.17	12.88	-120.86	0.00	0.00	Vehicle	Vehicle	------	-333.39	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	------	------	------	------	------	4.39	4.39
		U$_{29}$ - L$_{29}$	-116.87	7.20	-105.39			0.90	1.17	7.58	-110.88	0.00	0.00	Vehicle	Vehicle	------	-296.08	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	------	------	------	------	------	5.17	5.17
		U$_{30}$ - L$_{30}$	-262.02	-89.18	-100.24			0.90	1.18	-94.95	-106.72	0.00	0.00	Vehicle	Vehicle	------	-479.37	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	------	------	------	------	------	7.40	7.40
		U$_{31}$ - L$_{31}$	-156.38	-92.63	16.59			0.90	1.18	17.66	-98.62	0.00	0.00	Vehicle	Vehicle	------	-331.49	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	------	------	------	------	------	5.41	5.41
		U$_{32}$ - L$_{32}$	-185.51	-95.88	11.38			0.90	1.18	12.11	-102.08	0.00	0.00	Vehicle	Vehicle	------	-373.86	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

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: 5C1 — 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
North Truss - Diagonals — Structure 1	U_1 - L_1	87.33	54.98	-24.30			0.90	1.24	61.21	-27.05	0.00	0.00	Vehicle	Vehicle	193.09	-----	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	-----	-----	-----	-----	-----	**8.15**	**8.15**	-----	-----
	U_1 - L_2	23.35	63.34	2.43			0.90	1.24	70.52	2.71	0.00	0.00	Vehicle	Vehicle	122.03	-----	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	-----	-----	-----	-----	-----	**5.73**	**5.73**	-----	-----
	U_2 - L_3	-37.85	30.67	-16.67			0.90	1.24	34.14	-18.56	0.00	0.00	Vehicle	-----	-----	-73.34	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	-23.03	3.31			0.90	1.24	3.68	-25.64	0.00	0.00	Vehicle	Vehicle	-----	-153.19	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	-----	-----	**15.96**	**15.96**	-----	-----
	U_3 - L_4	143.37	15.84	34.48			0.90	1.24	38.39	17.63	0.00	0.00	Vehicle	Vehicle	236.28	-----	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	-----	-----	-----	-----	-----	**9.52**	**9.52**	-----	-----
	U_4 - L_5	177.90	87.27	-0.20			0.90	1.24	97.16	-0.22	0.00	0.00	Vehicle	Vehicle	357.57	-----	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	-----	-----	-----	-----	-----	**9.93**	**9.93**	-----	-----
	U_4 - L_6	184.42	105.32	0.00			0.90	1.24	117.25	0.00	0.00	0.00	Vehicle	Vehicle	392.18	-----	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	-----	-----	-----	-----	-----	**4.87**	**4.87**	-----	-----
	U_5 - L_6	180.02	107.93	-2.69			0.90	1.24	120.16	-3.00	0.00	0.00	Vehicle	Vehicle	390.22	-----	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	-----	-----	-----	-----	-----	**3.98**	**3.98**	-----	-----
	U_6 - L_7	180.02	107.93	-2.69			0.90	1.24	120.16	-3.00	0.00	0.00	Vehicle	Vehicle	390.22	-----	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	-----	-----	-----	-----	-----	**3.92**	**3.92**	-----	-----
	U_6 - L_8	268.98	103.58	-11.29			0.90	1.20	111.67	-12.17	0.00	0.00	Vehicle	Vehicle	494.85	-----	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	-----	-----	-----	-----	-----	**6.21**	**6.21**	-----	-----
	U_8 - L_{10}	278.85	97.45	-11.21			0.90	1.20	105.07	-12.08	0.00	0.00	Vehicle	Vehicle	499.09	-----	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	-----	-----	-----	-----	-----	**6.50**	**6.50**	-----	-----
	U_{10} - L_{11}	285.04	105.99	-0.23			0.90	1.20	114.28	-0.25	0.00	0.00	Vehicle	Vehicle	519.11	-----	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	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
	U_{11} - L_{12}	250.60	87.42	-4.41			0.90	1.20	94.26	-4.76	0.00	0.00	Vehicle	Vehicle	448.31	-----	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	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
	U_{12} - L_{13}	189.65	78.58	-18.30			0.90	1.20	84.73	-19.73	0.00	0.00	Vehicle	Vehicle	356.69	-----	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	-----	-----	-----	-----	-----	**5.21**	**5.21**	-----	-----
	U_{13} - L_{14}	123.32	49.77	-22.17			0.90	1.20	53.66	-23.91	0.00	0.00	Vehicle	Vehicle	230.08	-----	0.00	16.85	16.8486	556.00	131.71	12.1771	1.9682	55.66	30.05	-430.37	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
	U_{14} - L_{14}	-24.41	42.79	-42.43			0.90	1.20	46.14	-45.74	0.00	0.00	Vehicle	Vehicle	28.25	-91.20	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	12.00	Pass	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**9.80**	**9.80**	**6.64**	**6.64**
	U_{14} - L_{15}	48.53	67.53	-20.45			0.90	1.20	72.81	-22.05	0.00	0.00	Vehicle	Vehicle	157.74	-----	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	-----	-----	-----	-----	-----	**5.21**	**5.21**	-----	-----
	U_{15} - L_{16}	146.59	91.09	-6.63			0.90	1.20	98.21	-7.15	0.00	0.00	Vehicle	Vehicle	318.24	-----	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	-----	-----	-----	-----	-----	**3.85**	**3.85**	-----	-----
	U_{16} - L_{17}	182.46	103.48	-13.49			0.90	1.20	111.57	-14.54	0.00	0.00	Vehicle	Vehicle	382.23	-----	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	-----	-----	-----	-----	-----	**4.20**	**4.20**	-----	-----
	U_{18} - L_{18}	223.82	113.82	-11.35			0.90	1.20	122.73	-12.24	0.00	0.00	Vehicle	Vehicle	450.51	-----	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	-----	-----	-----	-----	-----	**3.96**	**3.96**	-----	-----
	U_{20} - L_{19}	232.72	110.24	-9.48			0.90	1.20	118.86	-10.22	0.00	0.00	Vehicle	Vehicle	457.05	-----	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	-----	-----	-----	-----	-----	**4.02**	**4.02**	-----	-----
Structure 2	U_1 - L_1	213.54	102.23	-14.24			0.90	1.18	108.84	-15.17	0.00	0.00	Vehicle	Vehicle	419.09	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
	U_1 - L_2	200.48	94.67	-16.71			0.90	1.18	100.79	-17.79	0.00	0.00	Vehicle	Vehicle	391.66	-----	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	-----	-----	-----	-----	-----	**5.73**	**5.73**	-----	-----
	U_1 - L_3	172.81	92.41	-18.65			0.90	1.18	98.39	-19.85	0.00	0.00	Vehicle	Vehicle	352.56	-----	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	-----	-----	-----	-----	-----	**4.86**	**4.86**	-----	-----
	U_2 - L_3	147.16	91.13	-21.92			0.90	1.18	97.02	-23.34	0.00	0.00	Vehicle	Vehicle	317.44	-----	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	-----	-----	-----	-----	-----	**4.43**	**4.43**	-----	-----
	U_2 - L_4	49.10	67.65	-24.82			0.90	1.18	72.03	-26.42	0.00	0.00	Vehicle	Vehicle	157.47	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.41	29.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**5.26**	**5.26**	-----	-----
	U_3 - L_5	2.96	59.78	-29.75			0.90	1.18	63.65	-31.68	0.00	0.00	Vehicle	Vehicle	86.59	-37.33	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	-----	-----	-----	**6.67**	**6.67**	**10.38**	**10.38**
	U_3 - L_7	-85.74	34.46	-59.66			0.90	1.18	36.69	-63.52	0.00	0.00	Vehicle	-----	-----	-194.04	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	-----	-----	-----	-----	-----	**4.31**	**4.31**
	U_4 - L_7	140.30	66.44	-25.65			0.90	1.18	70.74	-27.31	0.00	0.00	Vehicle	Vehicle	274.35	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
	U_4 - L_8	204.22	97.22	-11.03			0.90	1.18	103.51	-11.75	0.00	0.00	Vehicle	Vehicle	400.04	-----	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	-----	-----	-----	-----	-----	**4.89**	**4.89**	-----	-----
	U_8 - L_9	234.87	112.35	-2.65			0.90	1.18	119.62	-2.82	0.00	0.00	Vehicle	Vehicle	460.83	-----	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	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U_{11} - L_{10}	263.10	126.36	-0.10			0.90	1.18	134.54	-0.11	0.00	0.00	Vehicle	Vehicle	516.93	-----	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	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
	U_{12} - L_{11}	274.02	124.35	0.09			0.90	1.18	132.39	0.10	0.00	0.00	Vehicle	Vehicle	528.33	-----	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	-----	-----	-----	-----	-----	**4.31**	**4.31**	-----	-----
	U_{13} - L_{12}	254.94	123.89	-13.27			0.90	1.18	131.91	-14.13	0.00	0.00	Vehicle	Vehicle	502.90	-----	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	-----	-----	-----	-----	-----	**3.96**	**3.96**	-----	-----
	U_{13} - L_{13}	217.71	111.83	-14.69			0.90	1.18	119.07	-15.64	0.00	0.00	Vehicle	Vehicle	437.80	-----	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	-----	-----	-----	-----	-----	**4.70**	**4.70**	-----	-----
	U_{15} - L_{15}	110.05	84.14	-14.14			0.90	1.17	88.53	-14.88	0.00	0.00	Vehicle	Vehicle	258.15	-----	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	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
	U_{16} - L_{16}	132.30	84.65	-14.55			0.90	1.17	89.06	-15.31	0.00	0.00	Vehicle	Vehicle	287.76	-----	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	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
	U_{17} - L_{17}	172.89	103.02	-10.54			0.90	1.17	108.39	-11.08	0.00	0.00	Vehicle	Vehicle	365.66	-----	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	-----	-----	-----	-----	-----	**4.96**	**4.96**	-----	-----
	U_{17} - L_{18}	160.19	94.19	-12.55			0.90	1.17	99.10	-13.20	0.00	0.00	Vehicle	Vehicle	337.07	-----	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	-----	-----	-----	-----	-----	**4.95**	**4.95**	-----	-----
	U_{19} - L_{19}	152.35	98.22	-16.40			0.90	1.17	103.34	-17.25	0.00	0.00	Vehicle	Vehicle	332.39	-----	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	-----	-----	-----	-----	-----	**4.82**	**4.82**	-----	-----
	U_{20} - L_{20}	120.69	83.32	-16.76			0.90	1.17	87.66	-17.63	0.00	0.00	Vehicle	Vehicle	270.85	-----	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	-----	-----	-----	-----	-----	**5.51**	**5.51**	-----	-----
	U_{20} - L_{21}	76.08	72.30	-25.09			0.90	1.17	76.07	-26.39	0.00	0.00	Vehicle	Vehicle	197.80	-----	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	-----	-----	-----	-----	-----	**4.62**	**4.62**	-----	-----
	U_{21} - L_{22}	31.46	52.81	-39.02			0.90	1.17	55.56	-41.05	0.00	0.00	Vehicle	Vehicle	113.13	-12.47	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**7.13**	**7.13**	**8.70**	**8.70**
	U_{22} - L_{22}	24.30	49.94	-40.79			0.90	1.17	52.54	-42.91	0.00	0.00	Vehicle	Vehicle	99.89	-24.20	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	-----	-----	-----	**7.68**	**7.68**	**8.09**	**8.09**
	U_{23} - L_{23}	72.26	71.59	-28.32			0.90	1.17	75.31	-29.80	0.00	0.00	Vehicle	Vehicle	191.85	-----	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	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U_{24} - L_{24}	112.13	94.69	-22.98			0.90	1.17	99.63	-24.17	0.00	0.00	Vehicle	Vehicle	275.28	-----	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	-----	-----	-----	-----	-----	**4.93**	**4.93**	-----	-----
	U_{25} - L_{25}	127.84	106.78	-20.77			0.90	1.17	112.34	-21.85	0.00	0.00	Vehicle	Vehicle	312.24	-----	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	-----	-----	-----	-----	-----	**4.65**	**4.65**	-----	-----
	U_{26} - L_{26}	132.67	108.98	-16.85			0.90	1.17	114.66	-17.72	0.00	0.00	Vehicle	Vehicle	321.53	-----	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	-----	-----	-----	-----	-----	**4.52**	**4.52**	-----	-----
	U_{27} - L_{27}	137.94	115.52	-14.52			0.90	1.17	121.54	-15.27	0.00	0.00	Vehicle	Vehicle	337.32	-----	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	-----	-----	-----	-----	-----	**4.71**	**4.71**	-----	-----
	U_{28} - L_{28}	122.80	109.83	-8.62			0.90	1.17	115.55	-9.07	0.00	0.00	Vehicle	Vehicle	309.85	-----	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	-----	-----	-----	-----	-----	**4.57**	**4.57**	-----	-----
	U_{29} - L_{29}	102.75	98.38	-6.76			0.90	1.17	103.51	-7.11	0.00	0.00	Vehicle	Vehicle	268.14	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U_{30} - L_{31}	140.07	85.52	-17.18			0.90	1.18	91.05	-18.29	0.00	0.00	Vehicle	Vehicle	300.46	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
	U_{31} - L_{32}	167.39	96.94	-18.84			0.90	1.18	103.21	-20.06	0.00	0.00	Vehicle	Vehicle	351.78	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
	U_{32} - L_{33}	202.10	106.64	-10.59			0.90	1.18	113.54	-11.27	0.00	0.00	Vehicle	Vehicle	410.33	-----	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	-----	-----	-----	-----	-----	**5.66**	**5.66**	-----	-----
	U_{33} - L_{34}	201.91	111.93	-0.24			0.90	1.18	119.17	-0.26	0.00	0.00	Vehicle	Vehicle	417.41	-----	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

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: 5C1 **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 (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	-52.64	14.35	-72.98			0.75	1.24	13.32	-67.71	0.00	0.00	Vehicle	Vehicle	-----	-156.45	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	-----	-----	7.57	7.57
		U_1 - U_2	-61.57	36.58	-110.49			0.75	1.24	33.94	-102.51	0.00	0.00	Vehicle	Vehicle	-----	-213.30	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	-----	-----	4.91	4.91
		U_2 - U_3	-26.99	50.51	-115.27			0.75	1.24	46.86	-106.94	0.00	0.00	Vehicle	Vehicle	25.84	-174.10	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	14.90	14.90	5.03	5.03
		U_3 - U_4	32.92	64.05	-89.22			0.75	1.24	59.42	-82.78	0.00	0.00	Vehicle	Vehicle	120.05	-64.81	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	10.74	10.74	7.23	7.23
		U_4 - U_5	34.77	61.56	-84.99			0.75	1.24	57.11	-78.85	0.00	0.00	Vehicle	Vehicle	119.45	-57.30	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	11.14	11.14	7.61	7.61
		U_5 - U_6	124.13	-61.91	-21.82			0.75	1.24	-20.24	-57.43	0.00	0.00	Vehicle	Vehicle	135.05	-----	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	87.50	32.41			0.75	1.24	81.18	30.07	0.00	0.00	Vehicle	Vehicle	395.68	-----	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	-----	-----	7.16	7.16	-----	-----
		U_7 - U_8	331.76	31.76	1.36			0.75	1.24	29.46	1.26	0.00	0.00	Vehicle	Vehicle	469.59	-----	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	-----	-----	26.42	26.42	-----	-----
		U_8 - U_9	267.61	41.97	14.70			0.75	1.20	37.71	13.21	0.00	0.00	Vehicle	Vehicle	396.92	-----	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	-----	-----	17.80	17.80	-----	-----
		U_9 - U_{10}	89.12	57.57	-38.15			0.75	1.20	51.73	-34.28	0.00	0.00	Vehicle	Vehicle	183.10	-----	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	-----	-----	11.99	11.99	-----	-----
		U_{10} - U_{11}	-76.81	50.91	-90.88			0.75	1.20	45.75	-81.66	0.00	0.00	Vehicle	Vehicle	-----	-206.00	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	-----	-----	6.38	6.38
		U_{11} - U_{12}	-230.69	44.46	-130.29			0.75	1.20	39.95	-117.07	0.00	0.00	Vehicle	Vehicle	-----	-452.08	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	-----	-----	4.97	4.97
		U_{12} - U_{13}	-341.88	-146.49	-160.48			0.75	1.20	-131.62	-144.19	0.00	0.00	Vehicle	Vehicle	-----	-631.89	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	-----	-----	5.52	5.52
		U_{13} - U_{14}	-421.62	-71.35	-172.38			0.75	1.20	-64.10	-154.89	0.00	0.00	Vehicle	Vehicle	-----	-749.46	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	-----	-----	5.85	5.85
		U_{14} - U_{15}	-422.51	-73.95	-172.19			0.75	1.20	-66.44	-154.71	0.00	0.00	Vehicle	Vehicle	-----	-750.38	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	-----	-----	5.85	5.85
		U_{15} - U_{16}	-439.94	-98.29	-104.23			0.75	1.20	-88.31	-93.65	0.00	0.00	Vehicle	Vehicle	-----	-693.67	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	-----	-----	9.48	9.48
		U_{16} - U_{17}	-422.43	-91.38	-94.70			0.75	1.20	-82.10	-85.08	0.00	0.00	Vehicle	Vehicle	-----	-659.76	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	-----	-----	10.64	10.64
		U_{17} - U_{18}	-340.94	-130.27	-72.30			0.75	1.20	-64.97	-117.05	0.00	0.00	Vehicle	Vehicle	-----	-595.38	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	-----	-----	5.38	5.38
		U_{18} - U_{19}	-247.15	-60.30	-24.78			0.75	1.20	-22.27	-54.18	0.00	0.00	Vehicle	Vehicle	-----	-391.72	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	-----	-----	7.94	7.94
		U_{19} - U_{20}	-131.71	-34.92	4.07			0.75	1.20	-3.66	-31.38	0.00	0.00	Vehicle	Vehicle	-----	-212.01	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	-----	-----	17.40	17.40
	Structure 2	U_0 - U_1	-131.51	10.90	-64.29			0.75	1.18	9.67	-57.04	0.00	0.00	Vehicle	Vehicle	-----	-245.12	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	-----	-----	9.04	9.04
		U_1 - U_2	-247.03	23.07	-111.53			0.75	1.18	20.47	-98.96	0.00	0.00	Vehicle	Vehicle	-----	-449.78	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	-----	-----	5.50	5.50
		U_2 - U_3	-347.15	36.20	-152.70			0.75	1.18	32.12	-135.49	0.00	0.00	Vehicle	Vehicle	-----	-627.43	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	-----	-----	5.39	5.39
		U_3 - U_4	-437.07	-133.81	-173.58			0.75	1.18	-118.72	-154.00	0.00	0.00	Vehicle	Vehicle	-----	-768.39	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	-----	-----	5.87	5.87
		U_4 - U_5	-468.70	62.27	-184.40			0.75	1.18	55.25	-163.61	0.00	0.00	Vehicle	Vehicle	-----	-822.01	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	-----	-----	6.22	6.22
		U_5 - U_6	-471.03	-189.16	-184.88			0.75	1.18	-164.04	-167.83	0.00	0.00	Vehicle	Vehicle	-----	-830.52	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	-----	-----	6.05	6.05
		U_6 - U_7	-414.41	82.03	-169.73			0.75	1.18	72.78	-150.59	0.00	0.00	Vehicle	Vehicle	-----	-734.50	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	-----	-----	6.16	6.16
		U_7 - U_8	-413.45	82.14	-183.38			0.75	1.18	72.88	-162.70	0.00	0.00	Vehicle	Vehicle	-----	-749.00	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	-----	-----	5.70	5.70
		U_8 - U_9	-321.98	85.32	-104.95			0.75	1.18	75.70	-93.11	0.00	0.00	Vehicle	Vehicle	-----	-539.63	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	-----	-----	8.64	8.64
		U_9 - U_{10}	-182.11	91.81	-82.94			0.75	1.18	81.46	-73.59	0.00	0.00	Vehicle	Vehicle	-----	-332.40	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	-----	-----	9.57	9.57
		U_{10} - U_{11}	-32.58	99.44	-34.49			0.75	1.18	88.23	-30.60	0.00	0.00	Vehicle	Vehicle	72.34	-82.13	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	10.69	10.69	24.08	24.08
		U_{11} - U_{12}	133.59	-46.80	-10.58			0.75	1.18	-9.39	-41.53	0.00	0.00	Vehicle	Vehicle	161.46	-----	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	31.48	19.86			0.75	1.18	27.93	17.62	0.00	0.00	Vehicle	Vehicle	413.29	-----	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	-----	-----	30.41	30.41	-----	-----
		U_{13} - U_{14}	434.76	31.08	-27.96			0.75	1.18	27.57	-24.80	0.00	0.00	Vehicle	Vehicle	601.03	-----	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	-----	-----	40.97	40.97	-----	-----
		U_{14} - U_{15}	474.45	63.97	31.73			0.75	1.17	56.08	27.82	0.00	0.00	Vehicle	Vehicle	689.69	-----	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	-----	-----	19.43	19.43	-----	-----
		U_{15} - U_{16}	383.28	76.19	-17.98			0.75	1.17	66.80	-15.76	0.00	0.00	Vehicle	Vehicle	585.10	-----	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	-----	-----	13.31	13.31	-----	-----
		U_{16} - U_{17}	279.57	75.41	-30.02			0.75	1.17	66.11	-26.32	0.00	0.00	Vehicle	Vehicle	449.39	-----	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	-----	-----	11.56	11.56	-----	-----
		U_{17} - U_{18}	172.63	72.81	-63.13			0.75	1.17	63.84	-55.35	0.00	0.00	Vehicle	Vehicle	307.40	-----	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	-----	-----	9.30	9.30	-----	-----
		U_{18} - U_{19}	74.36	69.08	-90.69			0.75	1.17	60.57	-79.51	0.00	0.00	Vehicle	Vehicle	175.41	-6.69	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	11.42	11.42	9.08	9.08
		U_{19} - U_{20}	-10.01	60.55	-128.67			0.75	1.17	53.08	-112.81	0.00	0.00	Vehicle	Vehicle	55.99	-159.67	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	15.64	15.64	6.05	6.05
	Structure 3	U_0 - U_1	-62.06	31.99	-133.80			0.75	1.17	28.05	-117.31	0.00	0.00	Vehicle	Vehicle	-----	-233.18	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	-----	-----	6.60	6.60
		U_1 - U_2	-88.74	43.81	-136.44			0.75	1.17	38.41	-119.62	0.00	0.00	Vehicle	Vehicle	-----	-270.86	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	-----	-----	6.25	6.25
		U_2 - U_3	-88.92	44.00	-137.56			0.75	1.17	38.57	-120.61	0.00	0.00	Vehicle	Vehicle	-----	-272.38	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_3 - U_4	-76.67	53.86	-92.96			0.75	1.17	47.22	-81.51	0.00	0.00	Vehicle	Vehicle	-----	-205.62	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	-----	-----	9.33	9.33
		U_4 - U_5	-37.64	62.65	-88.25			0.75	1.17	54.93	-77.38	0.00	0.00	Vehicle	Vehicle	22.47	-149.52	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	15.62	15.62	8.47	8.47
		U_5 - U_6	37.23	-83.48	-55.41			0.75	1.17	-48.58	-73.19	0.00	0.00	Vehicle	Vehicle	-----	-46.75	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	-----	-----	9.35	9.35
		U_6 - U_7	128.02	-43.00	-39.15			0.75	1.17	-34.32	-37.70	0.00	0.00	Vehicle	Vehicle	121.80	-----	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	-----	-----	-----	-----	-----	-----
		U_7 - U_8	233.68	-21.38	-12.24			0.75	1.17	-10.73	-18.75	0.00	0.00	Vehicle	Vehicle	289.84	-----	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_8 - U_9	337.65	51.89	28.54			0.75	1.17	45.49	25.02	0.00	0.00	Vehicle	Vehicle	498.09	-----	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	-----	-----	20.55	20.55	-----	-----
		U_9 - U_{10}	437.10	31.28	-21.97			0.75	1.17	27.42	-19.26	0.00	0.00	Vehicle	Vehicle	603.87	-----	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	-----	-----	41.11	41.11	-----	-----
		U_{10} - U_{11}	420.53	73.45	19.27			0.75	1.18	65.17	17.09	0.00	0.00	Vehicle	Vehicle	631.41	-----	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	-----	-----	17.55	17.55	-----	-----
		U_{11} - U_{12}	300.69	87.58	-14.77			0.75	1.18	77.71	-13.11	0.00	0.00	Vehicle	Vehicle	491.92	-----	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	-----	-----	10.79	10.79	-----	-----
		U_{12} - U_{13}	161.60	88.83	-57.17			0.75	1.18	78.81	-50.72	0.00	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: 5C1 **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 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	-4.01	-7.30			0.75	1.24	-3.72	-6.77	0.00	0.00	Vehicle	Vehicle	6.20	-----	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	-21.55	52.81			0.75	1.24	49.00	-20.00	0.00	0.00	Vehicle	Vehicle	129.75	-----	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	-----	-----	**9.22**	**9.22**	-----	-----
		L$_2$ - L$_3$	61.22	-36.66	74.64			0.75	1.24	69.25	-34.01	0.00	0.00	Vehicle	Vehicle	169.61	-----	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	-----	-----	**8.77**	**8.77**	-----	-----
		L$_3$ - L$_4$	25.70	-50.50	83.25			0.75	1.24	77.24	-46.85	0.00	0.00	Vehicle	Vehicle	133.82	-27.49	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	**8.32**	**8.32**	**12.57**	**12.57**
		L$_4$ - L$_5$	-118.45	13.19	55.98			0.75	1.24	51.94	12.24	0.00	0.00	Vehicle	Vehicle	-----	-138.08	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	-88.07	35.42			0.75	1.24	32.86	-81.71	0.00	0.00	Vehicle	Vehicle	-----	-389.36	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	-----	-----	**5.41**	**5.41**
		L$_6$ - L$_7$	-320.36	-36.81	-37.64			0.75	1.24	-34.15	-34.92	0.00	0.00	Vehicle	Vehicle	-----	-461.85	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	-----	-----	**17.89**	**17.89**
		L$_7$ - L$_8$	-417.18	-87.19	-0.17			0.75	1.24	-0.16	-80.89	0.00	0.00	Vehicle	Vehicle	-----	-647.50	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	-----	-----	**9.67**	**9.67**
		L$_8$ - L$_9$	-410.79	-48.63	-86.36			0.75	1.20	-43.69	-77.60	0.00	0.00	Vehicle	Vehicle	-----	-634.90	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	-----	-----	**10.16**	**10.16**
		L$_9$ - L$_{10}$	-247.75	-59.98	-36.24			0.75	1.20	-32.56	-53.89	0.00	0.00	Vehicle	Vehicle	-----	-392.14	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	-----	-----	**12.94**	**12.94**
		L$_{10}$ - L$_{11}$	-65.21	-60.00	1.24			0.75	1.20	1.11	-53.91	0.00	0.00	Vehicle	Vehicle	-----	-154.85	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	-----	-----	**8.07**	**8.07**
		L$_{11}$ - L$_{12}$	101.88	-53.24	48.76			0.75	1.20	43.81	-47.84	0.00	0.00	Vehicle	Vehicle	189.39	-----	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	-----	-----	**11.23**	**11.23**	-----	-----
		L$_{12}$ - L$_{13}$	264.09	-46.39	92.40			0.75	1.20	83.02	-41.68	0.00	0.00	Vehicle	Vehicle	451.24	-----	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	-----	-----	**8.56**	**8.56**	-----	-----
		L$_{13}$ - L$_{14}$	373.73	-40.00	107.74			0.75	1.20	96.81	-35.94	0.00	0.00	Vehicle	Vehicle	611.70	-----	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	-----	-----	**9.65**	**9.65**	-----	-----
		L$_{14}$ - L$_{15}$	476.34	88.44	173.23			0.75	1.20	155.65	79.46	0.00	0.00	Vehicle	Vehicle	821.58	-----	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	-----	-----	**7.06**	**7.06**	-----	-----
		L$_{15}$ - L$_{16}$	459.97	54.39	164.85			0.75	1.20	148.12	48.87	0.00	0.00	Vehicle	Vehicle	790.52	-----	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	-----	-----	**7.52**	**7.52**	-----	-----
		L$_{16}$ - L$_{17}$	381.37	70.14	94.66			0.75	1.20	85.05	63.02	0.00	0.00	Vehicle	Vehicle	606.34	-----	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	-----	-----	**9.82**	**9.82**	-----	-----
		L$_{17}$ - L$_{18}$	288.98	49.52	64.48			0.75	1.20	57.94	44.49	0.00	0.00	Vehicle	Vehicle	450.99	-----	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	-----	-----	**10.26**	**10.26**	-----	-----
		L$_{18}$ - L$_{19}$	176.20	22.73	23.47			0.75	1.20	21.09	20.42	0.00	0.00	Vehicle	Vehicle	256.47	-----	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	-----	-----	**15.48**	**15.48**	-----	-----
		L$_{19}$ - L$_{20}$	69.74	-16.12	0.38			0.75	1.20	0.34	-14.48	0.00	0.00	Vehicle	Vehicle	91.11	-----	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	-----	-----	**1264.49**	**1264.49**	-----	-----
	Structure 2	L$_0$ - L$_1$	24.59	-1.66	0.13			0.75	1.18	0.11	-1.47	0.00	0.00	Vehicle	Vehicle	32.11	-----	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	-----	-----	**5445.36**	**5445.36**	-----	-----
		L$_1$ - L$_2$	138.59	-12.10	56.08			0.75	1.18	49.75	-10.74	0.00	0.00	Vehicle	Vehicle	244.85	-----	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	-----	-----	**9.94**	**9.94**	-----	-----
		L$_2$ - L$_3$	252.83	-25.15	80.58			0.75	1.18	71.49	-22.31	0.00	0.00	Vehicle	Vehicle	421.61	-----	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	-----	-----	**10.12**	**10.12**	-----	-----
		L$_3$ - L$_4$	352.30	-38.05	124.05			0.75	1.18	110.06	-33.76	0.00	0.00	Vehicle	Vehicle	601.07	-----	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	-----	-----	**8.69**	**8.69**	-----	-----
		L$_4$ - L$_5$	447.17	-52.69	136.22			0.75	1.18	120.86	-46.75	0.00	0.00	Vehicle	Vehicle	738.44	-----	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	-----	-----	**9.95**	**9.95**	-----	-----
		L$_5$ - L$_6$	477.93	-64.17	136.27			0.75	1.18	120.90	-56.93	0.00	0.00	Vehicle	Vehicle	778.49	-----	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	-----	-----	**10.88**	**10.88**	-----	-----
		L$_6$ - L$_7$	482.68	-75.53	132.08			0.75	1.18	117.18	-67.02	0.00	0.00	Vehicle	Vehicle	779.82	-----	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	-----	-----	**11.39**	**11.39**	-----	-----
		L$_7$ - L$_8$	336.61	-91.37	130.11			0.75	1.18	115.44	-81.07	0.00	0.00	Vehicle	Vehicle	587.67	-----	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	-----	-----	**8.71**	**8.71**	-----	-----
		L$_8$ - L$_9$	196.05	67.68	107.00			0.75	1.18	94.94	60.05	0.00	0.00	Vehicle	Vehicle	378.28	-----	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	-----	-----	**9.52**	**9.52**	-----	-----
		L$_9$ - L$_{10}$	45.60	-98.05	78.64			0.75	1.18	69.77	-87.00	0.00	0.00	Vehicle	Vehicle	149.98	-53.82	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	**11.70**	**11.70**	**8.89**	**8.89**
		L$_{10}$ - L$_{11}$	-126.26	10.04	33.63			0.75	1.18	29.84	8.91	0.00	0.00	Vehicle	Vehicle	-----	-152.55	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$_{12}$	-284.87	-37.08	15.94			0.75	1.18	14.14	-32.90	0.00	0.00	Vehicle	Vehicle	-----	-413.09	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	-----	-----	**19.63**	**19.63**
		L$_{12}$ - L$_{13}$	-433.79	-46.21	-46.07			0.75	1.18	-40.87	-41.00	0.00	0.00	Vehicle	Vehicle	-----	-617.23	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	-----	-----	**20.53**	**20.53**
		L$_{13}$ - L$_{14}$	-552.65	-65.74	29.21			0.75	1.18	25.92	-58.33	0.00	0.00	Vehicle	Vehicle	-----	-794.27	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	-----	-----	**16.50**	**16.50**
		L$_{14}$ - L$_{15}$	-573.48	-62.42	-67.42			0.75	1.17	-54.73	-59.11	0.00	0.00	Vehicle	Vehicle	-----	-822.36	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	-----	-----	**15.93**	**15.93**
		L$_{15}$ - L$_{16}$	-492.94	-66.76	-23.32			0.75	1.17	-20.45	-58.53	0.00	0.00	Vehicle	Vehicle	-----	-716.92	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	-----	-----	**13.37**	**13.37**
		L$_{16}$ - L$_{17}$	-395.30	-81.45	-40.79			0.75	1.17	-35.76	-71.41	0.00	0.00	Vehicle	Vehicle	-----	-606.73	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	-----	-----	**9.13**	**9.13**
		L$_{17}$ - L$_{18}$	-288.04	-80.40	-1.39			0.75	1.17	-1.22	-70.49	0.00	0.00	Vehicle	Vehicle	-----	-466.09	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	-----	-----	**6.23**	**6.23**
		L$_{18}$ - L$_{19}$	-175.85	-76.94	25.97			0.75	1.17	22.77	-67.46	0.00	0.00	Vehicle	Vehicle	-----	-316.30	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	-----	-----	**5.90**	**5.90**
		L$_{19}$ - L$_{20}$	-78.08	-70.67	89.06			0.75	1.17	78.09	-61.96	0.00	0.00	Vehicle	Vehicle	0.01	-182.04	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**	**8.00**	**8.00**
		L$_{20}$ - L$_{21}$	7.55	-62.20	77.49			0.75	1.17	67.94	-54.53	0.00	0.00	Vehicle	Vehicle	98.14	-61.07	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**14.09**	**14.09**	**15.07**	**15.07**
		L$_{21}$ - L$_{22}$	59.07	-33.79	123.33			0.75	1.17	108.13	-29.62	0.00	0.00	Vehicle	Vehicle	217.35	-----	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	-----	-----	**8.37**	**8.37**	-----	-----
		L$_{22}$ - L$_{23}$	71.98	-55.74	117.03			0.75	1.17	102.61	-48.87	0.00	0.00	Vehicle	Vehicle	226.97	-----	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$_{24}$	33.55	-64.57	106.28			0.75	1.17	93.18	-56.61	0.00	0.00	Vehicle	Vehicle	164.75	-29.99	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	**9.99**	**9.99**	**14.98**	**14.98**
		L$_{24}$ - L$_{25}$	-45.09	44.02	99.75			0.75	1.17	87.46	38.60	0.00	0.00	Vehicle	Vehicle	55.09	-8.43	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	**8.28**	**8.28**	-----	-----
		L$_{25}$ - L$_{26}$	-134.94	11.42	54.36			0.75	1.17	47.66	10.01	0.00	0.00	Vehicle	Vehicle	-----	-162.40	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	-23.57	30.63			0.75	1.17	26.85	-20.67	0.00	0.00	Vehicle	Vehicle	-----	-346.54	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	-----	-----	**23.30**	**23.30**
		L$_{27}$ - L$_{28}$	-351.78	-52.46	-5.15			0.75	1.17	-4.52	-45.99	0.00	0.00	Vehicle	Vehicle	-----	-517.10	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	-----	-----	**15.13**	**15.13**
		L$_{28}$ - L$_{29}$	-458.29	-49.44	-31.14			0.75	1.17	-27.30	-43.35	0.00	0.00	Vehicle	Vehicle	-----	-652.13	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	-----	-----	**18.85**	**18.85**
		L$_{29}$ - L$_{30}$	-542.18	-64.37	22.73			0.75	1.17	19.92	-56.44	0.00	0.00	Vehicle	Vehicle	-----	-778.20	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	-----	-----	**17.24**	**17.24**
		L$_{30}$ - L$_{31}$	-514.03	-68.10	-65.69			0.75	1.18	-58.28	-60.42	0.00	0.00	Vehicle	Vehicle	-----	-746.78	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	-----	-----	**16.56**	**16.56**
		L$_{31}$ - L$_{32}$	-411.21	-89.83	-51.91			0.75	1.18	-46.06	-79.70	0.00	0.00	Vehicle	Vehicle	-----	-638.19	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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
Center Truss - Verticals	Structure 1	U$_0$ - L$_0$	-67.60	-125.46	14.34			0.75	1.24	13.30	-116.39	0.00	0.00	Vehicle	Vehicle	-----	-239.19	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	-----	-----	-----	-----	-----	2.38	2.38
		U$_1$ - L$_1$	-24.06	-45.84	13.93			0.75	1.24	12.92	-42.53	0.00	0.00	Vehicle	Vehicle	-----	-86.56	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	-----	-----	-----	-----	-----	7.71	7.71
		U$_2$ - L$_2$	12.88	-34.29	11.56			0.75	1.24	10.73	-31.82	0.00	0.00	Vehicle	Vehicle	30.68	-24.62	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	-----	-----	-----	-----	-----	38.68	38.68	11.47	11.47
		U$_3$ - L$_3$	37.35	-20.91	14.55			0.75	1.24	13.50	-19.40	0.00	0.00	Vehicle	Vehicle	66.10	-----	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	-----	-----	-----	-----	-----	28.92	28.92	-----	-----
		U$_4$ - L$_4$	-15.53	4.19	-19.79			0.75	1.24	3.89	-18.36	0.00	0.00	Vehicle	Vehicle	-----	-44.06	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	-----	-----	-----	-----	-----	18.21	18.21
		U$_5$ - L$_5$	-92.52	3.67	-64.53			0.75	1.24	3.40	-59.87	0.00	0.00	Vehicle	Vehicle	-----	-198.10	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	-----	-----	-----	-----	-----	5.56	5.56
		U$_6$ - L$_6$	-117.01	-8.07	-78.15			0.75	1.24	-7.48	-72.51	0.00	0.00	Vehicle	Vehicle	-----	-246.37	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	-----	-----	-----	-----	-----	5.39	5.39
		U$_7$ - L$_7$	-127.49	0.25	-91.70			0.75	1.24	0.23	-85.08	0.00	0.00	Vehicle	Vehicle	-----	-276.33	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	-121.25	-126.26			0.75	1.24	-112.49	-117.14	0.00	0.00	Vehicle	Vehicle	-----	-631.46	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	-----	-----	-----	-----	-----	5.95	5.95
		U$_9$ - L$_9$	-214.45	-89.91	4.28			0.75	1.20	3.85	-80.78	0.00	0.00	Vehicle	Vehicle	-----	-383.81	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	-----	-----	-----	-----	-----	5.33	5.33
		U$_{10}$ - L$_{10}$	-198.57	-87.39	-6.39			0.75	1.20	-5.74	-78.52	0.00	0.00	Vehicle	Vehicle	-----	-360.22	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	-----	-----	-----	-----	-----	6.93	6.93
		U$_{11}$ - L$_{11}$	-171.30	-77.61	2.96			0.75	1.20	2.66	-69.73	0.00	0.00	Vehicle	Vehicle	-----	-313.34	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	-----	-----	-----	-----	-----	6.74	6.74
		U$_{12}$ - L$_{12}$	-128.27	-63.16	13.32			0.75	1.20	11.96	-56.75	0.00	0.00	Vehicle	Vehicle	-----	-240.53	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	-----	-----	-----	-----	-----	7.12	7.12
		U$_{13}$ - L$_{13}$	-96.55	-53.11	20.89			0.75	1.20	18.77	-47.72	0.00	0.00	Vehicle	Vehicle	-----	-187.55	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	-----	-----	-----	-----	-----	5.95	5.95
		U$_{14}$ - L$_{14}$	-11.04	-4.87	-18.86			0.75	1.20	-4.37	-16.94	0.00	0.00	Vehicle	Vehicle	-----	-36.39	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	-----	-----	-----	-----	-----	19.69	19.69
		U$_{15}$ - L$_{15}$	-2.54	29.90	-49.28			0.75	1.20	26.86	-44.28	0.00	0.00	Vehicle	Vehicle	31.62	-60.86	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	-----	-----	-----	-----	-----	16.02	16.02	7.69	7.69
		U$_{16}$ - L$_{16}$	-31.31	22.85	-57.43			0.75	1.20	20.53	-51.60	0.00	0.00	Vehicle	Vehicle	-----	-107.79	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	-----	-----	-----	-----	-----	6.01	6.01
		U$_{17}$ - L$_{17}$	-105.02	7.09	-77.76			0.75	1.20	6.37	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-227.35	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	-----	-----	-----	-----	-----	4.38	4.38
		U$_{18}$ - L$_{18}$	-126.66	5.83	-88.89			0.75	1.20	5.24	-79.87	0.00	0.00	Vehicle	Vehicle	-----	-268.49	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	-----	-----	-----	-----	-----	4.99	4.99
		U$_{19}$ - L$_{19}$	-166.54	5.46	-95.17			0.75	1.20	4.91	-85.51	0.00	0.00	Vehicle	Vehicle	-----	-327.66	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	-----	-----	-----	-----	-----	5.26	5.26
		U$_{20}$ - L$_{20}$	-184.30	5.06	-114.69			0.75	1.20	4.55	-103.05	0.00	0.00	Vehicle	Vehicle	-----	-373.55	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	-----	-----	-----	-----	-----	3.86	3.86
	Structure 2	U$_0$ - L$_0$	-203.39	-105.61	16.06			0.75	1.18	14.25	-93.70	0.00	0.00	Vehicle	Vehicle	-----	-386.22	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	-----	-----	-----	-----	-----	4.69	4.69
		U$_1$ - L$_1$	-176.11	-97.01	17.56			0.75	1.18	15.58	-86.07	0.00	0.00	Vehicle	Vehicle	-----	-340.83	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	-----	-----	-----	-----	-----	5.77	5.77
		U$_2$ - L$_2$	-137.45	-80.85	16.67			0.75	1.18	14.79	-71.74	0.00	0.00	Vehicle	Vehicle	-----	-271.95	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	-----	-----	-----	-----	-----	6.09	6.09
		U$_3$ - L$_3$	-117.61	-72.68	17.36			0.75	1.18	15.41	-64.48	0.00	0.00	Vehicle	Vehicle	-----	-236.72	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	-----	-----	-----	-----	-----	5.18	5.18
		U$_4$ - L$_4$	-50.97	-54.16	22.21			0.75	1.18	19.71	-48.06	0.00	0.00	Vehicle	Vehicle	-----	-128.73	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	-----	-----	-----	-----	-----	6.00	6.00
		U$_5$ - L$_5$	-13.79	-46.36	28.65			0.75	1.18	25.42	-41.13	0.00	0.00	Vehicle	Vehicle	15.13	-71.39	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	-----	-----	-----	-----	-----	17.37	17.37	7.94	7.94
		U$_6$ - L$_6$	45.46	-38.07	38.74			0.75	1.18	34.37	-33.78	0.00	0.00	Vehicle	Vehicle	103.78	-----	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	-----	-----	-----	-----	-----	11.12	11.12	-----	-----
		U$_7$ - L$_7$	-22.33	0.76	-17.10			0.75	1.18	0.68	-15.17	0.00	0.00	Vehicle	Vehicle	-----	-48.76	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	-----	-----	-----	-----	-----	20.97	20.97
		U$_8$ - L$_8$	-120.06	25.26	-71.04			0.75	1.18	22.41	-63.03	0.00	0.00	Vehicle	Vehicle	-----	-238.01	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	-----	-----	-----	-----	-----	6.51	6.51
		U$_9$ - L$_9$	-177.00	16.14	-88.00			0.75	1.18	14.32	-78.08	0.00	0.00	Vehicle	Vehicle	-----	-331.60	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	-----	-----	-----	-----	-----	6.59	6.59
		U$_{10}$ - L$_{10}$	-205.85	7.96	-95.22			0.75	1.18	7.06	-84.48	0.00	0.00	Vehicle	Vehicle	-----	-377.44	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	-----	-----	-----	-----	-----	6.78	6.78
		U$_{11}$ - L$_{11}$	-239.21	6.82	-101.32			0.75	1.18	6.05	-89.90	0.00	0.00	Vehicle	Vehicle	-----	-427.84	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	-----	-----	-----	-----	-----	5.85	5.85
		U$_{12}$ - L$_{12}$	-257.92	-1.91	-109.92			0.75	1.18	-1.70	-97.53	0.00	0.00	Vehicle	Vehicle	-----	-462.09	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	-----	-----	-----	-----	-----	5.58	5.58
		U$_{13}$ - L$_{13}$	-243.80	7.94	-112.98			0.75	1.18	7.04	-100.24	0.00	0.00	Vehicle	Vehicle	-----	-447.25	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	-----	-----	-----	-----	-----	4.45	4.45
		U$_{14}$ - L$_{14}$	-420.84	-107.95	-123.44			0.75	1.18	-95.78	-109.52	0.00	0.00	Vehicle	Vehicle	-----	-689.48	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	-----	-----	-----	-----	-----	5.76	5.76
		U$_{15}$ - L$_{15}$	-158.85	-107.30	13.16			0.75	1.17	11.54	-94.08	0.00	0.00	Vehicle	Vehicle	-----	-328.80	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	-----	-----	-----	-----	-----	5.65	5.65
		U$_{16}$ - L$_{16}$	-174.03	-92.88	3.85			0.75	1.17	3.38	-81.44	0.00	0.00	Vehicle	Vehicle	-----	-332.10	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	-----	-----	-----	-----	-----	6.04	6.04
		U$_{17}$ - L$_{17}$	-156.46	-85.88	12.34			0.75	1.17	10.81	-75.29	0.00	0.00	Vehicle	Vehicle	-----	-301.28	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	-----	-----	-----	-----	-----	6.20	6.20
		U$_{18}$ - L$_{18}$	-142.20	-78.04	13.05			0.75	1.17	11.44	-68.43	0.00	0.00	Vehicle	Vehicle	-----	-273.82	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	-----	-----	-----	-----	-----	6.36	6.36
		U$_{19}$ - L$_{19}$	-113.66	-67.22	17.27			0.75	1.17	15.14	-58.94	0.00	0.00	Vehicle	Vehicle	-----	-224.37	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	-----	-----	-----	-----	-----	6.75	6.75
		U$_{20}$ - L$_{20}$	-76.52	-56.82	24.37			0.75	1.17	21.37	-49.82	0.00	0.00	Vehicle	Vehicle	-----	-164.24	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	-----	-----	-----	-----	-----	5.99	5.99
		U$_{21}$ - L$_{21}$	-45.78	-51.29	26.59			0.75	1.17	23.31	-44.96	0.00	0.00	Vehicle	Vehicle	-----	-117.97	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	-----	-----	-----	-----	-----	6.55	6.55
		U$_{22}$ - L$_{22}$	-17.71	3.73	-13.43			0.75	1.17	3.27	-11.77	0.00	0.00	Vehicle	Vehicle	-----	-38.33	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	-----	-----	-----	-----	-----	27.53	27.53
		U$_{23}$ - L$_{23}$	-30.66	31.01	-54.59			0.75	1.17	27.19	-47.86	0.00	0.00	Vehicle	Vehicle	-----	-102.08	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	-----	-----	-----	-----	-----	6.47	6.47
		U$_{24}$ - L$_{24}$	-62.03	24.34	-68.37			0.75	1.17	21.34	-59.94	0.00	0.00	Vehicle	Vehicle	-----	-158.56	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	-----	-----	-----	-----	-----	5.22	5.22
		U$_{25}$ - L$_{25}$	-103.10	16.69	-81.46			0.75	1.17	14.64	-71.42	0.00	0.00	Vehicle	Vehicle	-----	-226.87	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	-----	-----	-----	-----	-----	5.72	5.72
		U$_{26}$ - L$_{26}$	-134.31	11.69	-86.93			0.75	1.17	10.25	-76.22	0.00	0.00	Vehicle	Vehicle	-----	-273.68	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	-----	-----	-----	-----	-----	5.81	5.81
		U$_{27}$ - L$_{27}$	-155.93	10.72	-97.61			0.75	1.17	9.40	-85.58	0.00	0.00	Vehicle	Vehicle	-----	-313.96	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	-----	-----	-----	-----	-----	5.46	5.46
		U$_{28}$ - L$_{28}$	-179.28	9.21	-107.82			0.75	1.17	8.08	-94.53	0.00	0.00	Vehicle	Vehicle	-----	-355.96	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	-----	-----	-----	-----	-----	5.15	5.15
		U$_{29}$ - L$_{29}$	-171.45	6.51	-106.33			0.75	1.17	5.71	-93.22	0.00	0.00	Vehicle	Vehicle	-----	-344.07	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	-----	-----	-----	-----	-----	5.56	5.56
		U$_{30}$ - L$_{30}$	-392.76	-100.47	-122.60			0.75	1.18	-89.14	-108.78	0.00	0.00	Vehicle	Vehicle	-----	-651.99	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	-----	-----	-----	-----	-----	6.06	6.06
		U$_{31}$ - L$_{31}$	-203.21	-102.23	13.50			0.75	1.18	11.98	-90.70	0.00	0.00	Vehicle	Vehicle	-----	-382.09	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	-----	-----	-----	-----	-----	5.37	5.37
		U$_{32}$ - L$_{32}$	-222.46	-99.36	4.44			0.75	1.18	3.94	-88.16	0.00	0.00	Vehicle	Vehicle	-----	-403.80	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: 5C1
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

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	52.34	-21.69			0.75	1.24	48.56	-20.12	0.00	0.00	Vehicle	Vehicle	132.35	-----	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	-----	-----	-----	-----	-----	**10.98**	**10.98**	-----	-----
		U_1 - L_2	10.78	52.47	6.51			0.75	1.24	48.68	6.04	0.00	0.00	Vehicle	Vehicle	77.29	-----	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	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
		U_2 - L_3	-44.02	35.95	-25.73			0.75	1.24	33.35	-23.87	0.00	0.00	Vehicle	Vehicle	-----	-88.25	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	-----	-----	-----	-----	-----	**12.16**	**12.16**
		U_3 - L_4	-76.72	0.03	-54.36			0.75	1.24	0.03	-50.44	0.00	0.00	Vehicle	Vehicle	-----	-165.30	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	-----	-----	-----	-----	-----	**5.15**	**5.15**
		U_4 - L_4	118.39	19.62	46.01			0.75	1.24	42.68	18.21	0.00	0.00	Vehicle	Vehicle	209.39	-----	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	-----	-----	-----	-----	-----	**9.52**	**9.52**	-----	-----
		U_5 - L_5	137.53	86.39	-0.04			0.75	1.24	80.15	-0.04	0.00	0.00	Vehicle	Vehicle	282.97	-----	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	-----	-----	-----	-----	-----	**6.40**	**6.40**	-----	-----
		U_6 - L_6	157.34	89.08	-0.09			0.75	1.24	82.64	-0.09	0.00	0.00	Vehicle	Vehicle	311.97	-----	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	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
		U_7 - L_7	149.30	101.20	-0.26			0.75	1.24	93.88	-0.24	0.00	0.00	Vehicle	Vehicle	316.14	-----	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	-----	-----	-----	-----	-----	**5.34**	**5.34**	-----	-----
		U_8 - L_8	249.09	121.31	-4.23			0.75	1.20	109.00	-3.80	0.00	0.00	Vehicle	Vehicle	465.52	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
		U_9 - L_{10}	260.26	99.56	0.00			0.75	1.20	89.46	0.00	0.00	0.00	Vehicle	Vehicle	454.63	-----	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	-----	-----	-----	-----	-----	**7.85**	**7.85**	-----	-----
		U_{10} - L_{11}	236.30	99.03	1.92			0.75	1.20	88.98	1.73	0.00	0.00	Vehicle	Vehicle	422.87	-----	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	-----	-----	-----	-----	-----	**7.58**	**7.58**	-----	-----
		U_{11} - L_{12}	211.92	82.91	-13.74			0.75	1.20	74.49	-12.34	0.00	0.00	Vehicle	Vehicle	372.34	-----	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	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U_{12} - L_{13}	151.66	76.14	-28.97			0.75	1.20	68.41	-26.03	0.00	0.00	Vehicle	Vehicle	286.09	-----	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	-----	-----	-----	-----	-----	**7.01**	**7.01**	-----	-----
		U_{13} - L_{14}	108.60	65.71	-38.67			0.75	1.20	59.04	-34.74	0.00	0.00	Vehicle	Vehicle	217.94	-----	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	-----	-----	-----	-----	-----	**5.40**	**5.40**	-----	-----
		U_{14} - L_{15}	-24.45	43.51	-42.23			0.75	1.20	39.09	-37.94	0.00	0.00	Vehicle	Vehicle	19.03	-81.10	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	-----	-----	-----	-----	-----	**11.57**	**11.57**	**8.01**	**8.01**
		U_{15} - L_{15}	23.99	67.03	-28.26			0.75	1.20	60.23	-25.39	0.00	0.00	Vehicle	Vehicle	109.48	-1.82	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**	**13.73**	**13.73**
		U_{17} - L_{16}	120.03	81.60	-17.44			0.75	1.20	73.32	-15.67	0.00	0.00	Vehicle	Vehicle	251.36	-----	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	-----	-----	-----	-----	-----	**5.52**	**5.52**	-----	-----
		U_{18} - L_{17}	144.79	92.84	-4.83			0.75	1.20	83.41	-4.34	0.00	0.00	Vehicle	Vehicle	296.67	-----	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	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U_{19} - L_{18}	193.05	97.43	1.70			0.75	1.20	87.54	1.52	0.00	0.00	Vehicle	Vehicle	364.76	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
		U_{20} - L_{19}	193.51	92.08	-5.77			0.75	1.20	82.73	-5.18	0.00	0.00	Vehicle	Vehicle	359.12	-----	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	-----	-----	-----	-----	-----	**6.25**	**6.25**	-----	-----
		U_0 - L_1	202.41	92.84	-18.20			0.75	1.18	82.37	-16.14	0.00	0.00	Vehicle	Vehicle	370.22	-----	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	-----	-----	-----	-----	-----	**6.98**	**6.98**	-----	-----
		U_1 - L_2	190.86	89.07	-20.52			0.75	1.18	79.03	-18.21	0.00	0.00	Vehicle	Vehicle	350.86	-----	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	-----	-----	-----	-----	-----	**7.42**	**7.42**	-----	-----
		U_2 - L_3	155.85	91.12	-20.05			0.75	1.18	80.84	-17.79	0.00	0.00	Vehicle	Vehicle	307.70	-----	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	-----	-----	-----	-----	-----	**6.12**	**6.12**	-----	-----
		U_3 - L_4	134.05	74.59	-23.58			0.75	1.18	66.18	-20.92	0.00	0.00	Vehicle	Vehicle	260.30	-----	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	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
		U_4 - L_5	46.02	64.71	-35.20			0.75	1.18	57.41	-31.23	0.00	0.00	Vehicle	Vehicle	134.46	-----	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	-----	-----	-----	-----	-----	**6.65**	**6.65**	-----	-----
		U_5 - L_6	3.45	55.89	-47.64			0.75	1.18	49.59	-42.27	0.00	0.00	Vehicle	Vehicle	68.95	-50.47	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	-----	-----	-----	-----	-----	**8.56**	**8.56**	**7.79**	**7.79**
		U_6 - L_7	-84.29	38.61	-70.68			0.75	1.18	34.25	-62.71	0.00	0.00	Vehicle	Vehicle	-----	-191.09	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	-----	-----	-----	-----	-----	-----	-----	**4.39**	**4.39**
		U_7 - L_7	137.30	82.33	-31.90			0.75	1.18	73.05	-28.31	0.00	0.00	Vehicle	Vehicle	273.45	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U_8 - L_8	210.89	94.41	-24.31			0.75	1.18	83.76	-21.57	0.00	0.00	Vehicle	Vehicle	383.05	-----	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	-----	-----	-----	-----	-----	**5.96**	**5.96**	-----	-----
		U_9 - L_{10}	236.36	106.92	-12.81			0.75	1.18	94.86	-11.36	0.00	0.00	Vehicle	Vehicle	430.59	-----	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	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
		U_{11} - L_{10}	274.62	109.66	-9.43			0.75	1.18	97.29	-8.37	0.00	0.00	Vehicle	Vehicle	483.49	-----	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	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
		U_{12} - L_{11}	281.06	109.79	-4.81			0.75	1.18	97.41	-4.26	0.00	0.00	Vehicle	Vehicle	492.02	-----	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	-----	-----	-----	-----	-----	**5.78**	**5.78**	-----	-----
		U_{13} - L_{12}	278.12	108.19	-8.60			0.75	1.18	95.99	-7.63	0.00	0.00	Vehicle	Vehicle	486.34	-----	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	-----	-----	-----	-----	-----	**5.20**	**5.20**	-----	-----
		U_{14} - L_{13}	235.45	106.03	-8.31			0.75	1.18	94.07	-7.37	0.00	0.00	Vehicle	Vehicle	428.37	-----	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	-----	-----	-----	-----	-----	**5.76**	**5.76**	-----	-----
		U_{14} - L_{15}	143.03	96.65	-13.46			0.75	1.17	84.74	-11.80	0.00	0.00	Vehicle	Vehicle	296.10	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
		U_{15} - L_{16}	171.91	103.44	-9.19			0.75	1.17	90.69	-8.06	0.00	0.00	Vehicle	Vehicle	341.38	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
		U_{16} - L_{17}	181.04	107.13	-13.06			0.75	1.17	93.93	-11.45	0.00	0.00	Vehicle	Vehicle	357.45	-----	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	-----	-----	-----	-----	-----	**5.63**	**5.63**	-----	-----
		U_{17} - L_{18}	171.16	90.30	-14.74			0.75	1.17	79.17	-12.92	0.00	0.00	Vehicle	Vehicle	325.42	-----	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	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U_{18} - L_{19}	150.64	90.56	-19.92			0.75	1.17	79.40	-17.46	0.00	0.00	Vehicle	Vehicle	299.05	-----	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	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	76.72	-31.00			0.75	1.17	67.26	-27.17	0.00	0.00	Vehicle	Vehicle	251.06	-----	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	-----	-----	-----	-----	-----	**7.10**	**7.10**	-----	-----
		U_{20} - L_{21}	76.05	67.89	-33.72			0.75	1.17	59.52	-29.56	0.00	0.00	Vehicle	Vehicle	176.25	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
		U_{21} - L_{22}	38.34	49.63	-54.33			0.75	1.17	43.51	-47.64	0.00	0.00	Vehicle	Vehicle	106.41	-12.08	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	-----	-----	-----	-----	-----	**8.95**	**8.95**	**7.64**	**7.64**
		U_{23} - L_{22}	18.02	47.28	-43.99			0.75	1.17	41.45	-38.57	0.00	0.00	Vehicle	Vehicle	77.32	-26.71	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	-----	-----	-----	-----	-----	**9.88**	**9.88**	**8.84**	**8.84**
		U_{24} - L_{23}	58.54	73.19	-33.33			0.75	1.17	64.17	-29.22	0.00	0.00	Vehicle	Vehicle	159.53	-----	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	-----	-----	-----	-----	-----	**5.75**	**5.75**	-----	-----
		U_{25} - L_{24}	114.92	87.77	-22.26			0.75	1.17	76.95	-19.51	0.00	0.00	Vehicle	Vehicle	249.43	-----	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	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
		U_{26} - L_{25}	142.93	98.77	-14.68			0.75	1.17	86.60	-12.87	0.00	0.00	Vehicle	Vehicle	298.39	-----	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	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
		U_{27} - L_{26}	173.71	95.57	-13.39			0.75	1.17	83.79	-11.74	0.00	0.00	Vehicle	Vehicle	334.76	-----	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	-----	-----	-----	-----	-----	**5.69**	**5.69**	-----	-----
		U_{28} - L_{27}	186.49	106.68	-11.68			0.75	1.17	93.53	-10.24	0.00	0.00	Vehicle	Vehicle	364.02	-----	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	-----	-----	-----	-----	-----	**5.60**	**5.60**	-----	-----
		U_{29} - L_{28}	190.57	99.23	-7.89			0.75	1.17	87.00	-6.92	0.00	0.00	Vehicle	Vehicle	360.84	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
		U_{30} - L_{29}	161.74	98.40	-6.22			0.75	1.17	86.27	-5.46	0.00	0.00	Vehicle	Vehicle	322.42	-----	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	-----	-----	-----	-----	-----	**5.67**	**5.67**	-----	-----
		U_{30} - L_{31}	191.49	102.11	-13.55			0.75	1.18	90.60	-12.02	0.00	0.00	Vehicle	Vehicle	366.71	-----	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	-----	-----	-----	-----	-----	**6.47**	**6.47**	-----	-----
		U_{31} - L_{32}	226.17	106.45	-14.84			0.75	1.18	94.45	-13.16	0.00	0.00	Vehicle	Vehicle	416.80	-----	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	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_{32} - L_{33}	243.26	105.24	-0.06			0.75	1.18	93.37	-0.05	0.00	0.00	Vehicle	Vehicle	437.62	-----	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	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{33} - L_{34}	238.98	89.86	-11.87			0.75	1.18	79.73	-10.53	0.00	0.00	Vehicle	Vehicle	414.32	-----	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	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U_{34} - L_{35}	222.10	92.90	-18.37			0.75	1.18	82.42	-16.30	0.00	0.00	Vehicle	Vehicle	395.88	-----	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: 5C1
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

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	-66.77	13.38	-46.03	2.20	-8.83	0.90	1.24	14.90	-51.25	2.20	-8.83	Vehicle	Vehicle	-----	-153.42	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	-----	-----	9.73	9.73
		U_1 - U_2	-86.66	31.98	-71.05	6.00	-16.34	0.90	1.24	35.60	-79.09	6.00	-16.34	Vehicle	Vehicle	-----	-215.48	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	-----	-----	6.05	6.05
		U_2 - U_3	-48.28	47.12	-59.31	9.44	-19.05	0.90	1.24	52.46	-66.03	9.44	-19.05	Vehicle	Vehicle	5.44	-148.60	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	13.71	13.71	7.83	7.83
		U_3 - U_4	36.43	60.45	-71.89	12.72	-17.47	0.90	1.24	67.30	-80.04	12.72	-17.47	Vehicle	Vehicle	134.85	-56.68	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	9.43	9.43	7.52	7.52
		U_4 - U_5	38.78	60.63	-61.70	12.78	-17.37	0.90	1.24	67.50	-68.69	12.78	-17.37	Vehicle	Vehicle	138.17	-38.88	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	9.37	9.37	8.79	8.79
		U_5 - U_6	154.43	67.78	-36.70	3.10	0.00	0.90	1.24	75.46	-40.86	3.10	0.00	Vehicle	Vehicle	298.85	-----	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	-----	-----	6.85	6.85	-----	-----
		U_6 - U_7	288.19	73.72	34.89	17.11	-4.31	0.90	1.24	82.08	38.84	17.11	-4.31	Vehicle	Vehicle	481.35	-----	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	-----	-----	6.29	6.29	-----	-----
		U_7 - U_8	410.75	17.66	14.08	22.59	0.00	0.90	1.24	19.66	15.67	22.59	0.00	Pedestrian	Vehicle	588.90	-----	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	-----	-----	16.55	16.55	-----	-----
		U_8 - U_9	311.35	48.81	14.55	12.90	6.15	0.90	1.20	52.62	15.69	12.90	6.15	Vehicle	Pedestrian	473.16	-----	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	-----	-----	11.92	11.92	-----	-----
		U_9 - U_{10}	78.25	51.04	-34.14	12.28	-6.83	0.90	1.20	55.03	-36.81	12.28	-6.83	Vehicle	Vehicle	173.27	-----	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	-----	-----	11.46	11.46	-----	-----
		U_{10} - U_{11}	-141.75	48.02	-76.56	11.11	-18.45	0.90	1.20	51.78	-82.55	11.11	-18.45	Vehicle	Vehicle	-----	-291.59	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	-----	-----	5.52	5.52
		U_{11} - U_{12}	-338.40	44.15	-108.76	9.77	-27.96	0.90	1.20	47.60	-117.27	9.77	-27.96	Vehicle	Vehicle	-----	-592.37	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	-----	-----	4.04	4.04
		U_{12} - U_{13}	-480.50	38.62	-125.62	8.23	-34.35	0.90	1.20	41.63	-135.45	8.23	-34.35	Vehicle	Vehicle	-----	-800.72	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	-----	-----	4.85	4.85
		U_{13} - U_{14}	-571.10	32.77	-152.61	6.68	-37.24	0.90	1.20	35.33	-164.54	6.68	-37.24	Vehicle	Vehicle	-----	-956.33	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	-----	-----	4.60	4.60
		U_{14} - U_{15}	-571.52	32.61	-150.05	6.65	-37.25	0.90	1.20	35.16	-161.79	6.65	-37.25	Vehicle	Vehicle	-----	-953.30	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	-----	-----	4.67	4.67
		U_{15} - U_{16}	-582.34	12.47	-133.27	0.00	-31.16	0.90	1.20	13.45	-143.69	0.00	-31.16	Vehicle	Vehicle	-----	-943.84	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	-----	-----	5.19	5.19
		U_{16} - U_{17}	-539.92	11.17	-112.40	0.00	-28.35	0.90	1.20	12.04	-121.19	0.00	-28.35	Vehicle	Vehicle	-----	-859.43	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	-----	-----	6.50	6.50
		U_{17} - U_{18}	-422.72	-91.37	-24.36	-25.07	2.26	0.90	1.20	-26.27	-98.52	2.26	-25.07	Vehicle	Vehicle	-----	-677.61	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	-----	-----	5.56	5.56
		U_{18} - U_{19}	-286.53	-60.10	-17.28	-16.97	1.28	0.90	1.20	-18.63	-64.80	1.28	-16.97	Vehicle	Vehicle	-----	-456.73	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	-----	-----	6.03	6.03
		U_{19} - U_{20}	-140.97	-26.20	-3.82	-8.68	0.55	0.90	1.20	-4.11	-28.25	0.55	-8.68	Vehicle	Vehicle	-----	-219.98	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	-----	-----	19.00	19.00
	Structure 2	U_0 - U_1	-147.48	4.29	-39.48	0.36	-4.88	0.90	1.18	4.57	-42.03	0.36	-4.88	Vehicle	Vehicle	-----	-246.37	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	-----	-----	11.89	11.89
		U_1 - U_2	-319.09	14.89	-82.12	1.96	-13.36	0.90	1.18	15.85	-87.43	1.96	-13.36	Vehicle	Vehicle	-----	-528.48	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	-----	-----	5.40	5.40
		U_2 - U_3	-460.93	26.70	-116.15	3.77	-20.95	0.90	1.18	28.43	-123.66	3.77	-20.95	Vehicle	Vehicle	-----	-759.97	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	-----	-----	4.99	4.99
		U_3 - U_4	-580.02	40.61	-140.49	5.92	-27.68	0.90	1.18	43.24	-149.57	5.92	-27.68	Vehicle	Vehicle	-----	-948.48	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	-----	-----	5.09	5.09
		U_4 - U_5	-616.47	52.66	-149.40	7.86	-31.35	0.90	1.18	56.07	-159.06	7.86	-31.35	Vehicle	Vehicle	-----	-1008.20	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	-----	-----	5.47	5.47
		U_5 - U_6	-604.69	64.80	-147.31	9.87	-32.88	0.90	1.18	68.99	-156.84	9.87	-32.88	Vehicle	Vehicle	-----	-989.98	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	-----	-----	5.63	5.63
		U_6 - U_7	-514.75	74.07	-114.73	11.56	-31.23	0.90	1.18	78.86	-122.16	11.56	-31.23	Vehicle	Vehicle	-----	-827.98	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	-----	-----	6.77	6.77
		U_7 - U_8	-512.80	74.01	-146.20	11.57	-31.18	0.90	1.18	78.80	-155.65	11.57	-31.18	Vehicle	Vehicle	-----	-868.99	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	-----	-----	5.32	5.32
		U_8 - U_9	-373.48	82.42	-123.95	13.16	-27.41	0.90	1.18	87.76	-131.97	13.16	-27.41	Vehicle	Vehicle	-----	-657.08	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	-----	-----	5.70	5.70
		U_9 - U_{10}	-181.02	86.23	-91.66	14.25	-21.42	0.90	1.18	91.81	-97.59	14.25	-21.42	Vehicle	Vehicle	-----	-362.19	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	-----	-----	7.23	7.23
		U_{10} - U_{11}	26.21	89.11	-51.19	15.21	-14.40	0.90	1.18	94.88	-54.51	15.21	-14.40	Vehicle	Vehicle	157.41	-36.79	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	9.32	9.32	14.60	14.60
		U_{11} - U_{12}	237.41	-11.69	8.36	10.86	0.00	0.90	1.18	8.90	-12.45	10.86	0.00	Pedestrian	Vehicle	334.31	-----	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	-----	-----	34.08	34.08	-----	-----
		U_{12} - U_{13}	435.92	20.26	36.31	15.82	0.56	0.90	1.18	38.65	21.57	15.82	0.56	Pedestrian	Vehicle	637.50	-----	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	-----	-----	12.91	12.91	-----	-----
		U_{13} - U_{14}	595.85	24.80	7.64	24.32	0.00	0.90	1.18	26.41	8.13	24.32	0.00	Pedestrian	Vehicle	840.55	-----	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	-----	-----	19.09	19.09	-----	-----
		U_{14} - U_{15}	615.52	73.16	23.74	13.42	8.77	0.90	1.17	76.97	24.98	13.42	8.77	Vehicle	Pedestrian	900.24	-----	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	-----	-----	12.33	12.33	-----	-----
		U_{15} - U_{16}	486.12	77.45	1.66	14.17	3.09	0.90	1.17	81.48	1.74	14.17	3.09	Vehicle	Pedestrian	737.89	-----	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	-----	-----	9.65	9.65	-----	-----
		U_{16} - U_{17}	339.23	76.98	-28.25	14.66	-2.95	0.90	1.17	80.99	-29.72	14.66	-2.95	Vehicle	Vehicle	546.29	-----	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	-----	-----	8.70	8.70	-----	-----
		U_{17} - U_{18}	192.06	75.25	-64.32	15.12	-9.49	0.90	1.17	79.17	-67.68	15.12	-9.49	Vehicle	Vehicle	352.60	-----	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	-----	-----	7.25	7.25	-----	-----
		U_{18} - U_{19}	53.73	68.93	-79.70	15.12	-15.34	0.90	1.17	72.52	-83.85	15.12	-15.34	Vehicle	Vehicle	164.12	-39.16	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	45.00	Fail	42.67	50.00	Pass	10.67	12.00	Pass	9.83	9.83	8.36	8.36
		U_{19} - U_{20}	-59.08	61.12	-114.00	15.07	-19.84	0.90	1.17	64.30	-119.93	15.07	-19.84	Vehicle	Vehicle	6.79	-232.72	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	13.67	13.67	5.28	5.28
	Structure 3	U_0 - U_1	-125.50	31.13	-110.84	14.76	-22.39	0.90	1.17	32.75	-116.61	14.76	-22.39	Pedestrian	Vehicle	-----	-314.74	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	-----	-----	6.10	6.10
		U_1 - U_2	-146.93	41.91	-102.54	14.37	-22.74	0.90	1.17	44.09	-107.88	14.37	-22.74	Vehicle	Vehicle	-----	-331.25	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	-----	-----	6.39	6.39
		U_2 - U_3	-146.70	39.34	-120.12	14.36	-22.72	0.90	1.17	41.39	-126.38	14.36	-22.72	Pedestrian	Vehicle	-----	-355.01	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	-----	-----	5.46	5.46
		U_3 - U_4	-112.76	51.01	-109.57	13.87	-16.66	0.90	1.17	53.67	-115.28	13.87	-16.66	Vehicle	Vehicle	-----	-296.46	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	-----	-----	6.28	6.28
		U_4 - U_5	-36.27	59.14	-44.83	13.40	-15.02	0.90	1.17	62.23	-47.16	13.40	-15.02	Vehicle	Vehicle	33.74	-108.47	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	13.76	13.76	13.92	13.92
		U_5 - U_6	80.70	64.22	-30.00	0.37	0.00	0.90	1.17	67.57	-31.56	0.37	0.00	Vehicle	Vehicle	192.74	-----	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	-----	-----	10.15	10.15	-----	-----
		U_6 - U_7	220.59	-18.00	-14.89	7.92	0.00	0.90	1.17	-15.67	-18.94	7.92	0.00	Vehicle	Vehicle	266.40	-----	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	363.31	2.31	14.06	14.90	0.00	0.90	1.17	14.79	2.43	14.90	0.00	Pedestrian	Vehicle	510.89	-----	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	-----	-----	22.93	22.93	-----	-----
		U_8 - U_9	503.82	47.89	24.55	21.74	3.11	0.90	1.17	50.38	25.83	21.74	3.11	Pedestrian	Vehicle	748.72	-----	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	-----	-----	10.66	10.66	-----	-----
		U_9 - U_{10}	616.57	21.96	-3.49	27.08	0.00	0.90	1.17	23.10	-3.67	27.08	0.00	Pedestrian	Vehicle	866.76	-----	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	-----	-----	18.89	18.89	-----	-----
		U_{10} - U_{11}	559.74	80.57	16.09	15.74	6.15	0.90	1.18	85.78	17.14	15.74	6.15	Vehicle	Pedestrian	839.18	-----	13.75	61.63	47

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: 5C1 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

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	1.27	-3.60	0.36	-2.06	0.90	1.24	1.42	-4.00	0.36	-2.06	Vehicle	Pedestrian	-----	-10.49	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	-----	-----	**69.57**	**69.57**
	L_1 - L_2	67.91	-17.87	36.97	-3.36	9.23	0.90	1.24	41.15	-19.90	9.23	-3.36	Vehicle	Vehicle	141.78	-----	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	-----	-----	**10.56**	**10.56**	-----	-----
	L_2 - L_3	78.84	-38.62	70.53	-7.39	15.48	0.90	1.24	78.52	-42.99	15.48	-7.39	Vehicle	Vehicle	204.57	-----	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	-----	-----	**7.51**	**7.51**	-----	-----
	L_3 - L_4	39.14	-53.71	75.59	-10.83	18.09	0.90	1.24	84.15	-59.80	18.09	-10.83	Vehicle	Vehicle	160.28	-26.86	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	**7.48**	**7.48**	**10.07**	**10.07**
	L_4 - L_5	-166.38	-76.36	54.29	-16.90	10.96	0.90	1.24	60.44	-85.01	10.96	-16.90	Vehicle	Vehicle	-----	-326.80	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	-----	-----	**3.93**	**3.93**
	L_5 - L_6	-301.23	-82.53	22.07	-15.70	0.00	0.90	1.24	24.57	-91.88	0.00	-15.70	Vehicle	Vehicle	-----	-511.04	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	44.32	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.90**	**3.90**
	L_6 - L_7	-438.94	-13.36	-43.86	-4.99	-21.52	0.90	1.24	-14.88	-48.83	-4.99	-21.52	Pedestrian	Pedestrian	-----	-662.07	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	-----	-----	**7.19**	**7.19**
	L_7 - L_8	-551.65	-53.77	-0.70	-35.55	0.00	0.90	1.24	-0.78	-59.87	0.00	-35.55	Vehicle	Pedestrian	-----	-841.18	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	-----	-----	**6.79**	**6.79**
	L_8 - L_9	-570.53	-34.45	-43.97	-11.71	-25.77	0.90	1.20	-37.14	-47.41	-11.71	-25.77	Vehicle	Pedestrian	-----	-836.82	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	-----	-----	**8.59**	**8.59**
	L_9 - L_{10}	-355.48	-41.46	-43.73	-11.67	-13.03	0.90	1.20	-44.70	-47.15	-11.67	-13.03	Vehicle	Vehicle	-----	-523.42	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	-----	-----	**12.51**	**12.51**
	L_{10} - L_{11}	-118.48	-42.50	10.33	-10.69	-1.74	0.90	1.20	11.14	-45.82	-1.74	-10.69	Vehicle	Vehicle	-----	-213.59	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	-----	-----	**8.33**	**8.33**
	L_{11} - L_{12}	103.45	-39.34	53.71	-9.47	9.96	0.90	1.20	57.91	-42.42	9.96	-9.47	Vehicle	Vehicle	209.77	-----	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	-----	-----	**8.47**	**8.47**	-----	-----
	L_{12} - L_{13}	300.60	-36.47	104.01	-8.14	17.83	0.90	1.20	112.14	-39.32	17.83	-8.14	Vehicle	Vehicle	536.56	-----	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	-----	-----	**6.01**	**6.01**	-----	-----
	L_{13} - L_{14}	441.19	-31.00	125.60	-6.61	24.15	0.90	1.20	135.42	-33.42	24.15	-6.61	Vehicle	Vehicle	749.59	-----	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	-----	-----	**6.40**	**6.40**	-----	-----
	L_{14} - L_{15}	547.00	-19.18	140.75	0.00	21.08	0.90	1.20	151.76	-20.67	21.08	0.00	Vehicle	Vehicle	908.39	-----	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	-----	-----	**6.77**	**6.77**	-----	-----
	L_{15} - L_{16}	506.09	-17.93	116.32	0.00	18.29	0.90	1.20	125.41	-19.33	18.29	0.00	Vehicle	Vehicle	820.95	-----	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	-----	-----	**8.52**	**8.52**	-----	-----
	L_{16} - L_{17}	398.75	80.22	34.45	0.00	11.88	0.90	1.20	86.49	37.15	11.88	0.00	Vehicle	Vehicle	630.82	-----	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	-----	-----	**9.46**	**9.46**	-----	-----
	L_{17} - L_{18}	263.81	49.79	18.76	4.66	0.15	0.90	1.20	53.68	20.22	4.66	0.15	Vehicle	Vehicle	412.74	-----	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	-----	-----	**11.54**	**11.54**	-----	-----
	L_{18} - L_{19}	118.75	21.19	4.73	-3.38	0.71	0.90	1.20	22.84	5.10	0.71	-3.38	Vehicle	Vehicle	184.08	-----	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	-----	-----	**16.80**	**16.80**	-----	-----
	L_{19} - L_{20}	-23.36	-5.17	3.79	-12.08	1.28	0.90	1.20	4.09	-5.58	1.28	-12.08	Vehicle	Pedestrian	-----	-53.32	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	-----	-----	**22.66**	**22.66**
	L_0- L_1	-36.12	5.06	-7.63	1.19	-5.14	0.90	1.18	5.39	-8.12	1.19	-5.14	Vehicle	Pedestrian	-----	-64.20	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	-----	-----	**37.61**	**37.61**
	L_1 - L_2	132.64	-3.24	27.89	-0.06	2.93	0.90	1.18	29.69	-3.45	2.93	-0.06	Vehicle	Vehicle	211.04	-----	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	-----	-----	**16.86**	**16.86**	-----	-----
	L_2 - L_3	303.94	-15.21	73.12	-1.79	10.52	0.90	1.18	77.85	-16.20	10.52	-1.79	Vehicle	Vehicle	496.32	-----	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	-----	-----	**8.63**	**8.63**	-----	-----
	L_3 - L_4	445.73	-27.15	106.06	-3.63	18.15	0.90	1.18	112.92	-28.90	18.15	-3.63	Vehicle	Vehicle	726.25	-----	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	-----	-----	**7.65**	**7.65**	-----	-----
	L_4 - L_5	567.64	-43.43	121.68	-6.10	24.81	0.90	1.18	129.55	-46.24	24.81	-6.10	Vehicle	Vehicle	906.35	-----	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	-----	-----	**8.35**	**8.35**	-----	-----
	L_5 - L_6	603.43	-55.56	160.33	-8.06	28.47	0.90	1.18	170.70	-59.15	28.47	-8.06	Vehicle	Vehicle	1006.38	-----	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	-----	-----	**6.97**	**6.97**	-----	-----
	L_6 - L_7	599.28	-70.30	171.54	-10.41	30.25	0.90	1.18	182.64	-74.85	30.25	-10.41	Vehicle	Vehicle	1016.50	-----	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	-----	-----	**6.67**	**6.67**	-----	-----
	L_7 - L_8	373.73	-87.55	138.58	-13.66	24.92	0.90	1.18	147.54	-93.21	24.92	-13.66	Vehicle	Vehicle	677.65	-----	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	-----	-----	**6.56**	**6.56**	-----	-----
	L_8 - L_9	195.51	-94.17	51.36	-15.12	19.51	0.90	1.18	54.68	-100.27	19.51	-15.12	Pedestrian	Vehicle	350.62	-----	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	-----	-----	**12.19**	**12.19**	-----	-----
	L_9 - L_{10}	-13.41	-97.23	28.51	-7.61	12.45	0.90	1.18	30.35	-103.52	12.45	-7.61	Pedestrian	Vehicle	38.20	-152.02	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	**20.45**	**20.45**	**6.90**	**6.90**
	L_{10} - L_{11}	-217.51	20.49	5.41	-15.65	0.00	0.90	1.18	21.82	5.76	0.00	-15.65	Vehicle	Pedestrian	-----	-295.61	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	-----	-----	-----	-----
	L_{11} - L_{12}	-420.12	-94.55	26.78	-23.35	0.00	0.90	1.18	28.51	-100.67	0.00	-23.35	Vehicle	Vehicle	-----	-677.02	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	-----	-----	**5.07**	**5.07**
	L_{12} - L_{13}	-591.61	-39.23	-41.43	-7.10	-18.75	0.90	1.18	-41.76	-44.11	-7.10	-18.75	Vehicle	Pedestrian	-----	-850.80	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	-----	-----	**10.88**	**10.88**
	L_{13} - L_{14}	-724.42	-36.00	1.19	-35.12	0.00	0.90	1.18	1.27	-38.33	0.00	-35.12	Vehicle	Pedestrian	-----	-1037.23	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	-----	-----	**10.77**	**10.77**
	L_{14} - L_{15}	-747.19	13.80	-33.98	0.00	-36.29	0.90	1.17	14.52	-35.75	0.00	-36.29	Vehicle	Pedestrian	-----	-1065.00	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	-----	-----	**10.66**	**10.66**
	L_{15} - L_{16}	-632.29	-60.23	-51.81	-9.38	-12.11	0.90	1.17	-54.51	-63.36	-9.38	-12.11	Vehicle	Vehicle	-----	-904.34	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	-----	-----	**10.15**	**10.15**
	L_{16} - L_{17}	-488.73	-64.88	-32.61	-9.25	-11.44	0.90	1.17	-34.31	-68.26	-9.25	-11.44	Vehicle	Vehicle	-----	-724.08	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	-----	-----	**8.18**	**8.18**
	L_{17} - L_{18}	-337.06	-64.29	-3.09	-9.73	-4.53	0.90	1.17	-3.26	-67.64	-4.53	-9.73	Pedestrian	Vehicle	-----	-526.11	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	-63.26	35.00	-9.59	1.37	0.90	1.17	36.82	-66.55	1.37	-9.59	Vehicle	Vehicle	-----	-325.24	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	-----	-----	**5.86**	**5.86**
	L_{19} - L_{20}	-45.76	-56.88	74.06	-9.58	7.21	0.90	1.17	77.91	-59.84	7.21	-9.58	Vehicle	Vehicle	41.80	-137.28	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	**9.30**	**9.30**	**8.82**	**8.82**
	Structure 2																																														
	L_{20} - L_{21}	68.06	-50.54	100.83	-9.12	11.07	0.90	1.17	106.08	-53.17	11.07	-9.12	Vehicle	Vehicle	226.39	-----	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	-----	-----	**8.45**	**8.45**	-----	-----
	L_{21} - L_{22}	134.01	-21.89	110.63	-8.81	13.61	0.90	1.17	116.40	-23.03	13.61	-8.81	Vehicle	Pedestrian	325.52	-----	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	-----	-----	**7.14**	**7.14**	-----	-----
	L_{22} - L_{23}	122.68	-42.23	108.70	-7.57	8.54	0.90	1.17	114.36	-44.43	8.54	-7.57	Vehicle	Vehicle	308.16	-----	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	-----	-----	**7.36**	**7.36**	-----	-----
	L_{23} - L_{24}	46.89	-49.96	90.14	-7.09	6.92	0.90	1.17	94.84	-52.57	6.92	-7.09	Vehicle	Vehicle	184.25	-7.38	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**9.68**	**9.68**	**16.38**	**16.38**
	L_{24} - L_{25}	-66.54	-54.56	37.36	-4.27	3.32	0.90	1.17	39.31	-57.40	3.32	-4.27	Vehicle	Vehicle	-----	-161.13	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	-----	-----	**8.83**	**8.83**
	L_{25} - L_{26}	-205.63	-59.06	55.87	-11.77	0.00	0.90	1.17	58.78	-62.13	0.00	-11.77	Vehicle	Vehicle	-----	-348.09	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	-----	-----	**5.92**	**5.92**
	L_{26} - L_{27}	-350.43	-10.16	-8.65	-18.87	0.00	0.90	1.17	-9.10	-10.69	0.00	-18.87	Vehicle	Pedestrian	-----	-493.97	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	-----	-----	**12.76**	**12.76**
	L_{27} - L_{28}	-494.65	-39.64	20.56	-25.89	0.00	0.90	1.17	21.63	-41.70	0.00	-25.89	Vehicle	Pedestrian	-----	-730.90	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	-----	-----	**8.18**	**8.18**
	L_{28} - L_{29}	-620.83	-67.20	-30.29	-21.97	-5.03	0.90	1.17	-31.87	-70.70	-5.03	-21.97	Vehicle	Vehicle	-----	-898.99	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	-----	-----	**9.26**	**9.26**
	L_{29} - L_{30}	-716.91	-37.80	-21.46	-36.29	0.00	0.90	1.17	-22.57	-39.77	0.00	-36.29	Vehicle	Pedestrian	-----	-1030.86	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

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: 5C1
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

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	-63.67	17.51	-12.32	3.44	0.90	1.24	19.50	-70.88	3.44	-12.32	Vehicle	Vehicle	-----	-213.98	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	-----	-----	-----	-----	-----	3.54	3.54
	U_1 - L_1	-46.53	-32.80	15.10	-9.05	2.93	0.90	1.24	16.81	-36.52	2.93	-9.05	Vehicle	Vehicle	-----	-107.97	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	-----	-----	-----	-----	-----	8.37	8.37
	U_2 - L_2	-0.10	-22.10	13.51	-5.68	2.84	0.90	1.24	15.04	-24.61	2.84	-5.68	Vehicle	Vehicle	19.42	-32.12	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	28.44	28.44	14.30	14.30
	U_3 - L_3	39.60	-8.90	11.83	-2.12	2.69	0.90	1.24	13.17	-9.90	2.69	-2.12	Vehicle	Vehicle	68.60	-----	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	-----	-----	29.47	29.47	-----	-----
	U_4 - L_4	-30.20	0.50	-12.01	0.00	-3.46	0.90	1.24	0.56	-13.37	0.00	-3.46	Vehicle	Vehicle	-----	-56.65	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	-----	-----	23.90	23.90
	U_5 - L_5	-130.49	2.25	-37.24	0.00	-10.23	0.90	1.24	2.51	-41.46	0.00	-10.23	Vehicle	Vehicle	-----	-223.53	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	-----	-----	7.11	7.11
	U_6 - L_6	-158.18	8.76	-41.39	0.00	-13.06	0.90	1.24	9.75	-46.08	0.00	-13.06	Vehicle	Vehicle	-----	-265.54	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	-----	-----	7.59	7.59
	U_7 - L_7	-152.32	14.13	-41.99	0.00	-13.24	0.90	1.24	15.74	-46.75	0.00	-13.24	Vehicle	Vehicle	-----	-258.79	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	-----	-----	6.59	6.59
	U_8 - L_8	-455.55	-73.13	-44.05	-18.97	-12.74	0.90	1.24	-49.04	-81.41	-12.74	-18.97	Vehicle	Vehicle	-----	-698.04	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	-----	-----	7.49	7.49
	U_9 - L_9	-287.55	-70.13	0.48	-18.20	0.00	0.90	1.20	0.51	-75.61	0.00	-18.20	Vehicle	Vehicle	-----	-472.11	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}	-276.32	-68.29	-2.69	-16.17	-1.37	0.90	1.20	-2.90	-73.63	-1.37	-16.17	Pedestrian	Vehicle	-----	-454.94	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	-----	-----	6.33	6.33
	U_{11} - L_{11}	-232.59	-60.50	1.66	-14.41	0.00	0.90	1.20	1.79	-65.23	0.00	-14.41	Vehicle	Vehicle	-----	-387.17	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	-----	-----	6.27	6.27
	U_{12} - L_{12}	-178.43	-42.41	1.00	-11.20	0.00	0.90	1.20	1.07	-45.72	0.00	-11.20	Vehicle	Vehicle	-----	-291.40	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	-----	-----	7.74	7.74
	U_{13} - L_{13}	-127.74	-32.70	1.80	-7.88	0.00	0.90	1.20	1.94	-35.26	0.00	-7.88	Vehicle	Vehicle	-----	-211.90	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	-----	-----	7.17	7.17
	U_{14} - L_{14}	-30.39	-2.04	-8.63	-3.03	0.00	0.90	1.20	-2.19	-9.30	0.00	-3.03	Vehicle	Vehicle	-----	-51.60	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	-----	-----	33.79	33.79
	U_{15} - L_{15}	-28.94	6.79	-28.58	1.55	-4.54	0.90	1.20	7.32	-30.82	1.55	-4.54	Vehicle	Vehicle	-----	-77.68	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	-----	-----	10.20	10.20
	U_{16} - L_{16}	-76.03	6.57	-35.56	1.39	-7.08	0.90	1.20	7.09	-38.34	1.39	-7.08	Vehicle	Vehicle	-----	-148.69	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	-----	-----	6.92	6.92
	U_{17} - L_{17}	-161.89	7.05	-48.30	1.30	-10.66	0.90	1.20	7.60	-52.07	1.30	-10.66	Vehicle	Vehicle	-----	-278.15	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	-----	-----	4.79	4.79
	U_{18} - L_{18}	-190.28	6.06	-50.62	1.12	-12.71	0.90	1.20	6.53	-54.58	1.12	-12.71	Vehicle	Vehicle	-----	-318.32	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	-----	-----	6.14	6.14
	U_{19} - L_{19}	-228.17	5.19	-50.51	0.97	-14.98	0.90	1.20	5.60	-54.46	0.97	-14.98	Vehicle	Vehicle	-----	-367.41	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	-----	-----	7.13	7.13
	U_{20} - L_{20}	-242.83	4.71	-52.16	0.95	-15.63	0.90	1.20	5.07	-56.24	0.95	-15.63	Vehicle	Vehicle	-----	-388.78	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	-----	-----	6.03	6.03
Structure 2	U_0 - L_0	-303.03	-80.27	13.75	-15.08	2.22	0.90	1.18	14.64	-85.46	2.22	-15.08	Vehicle	Vehicle	-----	-505.04	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	-----	-----	3.97	3.97
	U_1 - L_1	-268.78	-70.13	14.00	-13.67	2.12	0.90	1.18	14.90	-74.67	2.12	-13.67	Vehicle	Vehicle	-----	-446.48	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	-----	-----	5.41	5.41
	U_2 - L_2	-220.87	-64.98	15.05	-12.32	2.34	0.90	1.18	16.03	-69.18	2.34	-12.32	Vehicle	Vehicle	-----	-377.07	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	-----	-----	5.11	5.11
	U_3 - L_3	-175.23	-53.16	16.13	-10.35	2.49	0.90	1.18	17.17	-56.60	2.49	-10.35	Vehicle	Vehicle	-----	-301.37	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	-----	-----	4.89	4.89
	U_4 - L_4	-82.08	-38.41	13.96	-6.62	2.21	0.90	1.18	14.86	-40.89	2.21	-6.62	Vehicle	Vehicle	-----	-159.86	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	-----	-----	6.29	6.29
	U_5 - L_5	-19.89	-29.97	13.79	-4.16	2.23	0.90	1.18	14.68	-31.91	2.23	-4.16	Vehicle	Vehicle	-----	-67.35	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	-----	-----	10.05	10.05
	U_6 - L_6	60.32	-14.09	22.16	-0.47	1.75	0.90	1.18	23.60	-15.00	1.75	-0.47	Vehicle	Vehicle	109.09	-----	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	-----	-----	15.57	15.57	-----	-----
	U_7 - L_7	-41.77	-1.09	-7.05	0.00	-2.49	0.90	1.18	-1.16	-7.51	0.00	-2.49	Vehicle	Vehicle	-----	-64.07	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	-----	-----	39.79	39.79
	U_8 - L_8	-189.01	4.07	-46.43	0.00	-8.38	0.90	1.18	4.34	-49.44	0.00	-8.38	Vehicle	Vehicle	-----	-309.99	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	-----	-----	6.91	6.91
	U_9 - L_9	-253.99	1.74	-58.15	0.00	-10.55	0.90	1.18	1.85	-61.91	0.00	-10.55	Vehicle	Vehicle	-----	-410.67	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	-----	-----	7.06	7.06
	U_{10} - L_{10}	-290.02	4.37	-61.07	0.00	-12.18	0.90	1.18	4.65	-65.02	0.00	-12.18	Vehicle	Vehicle	-----	-461.54	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	-----	-----	7.51	7.51
	U_{11} - L_{11}	-312.18	10.01	-66.32	0.00	-12.59	0.90	1.18	10.65	-70.61	0.00	-12.59	Vehicle	Vehicle	-----	-497.62	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	-----	-----	6.41	6.41
	U_{12} - L_{12}	-327.28	14.86	-61.23	-0.93	-13.01	0.90	1.18	15.82	-65.19	-0.93	-13.01	Vehicle	Vehicle	-----	-510.20	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	-----	-----	7.28	7.28
	U_{13} - L_{13}	-277.21	21.20	-51.63	0.00	-11.39	0.90	1.18	22.57	-54.97	0.00	-11.39	Vehicle	Vehicle	-----	-431.84	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	-----	-----	7.51	7.51
	U_{14} - L_{14}	-505.44	-54.77	-37.43	-11.34	-9.95	0.90	1.18	-39.86	-58.32	-9.95	-11.34	Vehicle	Vehicle	-----	-732.89	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	-----	-----	9.37	9.37
	U_{15} - L_{15}	-232.94	-63.41	2.52	-11.17	0.00	0.90	1.17	2.65	-66.72	0.00	-11.17	Vehicle	Vehicle	-----	-389.55	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	-----	-----	6.85	6.85
	U_{16} - L_{16}	-260.12	-68.94	0.34	-12.63	0.83	0.90	1.17	0.36	-72.53	0.83	-12.63	Pedestrian	Vehicle	-----	-432.44	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	-----	-----	5.60	5.60
	U_{17} - L_{17}	-228.24	-65.84	9.29	-11.76	0.66	0.90	1.17	9.77	-69.27	0.66	-11.76	Vehicle	Vehicle	-----	-386.76	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	-----	-----	5.70	5.70
	U_{18} - L_{18}	-209.27	-55.23	11.15	-11.28	-0.03	0.90	1.17	11.73	-58.10	-0.03	-11.28	Vehicle	Vehicle	-----	-347.59	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	-----	-----	6.33	6.33
	U_{19} - L_{19}	-166.55	-49.75	11.84	-9.53	-0.07	0.90	1.17	12.46	-52.35	-0.07	-9.53	Vehicle	Vehicle	-----	-284.57	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	-----	-----	6.59	6.59
	U_{20} - L_{20}	-113.95	-39.35	11.95	-7.50	-0.43	0.90	1.17	12.58	-41.40	-0.43	-7.50	Vehicle	Vehicle	-----	-201.95	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	-----	-----	6.31	6.31
	U_{21} - L_{21}	-62.76	-26.81	13.66	-5.22	-0.44	0.90	1.17	14.38	-28.21	-0.44	-5.22	Vehicle	Vehicle	-----	-118.26	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	-----	-----	9.85	9.85
	U_{22} - L_{22}	-38.94	-6.99	-5.70	-2.15	-2.04	0.90	1.17	-5.99	-7.36	-2.04	-2.15	Pedestrian	Vehicle	-----	-60.18	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	45.00	Pass	6.56	12.00	Pass	-----	-----	41.18	41.18
	U_{23} - L_{23}	-74.43	12.69	-36.84	0.48	-6.10	0.90	1.17	13.35	-38.75	0.48	-6.10	Vehicle	Vehicle	-----	-147.14	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	-----	-----	6.87	6.87
	U_{24} - L_{24}	-121.36	12.44	-42.84	0.37	-8.17	0.90	1.17	13.09	-45.07	0.37	-8.17	Vehicle	Vehicle	-----	-216.36	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	-----	-----	5.63	5.63
	U_{25} - L_{25}	-169.12	11.96	-52.80	0.43	-9.94	0.90	1.17	12.58	-55.55	0.43	-9.94	Vehicle	Vehicle	-----	-292.07	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	-----	-----	6.16	6.16
	U_{26} - L_{26}	-207.97	10.82	-56.35	0.14	-11.42	0.90	1.17	11.38	-59.29	0.14	-11.42	Vehicle	Vehicle	-----	-347.44	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	-----	-----	6.23	6.23
	U_{27} - L_{27}	-219.96	8.90	-58.25	0.16	-11.49	0.90	1.17	9.36	-61.28	0.16	-11.49	Vehicle	Vehicle	-----	-365.61	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	-----	-----	6.58	6.58
	U_{28} - L_{28}	-240.91	12.85	-55.41	-0.25	-11.17	0.90	1.17	13.52	-58.30	-0.25	-11.17	Vehicle	Vehicle	-----	-388.97	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	-----	-----	7.29	7.29
	U_{29} - L_{29}	-202.73	21.21	-47.65	0.00	-10.35	0.90	1.17	22.31	-50.13	0.00	-10.35	Vehicle	Vehicle	-----	-328.71	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	-----	-----	9.72	9.72
	U_{30} - L_{30}	-518.05	-61.62	-35.08	-13.79	-8.23	0.90	1.18	-37.35	-65.60	-8.23	-13.79	Vehicle	Vehicle	-----	-758.74	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	-----	-----	8.14	8.14
	U_{31} - L_{31}	-318.43	-68.28	9.24	-12.95	0.00	0.90	1.18	9.84	-72.69	0.00	-12.95	Vehicle	Vehicle	-----	-508.46	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	-----	-----	5.11	5.11
	U_{32} - L_{32}	-358.67	-75.66	2.58	-14.65	-0.26	0.90	1.18	2.75	-80.55	-0.26	-14.65	Vehicle	Vehicle	-----	-571.00	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	-----	-----	5.50	5.50
	U_{33} - L_{33}	-325.88	-67.59	2.80	-13.02	-0.46	0.90	1.18	2.98	-71.97	-0.46	-13.02	Vehicle	Vehicle	-----	-517.20	2.42

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: 5C1
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

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	48.24	-23.15	14.00	-4.60	0.90	1.24	53.71	-25.77	14.00	-4.60	Vehicle	Vehicle	183.78	-----	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	-----	-----	-----	-----	-----	**9.29**	**9.29**	-----	-----
		U_1 - L_2	23.90	28.70	3.25	9.20	-4.71	0.90	1.24	31.95	3.62	9.20	-4.71	Vehicle	Vehicle	72.60	-----	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	-----	-----	-----	-----	-----	**12.64**	**12.64**	-----	-----
		U_2 - L_3	-49.02	14.86	-10.22	0.00	-1.00	0.90	1.24	16.54	-11.38	0.00	-1.00	Vehicle	Vehicle	-----	-78.52	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	-----	-----	-----	-----	-----	**25.05**	**25.05**
		U_3 - L_4	-108.88	-5.67	1.01	-4.20	-2.10	0.90	1.24	1.12	-6.32	-2.10	-4.20	Vehicle	Pedestrian	-----	-155.21	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	-----	-----	-----	-----	-----	**21.63**	**21.63**
		U_4 - L_4	153.12	9.96	28.63	3.11	7.00	0.90	1.24	31.87	11.09	7.00	3.11	Vehicle	Vehicle	240.49	-----	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	-----	-----	-----	-----	-----	**11.65**	**11.65**	-----	-----
		U_5 - L_5	186.35	49.91	-0.03	13.44	0.00	0.90	1.24	55.56	-0.04	13.44	0.00	Vehicle	Vehicle	314.49	-----	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	-----	-----	-----	-----	-----	**8.36**	**8.36**	-----	-----
		U_6 - L_6	177.52	50.16	-15.18	14.13	0.00	0.90	1.24	55.85	-16.90	14.13	0.00	Vehicle	Vehicle	303.38	-----	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	-----	-----	-----	-----	-----	**8.47**	**8.47**	-----	-----
		U_7 - L_7	173.18	47.01	-15.77	13.87	0.00	0.90	1.24	52.34	-17.56	13.87	0.00	Vehicle	Vehicle	293.17	-----	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	-----	-----	-----	-----	-----	**9.12**	**9.12**	-----	-----
		U_8 - L_8	328.11	77.44	-1.15	19.31	0.00	0.90	1.20	83.49	-1.24	19.31	0.00	Vehicle	Vehicle	535.08	-----	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	-----	-----	-----	-----	-----	**7.60**	**7.60**	-----	-----
		U_9 - L_{10}	339.70	81.56	-2.54	19.74	0.00	0.90	1.20	87.94	-2.74	19.74	0.00	Vehicle	Vehicle	555.93	-----	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	-----	-----	-----	-----	-----	**7.08**	**7.08**	-----	-----
		U_{10} - L_{11}	313.22	68.13	-0.16	18.15	0.00	0.90	1.20	73.46	-0.17	18.15	0.00	Vehicle	Vehicle	502.68	-----	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	-----	-----	-----	-----	-----	**8.13**	**8.13**	-----	-----
		U_{11} - L_{12}	270.68	59.86	13.81	14.84	0.00	0.90	1.20	64.54	14.89	14.84	0.00	Vehicle	Vehicle	435.79	-----	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	-----	-----	-----	-----	-----	**7.85**	**7.85**	-----	-----
		U_{12} - L_{13}	194.17	45.52	-2.74	10.79	0.00	0.90	1.20	49.07	-2.96	10.79	0.00	Vehicle	Vehicle	316.21	-----	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	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
		U_{13} - L_{14}	123.57	26.78	-11.70	2.11	3.86	0.90	1.20	28.87	-12.61	3.86	2.11	Vehicle	Vehicle	198.17	-----	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	-----	-----	-----	-----	-----	**10.53**	**10.53**	-----	-----
		U_{15} - L_{14}	-16.32	22.98	-14.46	0.00	-0.87	0.90	1.20	24.77	-15.59	0.00	-0.87	Vehicle	Vehicle	10.99	-41.48	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	-----	-----	-----	**17.92**	**17.92**	**20.02**	**20.02**
		U_{16} - L_{15}	59.12	39.33	-7.82	6.08	-2.09	0.90	1.20	42.41	-8.43	6.08	-2.09	Vehicle	Vehicle	131.99	-----	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	-----	-----	-----	-----	-----	**8.69**	**8.69**	-----	-----
		U_{17} - L_{16}	172.14	58.52	-9.83	9.93	-1.86	0.90	1.20	63.09	-10.60	9.93	-1.86	Vehicle	Vehicle	305.81	-----	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	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
		U_{18} - L_{17}	210.78	58.11	-8.34	12.51	-1.53	0.90	1.20	62.66	-8.99	12.51	-1.53	Vehicle	Vehicle	355.47	-----	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	-----	-----	-----	-----	-----	**7.02**	**7.02**	-----	-----
		U_{19} - L_{18}	242.64	60.19	-6.67	13.73	-1.21	0.90	1.20	64.89	-7.19	13.73	-1.21	Vehicle	Vehicle	399.79	-----	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	-----	-----	-----	-----	-----	**7.21**	**7.21**	-----	-----
		U_{20} - L_{19}	257.76	53.29	-5.48	15.70	-1.03	0.90	1.20	57.46	-5.91	15.70	-1.03	Vehicle	Vehicle	409.79	-----	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	-----	-----	-----	-----	-----	**7.87**	**7.87**	-----	-----
		U_0 - L_1	298.99	64.26	-14.60	14.21	-2.21	0.90	1.18	68.41	-15.55	14.21	-2.21	Vehicle	Vehicle	477.62	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
		U_1 - L_2	284.21	76.37	-17.33	14.05	-2.66	0.90	1.18	81.31	-18.45	14.05	-2.66	Vehicle	Vehicle	475.17	-----	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	-----	-----	-----	-----	-----	**6.07**	**6.07**	-----	-----
		U_2 - L_3	221.42	67.80	-18.51	11.83	-2.85	0.90	1.18	72.18	-19.71	11.83	-2.85	Vehicle	Vehicle	381.69	-----	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	-----	-----	-----	-----	-----	**5.95**	**5.95**	-----	-----
		U_3 - L_4	178.30	58.98	-20.87	10.08	-3.23	0.90	1.18	62.80	-22.22	10.08	-3.23	Vehicle	Vehicle	313.42	-----	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	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
		U_4 - L_5	53.50	39.17	-17.86	5.37	-2.87	0.90	1.18	41.70	-19.02	5.37	-2.87	Vehicle	Vehicle	123.76	-----	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	-----	-----	-----	-----	-----	**8.97**	**8.97**	-----	-----
		U_5 - L_6	-16.51	27.26	-20.50	2.23	-1.22	0.90	1.18	29.03	-21.83	2.23	-1.22	Vehicle	Vehicle	16.27	-49.84	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	-----	-----	-----	**15.30**	**15.30**	**14.17**	**14.17**
		U_6 - L_7	-133.21	11.12	-40.49	0.00	-5.36	0.90	1.18	11.84	-43.11	0.00	-5.36	Vehicle	Vehicle	-----	-229.21	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	-----	-----	-----	-----	-----	**5.24**	**5.24**
		U_7 - L_7	208.77	50.31	-9.14	8.33	0.00	0.90	1.18	53.56	-9.73	8.33	0.00	Vehicle	Vehicle	341.03	-----	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	-----	-----	-----	-----	-----	**7.37**	**7.37**	-----	-----
		U_8 - L_8	289.58	66.87	-2.22	10.70	0.00	0.90	1.18	71.20	-2.36	10.70	0.00	Vehicle	Vehicle	469.01	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
		U_{10} - L_9	327.97	71.07	-1.19	12.66	0.00	0.90	1.18	75.67	-1.27	12.66	0.00	Vehicle	Vehicle	524.73	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{11} - L_{10}	349.25	76.46	1.13	12.70	0.00	0.90	1.18	81.41	1.20	12.70	0.00	Vehicle	Vehicle	559.86	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
		U_{12} - L_{11}	358.20	72.69	-11.28	13.52	0.00	0.90	1.18	77.40	-12.00	13.52	0.00	Vehicle	Vehicle	566.27	-----	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	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
		U_{13} - L_{12}	307.75	59.45	-21.52	12.26	-0.24	0.90	1.18	63.30	-22.91	12.26	-0.24	Vehicle	Vehicle	482.36	-----	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	-----	-----	-----	-----	-----	**7.42**	**7.42**	-----	-----
		U_{14} - L_{13}	260.20	49.11	-19.76	9.65	0.00	0.90	1.18	52.28	-21.04	9.65	0.00	Vehicle	Vehicle	406.23	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{15} - L_{15}	208.42	63.19	-8.80	11.04	-2.51	0.90	1.17	66.49	-9.26	11.04	-2.51	Vehicle	Vehicle	357.38	-----	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	-----	-----	-----	-----	-----	**6.65**	**6.65**	-----	-----
		U_{16} - L_{16}	243.55	71.87	-5.97	11.54	-1.48	0.90	1.17	75.61	-6.28	11.54	-1.48	Vehicle	Vehicle	414.91	-----	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	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
		U_{17} - L_{17}	255.86	70.06	-9.78	12.23	0.00	0.90	1.17	73.71	-10.29	12.23	0.00	Vehicle	Vehicle	428.45	-----	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	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
		U_{18} - L_{18}	235.29	69.96	-11.46	11.35	0.00	0.90	1.17	73.61	-12.06	11.35	0.00	Vehicle	Vehicle	401.57	-----	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	-----	-----	-----	-----	-----	**5.64**	**5.64**	-----	-----
		U_{19} - L_{19}	212.11	59.24	-13.98	11.09	0.00	0.90	1.17	62.32	-14.70	11.09	0.00	Vehicle	Vehicle	356.76	-----	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	-----	-----	-----	-----	-----	**7.04**	**7.04**	-----	-----
	Structure 2	U_0 - L_{20}	168.24	54.17	-15.47	9.14	0.00	0.90	1.17	57.00	-16.28	9.14	0.00	Vehicle	Vehicle	292.81	-----	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	-----	-----	-----	-----	-----	**7.63**	**7.63**	-----	-----
		U_{20} - L_{21}	97.26	36.00	-16.44	6.66	0.00	0.90	1.17	37.87	-17.30	6.66	0.00	Vehicle	Vehicle	175.67	-----	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	-----	-----	-----	-----	-----	**8.72**	**8.72**	-----	-----
		U_{21} - L_{22}	30.60	16.54	-22.38	0.58	-2.18	0.90	1.17	17.40	-23.54	0.58	-2.18	Vehicle	Vehicle	62.40	-----	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	-----	-----	-----	-----	-----	**22.83**	**22.83**	-----	-----
		U_{22} - L_{23}	49.78	37.99	-17.45	5.11	-0.95	0.90	1.17	39.97	-18.36	5.11	-0.95	Vehicle	Vehicle	116.68	-----	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	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
		U_{24} - L_{23}	115.07	48.63	-16.87	8.00	-0.72	0.90	1.17	51.17	-17.74	8.00	-0.72	Vehicle	Vehicle	216.11	-----	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	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
		U_{25} - L_{24}	179.22	60.05	-16.40	10.10	0.00	0.90	1.17	63.18	-17.25	10.10	0.00	Vehicle	Vehicle	315.11	-----	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	-----	-----	-----	-----	-----	**6.71**	**6.71**	-----	-----
		U_{26} - L_{25}	220.97	64.43	-14.39	11.89	0.00	0.90	1.17	67.79	-15.13	11.89	0.00	Vehicle	Vehicle	375.39	-----	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	-----	-----	-----	-----	-----	**6.34**	**6.34**	-----	-----
		U_{27} - L_{26}	234.87	66.53	-11.44	11.45	0.00	0.90	1.17	70.00	-12.03	11.45	0.00	Vehicle	Vehicle	396.33	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{28} - L_{27}	253.15	63.69	-10.09	12.25	0.00	0.90	1.17	67.01	-10.62	12.25	0.00	Vehicle	Vehicle	416.20	-----	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	-----	-----	-----	-----	-----	**6.82**	**6.82**	-----	-----
		U_{29} - L_{28}	215.91	51.91	-21.34	10.20	0.61	0.90	1.17	54.61	-22.46	10.20	0.61	Vehicle	Vehicle	351.69	-----	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	-----	-----	-----	-----	-----	**7.96**	**7.96**	-----	-----
		U_{30} - L_{29}	180.73	45.16	-20.10	8.49	0.00	0.90	1.17	47.51	-21.15	8.49	0.00	Vehicle	Vehicle	296.72	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{30} - L_{31}	294.99	66.76	-10.32	12.90	0.00	0.90	1.18	71.08	-10.98	12.90	0.00	Vehicle	Vehicle	475.88	-----	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	-----	-----	-----	-----	-----	**6.79**	**6.79**	-----	-----
		U_{31} - L_{32}	342.70	73.76	-8.60	13.70	-0.55	0.90	1.18	78.53	-9.16	13.70	-0.55	Vehicle	Vehicle	547.60	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
		U_{32} - L_{33}	363.39	77.71	-4.79	14.16	0.00	0.90	1.18	82.74	-5.10	14.16	0.00	Vehicle	Vehicle	579.97	-----	0.00	33.27	33.2657	1097.77	131.71

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: 5C1
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 3.22.3
(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 Min End (k-in)
Structure 1	U_0-U_1	-129.80	-23.02	-0.10	1.75	1.30	-11.29				
	U_1-U_2	-54.81	-51.14	0.28	3.06	-1.68	-18.30				
	U_2-U_3	-53.39	-44.50	0.28	3.06	-5.04	-16.40				
	U_3-U_4	-52.27	-51.68	2.78	4.43	-5.28	-14.49				
	U_4-U_5	-47.23	-50.17	3.09	4.43	-5.28	-5.46				
	U_5-U_6	1.19	-145.97	3.64	4.06	-2.00	-3.46				
	U_6-U_7	94.94	-53.22	3.83	22.50	-43.65	-81.23				
	U_7-U_8	-70.13	-598.66	11.53	19.47	0.01	0.00				
	U_8-U_9	528.73	-128.77	0.26	1.08	11.78	-12.91				
	U_9-U_{10}	69.10	44.97	1.86	3.24	2.50	-7.48				
	U_{10}-U_{11}	101.46	-177.08	3.38	2.77	2.62	-14.86				
	U_{11}-U_{12}	84.48	-160.13	3.38	2.77	2.62	-15.78				
	U_{12}-U_{13}	-56.63	-218.18	3.04	1.00	-2.63	-16.90				
	U_{13}-U_{14}	-113.99	-344.02	1.98	1.87	-2.63	-27.88				
	U_{14}-U_{15}	-287.88	-237.50	2.64	1.54	-5.84	-17.18				
	U_{15}-U_{16}	-196.26	-337.79	1.34	0.60	-6.64	-17.06				
	U_{16}-U_{17}	-291.52	-154.89	1.34	0.60	-6.64	-11.34				
	U_{17}-U_{18}	-190.08	-29.82	-8.04	4.65	-3.20	-6.02				
	U_{18}-U_{19}	-179.81	-40.24	-10.26	2.25	-3.20	-4.72				
	U_{19}-U_{20}	-290.19	260.74	-11.86	15.68	5.58	-6.63				
	U_0-L_1	-27.02	-172.57	-0.56	1.49	3.50	-15.07				
	L_1-L_2	-25.34	-194.81	-0.29	1.49	1.74	-15.73				
	L_2-L_3	-62.13	-282.61	-0.85	2.04	0.96	-26.45				
	L_3-L_4	-339.12	-389.61	-1.32	1.22	0.96	-26.45				
	L_4-L_5	-360.73	-390.17	0.23	3.38	-9.15	-32.24				
	L_5-L_6	-403.61	-397.92	2.53	3.63	-9.15	-27.02				
	L_6-L_7	-349.78	-208.78	4.69	4.69	-11.22	-34.71				
	L_7-L_8	-253.89	-280.84	3.62	5.03	-14.04	-20.57				
	L_8-L_9	-330.50	-281.61	3.62	5.03	-14.04	-14.76				
	L_9-L_{10}	-237.13	-39.43	5.23	6.59	-6.88	-10.73				
	L_{10}-L_{11}	-135.22	-82.94	5.23	6.59	-6.88	-7.11				
	L_{11}-L_{12}	-116.81	-170.72	-0.98	2.72	-6.62	-0.66				
	L_{12}-L_{13}	-111.46	-65.08	-0.17	-68.83	0.00	0.00				
	L_{13}-L_{14}	-58.88	-58.88	0.34	-0.17	-68.83	0.00				
	L_{14}-L_{15}	-218.17	-408.36	-17.87	-8.47	-8.43	0.00				
	L_{15}-L_{16}	-2.85	-25.68	314.17	-214.38	0.00	0.00				
	L_{16}-L_{17}	-2.85	-25.68	314.17	-214.38	0.00	0.00				
	L_{17}-L_{18}	-48.85	-45.93	26.64	-194.06	0.00	0.00				
	L_{18}-L_{19}	-56.89	-54.15	26.64	-213.86	0.00	0.00				
	L_{19}-L_{20}	-66.99	-51.30	27.74	-236.87	0.00	0.00				
Structure 2	U_0-L_1	-48.44	-11.25	5.25	-5.13	-19.18					
	L_1-L_2	-46.24	-29.77	5.25	-5.13	-19.18					
	L_2-L_3	-92.46	-69.91	1.99	2.78	-7.69	-26.78				
	L_3-L_4	-59.53	-191.47	1.99	2.78	-7.69	-26.78				
	L_4-L_5	-48.21	-31.51	0.15	4.30	-0.02	-16.94				
	L_5-L_6	-10.71	137.69	-7.58	5.63	-1.61	-7.71				
	L_6-L_7	-37.18	122.94	-6.21	6.06	-1.25	-8.23				
	L_7-L_8	-78.40	76.50	-15.82	-103.84	0.00	0.00				
	L_8-L_9	-117.36	76.50	-15.82	-103.84	0.00	0.00				
	L_9-L_{10}	-85.58	3.84	-0.79	3.94	-4.78	-12.55				
	L_{10}-L_{11}	-54.12	-816.02	-3.50	3.30	-4.78	-12.55				
	L_{11}-L_{12}	-823.61	100.42	0.26	2.96	23.26	-21.37				
	L_{12}-L_{13}	-34.22	39.62	0.26	2.81	3.47	-21.37				
	L_{13}-L_{14}	-190.29	-2.92	3.79	4.73	4.39	-17.28				
	L_{14}-L_{15}	-33.33	-89.79	5.02	5.32	-0.96	-16.70				
	L_{15}-L_{16}	-79.26	-230.76	5.30	3.31	-1.16	-26.70				
	L_{16}-L_{17}	-29.29	-29.29	1.41	5.20	-4.58	-47.62				
	L_{17}-L_{18}	-84.35	-278.75	5.21	4.56	-8.21	-24.48				
	L_{18}-L_{19}	-138.20	-138.20	5.21	4.56	-8.21	-27.48				
	L_{19}-L_{20}	-275.08	-274.62	5.26	1.01	-11.56	-25.70				
	U_0-L_1	-257.08	-269.15	6.69	-14.25	-20.26					
	L_1-L_2	-75.75	-83.94	6.69	-14.25	-20.26					
	L_2-L_3	-154.97	-33.11	-0.83	1.17	-3.39	-8.16				
	L_3-L_4	-10.77	2.71	-0.83	0.52	-3.39	-8.16				
	L_4-L_5	40.07	-167.86	-0.53	0.52	4.03	-11.89				
	L_5-L_6	-10.53	-132.37	-0.37	0.64	1.53	-13.63				
	L_6-L_7	-140.16	-260.93	0.28	0.87	-2.72	-20.71				
	L_7-L_8	-187.10	-276.08	1.42	1.98	-7.79	-27.57				
	L_8-L_9	-322.62	-340.18	1.42	1.98	-7.79	-27.57				
	L_9-L_{10}	-162.95	-104.84	1.08	3.11	-4.94	-10.90				
	L_{10}-L_{11}	-147.84	26.72	2.32	3.73	-10.03	-6.19				
	L_{11}-L_{12}	-135.88	61.93	1.06	3.11	-4.94	-10.90				
	L_{12}-L_{13}	-162.95	-104.84	1.08	3.11	-4.94	-10.90				
	L_{13}-L_{14}	-147.84	26.72	2.32	3.73	-10.03	-6.19				
	L_{14}-L_{15}	-135.88	61.93	1.06	3.11	-4.94	-10.90				
	L_{15}-L_{16}	-162.95	-104.84	1.08	3.11	-4.94	-10.90				
	L_{16}-L_{17}	-147.84	26.72	2.32	3.73	-10.03	-6.19				
	L_{17}-L_{18}	-135.88	61.93	1.06	3.11	-4.94	-10.90				
	L_{18}-L_{19}	-162.95	-104.84	1.08	3.11	-4.94	-10.90				
	L_{19}-L_{20}	-147.84	26.72	2.32	3.73	-10.03	-6.19				
Structure 3	U_0-L_1	-10.77	46.02	-3.93	3.24	0.04	2.98				
	L_1-L_2	-10.77	46.02	-3.93	3.24	0.04	2.98				
	L_2-L_3	-426.33	9.05	-1.62	16.47	-15.28					
	L_3-L_4	-426.33	9.05	-1.62	16.47	-15.28					
	L_4-L_5	-128.06	54.04	4.29	3.76	2.72	-11.56				
	L_5-L_6	-70.10	43.62	4.81	3.35	-1.93	-14.81				
	L_6-L_7	-83.36	11.16	-2.73	3.35	-5.45	-14.81				
	L_7-L_8	-83.36	-59.48	4.87	1.34	-5.65	-12.36				
	L_8-L_9	-83.36	-52.69	3.52	1.34	-5.65	-12.36				
	L_9-L_{10}	-8.36	-35.51	-10.80	16.01	-0.62	-5.77				

ZZ Axis Moment Properties

Location	Member	Rcv. Proc. Mom. Start (k-in)	Rcv. Proc. Mom. 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_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term * F/S_{bot}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_m/a	Equivalent Mom. Factor $C_{m(x)}$
Structure 1	U_0-U_1	-170.55	5.50	-140.18	-226.08	90.2	90.24	72.24	1276.46	2147	1328.6	f: 1.41	4206	0.99880041	2974.3	0.647	0.86	0.86
	U_1-U_2	-68.43	-13.30	-100.47	-384.24	90.2	90.24	72.24	1276.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.701	0.70	0.70
	U_2-U_3	-158.61	58.29	-208.54	-268.54	90.2	90.24	72.24	1276.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.693	0.72	0.72
	U_3-U_4	-37.18	59.14	-70.54	-193.57	90.2	90.24	72.24	1276.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.931	0.97	0.97
	U_4-U_5	-41.27	57.07	-118.61	-88.89	0.00	0.00	72.24	1276.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.773	0.73	0.73
	U_5-U_6	64.78	-292.29	-33.15	-129.64	90.2	90.24	76.71	1276.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.249	0.70	0.70
	U_6-U_7	18.45	-41.71	-46.21	-78.45	90.2	90.24	76.71	1276.46	2147	1328.6	1.41	4206	0.99880041	2974.3	0.249	0.70	0.70
	U_7-U_8	51.18	32.93	-43.65	-81.23	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_8-U_9	-154.04	260.15	0.07	-0.04	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_9-U_{10}	12.37	-183.13	12.37	-183.13	175.88	-480.18	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99872132	3184.1	-0.366
	U_{10}-U_{11}	50.18	3.27	-205.76	-274.09	175.88	-480.18	96.6	96.61	83.55	130.29	2174	1387.9	1.40	4465	0.99872132	3184.1	-0.366
	U_{11}-U_{12}	39.35	14.28	-35.58	-216.68	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}	27.64	21.62	-32.73	-269.73	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}	34.17	19.87	-75.52	-222.28	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}	17.38	7.78	-85.55	-220.70	88.5	88.51	164.41	2748.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.505	0.80	0.80
	U_{15}-U_{16}	17.48	7.89	-85.55	-220.70	88.5	88.51	164.41	2748.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.505	0.80	0.80
	U_{16}-U_{17}	29.64	21.62	-32.73	-269.73	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_{17}-U_{18}	-104.02	60.10	-41.39	-77.85	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_{18}-U_{19}	-152.73	72.12	-54.36	-41.72	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_{19}-U_{20}	-153.50	202.88	7.47	-85.72	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_0-L_1	-7.21	18.97	44.74	-192.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_1-L_2	-37.76	-230.32	-14.14	-189.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_2-L_3	-76.55	-333.54	-51.90	-606.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_3-L_4	-74.47	-265.06	-171.87	-567.92	151.8	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905052	5003.4	0.303	0.72	0.72
	L_4-L_5	-192.85	-420.46	-192.85	-420.46	151.8	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905052	5003.4	0.303	0.72	0.72
	L_5-L_6	-329.82	-282.92	-472.42	-597.72	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.750	0.52	0.92
	L_6-L_7	-232.55	-429.01	-368.97	-726.04	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.505	0.80	0.80
	L_7-L_8	-444.51	-197.24	-444.51	-362.11	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.922	0.53	0.93
	L_8-L_9	-358.45	-339.46	-358.45	-500.89	-139.97	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99907190	4197.7	-0.103	0.56
	L_9-L_{10}	-405.06	-14.45	-319.09	-131.77	104.8	104.75	86.43	150.53	2599	1554.3	1.44	4971	0.99885042	3452.8	0.035	0.91	0.91
	L_{10}-L_{11}	-624.79	662.66	-315.54	227.63	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99885042	3452.8	0.871	0.25	0.25
	L_{11}-L_{12}	-44.50	-199.67	23.04	-474.71	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861321	4212.5	-0.049	0.58	0.58
	L_{12}-L_{13}	-177.11	104.51	-177.11	-104.51	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861321	4212.5	-0.407	0.44	0.44
	L_{13}-L_{14}	-58.88	-58.88	0.34	-0.17	-68.83	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}	-296.73	356.05	-152.06	132.33	106.8	106.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.3	-0.968	0.21	0.21
	L_{15}-L_{16}	-296.73	356.05	-152.06	132.33	106.8	106.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.3	-0.968	0.21	0.21
	L_{16}-L_{17}	-48.85	-45.93	26.64	-194.06	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_{17}-L_{18}	-56.89	-54.15	26.64	-213.86	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_{18}-L_{19}	-66.99	-51.30	27.74	-236.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_0-L_1	-48.44	-11.25	5.25	-5.13	-19.18												
	L_1-L_2	-46.24	-29.77	5.25	-5.13	-19.18												
	L_2-L_3	-92.46	-69.91	1.99	2.78	-7.69	-26.78											
	L_3-L_4	-59.53	-191.47	1.99	2.78	-7.69	-26.78											
	L_4-L_5	-48.21	-31.51	0.15	4.30	-0.02	-16.94											
	L_5-L_6	-10.71	137.69	-7.58	5.63	-1.61	-7.71											
	L_6-L_7	-37.18	122.94	-6.21	6.06	-1.25	-8.23											
	L_7-L_8	-78.40	76.50	-15.82	-103.84	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_8-L_9	-117.36	76.50	-15.82	-103.84	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_9-L_{10}	-85.58	3.84	-0.79	3.94	-4.78	-12.55											
	L_{10}-L_{11}	-54.12	-816.02	-3.50	3.30	-4.78	-12.55											
	L_{11}-L_{12}	-823.61	100.42	0.26	2.96	23.26	-21.37											
	L_{12}-L_{13}	-34.22	39.62	0.26	2.81	3.47	-21.37											
	L_{13}-L_{14}	-190.29	-2.92	3.79	4.73	4.39	-17.28											
	L_{14}-L_{15}	-33.33	-89.79	5.02	5.32	-0.96	-16.70											
	L_{15}-L_{16}	-79.26	-230.76	5.30	3.31	-1.16	-26.70											
	L_{16}-L_{17}	-29.29	-29.29	1.41	5.20	-4.58	-47.62											
	L_{17}-L_{18}	-84.35	-278.75	5.21	4.56	-8.21	-24.48											
	L_{18}-L_{19}	-138.20	-138.20	5.21	4.56	-8.21	-27.48											
	L_{19}-L_{20}	-275.08	-274.62	5.26	1.01	-11.56	-25.70											
	U_0-L_1	-257.08	-269.15	6.69	-14.25	-20.26												
	L_1-L_2	-75.75	-83.94	6.69	-14.25	-20.26												
	L_2-L_3	-154.97	-33.11	-0.83	1.17	-3.39	-8.16											
	L_3-L_4	-10.77	2.71	-0.83	0.52	-3.39	-8.16											
	L_4-L_5	40.07	-167.86	-0.53	0.52	4.03	-11.89											
	L_5-L_6	-10.53	-132.37	-0.37	0.64	1.53	-13.63											
	L_6-L_7	-140.16	-260.93	0.28	0.87	-2.72	-20.71											
	L_7-L_8	-187.10	-276.08	1.42	1.98	-7.79	-27.57											
	L_8-L_9	-322.62	-340.18	1.42	1.98	-7.79	-27.57											
	L_9-L_{10}	-162.95	-104.84	1.08	3.11	-4.94	-10.90											
	L_{10}-L_{11}	-147.84	26.72	2.32	3.73	-10.03	-6.19											
	L_{11}-L_{12}	-135.88	61.93	1.06	3.11	-4.94	-10.90											
	L_{12}-L_{13}	-162.95	-104.84	1.08	3.11	-4.94	-10.90											
	L_{13}-L_{14}	-147.84	26.72	2.32	3.73	-10.03	-6.19											
	L_{14}-L_{15}	-135.88	61.93	1.06	3.11	-4.94	-10.90											
	L_{15}-L_{16}	-162.95	-104.84	1.08	3.11	-4.94	-10.90											
	L_{16}-L_{17}	-147.84	26.72	2.32	3.73	-10.03	-6.19											
	L_{17}-L_{18}	-135.88	61.93	1.06	3.11	-4.94	-10.90											
	L_{18}-L_{19}	-162.95	-104.84	1.08	3.11	-4.94	-10.90											
	L_{19}-L_{20}	-147.84	26.72	2.32	3.73	-10.03	-6.19											
Structure 3	U_0-L_1	-10.77	46.02	-3.93	3.24	0.04	2.98											
	L_1-L_2	-10.77	46.02	-3.93	3.24	0.04	2.98											
	L_2-L_3	-426.33	9.05	-1.62	16.47	-15.28												
	L_3-L_4	-426.33	9.05	-1.62	16.47	-15.28												
	L_4-L_5	-128.06	54.04	4.29	3.76	2.72	-11.56											
	L_5-L_6	-70.10	43.62	4.81	3.35	-1.93	-14.81											
	L_6-L_7	-83.36	11.16	-2.73	3.35	-5.45	-14.81											
	L_7-L_8	-83.36	-59.48	4.87	1.34	-5.65	-12.36											
	L_8-L_9	-83.36	-52.69	3.52	1.34	-5.65	-12.36											
	L_9-L_{10}	-8.36	-35.51	-10.80	16.01	-0.62	-5.77											

M_y 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 Min End (k-in)
Structure 1	U_0-U_1	4.07	-17.93	0.05	0.39	-0.06	-3.21				
	U_1-U_2	0.60	4.02	-0.81	-42.82	0.00	0.00				
	U_2-U_3	-0.28	16.95	15.26	-11.40	0.00	0.00				
	U_3-U_4	3.66	-3.70	-0.23	0.00	0.00	0.00				
	U_4-U_5	-17.01	-4.30	30.57	-5.52	0.00	0.00				
	U_5-U_6	-8.31	-4.90	-3.51	-31.31	0.00	0.00				
	U_6-U_7	-23.01	-6.68	29.27	-40.56	0.00	0.00				
	U_7-U_8	-42.82	-2.43	64.37	-52.60	-1.91	-0.97				
	U_8-U_9	57.99	-59.40	-0.08	0.03	0.00	0.00				
	U_9-U_{10}	-32.07	64.89	-1.54	0.25	3.47	2.12				
	U_{10}-U_{11}	-16.90	1.25	-0.46	0.00	0.00	0.00				
	U_{11}-U_{12}	-18.94	-4.42	13.33	-6.34	2.60	2.61				
	U_{12}-U_{13}	-13.05	-12.01	34.25	-14.85	0.00	0.00				
	U_{13}-U_{14}	-17.04	-4.36	86.14	5.74	0.00	0.00				
	U_{14}-U_{15}	-14.00	5.42	79.92	12.23	0.00	0.00				
	U_{15}-U_{16}	40.76	-0.34	52.63	-21.68	0.00	0.00				
	U_{16}-U_{17}	89.37	-13.68	52.81	-28.48	0.00	0.00				
	U_{17}-U_{18}	94.70	51.07	-13.49	-20.41	0.00	0.00				
	U_{18}-U_{19}	45.32	-83.41	14.98	-53.10	0.00	0.00				
	U_{19}-U_{20}	-1.77	0.00	0.00	0.00	0.00	0.00				
	U_0-L_1	1.02	-0.14	21.25	5.63	0.00	0.00				
	L_1-L_2	-37.76	-230.32	-14.14	-189.59	0.00	0.00				
	L_2-L_3	-76.55	-333.54	-51.90	-606.69	0.00	0.00				
	L_3-L_4	-74.47	-265.06	-171.87	-567.92	151.8	151.76	130.94	219.77	4535	2532.6
	L_4-L_5	-192.85	-420.46	-192.85	-420.46	151.8

Moment (End) - AB2

Maximum Axial with Moment Interaction Check

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
1st Row Rating Analysis - Truss Span
Loading: 5C1
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
Governing Equation 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	-44.17	-99.07	0.97	1.01	4.06	-6.34				
	L_1-L_2	-131.02	-112.64	-0.42	2.46	2.85	-11.93				
	L_2-L_3	-230.45	-179.90	-0.65	2.86	3.06	-11.74				
	L_3-L_4	-18.36	-16.12	1.38	5.16	-3.42	-13.48				
	L_4-L_5	-68.34	-212.03	-0.43	0.27	-5.35	-70.36				
	L_5-L_6	-8.36	-229.14	3.11	6.07	-5.36	-4.14				
	L_6-L_7	-61.83	-177.52	5.60	5.74	-14.27	-70.71				
	L_7-L_8	-1.61	-69.41	-1.07	14.79	0.01	0.00				
	L_8-L_9	-439.88	-25.12	5.37	20.74	12.21	-4.28				
	L_9-L_{10}	-204.03	-117.02	-2.16	3.03	3.95	-6.44				
	L_{10}-L_{11}	-168.12	-117.13	4.75	2.24	3.57	-6.89				
	L_{11}-L_{12}	-23.72	-23.72	2.31	2.31	3.85	-3.85				
	L_{12}-L_{13}	-19.73	-128.50	2.84	1.44	-1.70	-8.33				
	L_{13}-L_{14}	-175.78	-425.21	2.28	1.97	5.99	-18.22				
	L_{14}-L_{15}	-409.28	-29.76	2.70	2.17	-4.70	-4.70				
	L_{15}-L_{16}	-209.39	-318.68	0.76	0.67	-10.05	-14.34				
	L_{16}-L_{17}	-374.86	-834.56	-3.08	4.04	-4.80	-4.80				
	L_{17}-L_{18}	-171.07	-198.86	-3.96	-4.09	-2.23	-2.91				
	L_{18}-L_{19}	-208.33	-253.78	-7.48	-5.63	-2.65	-1.86				
	L_{19}-L_{20}	-84.78	1.02	-7.64	-4.95	0.42	-0.43				
	L_{20}-L_{21}	10.35	-213.29	-0.52	1.16	3.66	-9.94				
	L_{21}-L_{22}	54.16	-247.73	0.39	1.25	10.71	-10.71				
	L_{22}-L_{23}	-0.36	-194.33	-0.63	1.25	-3.56	-11.20				
	L_{23}-L_{24}	-287.80	-299.08	-0.21	2.13	4.95	-16.87				
	L_{24}-L_{25}	-131.71	-243.31	-0.63	1.91	-0.56	-58.99				
	L_{25}-L_{26}	-467.54	-273.29	3.10	4.60	-10.71	-23.92				
	L_{26}-L_{27}	-310.55	-49.89	3.75	6.93	-10.08	-15.62				
	L_{27}-L_{28}	-272.22	-229.04	2.77	3.74	-14.70	-14.70				
	L_{28}-L_{29}	-261.97	188.33	3.24	6.83	-7.28	-7.15				
	L_{29}-L_{30}	-374.46	-20.34	-10.62	4.24	-4.80	-4.80				
	L_{30}-L_{31}	-131.48	389.15	-8.28	7.38	-4.14	-2.42				
	L_{31}-L_{32}	-164.35	-140.48	-5.05	2.21	-7.11	-14.22				
	L_{32}-L_{33}	-267.47	-996.41	-2.63	2.63	-4.16	-4.16				
	L_{33}-L_{34}	-912.03	-326.89	2.49	1.69	24.04	-16.50				
	L_{34}-L_{35}	-289.13	-6.43	1.31	4.69	-6.19	-6.19				
	L_{35}-L_{36}	-515.59	-35.24	7.56	2.30	6.52	-8.48				
	L_{36}-L_{37}	-273.10	-273.10	2.46	2.46	-5.35	-5.35				
	L_{37}-L_{38}	-252.02	-29.09	6.50	2.84	4.21	-10.42				
	L_{38}-L_{39}	-230.55	-46.27	3.77	4.34	0.97	-12.86				
	L_{39}-L_{40}	-31.58	-31.58	1.36	1.36	-1.36	-1.36				
	L_{40}-L_{41}	-41.53	-186.96	-0.09	3.31	-0.96	-24.76				
	L_{41}-L_{42}	-108.53	-108.53	2.79	2.79	22.54	-22.54				
	L_{42}-L_{43}	-108.53	-10.73	1.54	5.23	-8.62	-14.75				
	L_{43}-L_{44}	-30.64	-30.64	-5.26	3.20	-6.37	-6.37				
	L_{44}-L_{45}	-65.47	-173.47	-7.32	6.45	-4.31	-7.26				
	L_{45}-L_{46}	-30.98	-151.24	-7.75	6.38	-6.10	-5.26				
	L_{46}-L_{47}	-273.10	-73.61	-7.75	2.46	-5.35	-5.35				
	L_{47}-L_{48}	-19.38	-193.41	0.77	3.27	-4.68	-15.53				
	L_{48}-L_{49}	-273.10	-73.61	-7.75	2.46	-5.35	-5.35				
	L_{49}-L_{50}	-740.88	-268.17	4.53	0.43	25.16	-15.84				
	L_{50}-L_{51}	-140.43	-76.07	-1.58	3.75	-7.85	-8.80				
	L_{51}-L_{52}	-273.10	-73.61	-7.75	2.46	-5.35	-5.35				
	L_{52}-L_{53}	-147.94	-145.21	2.65	4.73	5.77	-11.03				
	L_{53}-L_{54}	-279.36	-144.86	4.24	4.73	5.77	-11.03				
	L_{54}-L_{55}	95.37	-212.64	3.77	3.86	5.88	-12.74				
	L_{55}-L_{56}	-182.93	-415.63	3.32	3.08	-13.43	-27.53				
Structure 2	L_{56}-L_{57}	-370.36	-165.17	1.62	0.88	-15.74	-19.99				
	L_{57}-L_{58}	-284.72	-267.71	-3.48	0.42	-6.79	-7.58				
	L_{58}-L_{59}	-319.74	-224.72	-3.48	0.42	-6.79	-7.58				
	L_{59}-L_{60}	-304.19	-21.34	-9.55	3.10	-9.49	-8.28				
	L_{60}-L_{61}	-227.31	-59.39	-10.12	5.02	-2.65	-3.55				
	L_{61}-L_{62}	-178.71	-63.98	-10.65	3.97	-4.23	-4.23				
	L_{62}-L_{63}	-43.83	-117.87	-0.38	5.41	5.10	-8.04				
	L_{63}-L_{64}	-152.35	-177.82	-0.45	0.45	4.28	-8.54				
	L_{64}-L_{65}	-55.18	-53.31	-0.45	0.45	4.23	-12.40				
	L_{65}-L_{66}	-55.48	-320.94	-0.15	0.70	-1.89	-10.69				
	L_{66}-L_{67}	-64.07	-371.05	0.01	2.15	-1.63	-22.17				
	L_{67}-L_{68}	-370.76	-82.43	-10.75	4.74	-9.66	-11.12				
	L_{68}-L_{69}	-200.77	-149.87	-7.38	4.12	-3.16	-3.82				
	L_{69}-L_{70}	-131.78	166.76	-6.32	5.05	-0.61	-4.15				
	L_{70}-L_{71}	-361.88	-172.92	-8.88	0.79	12.79	-4.73				
	L_{71}-L_{72}	-91.93	-21.66	-1.98	3.90	4.73	-7.93				
	L_{72}-L_{73}	-189.90	5.62	-4.08	4.03	-4.03	-12.03				
	L_{73}-L_{74}	-38.98	-56.51	3.17	1.52	-6.68	-13.68				
	L_{74}-L_{75}	-66.52	-279.78	-5.88	4.17	0.90	-0.88				

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_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'c/S_{top}	M_u (k-in)	Equivalent Mom. Factor a	C_{mx}	C_{mx}/a
Structure 1	L_0-L_1	-14.26	-111.25	13.07	-238.87	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.055	0.58
	L_1-L_2	163.08	-103.77	219.77	-353.58	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.622	0.35
	L_2-L_3	63.25	-63.79	143.98	-367.27	99.5	99.53	91.00	125.40	3409	1372.0	1.26	4141	0.99911881	3294.8	-0.167	0.57
	L_3-L_4	47.90	110.54	-35.60	-213.22	99.9	99.93	84.14	125.49	3409	1372.0	1.26	4141	0.99911881	3294.8	0.167	0.67
	L_4-L_5	-19.16	303.27	52.63	-52.58	76.68	76.68	114.47	3186	2155.7	1.49	5182	0.99911881	3052.4	-0.040	0.58	0.58
	L_5-L_6	64.80	450.38	-62.13	226.05	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99923245	3448.5	0.161	0.66
	L_6-L_7	-117.58	314.91	-196.45	-117.99	104.6	104.58	95.61	136.57	4040	1678.1	1.31	4520	0.99923245	4776.0	0.564	0.57
	L_7-L_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00000000	0.0	0.000	0.00
	L_8-L_9	-16.54	854.05	2.20	597.16	145.8	145.75	130.44	228.84	6500	2932.4	1.57	7552	0.99925913	4806.3	-0.019	0.59
	L_9-L_{10}	662.20	-20.29	777.23	-104.59	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99925913	4806.4	-0.135	0.55
	L_{10}-L_{11}	229.87	-107.17	331.62	-262.38	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99916498	4776.1	-0.393	0.43
	L_{11}-L_{12}	298.52	-114.54	279.52	-268.12	92.6	92.56	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.384	0.45
	L_{12}-L_{13}	355.26	-257.01	371.12	-390.28	-439.14	92.56	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.843	0.26
	L_{13}-L_{14}	662.20	-20.29	777.23	-104.59	145.8	145.75	136.74	228.84	6500	2932.4	1.57	7552	0.99925913	4806.4	-0.135	0.55
	L_{14}-L_{15}	229.87	-107.17	331.62	-262.38	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99916498	4776.1	-0.393	0.43
	L_{15}-L_{16}	298.52	-114.54	279.52	-268.12	92.6	92.56	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.384	0.45
	L_{16}-L_{17}	355.26	-257.01	371.12	-390.28	-439.14	92.56	83.65	114.47	3295	1304.9	1.24	3777	0.99913812	3052.5	-0.843	0.26
	L_{17}-L_{18}	23.78	-142.77	-94.23	-307.17	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99923245	4288.6	0.177	0.67
	L_{18}-L_{19}	266.88	-519.57	329.22	-859.14	162.9	162.89	147.19	219.93	6087	2613.8	1.35	7258	0.99910036	5370.6	-0.383	0.45
	L_{19}-L_{20}	1.02	-76.25	12.42	-229.78	144.9	144.85	129.09	192.84	5010	2379.8	1.33	6364	0.99916498	4776.1	-0.393	0.43
	L_{20}-L_{21}	10.35	-213.29	-0.52	1.16	3.66	-9.94	121.3	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904481	3891.8	-0.327
	L_{21}-L_{22}	54.16	-247.73	0.39	1.25	10.71	-10.71	123.5	123.31	83.58	74.62	1087	1096.2	1.21	1354	0.99905621	2755.5	-0.936
	L_{22}-L_{23}	-0.36	-194.33	-0.63	1.25	-3.56	-11.20	99.0	98.80	83.58	67.49	1087	0.99904481	5357.7	-0.134	0.55	0.55
	L_{23}-L_{24}	-287.80	-299.08	-0.21	2.13	4.95	-16.87	52.78	52.63	49.52	68.45	1087	0.99904481	5357.7	-0.134	0.55	0.55
	L_{24}-L_{25}	-131.71	-243.31	-0.63	1.91	-0.56	-58.99	377.62	-353.39	456.35	-868.66	174.3	174.28	163.71	320.70	7266	3127.5
	L_{25}-L_{26}	-467.54	-273.29	3.10	4.60	-10.71	-23.92	696.29	-218.93	785.74	-752.59	218.3	216.33	205.74	344.19	7625	3425.8
	L_{26}-L_{27}	-310.55	-49.89	3.75	6.93	-10.08	-15.62	47.90	88.58	-128.74	-199.52	320.8	305.7	205.71	195.15	274.47	5445
	L_{27}-L_{28}	-272.22	-229.04	2.77	3.74	-14.70	-14.70	32.85	32.85	-118.52	-172.47	320.8	305.7	188.54	147.99	202.44	4015
	L_{28}-L_{29}	-261.97	188.33	3.24	6.83	-7.28	-7.15	42.72	87.20	-93.06	-91.29	320.8	305.7	464.80	461.46	126.15	149.0
	L_{29}-L_{30}	-374.46	-20.34	-10.62	4.24	-4.80	-4.80	-689.20	501.34	-914.49	-236.38	320.8	305.7	1013.72	1019.77	133.27	4464
	L_{30}-L_{31}	-131.48	389.15	-8.28	7.38	-4.14	-2.42	-105.83	84.24	-52.88	-30.87	320.8	305.7	308.50	628.41	-239.67	465.77
	L_{31}-L_{32}	-164.35	-140.48	-5.05	2.21	-7.11	-14.22	-64.07	28.21	-90.87	-181.64	320.8	305.7	297.50	-145.95	331.19	643.79
	L_{32}-L_{33}	-267.47	-996.41	-2.63	2.63	-4.16	-4.16	-1,226.49	-397.26	1380.13	-695.76	249.4	249.40	228.81	347.03	8248	3698.4
	L_{33}-L_{34}	-912.03	-326.89	2.49	1.69	24.04	-16.50	31.42	212.27	303.46	-208.34	320.8	305.7	1226.49	-397.26	1380.13	-695.76
	L_{34}-L_{35}	-289.13	-6.43	1.31	4.69	-6.19	-6.19	-481.47	51.18	-157.95	-109.71	320.8	305.7	481.47	51.18	-157.95	-109.71
	L_{35}-L_{36}	-515.59	-35.24	7.56	2.30	6.52	-8.48	95.47	29.00	82.27	-119.71	320.8	305.7	794.38	-8.11	777.21	-201.44
	L_{36}-L_{37}	-273.10	-273.10	2.46	2.46	-5.35	-5.35	39.66	39.66	58.73	-136.87	320.8	305.7	556.29	-218.93	785.74	-752.59
	L_{37}-L_{38}	-252.02	-29.09	6.50	2.84	4.21	-10.42	82.06	35.82	53.88	-131.55	320.8	305.7	434.31	13.95	396.76	-203.84
	L_{38}-L_{39}	-230.55	-46.27	3.77	4.34	0.97	-12.86	47.65	54.76	10.25	-162.32	320.8	305.7	361.65	10.94	315.63	-271.29
	L_{39}-L_{40}	-31.58	-31.58	1.36	1.36	-1.36	-1.36	21.31	21.31	-68.16	-68.16	320.8	305.7	213.51	-51.16	127.74	-168.48
	L_{40}-L_{41}	-41.53	-186.96	-0.09	3.31	-0.96	-24.76	-1.14	41.78	-12.07	-312.61	320.8	305.7	52.51	-188.74	38.29	-649.44
	L_{41}-L_{42}	-108.53	-108.53	2.79	2.79	22.54	-22.54	3.52	3.52	-7.78	-279.19	320.8	305.7	142.40	142.40	207.64	4574
	L_{42}-L_{43}	-108.53	-10.73	1.54	5.23	-8.62	-14.75	24.46	66.06	-111.37	-186.23	320.8	305.7	158.92	7.52	-283.29	256.05
	L_{43}-L_{44}	-30.64	-30.64	-5.26	3.20	-6.37	-6.37	42.36	42.36	-51.09	-51.09	320.8	305.7	212.18	212.18	-255.46	1161.6
	L_{44}-L_{45}	-65.47	-173.47	-7.32	6.45	-4.31	-7.26	-62.39	81.37	-5.40	-46.01	320.8	305.7	209.22	331.22	-159.84	106.36
	L_{45}-L_{46}	-30.98	-151.24	-7.75	6.38	-6.10	-5.26	-87.88	105.77	-77.51	-66.45	320.8	305.7	163.32	334.12	-140.39	110.24
	L_{46}-L_{47}	-273.10	-73.61	-7.75	2.46	-5.35	-5.35	39.66	58.73	-136.87	-305.62	320.8	305.7	611.78	-77.51	647.43	-192.04
	L_{47}-L_{48}	-19.38	-193.41	0.77	3.27	-4.68	-15.53	9.73	41.25	-59.04	-196.03	320.8	305.7	-12.59	-197.80	-101.95	-506.28
	L_{48}-L_{49}	-273.10	-73.61	-7.75	2.46	-5.35	-5.35	39.66	58.73	-136.87	-305.62	320.8	305.7	611.78	-77.51	647.43	-192.04
	L_{49}-L_{50}	-740.88	-268.17	4.53	0.43	25.16	-15.84	57.85	5.54	321.40	-202.43	320.8	305.7	1038.36	-34.41	1360.57	-611.78
	L_{50}-L_{51}	-140.43	-76.07	-1.58	3.75	-7.85	-8.80	20.21	47.86	-100.32	-112.41	320.8	305.7	210.33	-36.67	319.47	243.02
	L_{51}-L_{52}	-273.10	-73.61	-7.75	2.46	-5.35	-5.35	39.66	58.73	-136.87	-305.62	320.8	305.7	611.78	-77.51	647.43	-192.04
	L_{52}-L_{53}	-147.94	-145.21	2.65	4.73	5.77	-11.03	33.88	60.38	-73.75	-140.90	320.8	305.7	236.37	-10.28	288.19	-371.94
	L_{53}-L_{54}	-279.36	-144.86	4.24	4.73	5.77	-11.03	33.88	60.38	-73.75	-140.90	320.8	305.7	236.37	-10.28	288.19	-371.94
	L_{54}-L_{55}	95.37	-212.64	3.77	3.86	5.88	-12.74	48.15	49.36	75.07	-162.76	320.8	305.7	186.58	-212.27	221.58	-488.01
	L_{55}-L_{56}	-182.93	-415.63	3.32	3.08	-13.43	-27.53	42.44	39.34	-177.52	-301.75	320.8	305.7	-182.64	-489.18	-460.79	-997.69
	L_{56}-L_{57}	-370.36	-165.17	1.62	0.88	-15.74	-19.99	46.24	11.19	-201.09	-254.95	320.8	305.7	-421.36	-200.17	-742.88	-546.03
	L_{57}-L_{58}	-284.72	-267.71	-3.48	0.42	-6.79	-7.58	18.78	10.90	-177.52	-167.59	320.8	305.7	-284.72	-348.42	-674.79	-599.63
	L_{58}-L_{59}	-319.74	-224.72	-3.48	0.42	-6.79	-7.58	18.78	10.90	-177.52	-167.59	320.8	305.7	-319.74	-348.42	-674.79	-599.63
	L_{59}-L_{60}	-304.19	-21.34	-9.55	3.10	-9.49	-8.28	-54.09	23.80	-553.11	-165.31	176.7	176.70	-180.45	-553.11	-165.31	-176.70
	L_{60}-L_{61}	-227.31	-59.39	-10.12	5.02	-2.65	-3.55	-129.25	64.16	-33.83	-45.29	320.8	305.7	-463.53	160.62	-338.49	18.33
	L_{61}-L_{62}	-178.71	-63.98	-10.65	3.97	-4.23	-4.23	-43.83	5.10	-117.87	-8.04	320.8	305.7	-152.35	5.41	-177.82	-8.54
	L_{62}-L_{63}	-43.83	-117.87	-0.38	5.41	5.10	-8.04	30.63	30.63	-146.36	-162.68	-289.52	83.6	83.58	67.49	100.97	2740
	L_{63}-L_{64}	-152.35	-177.82	-0.45	0.45	4.28	-8.54	-5.84	5.85	55.40	-110.33	320.8	305.7	190.47	-223.36	270.08	-374.86
	L_{64}-L_{65}	-55.18	-53.31	-0.45	0.45	4.23	-12.40	-6.18	6.34	55.40	-110.33	320.8	305.7	190.47	-223.36	270.08	-374.86
	L_{65}-L_{66}	-55.48	-320.94	-0.15	0.70	-1.89	-10.69	-1.91	9.11	-24.48	-138.36	320.8	305.7	6.47	-16.36	30.07	-20.53
	L_{66}-L_{67}	-64.07	-371.05	0.01	2.15	-1.63	-22.17	0.10	27.77	-21.08	-286.83	320.8	305.7	-63.15	-446.26	-110.68	-855.24
	L_{67}-L_{68}	-370.76	-82.43	-10.75	4.74	-9.66	-11.12	-139.09	54.17	-123.68	-143.91	320.8	305.7	642.62	-171.59	-642.62	-329.40
	L_{68}-L_{69}	-200.77	-149.87	-7.38	4.12	-3.16	-3.82	-98.12	53.28	-80.83	-49.48	320.8	305.7	386.96	-264.09	-314.08	-130.51
	L_{69}-L_{70}	-131.78	166.76	-6.32	5.05	-0.61	-4.15	-81.60	78.24	-0.06	-53.64	320.8	305.7	277.55	318.49	-171.40	147.05
	L_{70}-L_{71}	-361.88	-172.92	-8.88	0.79	12.79	-4.73	-118.62	10.51	-170.83	-33.14	320.8	305.7	624.65	-9.62	682.52	-105.37
	L_{71}-L_{72}	-91.93	-21.66	-1.98	3.90	4.73	-7.93	-25.28	52.08	-63.20	-94.17	320.8	305.7	47.91	10.86	112.68	-94.25
	L_{72}-L_{73}	-189.90	5.62	-4.08	4.03	-4.03	-12.03	-54.53	58.72	-53.89	-160.73	320.8	305.7	317.76	83.63	316.93	-201.64
	L_{73}-L_{74}	-38.98	-56.51	3.17	1.52	-6.68	-13.68	-42.30	20.25	-115.91	-182.71	320.8	305.7	43.31	-47.14	-306.33	-313.96
	L_{74}-L_{75}	-66.52	-279.78	-5.88	4.17	0.90	-0.88	-78.61	55.72	-11.96	-175.11	320.8	305.7	53.80	25.54	142.57	-130.97

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	L_0-L_1	-2.16	-7.52	-0.08	-0.31	0.62	2.29				
	L_1-L_2	-1.12	-4.14	0.31	30.58	0.00	0.00				
	L_2-L_3	4.19	-8.30	-25.32	-15.76	0.00	0.00				
	L_3-L_4	-3.66	11.81	-29.77	17.09	0.00	0.00				
	L_4-L_5	20.61	2.00	-37.69	-8.70	0.00	0.00				
	L_5-L_6	16.37	1.08	-21.29	97.12	0.00	0.00				
	L_6-L_7	28.81	91.29	0.70	104.54	0.79	0.35				
	L_7-L_8	33.29	-42.37	86.99	-11.09	0.00	0.00				
	L_8-L_9	-11.34	-30.43	0.04	0.16	0.00	0.00				
	L_9-L_{10}	-6.50	8.86	2.86	41.71	0.00	0.00				
	L_{10}-L_{11}	20.17	17.96	18.02	-18.57	0.00	0.00				
	L_{11}-L_{12}	86.11	-28.11	0.46	1.23	-1.78	-1.39				
	L_{12}-L_{13}	18.46	7.03	-0.20	-2.61	0.00	0.00				
	L_{13}-L_{14}	-13.52	-3.86	0.00	0.40	0.00	0.00				
	L_{14}-L_{15}	-1.00	-5.73	-6.61	-22.27	0.00	0.00				
	L_{15}-L_{16}	-29.28	-10.61	-0.20	-2.61	0.00	0.00				
	L_{16}-L_{17}	-2.72	4.66	-1.88	46.49	0.00	0.00				
	L_{17}-L_{18}	-87.79	-23.88	-4.49	-0.01	-1.45	5.37				
	L_{18}-L_{19}	-15.15	-18.40	-12.67	-44.44	0.00	0.00				
	L_{19}-L_{20}	-70.90	-4.74	-3.04	31.26	0.00	0.00				
	L_{20}-L_{21}	53.31	11.96	1.36	0.30	0.00	0.00				
	L_{21}-L_{22}	-1.11	-3.87	-13.08	-45.47	0.00	0.00				
	L_{22}-L_{23}	-3.56	-1.63	-0.20	-2.61	0.00	0.00				
	L_{23}-L_{24}	90.54	156.88	74.93	119.68	385.1	385.05				
	L_{24}-L_{25}	10.29	-0.41	0.00	0.00	0.00	0.00				
	L_{25}-L_{26}	193.00	2.55	84.45	-79.80	321.4	321.40				
	L_{26}-L_{27}	27.64	-0.07	12

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: 3G1
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) 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~L_1	-56.29	86.22	-3.54	4.61	0.70	-0.93	-47.23	58.52	9.41	-12.46
	L_1~L_2	-14.44	23.27	-3.56	3.39	0.91	-0.92	-47.60	45.28	12.14	-12.22
	L_2~L_3	-0.62	5.55	-7.20	3.52	1.09	-1.20	-38.72	44.37	14.59	-10.55
	L_3~L_4	36.84	-39.22	-1.68	1.95	1.61	-1.42	-22.42	25.98	21.46	-18.97
	L_4~L_5	49.77	-49.19	-2.63	0.46	1.61	-1.42	-5.36	6.19	28.16	-27.36
	L_5~L_6	57.71	-69.80	0.02	0.62	2.98	-3.31	0.23	0.24	39.82	-44.15
	L_6~L_7	63.12	-67.29	0.07	0.10	3.72	-4.17	0.00	0.00	49.52	-55.66
	L_7~L_8	106.28	-118.16	0.15	0.13	5.21	-5.41	-2.00	1.74	69.66	-72.30
	L_8~L_9	-10.96	6.72	-4.73	5.65	0.69	-7.24	-63.24	75.52	81.31	-66.94
	L_9~L_{10}	-144.91	167.70	-4.48	4.78	0.36	-0.34	-57.91	71.71	81.31	-66.94
	U_0~U_1	-102.02	95.66	-3.83	4.03	0.15	-0.37	-50.90	52.09	1.98	-4.74
	U_1~U_2	-111.13	106.65	-4.32	3.76	0.02	-0.17	-54.63	56.07	2.21	-1.71
	U_2~U_3	-96.42	93.90	-3.70	3.82	0.33	-0.24	-47.89	49.41	4.31	-3.08
	U_3~U_4	-90.91	75.94	-3.48	3.60	0.67	-0.60	-44.96	46.55	8.63	-6.42
	U_4~U_5	-33.33	28.08	-1.30	1.40	0.82	-0.11	-41.19	39.81	12.22	-10.23
	U_5~U_6	8.32	15.87	1.30	1.26	3.16	-3.33	-16.81	16.29	40.83	-43.14
	U_6~U_7	47.73	-50.39	-0.70	0.92	3.46	-3.58	-4.89	4.68	44.81	-46.92
	U_7~U_8	61.55	-72.81	-0.53	0.54	3.80	-3.95	-6.86	6.95	49.19	-51.13
	U_8~U_9	113.17	-138.25	-0.74	0.74	5.47	-5.66	-9.51	9.34	66.14	-68.00
	U_9~U_{10}	157.87	-153.86	-0.76	0.68	7.48	-7.34	-9.79	8.79	86.62	-84.93
	U_{10}~U_{11}	131.38	-213.66	-0.31	0.54	5.21	-7.11	-4.06	7.04	67.43	-91.98
	L_1~U_1	-147.13	191.05	-2.47	0.72	0.89	-1.24	-78.26	101.76	1.78	-11.24
	L_2~U_2	-122.87	130.77	-5.62	5.70	0.81	-0.84	-71.79	72.88	10.40	-10.71
	L_3~U_3	-117.97	129.76	-6.13	5.96	1.01	-1.05	-78.01	78.88	12.84	-12.64
	L_4~U_4	-62.46	69.03	-3.27	3.33	0.65	-0.66	-41.78	42.58	9.28	-8.45
	L_5~U_5	-37.86	43.29	-3.25	3.05	0.37	-0.37	-22.89	23.14	10.64	-10.32
	L_6~U_6	-9.11	15.69	3.14	3.28	1.20	-1.15	-40.11	41.89	15.36	-14.67
	L_7~U_7	14.84	-14.93	-2.53	2.60	1.56	-1.61	-32.27	33.19	19.93	-20.57
	L_8~U_8	39.69	-45.43	-1.34	1.33	2.20	-2.20	-13.34	14.53	25.77	-28.16
	L_9~U_9	88.81	-97.92	-0.90	0.69	4.42	-4.52	-11.47	8.78	56.41	-57.72
	L_{10}~U_{10}	133.06	-153.02	-0.80	0.61	6.32	-6.47	-7.20	6.23	83.02	-84.78
	L_{11}~U_{11}	140.09	-147.00	0.00	0.11	5.95	-6.29	-0.05	1.42	75.96	-79.81
	L_{11}~U_{10}	148.96	-153.44	0.14	0.26	5.84	-6.40	-1.82	3.37	74.67	-77.73
	L_{10}~U_9	147.97	-139.95	-0.54	0.56	5.91	-6.70	-4.39	5.01	76.29	-82.10
	L_9~U_8	185.41	-182.32	-0.70	0.69	7.23	-8.87	-8.89	8.83	92.34	-97.79
	L_8~U_7	72.60	-71.3	-0.34	0.33	3.54	-4.35	-4.41	4.38	45.77	-48.50
	L_7~U_6	-128.28	129.98	-5.64	5.15	0.75	-0.67	-71.17	65.03	9.43	-8.42
	L_6~U_5	-125.94	122.64	-6.38	6.23	0.76	-0.72	-80.54	78.64	9.60	-8.03
	L_5~U_4	-109.69	106.91	-6.36	6.55	1.00	-0.98	-80.23	82.66	12.61	-12.41
	L_4~U_3	-87.53	79.39	-3.98	4.06	0.96	-0.85	-54.44	56.95	12.07	-10.66
	L_3~U_2	-43.25	43.74	-3.95	3.57	0.84	-0.84	-44.83	45.08	10.63	-10.58
	L_2~U_1	-29.76	34.94	-3.41	3.04	0.67	-0.61	-43.45	44.12	12.01	-12.51
	L_1~U_0	-1.28	1.60	-1.87	2.00	1.59	-1.77	-23.62	25.21	20.07	-22.31
	U_0~L_0	38.83	-38.83	-1.46	1.46	0.00	0.00	-12.47	12.47	0.00	0.00
	U_1~L_1	46.57	-51.18	-0.99	0.99	3.64	-3.77	-12.49	12.49	45.96	-47.57
	U_2~L_2	62.68	-61.36	-1.01	0.97	4.82	-4.76	-12.70	12.26	60.83	-60.06
	U_3~L_3	71.53	-71.53	-0.97	0.97	5.49	-5.49	-12.26	12.26	68.01	-68.01
	U_4~L_4	106.60	-105.79	-1.08	1.04	7.88	-8.00	-13.57	13.16	99.49	-100.95
	U_5~L_5	71.53	-71.53	-0.97	0.97	5.49	-5.49	-12.26	12.26	68.01	-68.01
	U_6~L_6	114.56	-114.55	-0.53	0.44	7.55	-7.17	-6.63	5.53	95.35	-90.48
	U_7~L_7	72.94	-73.13	-0.43	0.38	4.81	-4.56	-5.43	4.86	60.53	-57.43
	U_8~L_8	-121.12	118.67	-5.14	4.82	0.80	-0.75	-65.67	61.58	10.22	-9.63
	U_9~L_9	-92.37	86.40	-4.96	4.77	0.63	-0.88	-53.41	50.88	8.09	-11.27
	U_{10}~L_{10}	-102.94	95.05	-5.14	4.96	0.63	-0.86	-62.66	57.89	8.09	-11.27
	U_{11}~L_{11}	-96.77	103.11	-5.64	5.31	0.07	-0.30	-64.43	67.83	0.88	-3.77
	U_{11}~L_{10}	-11.50	11.50	-6.28	6.28	0.15	-0.32	-0.00	0.00	0.00	0.00
	U_{10}~L_9	-93.45	70.59	-4.50	4.56	0.51	-0.45	-57.48	58.27	6.55	-5.69
	U_9~L_8	-32.66	38.67	-2.26	2.54	0.76	-0.80	-28.90	32.44	9.74	-10.91
	U_8~L_7	-16.10	17.79	-2.21	2.47	0.74	-0.74	-0.00	0.00	0.00	0.00
	U_7~L_6	4.46	-6.40	1.30	1.23	2.87	-3.11	-16.56	15.65	36.71	-39.67
	U_6~L_5	47.22	-50.55	-0.79	0.80	3.69	-3.87	-10.11	10.20	47.13	-49.47
	U_5~L_4	47.22	-50.55	-0.79	0.80	3.69	-3.87	-10.11	10.20	47.13	-49.47
	U_4~L_3	104.86	-112.00	-1.13	1.07	7.80	-7.64	-14.48	13.61	99.64	-97.66
	U_3~L_2	108.12	-132.79	-0.57	0.93	5.04	-7.40	-7.31	11.93	64.38	-95.26
	U_2~L_1	124.18	-163.55	-0.57	0.93	5.20	-8.08	-0.00	0.00	0.00	0.00
	U_1~L_0	-109.22	116.95	-5.09	5.58	0.49	-0.46	-72.35	72.57	6.30	-6.00
	U_0~L_1	-65.02	69.70	-3.07	3.32	0.30	-0.28	-45.00	45.00	3.89	-3.70
	L_0~L_1	-48.68	58.79	-2.31	3.23	0.41	-0.40	-41.58	41.80	5.24	-5.33
	L_1~L_2	-39.15	42.89	-2.40	2.34	0.47	-0.46	-41.58	41.80	5.24	-5.33
	L_2~L_3	-5.41	11.55	2.97	3.09	1.00	-1.02	-38.48	40.01	12.93	-13.24
	L_3~L_4	27.86	-30.67	-1.65	1.69	1.63	-1.64	-21.28	21.88	23.61	-25.05
	L_4~L_5	55.75	-63.03	-0.43	0.30	4.05	-4.19	-5.54	3.87	52.35	-54.19
	L_5~L_6	84.25	-83.03	-0.43	0.30	4.05	-4.19	-5.54	3.87	52.35	-54.19
	L_6~L_7	107.33	-107.33	-0.04	0.04	4.70	-4.70	-0.00	0.00	0.00	0.00
	L_7~L_8	95.00	-97.81	0.15	0.30	4.70	-5.28	1.91	3.84	60.77	-68.30
	L_8~L_9	99.11	-131.56	0.04	0.03	4.76	-5.97	0.48	0.40	61.60	-77.28
	L_9~L_{10}	95.00	-87.91	0.15	0.30	4.70	-5.28	1.91	3.84	60.77	-68.30
	L_{10}~L_{11}	135.46	-154.19	-0.18	0.17	6.16	-6.67	-2.28	2.15	79.64	-86.29
	L_{11}~L_{10}	52.77	-74.32	-0.63	6.35	5.39	-6.88	-75.20	84.76	71.53	-81.53
	U_{10}~L_9	-62.87	69.54	-3.86	3.89	0.94	-0.33	-51.65	51.92	4.58	-4.34
	U_9~L_8	-41.65	35.38	-2.90	3.25	0.17	-0.35	-38.80	43.42	2.26	-4.65
	U_8~L_7	-36.85	40.05	-2.52	2.66	0.01	-0.13	-33.63	35.50	0.09	-1.35
	U_7~L_6	-39.84	39.91	-2.12	2.02	0.37	-0.30	-28.34	27.00	4.88	-4.02
	U_6~L_5	-38.87	40.30	-1.80	1.84	1.77	-1.99	-24.09	24.60	23.09	-26.53
	U_5~L_4	-13.42	14.14	-1.32	1.49	2.86	-3.41	-17.61	19.95	38.17	-40.52
	U_4~L_3	5.87	-9.62	-1.39	1.23	4.76	-4.37	-18.53	18.49	63.52	-58.31
	U_3~L_2	20.19	-40.81	-0.30	0.95	2.41	-4.68	-4.03	12.69	32.22	-62.38

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	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 1.8 Term * F$_y$/S$_{bot}$	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(UU)}$	$C_{b(UU)}$ Check
Structure 1	U_0~L_1	-134.57	188.68	80.95	95.88	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.713	0.31	0.31
	L_1~L_2	-21.03	-3.86	-1.81	-2.98	14.36	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.905	0.24	0.24
	L_2~L_3	-41.99	50.46	27.31	-26.16	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.932	0.21	0.21
	L_3~L_4	18.75	-12.01	75.78	-70.45	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.930	0.23	0.23
	L_4~L_5	53.83	-55.99	75.78	-70.45	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.952	0.21	0.21
	L_5~L_6	75.31	-90.42	126.79	-148.13	19.4	19.37	29.31	2	957.0	1.54	986	1.5	958.8	-0.956	0.26	0.26
	L_6~L_7	87.10	-86.19	163.43	-169.83	23.4	20.80	29.67	3	907.0	1.54	1140	1.5	1029.6	-0.960	0.23	0.23
	L_7~L_8	135.96	-131.35	238.72	-247.60	18.5	18.45	38.36	3	1020.9	1.67	1016	1.5	913.3	-0.924	0.23	0.23
	L_8~L_9	56.46	-106.91	91.45	-116.94	107.1	107.13	162.71	26	2058.9	1.52	5369	1.5	5362.9	-0.782	0.25	0.29
	L_9~L_{10}	-263.66	298.34	-252.36	-212.37	33.1	33.05	54.51	14	1408.8	1.65	1799	1.5	1636.0	-0.884	0.25	0.25
	U_0~U_1	-198.79	192.07	-130.05	118.20	39.5	35.52	59.44	14	1309.7	1.65	1929	1.5	1758.2	-0.966	0.21	0.21
	U_1~U_2	-277.62	290.48	-144.73	220.42	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.972	0.22	0.22
	U_2~L_3	-187.60	186.31	-119.74	118.67	21.1	21.09	31.46	10	1134.0	1.68	1170	1.5	1044.0	-0.993	0.20	0.20
	U_3~L_4	-137.62	159.24	-67.96	87.77	17.2	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.994	0.25	0.25
	U_4~L_5	-81.19	89.81	-22.33	39.61	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.957	0.21	0.21
	U_5~L_6	-10.64	51.64	63.89	-76.71	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.833	0.27	0.27
	U_6~L_7	50.27	-53.62	89.29	-125.72	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.833	0.54	0.54
	U_7~L_8	71.10	-85.62	143.96	-161.12	19.4	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.893	0.24	0.24
	U_8~L_9	160.68	-157.22	281.90	-274.00	33.1	33.05	53.74	14	1157.1	1.65	1766	1.5	1737.0	-0.982	0.21	0.21
	U_9~L_{10}	192.50	-188.60	331.10	-323.42	42.7	42.74	72.74	26	1599.6	1.53	2155	1.5	2115.6	-0.977	0.21	0.21
	U_{10}~L_{11}	165.49	-268.60	258.43	-397.33	42.7	42.74	72.74	26	1599.6	1.53	2155	1.5	2115.6	-0.650	0.34	0.34
	L_1~U_1	-278.79	309.95	-178.86	207.36	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.970	0.23	0.23
	L_2~U_2	-209.36	264.74	-146.21	156.08	46.7	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.998	0.22	0.22
	L_3~U_3	-78.01	112.86	-12.84	38.63	23.4	23.43	35.76	10	1122.1	1.68	1286	1.5	1262.5	-0.972	0.20	0.20
	L_4~U_4	-41.78	42.58	9.28	-8.45	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.895	0.26	0.26
	L_5~U_5	-22.89	23.14	10.64	-10.32	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.957	0.21	0.21
	L_6~U_6	-43.78	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.998	0.22	0.22	-76.41	2.74	-6.56	-1.39
	L_7~U_7	-38.63	39.23	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.998	0.22	0.22	-67.52	-28.58	68.50	14.51
	L_8~U_8	-135.51	145.10	-70.47	78.78	21.5	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2	-0.934	0.23	0.23
	L_9~U_9	-103.12	107.61	-39.42	45.09	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.892	0.21	0.21
	L_{10}~U_{10}	-63.98	74.86	8.12	1.33	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.895	0.26	0.26
	L_{11}~U_{11}	-22.67	23.74	45.20	-46.15	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.979	0.21	0.21
	U_{11}~U_{10}	-34.25	-40.20	89.29	-95.69	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.957	0.21	0.21
	U_{10}~U_9	-100.54	-115.88	188.78	-202.34	20.8	20.80	20.67	3	1037.5	1.67	1143	1.5	1029.6	-0.933	0.23	0.23
	U_9~U_8	-135.53	93.89	238.72	-247.60	18.5	18.45	38.36	3	1020.9	1.67	1016	1.5	913.3	-0.924	0.23	0.23
	U_8~U_7	-189.26	280.86	-294.86	-43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.993	0.22	0.22
	U_7~U_6	-189.26	280.86	-294.86	-43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.967	0.21	0.21
	U_6~U_5	-191.27	-195.08	290.71	-300.52	43.0	43.04	43.16	70.66	19	1515.6	1.53	2266	1.5	2129.0	-0.977	0.21	0.21
	U_5~U_4	-225.80	361.06	-351.40	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.979	0.21	0.21
	U_4~U_3	-154.48	158.02	-39.22	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.979	0.21	0.21
	U_3~U_2	-151.29	147.69	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.975	0.21	0.21
	U_2~U_1	-268.42	261.66	-151.29	147.69	42.7	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.975	0.21	0.21
	U_1~U_0	-246.89	249.04	-136.20	125.49	39.8	38.83	59.23	8	1264.6	1.53	1955	1.5	1922.1	-0.991	0.20	0.20
	L_0~U_0	-154.48	156.56	-83.33	85.09	18.5	18.61	28.24	10	1134.0	1.68	1170	1.5	1044.0	-0.993	0.20	0.20
	L_0~L_1	-114.51	115.47	-42.41	43.11	17.2	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.992	0.20	0.20
	L_1~L_2	-114.51	115.47	-42.41	43.11	17.2	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.992	0.20	0.20
	L_2~L_3	-127.07	128.04	-55.53	56.09	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.929	0.23	0.23
	L_3~L_4	-120.28	128.39	17.2	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.937	0.23	0.23
	L_4~L_5	-60.31	120.28	-128.39	17.2	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.937	0.23	0.23
	L_5~L_6	-44.30	-60.31	120.28	-128.39	17.2	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.937	0.23	0.23
	L_6~L_7	-64.97	-63.83	160.55	-157.84	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-0.983	0.21	0.21
	L_7~L_8	-63.83	-64.97	157.84	-160.55	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-0.983	0.21	0.21
	L_8~L_9	-64.97	-63.83	160.55	-157.84	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-0.983	0.21	0.21
	L_9~L_{10}	-63.83	-64.97	157.84	-160.55	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-0.983	0.21	0.21
	L_{10}~L_{11}	-64.97	-63.83	160.55	-157.84	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5	926.1	-0.983	0.21	0.21
	U_{11}~U_{10}	-11.50	11.50	-6.28	6.28	0.15	-0.32	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10}~U_9	-57.48	58.27	6.55	-5.69	0.00	0.00	0.00	0.00	20.80	20.67	34.64	3	1037.5	1.67	1143	1.5	1029.6	-0.938	0.22	0.22
	U_9~U_8	-28.90	32.44	9.74	-10.91	0.00	0.00	0.00	0.00	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.966	0.25	0.25
	U_8~U_7	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.966	0.26	0.26
	U_7~U_6	-16.56	15.65	36.71	-39.67	0.00	0.00	0.00	0.00	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.966	0.26	0.26
	U_6~U_5	-10.11	10.20	47.13	-49.47	0.00	0.00	0.00	0.00	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.924	0.23	0.23
	U_5~U_4	-10.11	10.20	47.13	-49.47	0.00	0.00	0.00	0.00	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.924	0.23	0.23
	U_4~U_3	-14.48	13.61	99.64	-97.66	0.00	0.00	0.00	0.00	20.80	20.67	34.64	3	1037.5	1.67	1143	1.5	1029.6	-0.938	0.22	0.22
	U_3~U_2	-7.31	11.93	64.38	-95.26	0.00	0.00	0.00	0.00	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.966	0.25	0.25
	U_2~U_1	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.966	0.25	0.25
	U_1~L_0	-271.65	329.97	-154.68	207.67	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	U_0~L_1	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	L_0~L_1	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	L_1~L_2	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	L_2~L_3	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	L_3~L_4	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	L_4~L_5	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	L_5~L_6	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.960	0.22	0.22
	L_6~L_7	-165.55	202.33	-92.60	124.23	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6

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: SU
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 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_x (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mx}/a	Pass
Structure 1	U_0-L_1	-23.44	7.53	1.96	0.93	0.28	-0.22					-26.17	12.44	3.77	-2.99	0.00	0.00	-64.50	25.95	25.58	5.89	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.402	0.44	0.44	-28.15	-30.90	-10.88	-1.17	0.55	0.94	-140.34	-15.65	7.33	12.60	0.00	0.00	0.00	-225.54	-80.52	-27.07	-23.79	100.5	100.60	100.48	126.29	66.1	1.20	3970	144	0.9425776	3126.1	0.268	0.71	0.71	0.263	0.132	0.39	Yes	0.163	0.073	0.23	Yes				

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 3G1
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-in)	Dead Load End (k-in)	Live Load (Max) End (k-ft)	Live Load (Min) 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	-75.12	-0.70	-1.16	1.52	6.47	-17.22	-12.89	16.88	72.04	-191.71
	U_1 - U_2	-46.81	-20.16	-1.52	2.01	-2.97	-17.29	2.89	32.40	-33.07	-190.46
	U_2 - U_3	-112.19	86.51	1.43	3.62	-2.29	-17.70	15.95	40.31	-25.46	-197.07
	U_3 - U_4	-15.68	66.14	2.32	3.40	-0.76	-17.71	25.87	37.71	-8.46	-175.61
	U_4 - U_5	-9.16	61.58	1.89	3.48	-0.21	-8.48	21.07	38.73	-2.32	-84.44
	U_5 - U_6	42.76	120.09	6.47	3.96	-1.28	-4.62	-72.02	44.05	-14.27	-51.42
	U_6 - U_7	93.12	43.54	8.27	2.96	-1.38	-4.01	29.93	23.96	-41.01	-52.01
	U_7 - U_8	-47.40	525.96	16.26	20.56	0.09	-0.05	-296.91	981.27	-60.25	683.02
	U_8 - U_9	64.51	-138.68	1.52	1.56	-15.81	-16.07	16.51	16.51	-138.65	140.15
	U_9 - U_{10}	46.76	20.63	1.53	2.61	2.21	-10.53	16.53	28.09	23.77	-113.50
	U_{10} - U_{11}	64.51	-138.68	1.52	1.56	-15.81	-16.07	27.49	31.19	21.14	-176.46
	U_{11} - U_{12}	27.83	-140.42	2.89	1.55	0.80	-16.00	30.69	16.69	8.97	-172.52
	U_{12} - U_{13}	-106.18	-154.99	0.36	0.85	2.45	-21.39	3.87	9.21	26.45	-230.67
	U_{13} - U_{14}	-137.97	-302.69	0.16	0.42	3.70	-29.25	-26.25	-25.63	-23.53	-314.56
	U_{14} - U_{15}	-245.66	-182.98	-0.33	1.38	-1.81	-19.26	-3.59	-14.90	-190.46	-207.63
	U_{15} - U_{16}	-123.52	-326.70	-0.36	1.65	3.81	-18.63	-27.68	-47.62	-107.16	-202.97
	U_{16} - U_{17}	-269.82	-144.38	-0.58	1.26	-3.71	-14.17	-6.29	13.54	-80.01	-152.79
	U_{17} - U_{18}	-194.10	-67.23	-0.89	4.92	-2.64	-7.86	-56.61	-33.50	-84.70	-84.03
	U_{18} - U_{19}	-170.35	-20.48	-2.86	3.96	0.76	-5.37	-30.85	42.65	8.21	-57.86
	U_{19} - U_{20}	-186.12	24.46	-7.78	10.28	2.70	-14.58	-83.85	110.82	29.06	-157.15
	U_{20} - U_{21}	-70.88	209.31	-5.24	1.76	3.00	-17.67	-3.14	22.85	3.56	-188.15
	U_{21} - U_{22}	-70.88	-181.00	-0.30	2.53	-20.09		-3.14	22.85	3.56	-213.93
	U_{22} - U_{23}	-5.93	-252.22	0.40	2.21	-20.09		-13.98	0.00	0.00	-213.93
	U_{23} - U_{24}	-327.18	-325.33	0.99	3.36	-7.20	-31.00	10.50	35.75	-76.65	-330.10
	U_{24} - U_{25}	-338.53	-264.71	1.77	3.66	-7.09	-31.00	-41.98	-14.17	-76.65	-330.10
	U_{25} - U_{26}	-396.09	-197.74	-1.57	6.18	-10.73	-32.36	-16.68	-65.82	-114.19	-344.56
	U_{26} - U_{27}	-344.15	-179.39	4.51	3.93	-6.71	-39.31	48.04	41.85	-71.44	-418.49
	U_{27} - U_{28}	-226.10	-295.71	3.32	4.46	-6.31	-39.31	35.10	67.45	-110.44	-428.67
	U_{28} - U_{29}	-350.17	-90.75	3.06	5.11	-2.50	-15.98	32.54	54.40	-26.59	-170.09
	U_{29} - U_{30}	-237.22	31.13	4.22	5.44	-1.46	-15.98	22.32	54.40	-13.98	-170.09
	U_{30} - U_{31}	-167.07	39.82	4.87	4.85	0.74	-8.86	51.85	51.58	7.86	-84.30
	U_{31} - U_{32}	-109.77	170.72	4.80	5.49	-1.02	-7.21	-51.07	58.40	-10.81	-77.40
	U_{32} - U_{33}	-83.73	279.91	4.80	5.49	-1.02	-7.21	-7.37	25.43	-10.81	-77.40
	U_{33} - U_{34}	-261.00	1265.93	6.77	36.86	-0.78	-1.55	-72.05	392.48	-8.28	-16.62
	U_{34} - U_{35}	-1192.75	2.49	38.59	6.77	-1.55	-0.78	8.65	392.48	353.55	-8.28
	U_{35} - U_{36}	-25.30	11.62	2.53	4.65	4.23	-18.54	26.64	48.92	-44.55	-195.05
	U_{36} - U_{37}	-25.30	11.62	2.53	4.65	4.23	-18.54	38.19	48.92	-44.55	-195.05
	U_{37} - U_{38}	-150.58	33.05	3.48	3.70	1.99	-18.20	36.58	38.94	20.88	-191.51
	U_{38} - U_{39}	-147.30	4.36	4.27	3.07	2.33	-20.73	44.92	32.32	-24.51	-218.07
	U_{39} - U_{40}	-147.30	4.36	4.27	3.07	2.33	-20.73	44.92	32.32	-24.51	-218.07
	U_{40} - U_{41}	-31.67	-34.01	0.11	3.41	-0.87	-27.55	1.17	35.89	-9.12	-289.90
	U_{41} - U_{42}	-86.04	-71.75	0.17	2.17	-0.87	-26.77	1.17	35.89	-9.12	-289.90
	U_{42} - U_{43}	-60.95	-86.97	1.42	1.95	-3.46	-19.94	14.97	20.54	-36.37	-209.79
	U_{43} - U_{44}	-32.99	-28.60	2.34	4.14	-4.65	-15.94	14.97	20.54	-36.37	-209.79
	U_{44} - U_{45}	-32.99	28.60	2.34	4.14	-4.65	-15.94	34.12	43.55	-48.92	-167.72
	U_{45} - U_{46}	-15.12	113.75	-11.26	5.54	-0.28	-11.08	118.43	58.23	-2.91	-116.54
	U_{46} - U_{47}	-15.12	113.75	-11.26	5.54	-0.28	-11.08	118.43	58.23	-2.91	-116.54
	U_{47} - U_{48}	-2.69	209.81	-11.85	8.06	-1.74	-10.28	-124.64	84.79	-18.32	-108.16
	U_{48} - U_{49}	-47.82	135.54	-11.85	8.06	-1.74	-10.28	4.96	84.79	-18.32	-108.16
	U_{49} - U_{50}	-122.28	-116.58	-0.73	36.12	0.15	-2.01	-49.73	380.52	1.58	-21.09
	U_{50} - U_{51}	-1153.78	-196.80	0.68	4.02	27.02	-27.07	7.24	42.84	287.68	-288.26
	U_{51} - U_{52}	-67.81	62.60	-0.77	2.32	0.13	-4.43	4.96	23.96	1.58	-21.09
	U_{52} - U_{53}	-178.87	-59.61	3.75	4.58	2.27	-20.10	39.90	48.75	24.19	-214.04
	U_{53} - U_{54}	-178.87	-59.61	3.75	4.58	2.27	-20.10	48.87	48.75	24.19	-214.04
	U_{54} - U_{55}	-68.77	-178.57	5.26	4.26	1.01	-24.86	55.98	45.37	10.73	-264.71
	U_{55} - U_{56}	-68.77	-178.57	5.26	4.26	1.01	-24.86	42.68	37.14	-48.97	-407.23
	U_{56} - U_{57}	-236.40	-153.06	4.01	3.49	4.60	-38.25	42.68	37.14	-48.97	-407.23
	U_{57} - U_{58}	-98.63	-313.14	4.21	3.98	4.00	-24.13	44.77	42.34	-30.62	-256.87
	U_{58} - U_{59}	-139.47	-362.56	3.42	3.98	1.40	-32.00	56.32	42.34	-30.62	-256.87
	U_{59} - U_{60}	-350.27	-386.72	-4.85	1.96	-7.13	-27.44	-51.63	21.53	-75.93	-292.19
	U_{60} - U_{61}	-350.27	-386.72	-4.85	1.96	-7.13	-27.44	-51.63	21.53	-75.93	-292.19
	U_{61} - U_{62}	-278.82	-117.63	-10.12	5.30	-5.68	-13.06	-107.78	56.44	-60.50	-139.01
	U_{62} - U_{63}	-278.82	-117.63	-10.12	5.30	-5.68	-13.06	-107.78	56.44	-60.50	-139.01
	U_{63} - U_{64}	-186.18	-74.10	-9.31	10.85	2.69	-13.97	-88.32	115.52	28.67	-148.78
	U_{64} - U_{65}	-139.59	-187.78	-7.66	0.94	8.60	-14.29	-82.62	10.10	92.73	-154.04
	U_{65} - U_{66}	-52.50	-128.95	-0.20	-1.02	3.94	-19.73	-2.12	10.99	42.44	-212.74
	U_{66} - U_{67}	-52.50	-128.95	-0.20	-1.02	3.94	-19.73	-2.12	10.99	42.44	-212.74
	U_{67} - U_{68}	-277.57	-111.60	-8.50	2.25	-3.52	-26.00	-91.66	24.24	-37.90	-260.28
	U_{68} - U_{69}	-166.87	-243.33	-1.28	1.88	-2.92	-28.53	13.78	20.24	-31.46	-302.23
	U_{69} - U_{70}	-287.50	-127.73	-1.36	1.80	-0.99	-16.56	-14.66	17.26	-20.97	-167.92
	U_{70} - U_{71}	-141.30	-113.93	-8.56	3.72	-3.80	-11.86	-92.30	46.09	-41.00	-127.86
	U_{71} - U_{72}	-140.41	22.73	-3.08	3.21	-0.33	-7.67	-38.56	34.58	-3.55	-82.64
	U_{72} - U_{73}	-141.54	56.98	-9.18	3.81	-1.81	-3.29	-99.00	81.04	-19.54	-39.49
	U_{73} - U_{74}	3.07	40.55	-2.52	3.14	0.17	-4.43	-37.45	33.86	1.81	-47.78
	U_{74} - U_{75}	-136.80	470.88	-5.78	17.24	0.13	-5.03	-62.30	160.91	1.40	-5.32
	U_{75} - U_{76}	497.19	-34.44	2.91	1.98	22.03	-19.28	32.44	22.03	245.22	-214.68
	U_{76} - U_{77}	59.30	15.07	3.50	2.21	-2.09	-16.41	39.01	24.55	-23.26	-182.71
	U_{77} - U_{78}	80.04	-19.79	3.51	1.94	3.25	-13.50	39.05	21.63	26.15	-150.30
	U_{78} - U_{79}	80.24	-119.59	-2.30	1.15	-3.50	-12.49	-25.56	12.80	-38.98	-139.01
	U_{79} - U_{80}	-24.67	-27.08	-2.56	1.82	-1.66	-10.33	-28.55	20.25	-18.43	-116.00
	U_{80} - U_{81}	28.36	-160.66	-6.20	8.53	0.58	-15.39	49.01	95.51	8.50	-171.30

Location	Member	Start (k-in)	End (k-in)	End (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	U_0 - U_1	-107.91	27.04	2.50	-250.13	90.2	90.24	72.24	127.46	2147	1328.6
	U_1 - U_2	-57.13	-18.91	-107.41	-214.44	90.2	90.24	72.24	127.46	2147	1328.6
	U_2 - U_3	-125.10	164.87	-178.94	-143.72	90.2	90.24	76.71	127.46	2147	1328.6
	U_3 - U_4	-13.26	77.89	-77.89	-143.72	90.2	90.24	72.24	127.46	2147	1328.6
	U_4 - U_5	13.49	130.41	-14.92	-42.22	90.2	90.24	72.24	127.46	2147	1328.6
	U_5 - U_6	-38.03	213.39	31.04	89.27	90.2	90.24	76.71	127.46	2147	1328.6
	U_6 - U_7	159.96	27.79	78.18	142.56	2586	3045.1	1.41	4204	0.9980134	2974.3
	U_7 - U_8	-2.07	3.84	-6.25	683.02	138.2	138.17	111.77	199.97	3642	2197.7
	U_8 - U_9	639.71	-140.39	807.24	-380.45	130.3	130.26	105.11	180.77	2960	1799.3
	U_9 - U_{10}	82.27	63.33	91.69	-129.74	96.6	96.61	79.12	139.29	2174	1387.9
	U_{10} - U_{11}	117.60	-152.73	151.35	-451.98	96.6	96.61	83.93	139.29	2174	1387.9
	U_{11} - U_{12}	76.57	-160.84	141.45	-406.82	128.7	128.69	105.26	182.66	3153	1864.4
	U_{12} - U_{13}	-133.00	-189.52	-103.64	-501.36	151.8	151.76	130.54	219.77	4535	2932.6
	U_{13} - U_{14}	-265.20	-375.63	-214.46	-615.09	151.8	151.76	130.54	219.77	4535	2932.6
	U_{14} - U_{15}	-324.03	-216.50	-344.66	-507.79	188.5	188.51	157.55	274.68	5476	3413.6
	U_{15} - U_{16}	-239.49	-401.62	-127.18	-688.37	188.5	188.51	164.41	274.68	5476	3413.6
	U_{16} - U_{17}	-358.68	-170.86	-602.52	-387.10	188.5	188.51	157.55	274.68	5476	3413.6
	U_{17} - U_{18}	-324.56	-18.50	-237.44	-513.54	127.3	127.33	110.40	189.23	3668	2308.5
	U_{18} - U_{19}	-261.56	28.83	-210.79	-101.83	104.8	104.75	86.43	150.63	2589	1554.3
	U_{19} - U_{20}	-350.97	-175.86	-264.19	-172.49	104.8	104.75	86.43	150.63	2589	1554.3
	U_{20} - U_{21}	-153.44	-247.28	-183.16	-0.04	104.8	104.75	86.43	150.63	2589	1554.3
	U_{21} - U_{22}	-96.22	-205.60	-87.52	-513.41	138.2	138.15	119.05	199.70	3434	1990.9
	U_{22} - U_{23}	-177.77	-70.79	-213.37	-344.50	138.2	138.15	119.05	199.70	3434	1990.9
	U_{23} - U_{24}	-411.68	-376.45	-524.97	-852.05	232.7	232.70	198.86	340.10	6520	3217.6
	U_{24} - U_{25}	-412.94	-425.80	-442.56	-1014.71	232.7	232.70	198.86	340.10	6520	3217.6
	U_{25} - U_{26}	-536.61	-171.50	-663.37	-704.99	251.7	251.73	219.41	365.62	7161	3870.6
	U_{26} - U_{27}	-384.56	-178.80	-540.27	-777.25	232.7	232.70	189.45	340.10	6520	3217.6
	U_{27} - U_{28}	-248.28	-322.79	-327.93	-1015.69	232.7	232.70	189.45	340.10	6520	3217.6
	U_{28} - U_{29}	-412.52	-67.26	-489.78	-339.09	198.9	198.88	169.65	285.08	5137	2713.1
	U_{29} - U_{30}	-274.53	-123.45	-353.13	-224.74	198.9	198.88	169.65	285.08	5137	2713.1
	U_{30} - U_{31}	-149.78	-118.83	-298.97	-70.89	156.8	156.80	134.92	214.81	3285	1852.3
	U_{31} - U_{32}	-209.09	-297.92	-158.74	-721.31	156.8	156.80	128.72	214.81	3285	1852.3
	U_{32} - U_{33}	-177.77	-70.79	-213.37	-344.50	137.2	137.23	119.05	199.70	3434	1990.9
	U_{33} - U_{34}	-432.96	2155.93	-350.06	1624.22	221.8	221.77	196.91	327.26	6244	3427.0
	U_{34} - U_{35}	-1.74	156.73	-90.80	-150.46	185.0	185.70	154.12	266.55	4767	2721.4
	U_{35} - U_{36}	-1.74	156.73	-90.80	-150.46	185.0	185.70	154.12	266.55	4767	2721.4
	U_{36} - U_{37}	243.31	153.38	222.90	-206.00	127.9	127.83	105.84	178.51	2762	1538.8
	U_{37} - U_{38}	243.31	153.38	222.90	-206.00	127.9	127.83	105.84	178.51	2762	1538.8
	U_{38} - U_{39}	-249.89	47.68	223.36	-277.82	127.9	127.83	111.16	178.51	2762	1538.8
	U_{39} - U_{40}	-249.89	47.68	223.36	-277.82	127.9	127.83	111.16	178.51	2762	1538.8
	U_{40} - U_{41}	-39.65	-2.45	-53.03	-421.07	144.8	144.84	125.49	208.19	3613	2101.0
	U_{41} - U_{42}	-39.65	-2.45	-53.03	-421.07	144.8	144.84	125.49	208.19	3613	2101.0
	U_{42} - U_{43}	-69.77	-86.36	-126.51	-385.79	144.8	144.84	130.31	208.19	3613	2101.0
	U_{43} - U_{44}	-69.77	-86.36	-126.51	-385.79	144.8	144.84	130.31	208.19	3613	2101.0
	U_{44} - U_{45}	1.47	93.86	-106.49	-180.79	134.9	134.91	112.76	189.26	3012	1689.0
	U_{45} - U_{46}	-173.63	222.58	-23.45	-3.63	127.8	127.83	111.16	178.51	2762	1538.8
	U_{46} - U_{47}	-173.63	222.58	-23.45	-3.63	127.8	127.83	111.16	178.51	2762	1538.8
	U_{47} - U_{48}	-124.64	84.79	-183.32	-108.16	127.8	127.83	105.84	178.51	2762	1538.8
	U_{48} - U_{49}	-165.53	382.98	-27.30	132.15	173.0	173.03	144.25	241.17	3969	2180.7
	U_{49} - U_{50}	-37.76	1100.43	-43.98	1000.74	1.58	1.58	1.47	2.66	0.9980134	2974.3
	U_{50} - U_{51}	-223.59	1907.48	-156.89	1479.64	221.8	221.77	196.91	327.26	6244	3427.0
	U_{51} - U_{52}	1509.33	-200.14	1873.92	430.57	221.8	221.77	196.91	327.26	6244	3427.0
	U_{52} - U_{53}	1509.33	-200.14	1873.92	430.57	221.8	221.77	189.39	327.26	6244	3427.0
	U_{53} - U_{54}	-284.41	-14.12	263.98	-355.74	156.8	156.80	128.72	214.81	3285	1852.3
	U_{54} - U_{55}	-284.41	-14.12	263.98	-355.74	156.8	156.80	128.72	214.81	3285	1852.3
	U_{55} - U_{56}	162.17	-173.16	103.35	-576.25	181.9	181.87	147.20	249.02	3767	2047.9
	U_{56} - U_{57}	162.17	-173.16	103.35	-576.25	181.9	181.87	147.20	249.02	3767	2047.9
	U_{57} - U_{58}	-134.06	-477.48	-37.68	-1015.46	188.5	188.51	157.55	274.68	5476	3413.6
	U_{58} - U_{59}	-134.06	-477.48	-37.68	-1015.46	188.5	188.51	164.41	274.68	5476	3413.6
	U_{59} - U_{60}	-622.47	-475.40	-554.08	-882.37	251.7	251.73	219.41	365.62	7161	3870.6
	U_{60} - U_{61}	-622.47	-475.40	-554.08	-882.37	251.7	251.73	219.41	365.62	7161	3870.6
	U_{61} - U_{62}	602.98	-79.55	441.12	-333.63	212.6	212.59	170.43	297.57	4867	2491.8
	U_{62} - U_{63}	602.98	-79.55	441.12	-333.63	212.6	212.59	170.43	297.57	4867	2491.8
	U_{63} - U_{64}	-207.11	-284.96	-289.75	-127.8	127.83	111.16	178.51	2762	1538.8	1.40
	U_{64} - U_{65}	76.06	-230.99	302.01	-444.37	104.8	104.75	86.43	150.63	2589	1554.3
	U_{65} - U_{66}	-43.62	-149.89	-61.03	-260.04	104.8	104.75	86.43	150.63	2589	1554.3
	U_{66} - U_{67}	-71.01	-153.35	-13.08	-444.19	127.3	127.32	110.40	189.23	3668	2526.5
	U_{67} - U_{68}	-71.01	-153.35	-13.08	-444.19	127.3	127.32	110.40	189.23	3668	2526.5
	U_{68} - U_{69}	-304.68	-143.57	-387.62	-463.09	188.5	188.51	157.55	274.68	5476	3413.6
	U_{69} - U_{70}	-304.68	-143.57	-387.62	-463.09	188.5	188.51	164.41	274.68	5476	3413.6
	U_{70} - U_{71}	-303.68	-96.00	-236.99	-314.34	151.8	151.76	130.54	219.77	4535	2932.6
	U_{71} - U_{72}	-229.15	-74.32	-229.15	-74.32	104.8	104.75	86.43	150.63	2589	1554.3
	U_{72} - U_{73}	-312.70	-127.42	-209.40	-27.55	96.6	96.61	83.55	139.29	2174	1387.9
	U_{73} - U_{74}	-258.83	852.84	-176.02	611.73	130.3	130.26	105.11	180.77	2960	1799.3
	U_{74} - U_{75}	1668.52	-153.36	960.13	-323.86	138.2	138.17	111.77	199.97	3642	2197.7
	U_{75} - U_{76}	1668.52	-153.36	960.13	-323.86	138.2	138.17	111.77	199.97	3642	2197.7
	U_{76} - U_{77}	199.35	94.53	187.38	-157.20	90.2	90.24	76.71	127.46	2147	1328.6
	U_{77} - U_{78}	199.35	94.53	187.38	-157.20	90.2	90.24	72.24	127.46	2147	1328.6
	U_{78} - U_{79}	-69.18	-8.88	-56.02	-184.71	90.2	90.24	72.24	127.46	2147	1328.6
	U_{79} - U_{80}	-52.85	-85.34	-45.31	-431.55	90.2	90.24	72.24	127.46	2147	1328.6
	U_{80} - U_{81}	-62.85	-85.34	-45.31	-431.55	90.2	90.24	72.24	127.46	2147	1328.6

Location	Member	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F$_y$*Z$_{xx}$	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{Yield}	Equivalent Mom. Factor C_{Ult}
Structure 1	U_0 - U_1	1328.6	1.41	4206	0.9980134	2974.3	-0.970	0.60	0.60
	U_1 - U_2	1328.6	1.41	4206	0.9980134	2974.3	-0.970	0.60	0.60
	U_2 - U_3	1328.6	1.41	4206	0.9980134	2974.3	0.803	0.92	0.92
	U_3 - U_4	1328.6	1.41	4206	0.9980134	2974.3	0.803	0.92	0.92
	U_4 - U_5	1328.6	1.41	4206	0.9980134	2974.3	0.803	0.92	0.92
	U_5 - U_6	1328.6	1.41	4206	0.9980134	2974.3	-0.178	0.53	0.53
	U_6 - U_7	1387.9	1.40	4354	0.9980134	3021.5	-0.178	0.53	0.53
	U_7 - U_8	2197.7	1.45	6099	0.9980134	4564.8	-0.303	0.48	0.48
	U_8 - U_9	1864.4	1.42	6028	0.9967395	4241.5	-0.312	0.48	0.48
	U_9 - U_{10}	1387.9	1.40	4465	0.9987310	3184.1	-0.407	0.44	0.44
	U_{10} - U_{11}	1387.9	1.40	4465	0.9987310	3184.1	-0.407	0.44	0.44
	U_{11} - U_{12}	1864.4	1.42	6028	0.9987395	4241.5	-0.312	0.48	0.48
	U_{12} - U_{13}	2932.6	1.45	7252	0.9990592	5003.4	0.207	0.68	0.68
	U_{13} - U_{14}	2932.6	1.45	7252	0.9990592	5003.4	0.207	0.68	0.68
	U_{14} - U_{15}	3413.6	1.46	9064	0.9989594	6214.6	0.679	0.87	0.87
	U_{15} - U_{16}	3413.6	1.46	9064	0.9989594	6214.6	0.679	0.87	0.87
	U_{16} - U_{17}	3413.6	1.46	9064	0.9989594	6214.6	0.679	0.87	0.87
	U_{17} - U_{18}	2308.5	1.41	6146	0.9990716	4197.7	0.057	0.62	0.62
	U_{18} - U_{19}	1554.3	1.44	4971	0.9988042	3452.6	-0.110	0.56	0.56
	U_{19} - U_{20}	1554.3	1.44	4971	0.9988042	3452.6	-0.501	0.40	0.40
	U_{20} - U_{21}	1554.3	1.44	4971	0.9988042	3452.6	-0.501	0.40	0.40
	U_{21} - U_{22}	1990.9	1.45	6699	0.9988045	4553.8	0.170	0.67	0.67
	U_{22} - U_{23}	1990.9	1.45	6699	0.9988045	4553.8	0.170	0.67	0.67
	U_{23} - U_{24}	3217.6	1.46	11223	0.9988836	7670.6	0.616	0.85	0.85
	U_{24} - U_{25}	3217.6	1.46	11223	0.9988836	7670.6	0.616	0.85	0.85
	U_{25} - U_{26}	3870.6	1.45	12965	0.9989193	8298.1	0.541	0.98	0.98
	U_{26} - U_{27}	3217.6	1.46	11223	0.9988836	7670.6	0.695	0.88

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: 5C1
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

| 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 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. Pos. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_{bot} (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_{top} | M_z (k-in) | Equivalent Mom. Factor a | $C_{m(a)}$ | $C_{m(b)}$ | Tension: Max. Neg. Mom. Start (k-in) | End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_{eff} (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F'c/M_p | M_z (k-in) | Equivalent Mom. Factor a | $C_{m(a)}$ | $C_{m(b)}$ | Compression: Yield: Axial Portion | Moment Portion | Total | Pass | Buckle: Axial Portion | Moment Portion | Total | Pass | Fracture: 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: 5C1
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

Girder Truss - Vertical

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. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_z (in^4)	$I_{t/n}$ (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	Equivalent Mom. Factor $C_{b(x)}$	$C_{b(min)}$
Structure 1	U_1–L_1	-29.84	-49.00	-3.79	-8.94	-0.85	-0.92					-83.71	-135.13	-26.47	-90.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.693	0.32	0.32
	U_1–L_2	-9.06	15.16	-3.71	-3.63	0.72	-0.78					-41.31	-40.38	-39.78	-8.65	0.00	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.24	0.24
	U_2–L_2	10.31	9.71	-3.77	-3.27	0.67	-0.90					-32.56	36.40	9.67	-11.06	0.00	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.907	0.24	0.24
	U_2–L_3	33.43	-34.38	-2.52	2.53	2.06	-1.89					-28.01	28.18	22.96	-20.97	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3	-0.992	0.21	0.21
	U_3–L_3	41.60	-42.42	-1.12	0.00	2.44	-2.27					-12.49	13.00	27.13	-25.28	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3	-0.993	0.21	0.21
	U_3–L_4	45.52	-51.05	-0.26	0.15	2.99	-3.20					-2.91	1.67	33.27	-36.15	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.993	0.24	0.24
	U_4–L_4	55.57	-55.85	0.02	0.00	3.64	-3.82					6.00	-6.00	39.39	-42.74	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.993	0.24	0.24
	U_4–L_5	91.21	-101.85	-0.02	0.02	4.81	-5.09					-0.23	0.27	53.99	-56.22	0.00	0.00	0.00	0.00	0	1020.9	1.67	1016	1.5	913.3	-0.916	0.23	0.23
	U_5–L_5	-20.53	21.18	4.80	5.72	6.07	-7.15					-53.39	63.73	67.58	-79.99	0.00	0.00	0.00	0.00	0	1020.9	1.67	1016	1.5	913.3	-0.916	0.23	0.23
	U_5–L_6	-135.19	155.81	4.85	5.67	9.19	-9.26					-243.74	281.97	-173.11	198.91	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0	-0.964	0.25	0.25
	U_6–L_6	-88.41	88.14	-3.85	3.92	-2.24	-0.19					-41.52	42.29	-2.56	-2.03	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.993	0.24	0.24
	U_6–L_7	91.02	-91.02	4.12	4.77	0.08	-0.09					-44.40	51.46	0.89	-0.55	0.00	0.00	0.00	0.00	0	907.0	1.54	986	1.5	958.8	-0.993	0.24	0.24
	U_7–L_7	-79.50	78.32	-4.04	3.87	0.70	-0.69					-43.68	41.67	7.59	-6.98	0.00	0.00	0.00	0.00	0	160.01	155.98	93.49	92.76	21.0	21.09	21.09	36.40	10	1137.6	1.68	1710	1.5	1544.0	-0.975	0.21	0.21
	U_7–L_8	-49.20	60.09	-3.59	3.63	1.06	-1.01					-38.71	39.10	11.44	-11.55	0.00	0.00	0.00	0.00	0	114.28	128.94	-49.09	63.11	17.2	17.24	17.24	26.54	2	824.7	1.54	870	1.5	853.4	-0.986	0.25	0.25
	U_8–L_8	-29.73	34.60	-2.99	2.60	1.09	-1.04					-14.88	21.89	13.52	-11.46	0.00	0.00	0.00	0.00	0	751.9	1.54	782	1.5	763.3	-0.979	0.23	0.23
	U_8–L_9	-1.46	-2.70	-2.02	1.92	3.16	-3.28					-21.74	29.67	34.09	-36.40	0.00	0.00	0.00	0.00	0	30.15	23.37	42.42	-49.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.957	0.26	0.26
	U_9–L_9	34.16	-36.97	1.30	0.00	3.64	-3.82					-14.05	11.44	36.58	-37.32	0.00	0.00	0.00	0.00	0	36.57	32.61	56.32	-66.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.901	0.29	0.29
	U_9–L_{10}	46.21	-55.82	-0.31	0.32	3.34	-3.46					-3.33	3.44	36.03	-37.34	0.00	0.00	0.00	0.00	0	59.75	48.10	106.92	-121.11	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.883	0.25	0.25
	U_{10}–L_{10}	110.34	-114.53	-0.42	0.43	3.98	-5.36					-4.52	6.13	63.36	-64.32	0.00	0.00	0.00	0.00	0	137.06	114.52	220.80	-232.48	33.1	33.05	32.91	54.51	14	1187.7	1.65	1799	1.5	1737.2	-0.911	0.23	0.23
	U_{10}–L_{11}	121.24	-131.09	-0.37	0.37	6.03	-6.22					-3.99	4.03	65.53	-67.09	0.00	0.00	0.00	0.00	0	152.43	135.71	242.15	-257.63	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.943	0.22	0.22
	U_{11}–L_{11}	134.20	-173.18	-0.22	0.31	6.13	-7.14					-2.42	3.37	66.31	-76.98	0.00	0.00	0.00	0.00	0	171.32	220.74	260.66	-325.21	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.802	0.28	0.28
	U_{11}–L_{12}	114.26	168.30	-1.32	0.00	5.19	-12.53					-269.86	329.30	-134.39	164.00	42.7	42.74	42.74	65.30	8	1711.0	1.53	2357	1.5	2312.1	-0.792	0.22	0.22
	U_{12}–L_{13}	-124.38	133.15	-5.86	0.00	0.98	-1.05					-62.34	63.91	10.47	-11.16	0.00	0.00	0.00	0.00	0	242.73	256.19	-148.08	158.99	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.947	0.22	0.22
	U_{13}–L_{14}	-113.48	113.48	-5.55	5.74	1.12	-1.15					-62.34	63.91	10.47	-11.22	0.00	0.00	0.00	0.00	0	242.73	256.19	-148.08	158.99	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.947	0.22	0.22
	U_{14}–L_{15}	-56.00	62.15	-3.12	3.10	0.66	-0.70					-33.19	33.01	7.06	-7.44	0.00	0.00	0.00	0.00	0	115.95	123.71	-63.63	71.12	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	-0.937	0.23	0.23
	U_{15}–L_{16}	-34.04	39.78	-2.31	3.03	0.68	-0.71					-39.22	39.17	7.39	-6.99	0.00	0.00	0.00	0.00	0	66.54	76.82	-39.43	44.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.993	0.24	0.24
	U_{16}–L_{17}	-7.09	12.30	3.03	3.09	1.61	-1.58					-32.24	32.93	17.14	-16.86	0.00	0.00	0.00	0.00	0	61.07	58.80	13.12	-5.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.989	0.25	0.25
	U_{17}–L_{18}	15.85	-15.58	-2.73	2.72	2.07	-2.19					-29.07	28.99	22.02	-23.27	0.00	0.00	0.00	0.00	0	17.19	17.43	49.22	-50.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.974	0.21	0.21
	U_{18}–L_{19}	38.85	-44.03	-1.34	1.36	2.60	-2.75					-14.30	14.56	25.04	-26.64	0.00	0.00	0.00	0.00	0	31.91	29.05	83.47	-91.74	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.974	0.21	0.21
	U_{19}–L_{20}	86.89	-96.05	-1.54	1.36	4.75	-4.70					-16.44	14.49	50.57	-50.05	0.00	0.00	0.00	0.00	0	91.59	-106.02	178.71	-189.93	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.941	0.22	0.22
	U_{20}–L_{21}	155.09	-159.44	-1.36	1.36	7.49	-7.40					-14.05	11.44	63.46	-64.39	0.00	0.00	0.00	0.00	0	184.08	-194.58	264.35	-277.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.901	0.29	0.29
	U_{21}–L_{22}	141.21	-149.39	-0.46	0.44	5.37	-5.56					-4.92	4.65	57.21	-59.17	0.00	0.00	0.00	0.00	0	177.17	-188.16	257.94	-271.12	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.951	0.22	0.22
	U_{22}–L_{23}	192.53	-192.81	-0.38	0.21	6.28	-6.31					-4.09	2.25	55.67	-57.04	0.00	0.00	0.00	0.00	0	190.37	-193.13	268.08	-270.20	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.952	0.20	0.20
	U_{23}–L_{24}	147.39	-148.78	-0.35	0.35	5.74	-5.74					-4.13	4.13	52.49	-53.44	0.00	0.00	0.00	0.00	0	175.6	-177.0	255.0	-257.3	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.952	0.20	0.20
	U_{24}–L_{25}	203.50	-203.15	-0.49	0.52	6.79	-6.50					-5.26	5.55	72.25	-69.19	0.00	0.00	0.00	0.00	0	257.71	-256.88	358.48	-354.05	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_{25}–L_{26}	60.02	-59.49	-2.76	2.24	7.99	-7.79					-29.70	29.70	31.72	-30.42	0.00	0.00	0.00	0.00	0	84.67	-84.67	118.17	-117.12	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.994	0.20	0.20
	U_{26}–L_{27}	-159.87	162.82	-6.51	6.36	0.83	-0.87					-68.49	66.91	8.72	-9.14	0.00	0.00	0.00	0.00	0	296.87	298.65	-196.49	199.79	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.994	0.20	0.20
	U_{27}–L_{28}	-113.84	113.84	-5.68	5.68	1.11	-1.21					-62.34	63.91	10.47	-11.27	0.00	0.00	0.00	0.00	0	242.73	256.19	-148.08	158.99	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.947	0.22	0.22
	U_{28}–L_{29}	-130.37	127.18	-6.17	6.06	0.84	-0.82					-64.83	63.72	8.81	-8.44	0.00	0.00	0.00	0.00	0	253.88	248.16	-158.03	154.16	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.977	0.21	0.21
	U_{29}–L_{30}	-113.07	114.60	-5.89	5.95	0.94	-0.96					-61.95	62.57	9.84	-10.10	0.00	0.00	0.00	0.00	0	240.65	250.32	-134.21	135.80	39.8	39.83	39.83	59.23	6	1264.6	1.53	1953	1.5	1922.1	-0.988	0.20	0.20
	U_{30}–L_{31}	-57.80	57.80	-2.87	2.87	0.47	-0.47					-61.44	61.44	7.32	-7.32	0.00	0.00	0.00	0.00	0	119.24	119.24	65.71	65.71	18.1	18.61	18.61	27.64	2	751.9	1.54	782	1.5	763.3	-0.957	0.26	0.26
	U_{31}–L_{32}	-44.77	46.58	-3.39	3.33	1.10	-1.04					-35.65	35.08	11.52	-10.93	0.00	0.00	0.00	0.00	0	104.54	106.15	-43.23	46.34	17.2	17.24	17.24	26.54	2	824.7	1.54	870	1.5	853.4	-0.985	0.21	0.21
	U_{32}–L_{33}	-30.30	31.29	-3.29	3.29	1.09	-1.02					-34.37	34.37	11.29	-10.92	0.00	0.00	0.00	0.00	0	94.97	94.97	63.73	63.73	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.967	0.21	0.21
	U_{33}–L_{34}	-3.70	4.34	-2.19	2.21	1.91	-2.02					-23.00	23.27	20.08	-21.22	0.00	0.00	0.00	0.00	0	34.70	35.89	21.31	-21.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.967	0.21	0.21
	U_{34}–L_{35}	22.64	26.75	-1.94	1.91	3.12	-3.24					-13.27	12.06	36.00	-36.84	0.00	0.00	0.00	0.00	0	34.54	39.09	98.59	-102.66	17.2	17.24	17.24	26.54	2	824.7	1.54	870	1.5	853.4	-0.960	0.22	0.22
	U_{35}–L_{36}	88.55	-87.48	-1.03	0.74	4.18	-4.12					-10.79	7.75	44.00	-43.31	0.00	0.00	0.00	0.00	0	72.49	-77.65	143.72	-144.04	18.7	18.71	18.61	31.48	8	970.0	1.68	1633	1.5	926.1	-0.998	0.20	0.20
	U_{36}–L_{37}	134.15	-132.42	-0.46	0.46	5.75	-5.75					-4.66	4.66	52.49	-53.44	0.00	0.00	0.00	0.00	0	175.6	-177.0	255.0	-257.3	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.952	0.20	0.20
	U_{37}–L_{38}	138.22	-138.66	-0.78	0.77	7.03	-7.14					-8.21	8.10	73.93	-75.10	0.00	0.00	0.00	0.00	0	169.02	-170.12	275.80	-278.28	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.951	0.20	0.20
	U_{38}–L_{39}	124.45	-125.62	-0.74	0.74	6.39	-6.49					-7.49	7.49	66.13	-68.11	0.00	0.00	0.00	0.00	0	159.79	-161.16	247.12	-249.58	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.951	0.20	0.20
	U_{39}–L_{40}	173.80	-176.10	-0.44	0.39	7.50	-7.22					-4.63	4.05	73.93	-75.98	0.00	0.00	0.00	0.00	0	215.93	-222.67	328.55	-327.71	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.997	0.20	0.20
	U_{40}–L_{41}	124.03	127.32	-0.48	0.48	6.37	-6.37					-6.24	6.24	66.04	-66.04	0.00	0.00	0.00	0.00	0	225.06	-225.06	329.19	-329.19	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.997	0.20	0.20
	U_{41}–L_{42}	-167.09	167.27	-6.16	5.86	0.77	-0.85					-65.54	62.35	8.19	-9.07	0.00	0.00	0.00	0.00	0	302.37	298.51	-296.52	295.66	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.987	0.21	0.21
	U_{42}–L_{43}	-116.04	109.89	-5.07	4.95	0.39	-0.71					-53.93	52.71	4.18	-7.55	0.00	0.00	0.00	0.00	0	209.95	211.38	-145.41	133.04	43.2	43.24	43.16	70.66	10	1515.6	1.63	2332	1.5	2140.4	-0.957	0.22	0.22
	U_{43}–L_{44}	-54.53	51.74	-2.48	2.48	0.34	-0.61					-47.86	47.86	3.62	-6.54	0.00	0.00	0.00	0.00	0	225.06	225.06	-229.19	229.19	43.2	43.24	43.16	70.66	10	1515.6	1.63	2332	1.5	2140.4	-0.957	0.22	0.22
	U_{44}–L_{45}	-119.83	124.38	-5.07	4.97	0.52	-0.41					-54.00	52.94	5.53	-4.37	0.00	0.00	0.00	0.00	0	225.88	230.52	-148.60	156.02	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0	-0.980	0.21	0.21
	U_{45}–L_{46}	-39.15	39.15	-3.45	3.45	0.63	-0.63					-61.13	61.13	8.57	-8.57	0.00	0.00	0.00	0.00	0	119.24	119.24	65.71	65.71	18.1	18.61	18.61	27.64	2	751.9	1.54	782	1.5	763.3	-0.957	0.26	0.26
	U_{46}–L_{47}	-79.51	88.86	-4.41	4.30	1.08	-1.00					-46.94	49.81	10.90	-10.62	0.00	0.00	0.00	0.00	0	164.33	176.08	98.41	101.72	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5	1029.6	-0.939	0.22	0.22
	U_{47}–L_{48}	-43.96	51.93	-2.33	2.50	1.17	-1.31					-24.80	29.64	12.44	-13.92	0.00	0.00	0.00	0.00	0	89.25	102.14	-40.95	49.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.974	0.25	0.25
	U_{48}–L_{49}	-28.15	34.03	-2.13	2.34	1.29	-1.44					-29.76	29.91	14.03	-15.70	0.00	0.00	0.00	0.00	0	61.78	75.88	-39.43	47.31	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.974	0.25	0.25
	U_{49}–L_{50}	-5.57	1.81	-1.77	1.66	3.11	-3.30					-18.83	17.64	33.13	-35.15	0.00	0.00	0.00	0.00	0	31.73	25.28	35.93	-43.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.957	0.26	0.26
	U_{50}–L_{51}	18.28	18.28	-2.47	2.47	3.41	-3.41					-18.28	-18.28	29.47	-29.47	0.00	0.00	0.00	0.00	0	18.28	-29.47	29.47	-29.47	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.841	0.29	0.29
	U_{51}–L_{52}	55.25	-61.09	-0.64	0.65	3.39	-3.47					-6.80	6.95	36.04	-36.91	0.00	0.00	0.00	0.00	0	62.98	-70.37	118.68	-127.40	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	-0.932	0.23	0.23
	U_{52}–L_{53}	10.19	10.19	-1.08	1.08	1.67	-1.67					-10.19	10.19	18.11	-18.11	0.00	0.00	0.00	0.00	0	10.19	-18.11	18.11	-18.11	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.841	0.29	0.29
	U_{53}–L_{54}	137.13	-150.74	-0.84	0.85	6.50	-6.57					-8.96	9.09	69.71	-69.92	0.00	0.00	0.00	0.00	0	166.61	-184.14	268.88	-286.85	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.937	0.23	0.23
	U_{54}–L_{55}	165.72	-206.83	-0.62	0.83	5.73	-7.34					-6.58	8.81	61.23	-78.14	0.00	0.00	0.00	0.00	0	206.88	-257.43	299.03	-370.46	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.796	0.28	0.28
	U_{55}–L_{56}	72.72	-143.91	-2.24	1.99	3.38	-4.38					-56.84	57.68	6.98	-6.38	0.00	0.00	0.00	0.00	0	222.06	-280.23	333.84	-421.24	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.937	0.23	0.23
	U_{56}–L_{57}	-109.81	112.89	-5.27	5.35	0.46	-0.49					-51.45	52.21	4.96	-4.52	0.00	0.00	0.00	0.00	0	211.45	221.72	-131.08	139.85	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.964	0.22	0.22
	U_{57}–L_{58}	-56.02	56.02	-2.73	2.73	0.45	-0.45					-56.02	56.02	6.73	-6.73	0.00	0.00	0.00	0.00	0	112.04	112.04	63.51	63.51	18.1	18.61	18.61	27.64	2	751.9	1.54	782	1.5	763.3	-0.957	0.26	0.26
	U_{58}–L_{59}	-38.40	48.11	-3.06	3.07	0.34	-0.36					-33.03	33.70	3.64	-3.51	0.00	0.00	0.00	0.00	0	82.86	105.37	-45.19	57.45	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.880	0.25	0.25
	U_{59}–L_{60}	-17.87	24.14	-2.32	2.19	1.02	-1.02					-32.95	33.14	17.43	-18.07	0.00	0.00	0.00	0.00	0	42.01	57.27	-46.44	63.99	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.925	0.25	0.25
	U_{60}–L_{61}	-2.78	8.39	3.06	3.07	1.62	-1.68					-21.00	21.09	26.91	-27.06	0.00	0.00	0.00	0.00	0	6.32	9.86	68.61	-72.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.947	0.22	0.22
	U_{61}–L_{62}	25.87	-28.68	-1.95	1.96	2.50	-2.51					-21.00	21.09	26.91	-27.06	0.00	0.00	0.00	0.00	0	42.09	-54.59	91.00	-105.50	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.947	0.22	0.22
	U_{62}–L_{63}	15.85	-15.58	-2.73	2.72	2.07	-2.19					-29.07	28.99	22.02	-23.27	0.00	0.00	0.00	0.00	0	17.19	17.43	49.22	-50.52	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.974	0.21	0.21
	U_{63}–L_{64}	142.63	-166.12	-0.06	0.08	5.70	-6.27					-0.68	0.83	61.48	-67.60	0.00	0.00	0.00	0.00	0	164.54	-214.85	260.34	-303.81	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1638.0	-0.873	0.25	0.25
	U_{64}–L_{65}	-81.19	89.90	-4.54	4.82	0.61	-0.53					-50.52	53.69	0.07	-0.33	0.00	0.00	0.00	0.00	0	171.23	186.67	-105.46	116.43	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016

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: SU1
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 unshielded in Mac, 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 Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-12.55	3.37	2.73	1.30	0.42	-0.24				
	L_1-L_2	-30.39	14.46	4.64	-2.65	0.00	0.00				
	L_2-L_3	-9.67	6.64	-3.32	-4.44	0.00	0.00				
	L_3-L_4	-4.52	4.09	-3.85	-7.01	0.00	0.00				
	L_4-L_5	9.78	-11.75	0.07	0.13	0.05	-0.84				
	L_5-L_6	-10.32	17.59	0.05	0.52	-0.13	0.47				
	L_6-L_7	-26.82	58.45	-2.00	2.03	0.00	0.00				
	L_7-L_8	-39.36	88.83	-3.72	2.67	0.00	0.00				
	L_8-L_9	-20.26	88.83	-1.83	3.62	0.01	-0.01				
	L_9-L_{10}	-9.60	109.51	1.34	3.32	0.13	-0.29				
	L_{10}-L_{11}	-74.77	141.56	-2.35	2.29	0.00	0.00				
	L_{11}-L_{12}	-56.82	54.75	-1.69	1.68	-0.20	-0.03				
	L_{12}-L_{13}	-55.23	39.04	-1.65	1.84	0.23	-0.73				
	L_{13}-L_{14}	-20.96	7.36	-0.91	0.71	0.28	-0.78				
	L_{14}-L_{15}	1.16	-20.29	0.04	-0.89	0.28	-0.64				
	L_{15}-L_{16}	-15.28	13.14	1.42	1.22	0.67	-0.83				
	L_{16}-L_{17}	-28.63	13.01	-1.26	-2.01	0.00	0.00				
	L_{17}-L_{18}	-89.28	58.13	-3.62	3.15	0.31	-0.35				
	L_{18}-L_{19}	-89.28	61.33	-3.97	3.51	0.28	-0.28				
	L_{19}-L_{20}	-105.04	88.64	-9.41	3.87	0.19	-0.19				
	L_{20}-L_{21}	-82.69	87.74	-5.94	4.59	0.84	-0.77				
	L_{21}-L_{22}	-36.36	87.74	-2.67	5.35	0.34	-0.67				
	L_{22}-L_{23}	-81.28	63.04	-3.57	3.07	0.88	-0.72				
	L_{23}-L_{24}	-89.28	25.63	-3.75	1.79	0.47	-0.63				
	L_{24}-L_{25}	-17.30	7.21	-1.46	1.33	0.52	-0.78				
	L_{25}-L_{26}	-7.42	-11.45	-1.26	-1.39	0.29	-0.79				
	L_{26}-L_{27}	-7.42	-23.91	-0.64	0.51	1.03	-1.41				
	L_{27}-L_{28}	-44.31	35.87	-1.87	1.55	0.75	-1.06				
	L_{28}-L_{29}	-56.38	68.64	-2.28	2.52	0.00	0.00				
	L_{29}-L_{30}	-88.54	73.82	-3.19	2.48	0.49	-0.61				
	L_{30}-L_{31}	-89.45	88.64	-3.57	3.01	0.00	0.00				
	L_{31}-L_{32}	-108.36	116.66	-4.08	3.89	0.67	-0.10				
	L_{32}-L_{33}	-154.28	139.69	-5.22	4.56	0.52	-0.20				
	L_{33}-L_{34}	-86.82	148.30	-3.23	4.95	0.41	-0.71				
	L_{34}-L_{35}	-24.74	100.39	-3.26	4.24	0.69	-0.59				
	L_{35}-L_{36}	-88.29	53.79	-3.22	2.43	0.10	-0.27				
	L_{36}-L_{37}	-74.15	95.51	-4.37	3.86	0.48	-0.55				
	L_{37}-L_{38}	-55.45	68.65	-3.03	3.03	0.00	0.00				
	L_{38}-L_{39}	-55.45	68.65	-3.05	2.74	0.23	-0.73				
	L_{39}-L_{40}	-32.97	39.97	-2.07	2.07	0.32	-0.81				
	L_{40}-L_{41}	-10.33	4.39	-0.83	0.77	0.63	-1.06				
	L_{41}-L_{42}	-10.33	4.39	-0.83	0.77	0.63	-1.06				
	L_{42}-L_{43}	-9.29	3.95	-0.75	0.69	0.57	-0.96				
	L_{43}-L_{44}	-17.08	15.19	-1.43	0.66	-0.88					
	L_{44}-L_{45}	-29.01	66.51	-3.42	3.01	0.43	-0.66				
	L_{45}-L_{46}	-55.66	65.11	-3.42	3.01	0.92	-0.72				
	L_{46}-L_{47}	-69.18	80.37	-3.87	3.43	0.46	-0.51				
	L_{47}-L_{48}	-89.45	88.64	-4.29	3.87	0.00	0.00				
	L_{48}-L_{49}	-106.02	102.50	-5.31	4.58	0.35	-0.29				
	L_{49}-L_{50}	-89.45	53.07	-3.66	2.29	0.00	0.00				
	L_{50}-L_{51}	-47.57	127.97	-3.63	4.65	0.75	-0.66				
	L_{51}-L_{52}	-89.45	116.66	-5.42	4.29	0.58	-0.41				
	L_{52}-L_{53}	-89.45	99.26	-3.56	3.51	0.12	-0.08				
	L_{53}-L_{54}	-86.48	82.53	-2.75	2.73	-0.08	-0.26				
	L_{54}-L_{55}	-89.45	78.71	-2.69	2.69	-0.04	-0.26				
	L_{55}-L_{56}	-90.13	67.65	-2.89	2.74	0.13	-1.04				
	L_{56}-L_{57}	-89.45	99.26	-3.56	3.51	0.12	-0.08				
	L_{57}-L_{58}	-12.59	26.40	-0.95	0.52	1.24	-1.33				
	L_{58}-L_{59}	-6.51	17.79	-1.45	1.08	1.01	-1.18				
	L_{59}-L_{60}	-11.68	0.88	-0.38	0.10	0.29	-0.37				
	L_{60}-L_{61}	-38.91	20.55	-2.18	1.87	0.44	-0.60				
	L_{61}-L_{62}	-89.45	88.64	-4.29	3.87	0.00	0.00				
	L_{62}-L_{63}	-88.49	71.14	-4.31	3.66	0.65	-0.55				
	L_{63}-L_{64}	-89.45	88.64	-4.27	3.87	0.00	0.00				
	L_{64}-L_{65}	-70.17	69.10	-6.46	4.31	0.42	-0.34				
	L_{65}-L_{66}	-86.86	56.37	-3.94	2.83	0.39	-0.29				
	L_{66}-L_{67}	-89.45	52.05	-3.81	2.60	0.00	0.00				
	L_{67}-L_{68}	-54.59	58.66	-3.27	2.40	0.02	-0.01				
	L_{68}-L_{69}	-89.45	88.64	-4.29	3.87	0.00	0.00				
	L_{69}-L_{70}	-9.16	17.57	-0.44	0.65	-0.51	-0.50				
	L_{70}-L_{71}	-10.33	9.84	-0.83	0.77	0.63	-1.06				
	L_{71}-L_{72}	-9.72	8.77	-0.79	0.72	0.60	-1.01				
	L_{72}-L_{73}	-23.22	7.61	-1.86	1.27	0.18	-0.16				

ZZ Axis Moments from STAAD

Location	Member	Nov. Pos. Mom. Start (k-in)	Nov. Pos. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mDL}	Equivalent Mom. Factor C_{mDL}
Structure 1	U_0-L_1	-55.777	23.18	-19.28	9.94	15.6	19.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	L_1-L_2	-54.76	-3.55	-6.49	-14.95	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_2-L_3	-0.31	-4.79	-6.25	-20.35	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_3-L_4	13.75	-13.41	13.46	-27.37	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_4-L_5	-12.63	18.77	19.37	19.37	15.4	19.37	19.37	29.87	5	968.8	2.08	1006	1.5	968.8
	L_5-L_6	-43.86	105.32	-34.84	75.99	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_6-L_7	-126.49	-17.64	-74.96	19.37	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_7-L_8	-167.83	-8.25	-115.35	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.207
	L_8-L_9	-167.83	-8.25	-115.35	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.207
	L_9-L_{10}	-31.26	188.89	-10.71	141.05	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7
	L_{10}-L_{11}	-129.36	718.14	67.20	84.68	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7
	L_{11}-L_{12}	-97.56	94.68	-76.62	70.74	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6
	L_{12}-L_{13}	-156.10	53.01	-143.32	12.04	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{13}-L_{14}	-84.91	76.55	-68.50	40.46	20.8	20.80	20.67	34.66	1	1079.0	1.67	1344	1.5	1029.6
	L_{14}-L_{15}	-40.02	19.52	-23.33	-1.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{15}-L_{16}	-8.69	18.79	-13.57	-22.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{16}-L_{17}	-44.57	22.44	-15.29	-4.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{17}-L_{18}	-44.52	22.44	-15.29	-4.27	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{18}-L_{19}	-166.74	119.68	-111.68	70.62	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{19}-L_{20}	-176.82	124.42	-113.06	73.79	35.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{20}-L_{21}	-205.32	169.71	-133.89	112.83	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{21}-L_{22}	-205.32	169.71	-133.89	112.83	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{22}-L_{23}	-177.36	124.42	-113.06	73.79	35.4	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{23}-L_{24}	-42.74	27.55	-19.29	-1.70	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{24}-L_{25}	-8.78	18.22	-13.57	-22.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{25}-L_{26}	-0.78	24.00	-23.83	-50.56	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	L_{26}-L_{27}	-48.08	35.87	-32.33	9.55	15.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	L_{27}-L_{28}	-43.44	68.08	-47.23	31.99	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2
	L_{28}-L_{29}	-174.01	104.61	-117.67	53.22	36.5	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{29}-L_{30}	-199.29	130.26	-138.31	87.52	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{30}-L_{31}	-191.02	154.32	-127.49	104.32	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{31}-L_{32}	-197.37	200.07	-131.61	148.96	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{32}-L_{33}	-272.79	244.77	-193.76	178.66	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{33}-L_{34}	-155.68	134.47	-93.48	72.04	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{34}-L_{35}	-76.11	188.71	-22.68	122.68	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{35}-L_{36}	-197.89	197.34	-122.68	122.68	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{36}-L_{37}	-156.20	176.53	-89.78	116.60	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{37}-L_{38}	-133.85	128.94	-68.99	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{38}-L_{39}	-133.85	128.94	-68.99	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{39}-L_{40}	-71.17	80.28	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2
	L_{40}-L_{41}	-47.27	-21.18	-53.34	-17.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{41}-L_{42}	-24.72	16.28	-4.85	-8.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{42}-L_{43}	-19.63	14.42	-4.59	-7.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{43}-L_{44}	-44.53	40.52	-13.22	8.93	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{44}-L_{45}	-40.39	25.51	-25.42	2.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{45}-L_{46}	-119.11	125.78	-69.25	74.81	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{46}-L_{47}	-142.83	161.40	-83.63	97.52	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{47}-L_{48}	-197.89	197.34	-122.68	122.68	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{48}-L_{49}	-210.47	195.89	-133.03	127.92	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{49}-L_{50}	-197.89	197.34	-122.68	122.68	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{50}-L_{51}	-230.77	61.43	-157.11	42.73	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{51}-L_{52}	-197.89	197.34	-122.68	122.68	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{52}-L_{53}	-165.59	174.86	-117.94	127.96	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{53}-L_{54}	-150.53	145.05	-113.53	103.69	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{54}-L_{55}	-139.71	121.91	-99.53	82.44	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{55}-L_{56}	-157.23	125.63	-115.46	73.61	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{56}-L_{57}	-165.59	174.86	-117.94	127.96	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	L_{57}-L_{58}	-27.37	29.05	-31.49	-52.77	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	L_{58}-L_{59}	-11.63	-8.13	-22.44	-39.40	19.4	19.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{59}-L_{60}	-38.10	-20.90	-50.61	-30.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{60}-L_{61}	-80.80	52.55	-44.54	18.47	21.5	21.54	21.54	33.27	5	987.9	1.54	1086	1.5	1068.2
	L_{61}-L_{62}	-125.62	125.62	-84.34	84.34	35.9	35.99	35.99	55.39	4	1213.4	1.53	1797	1.5	1781.1
	L_{62}-L_{63}	-197.89	197.34	-119.04	84.87	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{63}-L_{64}	-197.89	197.34	-122.68	122.68	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{64}-L_{65}	-181.79	192.17	-89.31	85.06	38.8	38.83	38.83	59.23	3	1284.6	1.53	1955	1.5	1922.1
	L_{65}-L_{66}	-168.17	112.97	-107.48	69.20	38.8	38.83	38.83	59.23	6	1284.6	1.53	1955	1.5	1922.1
	L_{66}-L_{67}	-142.63	108.98	-90.19	69.10	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0
	L_{67}-L_{68}	-197.89	197.34	-122.68	122.68	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{68}-L_{69}	-25.44	168.42	-3.57	106.55	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_{69}-L_{70}	-116.30	116.76	-76.16	76.16	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0
	L_{70}-L_{71}	-62.25	53.53	-38.45	34.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{71}-L_{72}	-18.25	32.21	-19.27	15.65	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	L_{72}-L_{73}	-13.28	12.16	-8.52	7.83	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3

M_r Information

YY Axis Moments from STAAD

Location	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_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mDL}	Equivalent Mom. Factor C_{mDL}
Structure 1	U_0-L_1	-211.19	-53.42	-42.47	-23.30	100.5	100.60	100.48	125.29	66.1	1.20	3970	144	0.94257776	3126.1	0.253	0.70	0.70
	L_1-L_2	-106.64	-35.00	-140.77	-76.16	94.0	93.99	93.99	104.66	65.3	1.11	3454	161	0.95139786	2952.4	0.541	0.82	0.82
	L_2-L_3	27.08	28.93	10.25	2.43	2.66	1.89	1.89	2.47	1.2	1.13	3454	3	0.95139786	2952.4	0.541	0.82	0.82
	L_3-L_4	-23.52	-28.97	-5.48	-5.45	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.95848452	4728.8	0.537	0.80	0.80
	L_4-L_5	-6.45	-7.70	-3.39	-3.45	0.00	0.00	0.00	0.00	0.0	1.13	5519	245	0.96429178	4738.1	0.533	0.81	0.81
	L_5-L_6	11.23	3.83	0.63	-0.56	0.00	0.00	0.00	0.00	0.0	1.13	5519	25	0.99994741	4689.9	0.696	0.88	0.88
	L_6-L_7	87.20	9.75	-6.20	-3.21	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.96384645	6452.3	0.691	0.87	0.87
	L_7-L_8	16.62	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.91814147	6457.7	0.555	0.98	0.98
	L_8-L_9	-15.87	-19.38	5.48	7.49	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.96813336	6309.9	0.782	0.91	0.91
	L_9-L_{10}	-21.38	-28.25	8.66	11.84	1.31	0.00	0.00	0.00	0.0	1.13	5519	277	0.91522526	5561.8	0.938	0.96	0.96
	L_{10}-L_{11}	-29.90	-30.16	-21.30	-10.36	0.00	0.00	0.00	0.00	0.0	1.16	5128	176	0.93039181	4786.9	0.874	0.95	0.95
	L_{11}-L_{12}	-20.04	-26.35	-15.90	-22.06	0.00	0.00	0.00	0.00	0.0	1.11	3454	145	0.94237553	2925.7	0.976	0.99	0.99
	L_{12}-L_{13}	-21.07	-28.45	-15.90	-22.06	0.00	0.00	0.00	0.00	0.0	1.11	3454	145	0.94237553	2925.7	0.976	0.99	0.99
	L_{13}-L_{14}	-23.53	-27.56	-13.36	-7.96	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.96384645	6452.3	0.691	0.87	0.87
	L_{14}-L_{15}	-24.49	-27.15	-19.87	-3.53	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.96384645	6452.3	0.691	0.87	0.87
	L_{15}-L_{16}	-30.21	-21.53	-21.42	-2.34	0.00	0.00	0.00	0.00	0.0	1.13	5519	207	0.96021955	4688.3	0.227	0.69	0.69
	L_{16}-L_{17}	-16.33	-21.08	-28.38	-3.43	0.00	0.00	0.00	0.00	0.0	1.13	6080	193	0.95372364	5072.2	0.272	0.72	0.72
	L_{17}-L_{18}	-109.60	-38.73	-101.77	-19.91	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.96384645	6452.3	0.691	0.87	0.87
	L_{18}-L_{19}	-133.17	-21.12	2.80	4.12	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.95421562	5469.3	-0.019	0.59	0.59
	L_{19}-L_{20}	-1.01	-1.01	-0.25	-0.25	0.00	0.00	0.00	0.00	0.0	1.13	5519	209	0.96021955	4688.3	0.227	0.69	0.69
	L_{20}-L_{21}	-19.22	-18.82	-4.65	-3.12	0.00	0.00	0.00	0.00	0.0	1.13	5519	217	0.96189756	4696.6	0.629	0.85	0.85
	L_{21}-L_{22}	-18.24	-18.24	-14.32	-14.32	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.96384645	6452.3	0.691	0.87	0.87
	L_{22}-L_{23}	-21.23	-23.02	-5.06	-8.83	0.00	0.00	0.00	0.00	0.0	1.13	5519	96	0.91239827	2834.9	0.788	0.92	0.92
	L_{23}-L_{24}	-29.83	-30.24	-15.51	-15.51	0.00	0.00	0.00	0.00	0.0	1.13	5519	262	0.96384645	6452.3	0.691	0.87	0.87
	L_{24}-L_{25}	-23.53	-23.14	-19.68	-22.11	0.00	0.00	0.00	0.00	0.0	1.13	5519

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SV1
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 Load Factor Rating 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

M_z Information

| Location | Member | ZZ Axis Moments from STAAD | | |

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 Factor Analysis - Truss System
Loading: **501**
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 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 Start (k-in) | Lane Reduction & Impact Live Load End (k-in) | Impact Pedestrian Load Start (k-in) | Impact Pedestrian Load End (k-in) | Mxx: Pos. Mom. Start (k-in) | Mxx: Pos. Mom. End (k-in) | Max. Neg. Mom. (k-in) | 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$_y$/S_{bb} | M_r (k-in) | Equivalent Mom. Factor a | $C_{m/t}$ | $C_{m/b}$ | 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) | Max. Neg. Mom. (k-in) | S_{ll} (in^3) | S_{rr} (in^3) | Z_y (in^3) | $I_{l/l}$ (in^4) | Shape Factor | M_p (k-in) | P_{crit} (kip) | Formula 1.8 Term * F$_y$/S_{ll} | M_r (k-in) | Equivalent Mom. Factor a | $C_{m/r}$ | $C_{m/l}$ | Tension: Axial Axial Load | Yield Moment Prism. | Yield Total | Pass | Fracture: Axial Axial Load | Fracture Moment Prism. | Fracture Total | Pass | Buckle: Axial Axial Load | Buckle Moment Prism. | Buckle Total | Pass | Compression: Axial Axial Load | Yield Moment Prism. | Yield Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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

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)	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 1.8 Term * F/S_{bc}	M_z (k-in)	Equivalent Mom. Factor	$C_{b(x)}$	$C_{b(m)}$	Pass
Structure 1	U_0–L_1	-15.70	54.51	2.65	2.90	0.50	-0.74	-0.04	0.43	0.03	-0.13	-35.43	38.78	4.05	-9.91	-0.48	5.10	0.34	-1.55	-66.47	121.29	-15.15	57.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.548	0.38	0.38	Yes
	U_1–L_1	-27.61	29.28	-2.26	2.22	0.98	-0.91	-0.57	0.52	0.20	-0.18	-30.19	29.62	15.13	-12.10	-6.82	6.19	2.40	-2.14	-75.15	76.50	-18.81	22.32	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.982	0.21	0.21	Yes
	U_1–L_2	-31.81	-5.24	-2.23	2.25	1.06	0.90	-1.06	-0.26	0.35	-0.22	-17.04	21.57	12.05	-14.09	-3.51	4.29	2.38	-2.75	-71.39	20.66	26.86	-29.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-1.000	0.22	0.22	Yes
	U_2–L_2	40.61	-41.50	-0.77	0.82	0.72	-0.89	-0.06	0.10	0.17	-0.21	-10.27	10.93	9.58	-11.93	-0.70	1.25	1.99	-2.46	39.44	-39.74	65.25	-69.46	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.939	0.22	0.22	Yes
	U_2–L_3	56.81	-57.80	-0.42	0.44	0.52	-0.65	-0.05	0.00	0.30	-0.31	-17.38	-15.79	0.00	0.00	0.00	0.00	0.00	0.00	-71.76	-71.76	-82.94	-82.94	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.931	0.20	0.20	Yes
	U_3–L_3	64.44	-72.22	-0.10	0.17	1.56	-1.77	0.05	0.00	0.42	-0.47	-1.30	2.29	20.79	-23.70	0.00	0.00	0.00	0.00	6.02	-5.65	82.69	-91.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.889	0.24	0.24	Yes
	U_3–L_4	60.40	-64.15	-0.43	0.43	1.67	-1.87	-0.26	0.00	0.00	0.00	-4.92	4.57	9.88	-27.57	0.00	0.00	0.00	0.00	26.51	-27.68	89.34	-92.45	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.847	0.26	0.26	Yes
	U_4–L_4	74.44	-85.11	-0.32	0.33	2.05	-2.14	-0.06	0.06	0.43	-0.46	-4.15	4.23	26.51	-27.68	-0.72	0.73	5.15	-5.53	91.37	-105.14	131.24	-146.62	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.895	0.24	0.24	Yes
	U_4–L_5	157.77	-162.63	-0.44	0.44	3.48	-3.48	-0.08	0.08	0.83	-0.87	-6.64	-43.67	-40.60	0.00	0.00	0.00	0.00	0.00	5.93	-10.42	187.78	-204.09	261.87	-284.92	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.887	0.25	0.25	Yes
	U_5–L_5	164.37	-173.76	-0.38	0.37	3.30	-3.40	-0.07	0.07	0.91	-0.96	-4.92	4.72	42.64	-43.96	-0.85	0.83	10.97	-11.39	207.29	-219.75	268.12	-283.05	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8	-0.879	0.25	0.25	Yes
	U_5–L_6	194.92	-205.55	-0.25	0.33	2.87	-3.43	-0.06	0.07	0.99	-1.17	-3.20	4.24	37.39	-44.40	-0.77	0.88	12.73	-14.04	249.18	-300.70	301.62	-363.94	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.929	0.27	0.27	Yes
	U_6–L_6	133.48	294.38	-3.96	3.96	4.85	0.40	-0.04	0.04	-0.11	0.11	-3.50	3.63	0.46	-1.25	-238.98	372.26	-0.04	0.11	73.74	0.00	47.74	-74.35	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2112.1	-0.652	0.24	0.24	Yes
	U_6–L_7	-201.32	204.79	-4.81	4.53	0.94	-0.90	-0.91	0.88	0.15	-0.14	-58.85	57.88	12.06	-11.51	-10.88	10.50	1.81	-1.68	-348.31	341.48	-246.01	251.26	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.990	0.20	0.20	Yes
	U_7–L_7	-154.93	160.02	-4.12	4.12	1.00	-1.00	-0.75	0.76	0.12	-0.12	-52.78	52.78	2.71	-2.71	9.17	9.17	1.65	-1.65	-299.47	299.47	-211.48	211.48	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.991	0.20	0.20	Yes
	U_7–L_8	-79.54	88.71	-2.21	2.28	0.63	-0.66	-0.37	0.41	0.10	-0.10	-28.26	29.12	8.10	-8.37	-4.46	4.67	1.18	-1.21	-140.15	153.17	-92.88	104.44	21.5	21.54	21.54	33.27	4	987.9	1.54	1098	1.5	1066.2	-0.915	0.23	0.23	Yes
	U_8–L_8	-41.64	54.58	-1.98	1.98	0.33	-0.33	-0.11	0.11	0.05	-0.05	-9.26	9.11	-3.01	3.01	3.78	1.38	-1.36	1.36	-43.93	43.93	-31.05	31.05	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.969	0.24	0.24	Yes
	U_8–L_9	-4.04	12.92	-1.49	1.65	0.78	-0.82	-0.17	0.21	0.13	-0.13	-19.01	21.03	5.91	-6.10	-2.05	2.50	1.51	-1.60	-30.42	53.98	-14.39	25.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.702	0.32	0.32	Yes
	U_9–L_9	27.52	-27.99	-1.09	1.13	1.10	-1.14	-0.04	0.05	0.10	-0.12	-13.88	14.44	14.07	-14.58	-5.43	5.60	1.22	-1.39	17.74	-17.61	54.07	-55.33	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.977	0.21	0.21	Yes
	U_9–L_{10}	59.94	-61.39	-0.31	0.31	2.42	-2.43	-0.12	0.12	0.20	-0.21	-3.94	4.50	17.72	-19.78	0.00	0.00	0.00	0.00	12.61	-12.61	118.32	-121.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.931	0.20	0.20	Yes
	U_{10}–L_{10}	130.31	-141.80	-0.24	0.17	2.74	-2.90	0.00	0.00	0.00	-0.07	35.06	-37.00	0.00	0.00	0.00	0.00	5.58	-5.94	214.98	-232.44	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.925	0.23	0.23	Yes
	U_{10}–L_{11}	216.58	-221.49	-0.31	0.31	3.49	-3.49	0.00	0.00	0.00	0.00	30.34	-31.60	0.00	0.00	0.00	0.00	0.00	0.00	-281.25	-285.71	167.52	-170.91	20.8	20.80	20.67	34.64	1	1037.5	1.67	1143	1.5	1029.6	-0.925	0.23	0.23	Yes
	U_{11}–L_{11}	193.18	-200.19	-0.24	0.36	3.47	-3.67	0.00	0.00	0.00	0.00	44.33	-46.93	0.00	0.00	0.00	0.00	8.02	-8.10	247.16	-254.25	308.76	-321.25	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.961	0.22	0.22	Yes
	U_{11}–L_{12}	194.78	-194.55	-0.45	0.56	3.40	-3.48	0.00	0.00	0.00	0.00	44.40	-44.00	0.00	0.00	0.00	0.00	7.91	-7.82	246.72	-243.06	309.67	-310.63	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.997	0.20	0.20	Yes
	U_{12}–L_{13}	177.13	-170.02	-0.27	0.52	3.24	-3.10	-0.22	0.04	0.00	0.00	-8.42	6.12	0.00	0.00	0.00	0.00	0.00	0.00	43.24	43.16	70.66	70.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.984	0.21	0.21	Yes
	U_{13}–L_{14}	231.65	-230.62	-1.34	1.35	3.11	-2.93	0.00	0.00	0.00	0.00	0.00	0.00	9.20	-9.19	278.84	-277.40	352.78	-348.52	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.980	0.20	0.21	Yes
	U_{14}–L_{15}	29.62	-29.23	-3.18	3.18	1.16	-1.16	-0.92	0.92	0.00	0.00	-43.97	-43.97	0.00	0.00	0.00	0.00	0.00	0.00	-61.35	-61.35	37.00	37.00	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.980	0.20	0.21	Yes
	U_{15}–L_{16}	-225.23	219.22	-4.47	4.11	0.38	-0.46	-0.83	0.81	0.00	0.00	-56.49	51.88	4.75	-5.82	-9.92	9.76	0.00	0.00	-359.73	352.43	-280.13	277.42	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.980	0.20	0.21	Yes
	U_{16}–L_{17}	-182.78	181.59	-4.42	4.52	0.69	-0.66	-0.77	0.78	0.07	-0.08	-55.84	57.02	8.75	-8.36	-8.28	9.34	0.80	-0.98	-310.18	312.18	-228.22	225.20	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-1.000	0.20	0.20	Yes
	U_{17}–L_{18}	-159.35	160.90	-4.11	4.30	0.84	-0.84	-0.74	0.76	0.09	-0.09	-51.91	54.25	10.54	-10.58	-6.84	9.07	0.58	-1.10	-264.61	283.61	-193.45	199.31	38.83	38.83	38.83	59.23	6	1284.6	1.53	1993	1.5	1922.1	-0.968	0.21	0.21	Yes
	U_{18}–L_{19}	-84.36	87.34	-2.35	2.35	0.61	-0.61	-0.36	0.36	0.04	-0.04	-24.84	24.84	7.84	-7.84	-3.84	3.84	0.61	-0.61	-129.61	129.61	-89.83	89.83	38.83	38.83	38.83	59.23	6	1284.6	1.53	1993	1.5	1922.1	-0.981	0.20	0.20	Yes
	U_{19}–L_{20}	-69.51	63.36	-1.79	1.90	0.64	-0.64	-0.34	0.35	0.00	-0.01	-22.62	24.00	8.02	-8.08	-4.02	4.24	0.02	-0.12	-106.78	113.37	-68.94	71.86	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.940	0.22	0.22	Yes
	U_{20}–L_{21}	37.52	-42.74	-0.73	0.73	0.73	-0.73	-0.13	0.13	0.00	0.00	-17.68	17.68	9.16	-9.16	-1.73	1.73	0.00	0.00	-77.68	77.68	-41.73	41.73	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.940	0.22	0.22	Yes
	U_{21}–L_{22}	4.56	-5.01	-0.83	0.87	1.11	-1.23	-0.07	0.09	0.13	-0.14	-10.53	10.92	14.03	-13.52	-0.89	1.06	1.52	-1.73	-8.91	9.64	24.17	-26.68	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.983	0.21	0.21	Yes
	U_{22}–L_{23}	28.28	-55.09	-0.76	0.76	0.72	-0.72	-0.13	0.13	0.00	0.00	-27.59	29.35	20.61	-20.61	-1.73	1.73	0.00	0.00	-82.77	88.04	-41.73	44.38	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.982	0.21	0.21	Yes
	U_{23}–L_{24}	70.77	-74.09	-0.72	0.72	2.23	-2.30	-0.05	0.05	0.40	-0.41	-9.14	9.10	18.25	-18.25	-4.33	4.33	0.81	-0.81	-175.61	175.61	-80.12	80.12	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.960	0.22	0.22	Yes
	U_{24}–L_{25}	104.65	-105.00	-0.68	0.66	2.79	-2.76	-0.06	0.06	0.52	-0.51	-8.60	8.28	35.22	-34.85	-0.66	0.70	6.19	-6.12	-124.97	-125.73	181.84	-181.80	18.7	18.71	18.61	31.48	8	970.0	1.68	1633	1.5	1626.1	-1.000	0.20	0.20	Yes
	U_{25}–L_{26}	139.79	-139.79	-0.81	0.81	3.35	-3.35	-0.08	0.08	0.62	-0.62	-8.25	8.25	42.26	-42.26	-0.79	0.79	7.39	-7.39	-167.29	-167.29	-107.29	-107.29	18.7	18.71	18.61	31.48	8	970.0	1.68	1633	1.5	1626.1	-1.000	0.20	0.20	Yes
	U_{26}–L_{27}	189.58	-191.05	-0.68	0.66	4.26	-4.29	-0.06	0.06	0.51	-0.50	-8.51	-8.57	8.32	53.82	54.26	-0.72	0.55	9.58	-8.77	239.31	-237.55	316.42	-318.82	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20	0.20	Yes
	U_{27}–L_{28}	153.03	-157.73	-0.63	0.63	3.29	-3.29	-0.05	0.05	0.50	-0.50	-32.22	-33.93	0.00	0.00	0.00	0.00	0.00	0.00	-197.25	-202.50	-131.21	-135.24	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20	0.20	Yes
	U_{28}–L_{29}	207.01	-210.59	-1.43	1.45	3.36	-3.11	0.00	0.00	0.81	-0.81	-18.09	-18.27	42.41	-39.30	0.00	0.00	0.00	0.00	-272.72	-277.01	-178.13	-181.04	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20	0.20	Yes
	U_{29}–L_{30}	144.02	-148.98	-0.61	0.61	3.08	-3.08	-0.04	0.04	0.48	-0.48	-46.92	-46.92	0.00	0.00	0.00	0.00	0.00	0.00	-187.68	-187.68	-125.73	-125.73	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.980	0.20	0.21	Yes
	U_{30}–L_{31}	-251.15	245.11	-4.10	3.80	0.43	-0.42	-0.82	0.81	0.00	0.00	-52.37	-48.65	5.52	-5.39	-9.83	9.68	0.00	0.00	-394.58	-381.82	-319.32	-311.63	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5	1938.9	-0.969	0.21	0.21	Yes
	U_{31}–L_{32}	-185.39	-176.08	-3.64	3.63	0.38	-0.67	-0.66	0.69	0.00	0.00	-45.28	-46.38	4.83	-5.61	-7.94	8.27	0.56	-1.25	-299.87	-291.80	-234.72	-220.31	43.2	43.24	43.16	70.66	10	1515.6	1.63	2332	1.5	2140.4	-0.973	0.21	0.21	Yes
	U_{32}–L_{33}	144.88	160.86	-4.02	4.02	0.00	0.00	0.00	0.00	0.00	0.00	-37.37	-37.37	0.00	0.00	0.00	0.00	0.00	0.00	-315.95	-315.95	-207.55	-207.55	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20	0.20	Yes
	U_{33}–L_{34}	-185.34	192.19	-3.51	3.65	0.04	-0.13	-0.64	0.64	0.00	0.00	-44.82	-46.58	0.45	-1.70	-7.63	7.72	0.00	0.00	-299.20	310.41	-241.53	247.64	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.964	0.21	0.21	Yes
	U_{34}–L_{35}	202.26	-202.26	-3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	-46.58	-46.58	0.00	0.00	0.00	0.00	0.00	0.00	-311.95	-311.95	-207.55	-207.55	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20	0.20	Yes
	U_{35}–L_{36}	-116.39	-129.36	-2.37	2.44	0.23	-0.14	-0.42	0.45	0.00	0.00	-30.27	-31.20	0.00	0.00	0.00	0.00	0.00	0.00	-190.66	-208.73	-147.54	-161.68	43.0	43.01	42.96	68.66	14	1479.6	1.60	2366	1.5	2129.0	-0.961	0.22	0.22	Yes
	U_{36}–L_{37}	-52.79	62.48	-1.13	1.25	0.46	-0.51	-0.16	0.20	0.00	0.00	-14.46	15.96	5.89	-6.46	-2.18	2.58	0.00	0.00	-87.43	101.97	-60.97	-77.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.957	0.26	0.26	Yes
	U_{37}–L_{38}	-19.17	20.05	-0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	-6.03	6.03	2.01	-2.01	-0.74	0.74	0.00	0.00	-38.05	39.82	-26.01	27.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.932	0.27	0.27	Yes
	U_{38}–L_{39}	18.83	-25.55	-0.81	0.84	1.86	-2.00	-0.14	0.14	0.22	-0.25	-10.32	10.68	23.75	-25.60	-1.67	1.73	2.60	-3.02	11.06	-19.33	55.36	-66.50	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.832	0.27	0.27	Yes
	U_{39}–L_{40}	66.01	-73.29	-0.73	0.73	2.23	-2.30	-0.05	0.05	0.40	-0.41	-9.14	9.10	18.25	-18.25	-4.33	4.33	0.81	-0.81	-175.61	175.61	-80.12	80.12	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4	-0.960	0.22	0.22	Yes
	U_{40}–L_{41}	95.02	-96.90	-0.61	0.62	2.23	-2.30	-0.10	0.10	0.37	-0.40	-7.79	7.95	28.43	-29.37	-1.16	1.16	4.48	-4.75	-106.90	-115.71	153.98	-164.16	21.5	21.54	21.54	33.27	5	987.9	1.54	1098	1.5	1066.2	-0.938	0.22	0.22	Yes
	U_{41}–L_{42}	177.21	-183.34	-0.64	0.64	3.17	-3.17	-0.08	0.08	0.61	-0.61	-48.92	-48.92	0.00	0.00	0.00	0.00	0.00	0.00	-197.68	-197.68	-132.49	-132.49	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20	0.20	Yes
	U_{42}–L_{43}	189.59	-202.30	-0.76	0.73	3.51	-3.59	-0.12	0.11	0.78	-0.81	-8.58	9.33	44.81	-45.41	-1.45	1.34	9.40	-9.72	-234.01	-250.86	304.72	-322.02	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.946	0.22	0.22	Yes
	U_{43}–L_{44}	214.89	-210.10	-0.46	0.67	2.74	-3.60	-0.06	0.10	0.97	-0.93	-8.85	8.57	34.94	-45.93	-0.67	1.15	9.59	-11.12	-271.75	-339.98	324.78	-410.84	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.791	0.28	0.28	Yes
	U_{44}–L_{45}	168.35	-168.35	-0.64	0.64	3.17	-3.17	-0.08	0.08	0.61	-0.61	-48.92	-48.92	0.00	0.00	0.00	0.00	0.00	0.00	-197.68	-197.68	-132.49	-132.49	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.992	0.20	0.20	Yes
	U_{45}–L_{46}	-129.25	-129.17	-0.46	0.46	2.36	-2.57	-0.05	0.05	0.02	-0.02	-6.83	-3.44	5.96	-30.50	-33.25	0.00	0.00	0.23	7.48	-8.52	163.55	-160.19	207.67	-211.17	36.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1798.2	-0.983	0.21	0.21	Yes
	U_{46}–L_{47}	-129.25	-129.17	-0.46	0.46	2.36	-2.57	-0.05	0.05	0.02	-0.02	-6.83	-3.44	5.96	-30.50	-33.25	0.00	0.00	0.23	7.48	-8.52	163.55	-160.19	207.67	-211.17	36.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1798.2	-0.983	0.21	0.21	Yes
	U_{47}–L_{48}	-180.48	-209.68	-0.80	0.91	2.66	-2.84	0.00	0.00	0.93	-1.09	-10.31	11.75	34.38	-36.76	0.00	0.00	11.17	-13.03	221.22	-257.31	279.31	-320.36	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1636.0	-0.872	0.25	0.25	Yes
	U_{48}–L_{49}	24.90	-49.24	-3.44	3.89	2.91	-3.20	-0.27	0.86	0.79	-1.01	-40.98	51.56	-33.51	-42.78	-8.24	10.38	5.43	-12.11	-27.40	-3.54	75.93	-119.63	107.1	107.13	107.11	162.71	26	2298.9	1.52	3269	1.5	3262.3	-0.635	0.35	0.35	Yes
	U_{49}–L_{50}	-121.66	132.24	-2.59	2.72	0.69	-0.11	-0.72	0.78	0.00	0.00	-34.64	36.31	1.22	-1.50	-8.66	9.37	0.00	0.00	-203.19	219.12	-156.57	169.97	18.5	18.45	18.36	30.78	7	1020.9	1.67	1018	1.5	913.3	-0.927	0.23	0.23	Yes
	U_{50}–L_{51}	-77.50	76.02	-1.79	1.98	0.61	-0.20	-0.43	0.51	-0.04	-0.03	-23.87	26.40	0.12	-2.66	-5.17	6.14	-0.50	-0.32	-138.51	141.14	-100.60	95.37	20.8	20.80	20.67	34.66	9	1076.0	1.67	1144	1.5	1029.6	-0.981	0.21	0.21	Yes
	U_{51}–L_{52}	42.60	70.37	-1.42	1.62	0.03	-0.09	-0.40	0.40	0.00	0.00	-18.93	21.59	0.41	-1.19	-5.79	6.40	0.00	0.00	-105.99	119.55	-80.85	89.94	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8	-0.887	0.25	0.25	Yes
	U_{52}–L_{53}	-57.67	58.82	-1.00	0.96	0.23	-0.19	-0.32	0.33	0.00	0.00	-13.36	12.80	3.01	-2.35	-3.79	3.92	0.00	0.00	-92.33	93.10	-71.06	-78.02	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.992	0.20	0.20	Yes
	U_{53}–L_{54}	-41.96	42.31	-0.81	0.84	1.16	-1.29	-0.17	0.20	0.03	-0.05	-10.79	12.58	15.44	-17.22	-2.04	2.41	0.32	-0.72	-68.56	71.36	-34.45	32.61	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.961	0.22	0.22	Yes
	U_{54}–L_{55}	-9.20	-2.43	-0.89	0.99	1.70	-1.99	-0.19	0.21

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: SU1
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

| 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 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_u (k-in) | YY Axis Moments from STAAD: Equivalent Mom. Factor a | b | c | Max. Pos. Mom. (k-in) | 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 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_{tb} (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{yn} (kips) | Formula 1.8 Term * F$_y$*S_{bb} | M_u (k-in) | Equivalent Mom. Factor a | b | c | C_{mx} | C_{my} | Pass | Axial Force (kips) | Moment Start (k-in) | Moment End (k-in) | Pass | Axial Force (kips) | Moment Start (k-in) | Moment End (k-in) | Pass |
|---|---|---|---

Moment (End) AB Operating

Operating Loads - 5C1

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 - Upper Chord	Structure 1	U_0 - U_1	21.15	-534.30	-176	93	-77	-825	8	-2	1	-249	0.024	0.238	0.27	Yes	0.017	0.163	0.18	Yes	0.727	0.273	1.00	Yes	0.720	0.196	0.92	Yes	1.00	**4.05**
		U_1 - U_2	20.38	-572.10	-60	63	-142	-840	-7	-22	42	-112	0.023	0.219	0.25	Yes	0.016	0.150	0.17	Yes	0.778	0.217	1.00	Yes	0.771	0.200	0.98	Yes	1.00	**2.43**
		U_2 - U_3	124.67	-562.41	-126	246	-393	-631	9	25	70	197	0.143	0.183	0.33	Yes	0.096	0.120	0.22	Yes	0.765	0.232	1.00	Yes	0.758	0.150	0.91	Yes	1.00	**2.42**
		U_3 - U_4	345.80	-541.10	77	311	-343	-675	1	33	187	28	0.396	0.192	0.59	Yes	0.272	0.132	0.41	Yes	0.736	0.254	1.00	Yes	0.730	0.160	0.90	Yes	1.00	**3.00**
		U_4 - U_5	420.79	-611.92	159	336	-597	-402	11	-36	33	-161	0.482	0.169	0.66	Yes	0.331	0.116	0.45	Yes	0.833	0.160	1.00	Yes	0.825	0.142	0.97	Yes	1.00	**3.63**
		U_5 - U_6	725.44	-5.84	281	501	-152	-76	-157	-69	137	-263	0.832	0.164	1.00	Yes	0.561	0.107	0.67	Yes	0.008	0.145	0.16	Yes	0.008	0.119	0.13	Yes	1.00	**4.42**
		U_6 - U_7	899.06	-----	398	246	-111	-367	-311	-109	264	-380	0.860	0.137	1.00	Yes	0.601	0.094	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		U_7 - U_8	682.33	-----	-1409	3004	-91	778	252	-624	-241	-116	0.473	0.519	1.00	Yes	0.330	0.354	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		U_8 - U_9	563.69	-----	726	-6	2439	-2086	-1040	-125	-375	417	0.462	0.537	1.00	Yes	0.316	0.365	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.84**
		U_9 - U_{10}	723.94	-76.88	237	314	287	-528	-166	17	69	575	0.785	0.211	1.00	Yes	0.532	0.141	0.68	Yes	0.099	0.126	0.23	Yes	0.098	0.118	0.22	Yes	1.00	**4.69**
		U_{10} - U_{11}	279.96	-585.52	329	-69	284	-1096	29	99	321	208	0.304	0.297	0.61	Yes	0.202	0.191	0.40	Yes	0.754	0.213	0.97	Yes	0.747	0.245	1.00	Yes	1.00	**3.46**
		U_{11} - U_{12}	-----	-859.39	217	-113	69	-853	107	411	218	654	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.182	1.00	Yes	0.806	0.142	0.95	Yes	1.00	**2.43**
		U_{12} - U_{13}	-----	-1186.33	3	-237	-242	-997	347	211	519	373	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1.00	Yes	0.792	0.137	0.93	Yes	1.00	**2.51**
		U_{13} - U_{14}	-----	-1320.21	-144	-379	-331	-1605	222	174	373	453	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.229	1.00	Yes	0.757	0.177	0.94	Yes	1.00	**2.47**
		U_{14} - U_{15}	-----	-1385.08	-260	-242	-628	-1055	205	28	551	62	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.191	1.00	Yes	0.794	0.116	0.92	Yes	1.00	**2.58**
		U_{15} - U_{16}	-----	-1414.44	-198	-413	-540	-1170	82	45	392	68	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.178	1.00	Yes	0.811	0.129	0.94	Yes	1.00	**2.55**
		U_{16} - U_{17}	-----	-1349.89	-709	-147	-711	-1234	454	-66	539	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1.00	Yes	0.774	0.136	0.92	Yes	1.00	**5.41**
		U_{17} - U_{18}	-----	-1103.54	-722	236	-436	-394	444	-8	277	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.123	1.00	Yes	0.863	0.117	0.99	Yes	1.00	**3.51**
		U_{18} - U_{19}	-----	-738.09	-734	58	-479	-283	419	-182	247	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.153	1.00	Yes	0.830	0.148	0.98	Yes	1.00	**2.90**
		U_{19} - U_{20}	-----	-525.70	-1578	1995	-264	-361	286	-841	37	-593	-----	-----	-----	-----	-----	-----	-----	-----	0.597	0.239	0.84	Yes	0.591	0.401	1.00	Yes	1.00	**6.28**
	Structure 2	U_0 - U_1	-----	-586.25	-93	-72	324	-1769	5	-67	167	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.265	0.97	Yes	0.692	0.300	1.00	Yes	1.00	**6.17**
		U_1 - U_2	-----	-843.31	-49	-178	34	-1131	-70	-221	0	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1.00	Yes	0.814	0.172	0.99	Yes	1.00	**3.36**
		U_2 - U_3	-----	-1147.74	-100	-265	-20	-1693	-27	375	51	309	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.177	1.00	Yes	0.815	0.172	0.99	Yes	1.00	**3.02**
		U_3 - U_4	-----	-1340.36	-409	-398	-801	-1736	324	482	284	341	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.229	1.00	Yes	0.763	0.155	0.92	Yes	1.00	**2.65**
		U_4 - U_5	-----	-1437.87	-458	-351	-893	-2003	789	313	489	276	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.249	1.00	Yes	0.738	0.166	0.91	Yes	1.00	**2.79**
		U_5 - U_6	-----	-1489.25	-409	38	-980	-1688	183	-228	328	430	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.221	1.00	Yes	0.765	0.140	0.91	Yes	1.00	**2.76**
		U_6 - U_7	-----	-1332.68	-249	-70	-947	-1794	-155	-198	285	99	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.235	1.00	Yes	0.759	0.160	0.92	Yes	1.00	**2.64**
		U_7 - U_8	-----	-1437.54	-165	-135	-972	-1305	-119	-196	211	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.174	1.00	Yes	0.819	0.116	0.94	Yes	1.00	**2.75**
		U_8 - U_9	163.74	-1201.62	-152	306	-741	-1123	-162	-237	272	-344	0.094	0.148	0.25	Yes	0.066	0.097	0.17	Yes	0.821	0.171	1.00	Yes	0.815	0.119	0.94	Yes	1.00	**4.25**
		U_9 - U_{10}	532.37	-993.45	144	621	-902	-875	-224	-195	263	-274	0.390	0.140	0.54	Yes	0.264	0.094	0.36	Yes	0.862	0.131	1.00	Yes	0.857	0.110	0.97	Yes	1.00	**5.20**
		U_{10} - U_{11}	690.58	-838.62	306	485	-987	-532	-228	-177	376	-280	0.583	0.185	0.77	Yes	0.397	0.120	0.52	Yes	0.838	0.157	1.00	Yes	0.833	0.139	0.98	Yes	1.00	**4.69**
		U_{11} - U_{12}	-----	-636.69	-2595	1649	-155	-1289	1212	-189	410	-748	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.264	0.91	Yes	0.633	0.366	1.00	Yes	1.00	**16.86**
		U_{12} - U_{13}	1174.16	-----	502	185	50	-1185	-434	-365	-2	-530	0.793	0.200	1.00	Yes	0.565	0.136	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.53**
		U_{13} - U_{14}	862.58	-----	-2247	5150	-346	1382	-67	-1321	-413	-496	0.424	0.567	1.00	Yes	0.300	0.372	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		U_{14} - U_{15}	950.16	-----	1307	244	4749	-3014	-1318	-698	-990	-232	0.467	0.530	1.00	Yes	0.331	0.348	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.35**
		U_{15} - U_{16}	1309.43	-----	139	501	-66	-1195	-652	-423	-238	745	0.792	0.199	1.00	Yes	0.563	0.135	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		U_{16} - U_{17}	1077.25	-----	673	334	527	-1240	-230	-34	421	359	0.794	0.200	1.00	Yes	0.528	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		U_{17} - U_{18}	721.31	-125.85	456	328	405	-949	3	252	198	737	0.724	0.269	1.00	Yes	0.482	0.178	0.66	Yes	0.150	0.271	0.43	Yes	0.149	0.161	0.31	Yes	1.00	**3.67**
		U_{18} - U_{19}	679.43	-619.75	611	301	372	-1453	69	108	440	446	0.682	0.312	1.00	Yes	0.447	0.199	0.65	Yes	0.736	0.174	0.91	Yes	0.732	0.247	0.98	Yes	1.00	**4.68**
		U_{19} - U_{20}	366.84	-701.40	357	253	-224	-1059	9	2	265	465	0.344	0.232	0.58	Yes	0.228	0.152	0.39	Yes	0.779	0.217	1.00	Yes	0.774	0.170	0.95	Yes	1.00	**3.41**
		U_{20} - U_{21}	99.32	-842.71	-72	139	-49	-1384	73	-10	298	254	0.077	0.233	0.32	Yes	0.054	0.150	0.21	Yes	0.775	0.217	1.00	Yes	0.769	0.200	0.97	Yes	1.00	**3.41**
		U_{21} - U_{22}	102.45	-798.59	-26	46	-486	-1359	40	55	156	325	0.079	0.232	0.32	Yes	0.056	0.156	0.22	Yes	0.734	0.262	1.00	Yes	0.729	0.197	0.93	Yes	1.00	**2.90**
		U_{22} - U_{23}	116.48	-852.67	104	-15	-582	-1025	48	-1	376	-16	0.090	0.190	0.28	Yes	0.064	0.128	0.20	Yes	0.784	0.209	1.00	Yes	0.778	0.149	0.93	Yes	1.00	**3.01**
		U_{23} - U_{24}	340.98	-863.52	-51	285	-64	-1324	-53	-77	209	-84	0.265	0.215	0.48	Yes	0.185	0.138	0.33	Yes	0.794	0.201	1.00	Yes	0.788	0.192	0.98	Yes	1.00	**4.62**
		U_{24} - U_{25}	467.13	-707.78	291	400	-552	-915	-108	-89	323	-271	0.438	0.190	0.63	Yes	0.290	0.125	0.42	Yes	0.786	0.211	1.00	Yes	0.781	0.147	0.93	Yes	1.00	**4.45**
		U_{25} - U_{26}	-----	-715.57	-860	828	-172	-709	346	-272	166	-285	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.136	0.99	Yes	0.845	0.146	1.00	Yes	1.00	**7.02**
		U_{26} - U_{27}	-----	-572.24	-1316	1517	-206	-1682	656	-604	420	-695	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.313	1.00	Yes	0.676	0.285	0.97	Yes	1.00	**13.64**
		U_{27} - U_{28}	-----	-361.11	-5204	5190	-1345	-4567	2294	-1113	1289	-1080	-----	-----	-----	-----	-----	-----	-----	-----	0.315	0.683	1.00	Yes	0.313	0.654	0.97	Yes	1.00	**36.30**
		U_{28} - U_{29}	1180.95	-----	-12	621	-636	-1956	104	-716	487	-649	0.714	0.283	1.00	Yes	0.508	0.191	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.52**
		U_{29} - U_{30}	987.63	-----	-1487	4790	-56	744	-66	-922	-269	-17	0.486	0.506	1.00	Yes	0.344	0.332	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.25**
		U_{30} - U_{31}	875.15	-----	1118	404	5267	-3986	-1145	-651	-1048	88	0.430	0.566	1.00	Yes	0.305	0.371	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.86**
		U_{31} - U_{32}	1211.62	-----	31	468	-391	-882	-429	-230	-25	690	0.818	0.177	1.00	Yes	0.583	0.121	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.47**
		U_{32} - U_{33}	876.76	-82.30	467	271	510	-1309	-84	8	539	493	0.741	0.250	1.00	Yes	0.497	0.167	0.67	Yes	0.082	0.148	0.24	Yes	0.082	0.185	0.27	Yes	1.00	**4.32**
		U_{33} - U_{34}	777.98	-608.11	422	307	-54	-1443	-2	243	490	1069	0.657	0.334	1.00	Yes	0.447	0.220	0.67	Yes	0.608	0.288	0.90	Yes	0.604	0.204	0.81	Yes	1.00	**4.79**
		U_{34} - U_{35}	472.91	-880.57	425	132	-146	-1525	164	147	685	537	0.347	0.260	0.61	Yes	0.235	0.176	0.42	Yes	0.764	0.233	1.00	Yes	0.760	0.186	0.95	Yes	1.00	**4.06**
		U_{35} - U_{36}	176.98	-1114.78	190	-120	-161	-1752	99	91	410	551	0.102	0.232	0.34	Yes	0.072	0.152	0.23	Yes	0.762	0.233	1.00	Yes	0.756	0.186	0.95	Yes	1.00	**3.27**
		U_{36} - U_{37}	15.63	-1321.90	-33	62	-658	-1905	77	-5	370	257	0.008	0.196	0.21	Yes	0.005	0.133	0.14	Yes	0.758	0.232	1.00	Yes	0.753	0.170	0.93	Yes	1.00	**3.20**
		U_{37} - U_{38}	40.15	-1397.93	174	-103	-647	-1756	38	22	314	207	0.019	0.178	0.20	Yes	0.014	0.121	0.14	Yes	0.802	0.195	1.00	Yes	0.796	0.156	0.96	Yes	1.00	**3.43**
		U_{38} - U_{39}	43.36	-1474.60	283	-227	-199	-2496	126	-22	502	-35	0.019	0.237	0.26	Yes	0.013	0.151	0.17	Yes	0.763	0.230	1.00	Yes	0.757	0.207	0.97	Yes	1.00	**4.58**
		U_{39} - U_{40}	-----	-1516.44	-227	-301	-1002	-1790	54	5	441	62	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1.00	Yes	0.779	0.148	0.93	Yes	1.00	**3.36**
		U_{40} - U_{41}	-----	-1400.64	-233	-311	-1129	-1480	51	-84	468	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.194	1.00	Yes	0.798	0.132	0.93	Yes	1.00	**3.36**
		U_{41} - U_{42}	-----	-1247.43	-882	282	-543	-944	366	-79	225	-293	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.108	1.00	Yes	0.885	0.096	0.99	Yes	1.00	**4.96**
		U_{42} - U_{43}	-----	-746.52	-314	115	-658	-1142	-77	-117	348	-556	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.270	1.00	Yes	0.721	0.173	0.90	Yes	1.00	**8.11**
		U_{43} - U_{44}	-----	-586.12	-1795	1782	-67	-588	173	-648	-16	-553	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.222	0.92	Yes	0.692	0.305	1.00	Yes	1.00	**6.05**
	Structure 3	U_0 - U_1	-----	-608.86	-7	-160	508	-1565	-3	-54	50	-259	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.250	0.95	Yes	0.685	0.315	1.00	Yes	1.00	**6.73**
		U_1 - U_2	-----	-722.48	-32	-141	62	-855	-62	-228	-115	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.178	1.00	Yes	0.813	0.172	0.99	Yes	1.00	**2.93**
		U_2 - U_3	-----	-1056.68	-74	-162	140	-959	-50	334	25	283	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.160	1.00	Yes	0.827	0.156	0.99	Yes	1.00	**3.00**
		U_3 - U_4	-----	-1354.40	-168	-294	-322	-1406	367	576	335	412	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1.00	Yes	0.776	0.155	0.94	Yes	1.00	**3.06**
		U_4 - U_5	-----	-1332.23	-398	-65	-607	-1178	681	227	416	251	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.225	1.00	Yes	0.764	0.130	0.90	Yes	1.00	**2.60**
		U_5 - U_6	-----	-1349.90	-184	-277	-567	-1506	139	-149	303	283	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.213	1.00	Yes	0.774	0.166	0.95	Yes	1.00	**2.47**
		U_6 - U_7	-----	-1371.15	-352	-54	-681	-1154	-122	-208	341	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.203	1.00	Yes	0.786	0.127	0.92	Yes	1.00	**3.98**
		U_7 - U_8	-----	-1193.04	-138	77	-551	-883	-82	-201	245	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.797	0.122	0.92	Yes	1.00	**4.08**
		U_8 - U_9	-----	-925.18	-92	196	-627	-233	-40	-162	270	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.118	1.00	Yes	0.868	0.104	0.98	Yes	1.00	**2.58**
		U_9 - U_{10}	-----	-635.89	-822	337	-276	-90	175	-184	131	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.153	0.98	Yes	0.811	0.184	1.00	Yes	1.00	**4.38**
		U_{10} - U_{11}	507.66	-447.33	-1133	1005	26	-809	713	-816	418	-1194	0.551	0.446	1.00	Yes	0.373	0.299	0.68	Yes	0.576	0.289	0.87	Yes	0.571	0.254	0.83	Yes	1.00	**17.35**
		U_{11} - U_{12}	537.28	-----	-1625	2594	-153	556	163	-974	-222	-191	0.440	0.555	1.00	Yes	0.301	0.377	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		U_{12} - U_{13}	983.59	-----	1078	127	1730	-1079	-546	-499	-375	-5	0.682	0.318	1.00	Yes	0.475	0.217	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		U_{13} - U_{14}	869.66	-----	225	442	60	-429	-343	-217	-53	493	0.832	0.162	1.00	Yes	0.581	0.111	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		U_{14} - U_{15}	687.41	-216.89	451	320	347	-697	-139	-39	252	95	0.788	0.208	1.00	Yes	0.531	0.136	0.67	Yes	0.295	0.224	0.52	Yes	0.292	0.166	0.46	Yes	1.00	**3.82**
		U_{15} - U_{16}	569.05	-552.88	434	306	-52	-1045	-98	116	144	411	0.652	0.318	0.98	Yes	0.448	0.218	0.67	Yes	0.752	0.230	0.99	Yes	0.746	0.248	1.00	Yes	1.00	**4.28**
		U_{16} - U_{17}	559.98	-565.82	504	197	114	-956	47	74	384	75	0.642	0.292	0.94	Yes	0.440	0.200	0.65	Yes	0.770	0.178	0.95	Yes	0.763	0.227	1.00	Yes	1.00	**4.28**
		U_{17} - U_{18}	273.44	-575.53	381	-49	-208	-817	-81	71	252	87	0.313	0.237	0.56	Yes	0.211	0.154	0.37	Yes	0.783	0.212	1.00	Yes	0.776	0.194	0.98	Yes	1.00	**3.23**
		U_{18} - U_{19}	321.23	-499.96	416	13	-94	-1310	-227	76	453	-363	0.368	0.388	0.76	Yes	0.253	0.266	0.52	Yes	0.680	0.311	1.00	Yes	0.674	0.311	0.99	Yes	1.00	**6.57**
		U_{19} - U_{20}	-----	-464.10	-1147	1539	-76	-640	185	209	527	-506	-----	-----	-----	-----	-----	-----	-----	-----	0.631	0.162	0.80	Yes	0.626	0.366	1.00	Yes	1.00	**6.06**

Moment (End) AB Operating

Operating Loads - 5C1

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	-----	-88.90	-462	293	1638	-2776	-38	-140	257	946	-----	-----	-----	-----	-----	-----	-----	-----	0.161	0.745	0.91	Yes	0.160	0.833	1.00	Yes	1.00	**24.05**
		L_1 - L_2	443.33	-26.03	143	13	356	-922	-22	-47	-166	-79	0.678	0.313	1.00	Yes	0.414	0.210	0.63	Yes	0.047	0.146	0.20	Yes	0.047	0.277	0.33	Yes	1.00	**3.75**
		L_2 - L_3	657.82	-106.13	8	84	-335	-874	-39	42	-167	68	0.757	0.238	1.00	Yes	0.438	0.143	0.59	Yes	0.145	0.227	0.38	Yes	0.144	0.211	0.36	Yes	1.00	**3.78**
		L_3 - L_4	666.54	-233.32	110	343	-190	-821	89	70	-184	20	0.767	0.228	1.00	Yes	0.455	0.147	0.61	Yes	0.319	0.192	0.52	Yes	0.316	0.198	0.52	Yes	1.00	**3.60**
		L_4 - L_5	119.65	-543.53	121	614	-364	102	59	38	-127	414	0.155	0.236	0.40	Yes	0.093	0.152	0.25	Yes	0.836	0.162	1.00	Yes	0.828	0.163	1.00	Yes	1.00	**3.01**
		L_5 - L_6	-----	-736.73	167	604	-259	90	72	121	77	136	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.137	1.00	Yes	0.850	0.134	0.99	Yes	1.00	**2.90**
		L_6 - L_7	-----	-1038.37	-905	1003	-318	-671	-270	47	182	823	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.148	1.00	Yes	0.836	0.158	1.00	Yes	1.00	**8.48**
		L_7 - L_8	-----	-1165.71	-83	1773	3	597	-132	-256	-64	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.247	1.00	Yes	0.738	0.235	0.98	Yes	1.00	**4.58**
		L_8 - L_9	-----	-1226.92	1044	32	1645	-408	-166	-85	-103	138	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1.00	Yes	0.777	0.218	1.00	Yes	1.00	**5.22**
		L_9 - L_{10}	-----	-1091.16	56	141	647	-774	52	161	36	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.059	0.95	Yes	0.878	0.122	1.00	Yes	1.00	**5.75**
		L_{10} - L_{11}	-----	-547.28	522	-9	446	-592	141	43	-1	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.105	0.95	Yes	0.834	0.157	1.00	Yes	1.00	**3.80**
		L_{11} - L_{12}	522.86	-382.34	563	-118	641	-1105	132	-45	-145	-133	0.677	0.318	1.00	Yes	0.406	0.210	0.62	Yes	0.588	0.113	0.71	Yes	0.583	0.292	0.88	Yes	1.00	**5.24**
		L_{12} - L_{13}	1038.90	-55.20	212	-50	-163	-841	7	25	158	224	0.820	0.175	1.00	Yes	0.524	0.105	0.63	Yes	0.052	0.160	0.22	Yes	0.051	0.149	0.21	Yes	1.00	**4.81**
		L_{13} - L_{14}	1232.83	-----	396	-408	667	-1886	10	-10	-22	-104	0.725	0.269	1.00	Yes	0.470	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_{14} - L_{15}	1659.16	-----	-1181	16	-1380	-1020	-284	-147	-215	276	0.811	0.186	1.00	Yes	0.527	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		L_{15} - L_{16}	1621.32	-----	-216	-364	-1018	-1479	-125	-57	-120	-351	0.792	0.203	1.00	Yes	0.508	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		L_{16} - L_{17}	1175.01	-----	-1109	477	-1330	-524	-594	-32	-278	527	0.743	0.248	1.00	Yes	0.482	0.153	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{17} - L_{18}	859.92	-----	-894	720	-601	-468	-273	-255	-241	-597	0.749	0.249	1.00	Yes	0.479	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.10**
		L_{18} - L_{19}	318.84	-77.52	-1190	1021	-596	108	-740	-73	-285	459	0.488	0.511	1.00	Yes	0.330	0.325	0.66	Yes	0.141	0.214	0.36	Yes	0.140	0.357	0.50	Yes	1.00	**7.31**
		L_{19} - L_{20}	82.45	-428.63	-727	392	-90	-33	291	65	-26	-6	0.126	0.279	0.41	Yes	0.077	0.186	0.27	Yes	0.779	0.173	0.96	Yes	0.772	0.218	1.00	Yes	1.00	**4.70**
	Structure 2	L_0 - L_1	29.94	-235.98	-140	64	1095	-3209	-26	-91	-303	-1052	0.036	0.826	0.87	Yes	0.022	0.527	0.55	Yes	0.339	0.566	0.91	Yes	0.337	0.653	1.00	Yes	1.00	**17.77**
		L_1 - L_2	565.80	-----	152	-191	483	-1453	-44	25	75	-49	0.687	0.308	1.00	Yes	0.409	0.199	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		L_2 - L_3	996.80	-----	-62	-132	343	-1334	73	83	-134	37	0.786	0.207	1.00	Yes	0.515	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_3 - L_4	1333.74	-----	34	-399	219	-1688	2	47	-161	-40	0.784	0.210	1.00	Yes	0.528	0.130	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		L_4 - L_5	1741.98	-----	-392	-211	-786	-1792	92	218	2	32	0.812	0.184	1.00	Yes	0.538	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_5 - L_6	1858.14	-----	-135	-325	-807	-2158	125	-17	-139	-110	0.797	0.200	1.00	Yes	0.535	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		L_6 - L_7	1815.12	-----	-349	28	-1501	-2349	-184	42	-58	401	0.768	0.231	1.00	Yes	0.511	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_7 - L_8	1464.97	-246.39	-96	509	-1230	-1340	-127	15	18	-132	0.840	0.159	1.00	Yes	0.552	0.093	0.65	Yes	0.167	0.171	0.34	Yes	0.166	0.148	0.32	Yes	1.00	**4.94**
		L_8 - L_9	1109.99	-----	-1028	657	-1150	-464	-278	40	-76	688	0.776	0.220	1.00	Yes	0.523	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_9 - L_{10}	694.22	-798.81	-40	858	-995	-397	37	117	259	-12	0.620	0.190	0.81	Yes	0.361	0.118	0.48	Yes	0.844	0.113	0.96	Yes	0.839	0.159	1.00	Yes	1.00	**5.41**
		L_{10} - L_{11}	382.82	-46.74	-2524	1825	-1210	-552	-1251	110	-287	1105	0.382	0.610	1.00	Yes	0.224	0.379	0.61	Yes	0.055	0.246	0.31	Yes	0.055	0.441	0.50	Yes	1.00	**13.82**
		L_{11} - L_{12}	-----	-944.54	-1416	1614	-793	143	11	207	465	2	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.157	0.94	Yes	0.775	0.220	1.00	Yes	1.00	**9.05**
		L_{12} - L_{13}	-----	-1321.35	-671	17	-858	-1471	38	-94	97	224	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1.00	Yes	0.790	0.146	0.94	Yes	1.00	**5.45**
		L_{13} - L_{14}	-----	-1416.61	-1002	3254	-348	1194	-196	-425	-184	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.221	0.94	Yes	0.713	0.284	1.00	Yes	1.00	**4.52**
		L_{14} - L_{15}	-----	-1395.54	1411	-272	3365	-1921	-203	-304	-141	186	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.197	0.91	Yes	0.702	0.294	1.00	Yes	1.00	**5.52**
		L_{15} - L_{16}	-----	-1426.68	-910	336	-1416	-667	-9	372	87	132	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.139	1.00	Yes	0.853	0.141	1.00	Yes	1.00	**5.06**
		L_{16} - L_{17}	-----	-1158.29	1220	121	1144	-736	401	188	-80	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.149	1.00	Yes	0.844	0.151	1.00	Yes	1.00	**4.43**
		L_{17} - L_{18}	-----	-831.03	471	235	756	-612	102	-56	-223	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.092	0.98	Yes	0.873	0.121	1.00	Yes	1.00	**3.25**
		L_{18} - L_{19}	-----	-652.28	675	119	553	-589	-5	33	129	136	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.122	1.00	Yes	0.869	0.130	1.00	Yes	1.00	**3.26**
		L_{19} - L_{20}	401.04	-604.23	565	244	368	-963	56	-44	-13	-97	0.454	0.201	0.66	Yes	0.269	0.128	0.40	Yes	0.810	0.152	0.97	Yes	0.805	0.186	1.00	Yes	1.00	**4.28**
		L_{20} - L_{21}	738.62	-775.53	849	172	321	-1829	-144	-153	-102	167	0.589	0.285	0.88	Yes	0.386	0.169	0.56	Yes	0.733	0.171	0.91	Yes	0.728	0.267	1.00	Yes	1.00	**7.75**
		L_{21} - L_{22}	788.08	-36.86	46	55	-32	-2471	-27	62	41	-81	0.628	0.369	1.00	Yes	0.420	0.230	0.66	Yes	0.035	0.273	0.31	Yes	0.035	0.361	0.40	Yes	1.00	**5.48**
		L_{22} - L_{23}	912.97	-156.69	-125	250	-1509	-1173	-15	3	-124	459	0.728	0.270	1.00	Yes	0.487	0.170	0.66	Yes	0.148	0.240	0.39	Yes	0.147	0.220	0.37	Yes	1.00	**4.48**
		L_{23} - L_{24}	919.18	-438.01	67	540	-1073	-1576	19	100	280	13	0.733	0.260	1.00	Yes	0.481	0.155	0.64	Yes	0.414	0.307	0.73	Yes	0.411	0.230	0.65	Yes	1.00	**6.45**
		L_{24} - L_{25}	602.78	-----	-598	504	-1129	-667	-274	200	-210	628	0.683	0.314	1.00	Yes	0.404	0.197	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.54**
		L_{25} - L_{26}	569.52	-490.32	-1529	1497	-935	-1206	1	-381	258	-313	0.645	0.353	1.00	Yes	0.372	0.210	0.59	Yes	0.658	0.179	0.84	Yes	0.653	0.295	0.95	Yes	1.00	**12.02**
		L_{26} - L_{27}	-----	-806.65	-705	915	-563	-255	-400	-18	-41	452	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.117	0.97	Yes	0.847	0.146	1.00	Yes	1.00	**5.23**
		L_{27} - L_{28}	-----	-1138.67	-514	1319	-66	199	-76	-51	89	198	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.126	0.97	Yes	0.829	0.163	1.00	Yes	1.00	**4.75**
		L_{28} - L_{29}	-----	-1432.25	26	-34	-336	-1283	-38	3	184	186	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.130	1.00	Yes	0.857	0.128	0.99	Yes	1.00	**4.05**
		L_{29} - L_{30}	-----	-1218.14	-1519	4335	-389	684	-169	-222	-41	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.257	0.88	Yes	0.613	0.379	1.00	Yes	1.00	**7.61**
		L_{30} - L_{31}	-----	-1272.72	1515	-296	4029	-2280	-427	-339	-19	249	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.239	0.89	Yes	0.640	0.352	1.00	Yes	1.00	**7.34**
		L_{31} - L_{32}	-----	-1231.89	-493	621	-1697	-1789	-591	23	-160	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.248	1.00	Yes	0.737	0.178	0.92	Yes	1.00	**11.56**
		L_{32} - L_{33}	-----	-1014.87	973	146	1194	-1079	-131	-71	173	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.089	0.93	Yes	0.832	0.163	1.00	Yes	1.00	**6.00**
		L_{33} - L_{34}	-----	-687.88	402	184	648	-1060	6	-92	-44	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.073	0.89	Yes	0.808	0.185	1.00	Yes	1.00	**4.76**
		L_{34} - L_{35}	563.66	-723.87	720	84	342	-1480	-45	58	352	425	0.503	0.288	0.80	Yes	0.293	0.178	0.48	Yes	0.765	0.194	0.96	Yes	0.760	0.237	1.00	Yes	1.00	**6.26**
		L_{35} - L_{36}	1080.97	-561.13	541	151	775	-1687	101	-82	50	-134	0.756	0.240	1.00	Yes	0.509	0.149	0.66	Yes	0.465	0.137	0.61	Yes	0.462	0.228	0.69	Yes	1.00	**6.67**
		L_{36} - L_{37}	1347.67	-163.20	352	82	-201	-1857	-115	0	-162	202	0.773	0.222	1.00	Yes	0.508	0.130	0.64	Yes	0.111	0.192	0.31	Yes	0.110	0.205	0.32	Yes	1.00	**4.70**
		L_{37} - L_{38}	1809.70	-----	5	-315	-1221	-2556	-35	-4	74	-29	0.766	0.229	1.00	Yes	0.509	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{38} - L_{39}	1827.98	-----	-152	-135	-1914	-2030	-52	3	-18	448	0.784	0.208	1.00	Yes	0.526	0.128	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		L_{39} - L_{40}	1709.76	-----	-185	-300	-1268	-1825	-50	-33	-68	-323	0.797	0.194	1.00	Yes	0.528	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		L_{40} - L_{41}	1327.46	-----	-1417	304	-1410	-913	-574	7	-238	538	0.780	0.212	1.00	Yes	0.525	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.44**
		L_{41} - L_{42}	1003.97	-----	-1197	556	-1024	-838	-112	13	286	21	0.791	0.203	1.00	Yes	0.519	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		L_{42} - L_{43}	465.20	-----	-1656	753	-652	-400	-539	160	-247	478	0.565	0.426	1.00	Yes	0.336	0.272	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.10**
		L_{43} - L_{44}	247.05	-369.94	-2314	854	-42	-28	1265	370	-176	-51	0.300	0.679	0.98	Yes	0.178	0.429	0.61	Yes	0.532	0.434	0.97	Yes	0.529	0.471	1.00	Yes	1.00	**11.69**
	Structure 3	L_0 - L_1	138.11	-338.42	3	-95	781	-1296	-8	-36	-30	-136	0.211	0.417	0.63	Yes	0.129	0.282	0.42	Yes	0.615	0.215	0.83	Yes	0.609	0.389	1.00	Yes	1.00	**8.45**
		L_1 - L_2	322.50	-----	129	-162	856	-1544	-55	13	184	116	0.494	0.502	1.00	Yes	0.334	0.311	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.13**
		L_2 - L_3	882.88	-----	-42	-154	156	-1051	34	23	122	218	0.769	0.230	1.00	Yes	0.492	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_3 - L_4	1234.67	-----	60	-358	-87	-1319	36	54	288	195	0.781	0.219	1.00	Yes	0.507	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_4 - L_5	1608.57	-----	-377	-160	-773	-1604	114	229	-18	95	0.786	0.209	1.00	Yes	0.504	0.122	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_5 - L_6	1528.93	-----	-83	-340	-191	-1952	142	77	-172	7	0.747	0.247	1.00	Yes	0.485	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		L_6 - L_7	1325.92	-----	-1249	406	-1164	-687	-247	4	-77	519	0.780	0.215	1.00	Yes	0.505	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		L_7 - L_8	1125.80	-----	-78	130	-572	-580	-29	34	41	5	0.888	0.108	1.00	Yes	0.568	0.064	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		L_8 - L_9	494.04	-----	-907	546	-530	-131	-281	189	-145	639	0.640	0.352	1.00	Yes	0.384	0.227	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.07**
		L_9 - L_{10}	162.45	-539.08	7	513	-639	-24	70	130	143	103	0.210	0.194	0.41	Yes	0.123	0.117	0.24	Yes	0.829	0.115	0.95	Yes	0.821	0.169	1.00	Yes	1.00	**4.84**
		L_{10} - L_{11}	-----	-1041.60	-957	968	-172	-299	-441	-168	119	525	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.093	0.95	Yes	0.838	0.152	1.00	Yes	1.00	**7.39**
		L_{11} - L_{12}	-----	-1243.94	-198	1349	-39	472	-278	-508	-174	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.201	1.00	Yes	0.788	0.179	0.97	Yes	1.00	**3.95**
		L_{12} - L_{13}	-----	-1187.84	1374	57	1772	-504	-203	-378	-289	124	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.235	1.00	Yes	0.752	0.235	0.99	Yes	1.00	**5.86**
		L_{13} - L_{14}	-----	-1143.18	-48	296	405	-455	-240	138	-207	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.931	0.051	0.99	Yes	0.920	0.072	1.00	Yes	1.00	**3.95**
		L_{14} - L_{15}	-----	-745.66	566	166	291	-296	159	-7	103	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.125	1.00	Yes	0.860	0.125	0.99	Yes	1.00	**2.72**
		L_{15} - L_{16}	11.91	-556.78	428	202	426	-526	15	-56	-126	-47	0.015	0.161	0.18	Yes	0.009	0.106	0.12	Yes	0.856	0.144	1.00	Yes	0.848	0.139	0.99	Yes	1.00	**2.55**
		L_{16} - L_{17}	638.71	-301.46	389	49	-195	-871	98	-54	88	318	0.735	0.261	1.00	Yes	0.436	0.168	0.61	Yes	0.412	0.219	0.64	Yes	0.408	0.210	0.62	Yes	1.00	**3.19**
		L_{17} - L_{18}	670.76	-167.75	130	13	-545	-853	-1	14	86	11	0.772	0.220	1.00	Yes	0.446	0.132	0.58	Yes	0.229	0.236	0.47	Yes	0.227	0.206	0.44	Yes	1.00	**3.28**
		L_{18} - L_{19}	410.14	-----	-668	267	-467	-717	-142	99	-71	691	0.628	0.364	1.00	Yes	0.383	0.238	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_{19} - L_{20}	60.20	-222.92	-1565	1015	138	-254	1732	471	-7	-2	0.092	0.842	0.94	Yes	0.054	0.505	0.56	Yes	0.405	0.593	1.00	Yes	0.401	0.470	0.88	Yes	1.00	**14.47**

Moment (End) AB Operating

Operating Loads - 5C1

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

DL Factor: 1.300 Vehicle 1.300 Pedestrian 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
			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	$U_0 - L_0$	-----	-314.30	-188	255	-50	82	-361	-116	-45	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.224	0.93	Yes	0.665	0.326	1.00	Yes	1.00	**1.86**
		$U_1 - L_1$	39.75	-320.77	-246	247	39	-28	-124	-14	0	-11	0.071	0.351	0.43	Yes	0.039	0.193	0.24	Yes	0.701	0.111	0.82	Yes	0.679	0.316	1.00	Yes	1.00	**3.68**
		$U_2 - L_2$	129.85	-284.64	-265	306	111	-124	-167	19	121	43	0.234	0.440	0.68	Yes	0.128	0.242	0.38	Yes	0.622	0.153	0.78	Yes	0.602	0.392	1.00	Yes	1.00	**5.44**
		$U_3 - L_3$	172.38	-295.23	-207	250	292	-262	531	167	268	189	0.310	0.527	0.84	Yes	0.171	0.290	0.47	Yes	0.647	0.237	0.89	Yes	0.625	0.373	1.00	Yes	1.00	**8.76**
		$U_4 - L_4$	-----	-234.13	-33	8	394	-384	14	201	-217	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.515	0.192	0.71	Yes	0.495	0.503	1.00	Yes	1.00	**8.99**
		$U_5 - L_5$	-----	-424.34	76	-90	231	-263	-176	-62	34	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.128	0.90	Yes	0.732	0.267	1.00	Yes	1.00	**3.00**
		$U_6 - L_6$	-----	-522.76	85	-79	264	-284	-242	-48	209	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.118	0.91	Yes	0.750	0.249	1.00	Yes	1.00	**2.72**
		$U_7 - L_7$	-----	-437.10	134	-150	300	-322	-159	19	223	39	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.141	0.88	Yes	0.674	0.317	1.00	Yes	1.00	**1.79**
		$U_8 - L_8$	-----	-1190.22	-337	394	401	-484	40	29	1063	322	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.137	1.00	Yes	0.825	0.090	0.92	Yes	1.00	**3.92**
		$U_9 - L_9$	-----	-660.19	-400	444	-171	202	-439	-332	-345	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.159	0.95	Yes	0.746	0.247	1.00	Yes	1.00	**2.81**
		$U_{10} - L_{10}$	-----	-711.87	-364	362	-124	103	-1099	-723	-829	-449	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.258	1.00	Yes	0.702	0.189	0.90	Yes	1.00	**3.50**
		$U_{11} - L_{11}$	-----	-653.56	-390	498	-145	196	-608	-484	-538	-369	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.186	0.98	Yes	0.761	0.231	1.00	Yes	1.00	**3.39**
		$U_{12} - L_{12}$	-----	-526.23	-318	321	-108	110	-14	-147	-277	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.140	0.90	Yes	0.722	0.274	1.00	Yes	1.00	**3.09**
		$U_{13} - L_{13}$	-----	-359.50	-244	269	-48	68	-72	-37	-184	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.132	0.86	Yes	0.689	0.307	1.00	Yes	1.00	**2.81**
		$U_{14} - L_{14}$	-----	-172.64	-469	490	206	-218	435	332	4	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.385	0.295	0.69	Yes	0.365	0.627	1.00	Yes	1.00	**11.47**
		$U_{15} - L_{15}$	114.20	-310.77	-85	72	243	-266	30	70	249	-107	0.205	0.412	0.62	Yes	0.113	0.227	0.34	Yes	0.697	0.161	0.86	Yes	0.658	0.340	1.00	Yes	1.00	**4.38**
		$U_{16} - L_{16}$	-----	-322.19	27	-30	238	-247	-84	-103	316	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.135	0.87	Yes	0.682	0.316	1.00	Yes	1.00	**3.01**
		$U_{17} - L_{17}$	-----	-436.24	60	-75	222	-243	-122	-113	139	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.117	0.94	Yes	0.753	0.246	1.00	Yes	1.00	**2.22**
		$U_{18} - L_{18}$	-----	-537.61	144	-151	427	-441	-133	-121	210	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.092	0.88	Yes	0.748	0.250	1.00	Yes	1.00	**2.33**
		$U_{19} - L_{19}$	-----	-638.29	172	-170	534	-522	-115	-45	246	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.111	0.91	Yes	0.743	0.248	1.00	Yes	1.00	**2.61**
		$U_{20} - L_{20}$	-----	-590.38	160	-260	343	-513	32	4	482	63	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.210	1.00	Yes	0.687	0.238	0.93	Yes	1.00	**1.97**
	Structure 2	$U_0 - L_0$	-----	-694.76	-458	589	-156	204	-332	-56	-53	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.159	1.00	Yes	0.745	0.250	1.00	Yes	1.00	**3.05**
		$U_1 - L_1$	-----	-720.31	-501	517	-110	119	-619	-81	-111	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.137	0.97	Yes	0.772	0.219	1.00	Yes	1.00	**3.66**
		$U_2 - L_2$	-----	-584.40	-495	496	-97	107	-236	-40	-102	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.101	0.89	Yes	0.745	0.254	1.00	Yes	1.00	**3.36**
		$U_3 - L_3$	-----	-490.59	-237	248	-50	58	-82	-57	88	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.090	0.93	Yes	0.769	0.226	1.00	Yes	1.00	**2.86**
		$U_4 - L_4$	-----	-335.21	-222	221	-5	13	-200	-46	270	81	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.159	0.92	Yes	0.709	0.284	1.00	Yes	1.00	**3.21**
		$U_5 - L_5$	92.07	-319.45	-228	246	71	-59	-83	-46	-67	105	0.166	0.345	0.52	Yes	0.091	0.190	0.29	Yes	0.722	0.142	0.87	Yes	0.676	0.315	1.00	Yes	1.00	**4.15**
		$U_6 - L_6$	321.70	-293.36	-267	276	196	-202	220	-5	166	138	0.579	0.416	1.00	Yes	0.318	0.229	0.55	Yes	0.660	0.167	0.83	Yes	0.621	0.352	0.98	Yes	1.00	**6.84**
		$U_7 - L_7$	-----	-267.18	-81	86	308	-340	-61	161	424	58	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.237	0.85	Yes	0.565	0.434	1.00	Yes	1.00	**7.66**
		$U_8 - L_8$	-----	-469.86	68	-91	351	-368	0	-30	206	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.109	0.80	Yes	0.677	0.322	1.00	Yes	1.00	**3.21**
		$U_9 - L_9$	-----	-687.24	179	-187	590	-598	-39	-156	272	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.100	0.87	Yes	0.737	0.254	1.00	Yes	1.00	**3.62**
		$U_{10} - L_{10}$	-----	-796.07	182	-184	544	-572	-148	-93	355	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.106	0.90	Yes	0.744	0.252	1.00	Yes	1.00	**3.67**
		$U_{11} - L_{11}$	-----	-816.20	186	-185	514	-533	-182	-63	242	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.110	0.94	Yes	0.763	0.235	1.00	Yes	1.00	**3.30**
		$U_{12} - L_{12}$	-----	-886.46	155	-130	524	-534	-143	12	302	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.118	0.97	Yes	0.768	0.229	1.00	Yes	1.00	**3.30**
		$U_{13} - L_{13}$	-----	-735.05	210	-206	567	-547	-159	20	357	43	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.178	1.00	Yes	0.709	0.271	0.98	Yes	1.00	**2.71**
		$U_{14} - L_{14}$	-----	-1200.00	-529	490	754	-720	-88	199	673	411	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.121	1.00	Yes	0.796	0.134	0.93	Yes	1.00	**5.19**
		$U_{15} - L_{15}$	-----	-700.34	-612	576	-108	116	-581	-178	-385	1	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1.00	Yes	0.675	0.293	0.97	Yes	1.00	**4.81**
		$U_{16} - L_{16}$	-----	-698.10	-494	476	-85	57	-791	-474	-830	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.186	1.00	Yes	0.748	0.210	0.96	Yes	1.00	**3.86**
		$U_{17} - L_{17}$	-----	-631.88	-556	543	-117	115	-663	-463	-275	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.194	0.98	Yes	0.735	0.258	1.00	Yes	1.00	**3.75**
		$U_{18} - L_{18}$	-----	-577.02	-492	502	-88	88	-262	-317	-115	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.126	0.90	Yes	0.735	0.257	1.00	Yes	1.00	**3.35**
		$U_{19} - L_{19}$	-----	-481.71	-282	285	-51	55	32	-136	-66	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.093	0.82	Yes	0.719	0.274	1.00	Yes	1.00	**2.95**
		$U_{20} - L_{20}$	-----	-375.97	-243	245	-12	13	-91	-98	-69	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.103	0.88	Yes	0.720	0.280	1.00	Yes	1.00	**3.21**
		$U_{21} - L_{21}$	39.66	-319.28	-236	250	18	-12	34	-32	-106	38	0.071	0.350	0.43	Yes	0.039	0.192	0.24	Yes	0.721	0.114	0.84	Yes	0.676	0.319	1.00	Yes	1.00	**3.50**
		$U_{22} - L_{22}$	-----	-119.72	-547	584	462	-513	70	376	96	93	-----	-----	-----	-----	-----	-----	-----	-----	0.269	0.266	0.54	Yes	0.253	0.746	1.00	Yes	1.00	**17.75**
		$U_{23} - L_{23}$	70.12	-317.41	-50	38	233	-251	48	113	160	-76	0.126	0.367	0.50	Yes	0.069	0.202	0.28	Yes	0.717	0.126	0.85	Yes	0.672	0.321	1.00	Yes	1.00	**3.66**
		$U_{24} - L_{24}$	-----	-373.57	13	-19	234	-246	-64	-31	310	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.126	0.90	Yes	0.716	0.281	1.00	Yes	1.00	**2.91**
		$U_{25} - L_{25}$	-----	-470.53	35	-35	303	-298	-92	-28	321	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.100	0.81	Yes	0.703	0.291	1.00	Yes	1.00	**2.80**
		$U_{26} - L_{26}$	-----	-567.12	61	-65	501	-529	-127	-21	456	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.116	0.88	Yes	0.723	0.271	1.00	Yes	1.00	**3.15**
		$U_{27} - L_{27}$	-----	-627.16	82	-82	556	-561	-139	3	401	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.118	0.90	Yes	0.730	0.260	1.00	Yes	1.00	**3.23**
		$U_{28} - L_{28}$	-----	-712.40	73	-70	546	-540	-158	17	500	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.120	0.95	Yes	0.763	0.232	1.00	Yes	1.00	**3.41**
		$U_{29} - L_{29}$	-----	-695.04	116	-122	616	-592	-121	27	534	51	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.221	1.00	Yes	0.670	0.295	0.97	Yes	1.00	**3.77**
		$U_{30} - L_{30}$	-----	-1182.77	-666	598	759	-749	183	361	949	15	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.126	1.00	Yes	0.784	0.134	0.92	Yes	1.00	**6.07**
		$U_{31} - L_{31}$	-----	-748.96	-521	495	-101	101	-217	-141	-305	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.157	1.00	Yes	0.722	0.249	0.98	Yes	1.00	**4.26**
		$U_{32} - L_{32}$	-----	-782.06	-456	435	-77	53	-1018	-476	-705	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.245	1.00	Yes	0.678	0.196	0.88	Yes	1.00	**4.08**
		$U_{33} - L_{33}$	-----	-817.77	-489	485	-117	104	-524	-506	-461	-348	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.172	1.00	Yes	0.765	0.216	0.99	Yes	1.00	**4.15**
		$U_{34} - L_{34}$	-----	-819.93	-494	522	-121	112	69	-298	-326	-311	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.117	0.93	Yes	0.767	0.230	1.00	Yes	1.00	**4.40**
		$U_{35} - L_{35}$	-----	-695.62	-586	579	-112	128	-195	-183	-160	6	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.089	0.87	Yes	0.745	0.249	1.00	Yes	1.00	**4.25**
		$U_{36} - L_{36}$	-----	-480.95	-334	347	-54	67	98	3	-52	60	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.097	0.80	Yes	0.693	0.303	1.00	Yes	1.00	**3.36**
		$U_{37} - L_{37}$	-----	-110.83	-530	598	122	-134	-200	233	-266	63	-----	-----	-----	-----	-----	-----	-----	-----	0.250	0.301	0.56	Yes	0.235	0.764	1.00	Yes	1.00	**12.98**
		$U_{38} - L_{38}$	348.12	-213.72	-245	246	179	-188	106	147	195	-110	0.626	0.372	1.00	Yes	0.344	0.204	0.55	Yes	0.481	0.103	0.59	Yes	0.452	0.315	0.77	Yes	1.00	**5.81**
		$U_{39} - L_{39}$	98.27	-328.72	-88	78	215	-237	63	39	287	-91	0.177	0.385	0.57	Yes	0.097	0.212	0.31	Yes	0.743	0.134	0.88	Yes	0.696	0.302	1.00	Yes	1.00	**4.37**
		$U_{40} - L_{40}$	10.16	-343.72	-14	8	210	-211	17	-31	241	-112	0.018	0.340	0.36	Yes	0.010	0.187	0.20	Yes	0.780	0.095	0.88	Yes	0.727	0.270	1.00	Yes	1.00	**3.05**
		$U_{41} - L_{41}$	-----	-488.72	23	-27	242	-255	11	-27	219	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.092	0.93	Yes	0.766	0.233	1.00	Yes	1.00	**2.95**
		$U_{42} - L_{42}$	-----	-584.55	56	-65	478	-489	13	-34	294	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.078	0.87	Yes	0.745	0.250	1.00	Yes	1.00	**3.03**
		$U_{43} - L_{43}$	-----	-707.96	75	-88	558	-559	-50	-52	380	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.098	0.91	Yes	0.759	0.237	1.00	Yes	1.00	**3.26**
		$U_{44} - L_{44}$	-----	-640.13	115	-131	368	-509	-141	-24	889	151	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.225	1.00	Yes	0.686	0.216	0.91	Yes	1.00	**2.71**
	Structure 3	$U_0 - L_0$	-----	-595.07	-431	493	-145	193	-647	-85	-58	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.211	1.00	Yes	0.693	0.229	0.93	Yes	1.00	**2.45**
		$U_1 - L_1$	-----	-662.71	-482	492	-112	124	138	136	-120	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.083	0.91	Yes	0.771	0.228	1.00	Yes	1.00	**3.62**
		$U_2 - L_2$	-----	-550.22	-395	414	-110	116	91	33	-146	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.088	0.90	Yes	0.765	0.234	1.00	Yes	1.00	**3.01**
		$U_3 - L_3$	-----	-441.16	-217	231	-44	57	-129	-64	46	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.113	0.94	Yes	0.761	0.234	1.00	Yes	1.00	**2.84**
		$U_4 - L_4$	-----	-323.79	-234	240	-19	24	-40	-3	222	47	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.143	0.88	Yes	0.685	0.307	1.00	Yes	1.00	**3.21**
		$U_5 - L_5$	106.51	-305.12	-256	274	77	-71	-138	-27	-84	108	0.192	0.391	0.59	Yes	0.105	0.215	0.33	Yes	0.684	0.161	0.85	Yes	0.646	0.351	1.00	Yes	1.00	**4.99**
		$U_6 - L_6$	-----	-226.82	-275	280	382	-406	-17	202	62	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.506	0.195	0.71	Yes	0.480	0.519	1.00	Yes	1.00	**11.25**
		$U_7 - L_7$	-----	-365.38	32	-46	241	-261	10	-34	71	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.114	0.86	Yes	0.700	0.299	1.00	Yes	1.00	**2.90**
		$U_8 - L_8$	-----	-513.71	88	-92	331	-336	5	-69	202	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.104	0.85	Yes	0.705	0.287	1.00	Yes	1.00	**3.23**
		$U_9 - L_9$	-----	-652.88	131	-169	399	-510	-175	-135	139	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.101	0.89	Yes	0.760	0.237	1.00	Yes	1.00	**3.37**
		$U_{10} - L_{10}$	-----	-780.29	132	-110	396	-434	-26	17	328	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.127	0.94	Yes	0.770	0.225	1.00	Yes	1.00	**3.45**
		$U_{11} - L_{11}$	-----	-648.39	169	-194	424	-469	-131	-28	373	76	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.137	0.92	Yes	0.732	0.261	1.00	Yes	1.00	**2.40**
		$U_{12} - L_{12}$	-----	-1170.26	-397	428	511	-666	35	90	822	405	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.146	1.00	Yes	0.811	0.124	0.94	Yes	1.00	**4.76**
		$U_{13} - L_{13}$	-----	-453.85	-287	297	-63	73	-443	-173	-319	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.194	0.96	Yes	0.700	0.293	1.00	Yes	1.00	**3.06**
		$U_{14} - L_{14}$	-----	-509.86	-231	244	-44	25	-583	-419	-740	-351	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1.00	Yes	0.731	0.214	0.95	Yes	1.00	**3.51**
		$U_{15} - L_{15}$	-----	-426.87	-234	249	-47	45	-524	-364	-569	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.226	1.00	Yes	0.736	0.253	0.99	Yes	1.00	**4.26**
		$U_{16} - L_{16}$	-----	-157.15	-518	496	28	-14	-1434	-491	-783	-418	-----	-----	-----	-----	-----	-----	-----	-----	0.346	0.564	0.91	Yes	0.333	0.662	1.00	Yes	1.00	**12.65**
		$U_{17} - L_{17}$	287.04	-270.74	-308	315	202	-231	-277	58	-79	-162	0.516	0.483	1.00	Yes	0.284	0.266	0.55	Yes	0.593	0.160	0.76	Yes	0.573	0.403	0.98	Yes	1.00	**8.22**
		$U_{18} - L_{18}$	144.10	-302.29	-133	150	234	-281	-135	24	244	-59	0.259	0.430	0.69	Yes	0.143	0.236	0.38	Yes	0.661	0.158	0.82	Yes	0.640	0.359	1.00	Yes	1.00	**5.06**
		$U_{19} - L_{19}$	57.06	-314.94	-64	52	255	-239	-90	1	126	-35	0.103	0.362	0.47	Yes	0.056	0.199	0.26	Yes	0.688	0.109	0.80	Yes	0.666	0.325	1.00	Yes	1.00	**2.99**
		$U_{20} - L_{20}$	-----	-332.94	17	-23	103	-203	-54	-17	449	144	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.252	1.00	Yes	0.704	0.259	0.97	Yes	1.00	**1.84**

Moment (End) AB Operating

Operating Loads - 5C1

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 - Diagonals	Structure 1	U_0 - L_1				445.34	-33.12	-172	77	-10	-6	-825	-125	3	28	0.584	0.409	1.00	Yes	0.353	0.225	0.58	Yes	0.057	0.290	0.35	Yes	0.051	0.201	0.26	Yes	1.00	**4.17**
		U_1 - L_2				401.74	-----	-73	19	-7	-32	-162	-175	605	123	0.723	0.268	1.00	Yes	0.397	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		U_2 - L_3				434.98	-312.46	-113	35	-81	-118	-228	-173	120	-94	0.782	0.217	1.00	Yes	0.430	0.119	0.55	Yes	0.719	0.234	0.96	Yes	0.661	0.151	0.82	Yes	1.00	**10.91**
		U_3 - L_4				-----	-300.49	50	-8	-36	-98	105	106	-241	-639	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.307	1.00	Yes	0.636	0.126	0.77	Yes	1.00	**5.42**
		U_4 - L_5				480.11	-----	0	94	-133	-15	99	53	-660	-496	0.704	0.289	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		U_5 - L_6				682.42	-----	-198	228	-49	99	-287	-303	27	-34	0.807	0.185	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		U_6 - L_7				648.93	-----	-302	247	-93	100	-309	-245	152	47	0.767	0.228	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.68**
		U_7 - L_8				651.17	-----	-101	311	-5	132	-196	-138	262	150	0.770	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.67**
		U_8 - L_9				967.90	-----	-86	360	18	141	349	381	465	86	0.774	0.220	1.00	Yes	0.479	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		U_9 - L_{10}				1019.12	-----	-280	287	-69	85	226	391	132	120	0.815	0.178	1.00	Yes	0.505	0.100	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		U_{10} - L_{11}				996.81	-----	-221	213	-83	95	94	354	33	146	0.842	0.149	1.00	Yes	0.521	0.084	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		U_{11} - L_{12}				861.55	-----	-242	145	-119	12	99	213	153	139	0.852	0.144	1.00	Yes	0.469	0.079	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		U_{12} - L_{13}				659.55	-----	-202	177	-85	33	50	47	58	-99	0.804	0.196	1.00	Yes	0.506	0.109	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		U_{13} - L_{14}				464.47	-----	-88	53	-32	-38	-25	-95	-1	-157	0.835	0.158	1.00	Yes	0.459	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		U_{15} - L_{14}				240.51	-301.65	-62	0	27	-100	-222	-242	-498	-134	0.433	0.271	0.71	Yes	0.238	0.149	0.39	Yes	0.707	0.290	1.00	Yes	0.638	0.127	0.77	Yes	1.00	**4.54**
		U_{16} - L_{15}				406.46	-40.89	-128	91	-10	-24	-351	-311	-300	-152	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	0.097	0.182	0.28	Yes	0.087	0.164	0.26	Yes	1.00	**3.63**
		U_{17} - L_{16}				505.51	-----	-140	97	-44	12	-498	-373	-338	-216	0.741	0.258	1.00	Yes	0.408	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		U_{18} - L_{17}				606.51	-----	-307	253	-112	76	-558	-475	-111	-118	0.717	0.275	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		U_{19} - L_{18}				684.65	-----	-344	258	-132	87	-491	-480	-65	-105	0.742	0.257	1.00	Yes	0.408	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		U_{20} - L_{19}				695.56	-----	-239	253	-95	92	-687	-408	-103	-40	0.753	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.54**
	Structure 2	U_0 - L_1				804.55	-----	-385	365	-109	95	-159	-111	-59	-45	0.796	0.202	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		U_1 - L_2				800.47	-----	-385	336	-84	62	-147	-114	-95	-21	0.792	0.201	1.00	Yes	0.436	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		U_2 - L_3				659.86	-----	-329	279	-75	56	-149	-24	-16	98	0.780	0.213	1.00	Yes	0.429	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.40**
		U_3 - L_4				596.12	-----	-181	135	-33	12	-163	-20	116	66	0.795	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.21**
		U_4 - L_5				435.86	-72.63	-133	108	-8	-25	-152	-19	15	-156	0.784	0.215	1.00	Yes	0.431	0.118	0.55	Yes	0.179	0.092	0.28	Yes	0.154	0.170	0.33	Yes	1.00	**3.97**
		U_5 - L_6				443.00	-214.73	-125	77	40	-95	-131	1	-35	-135	0.797	0.199	1.00	Yes	0.438	0.109	0.55	Yes	0.507	0.148	0.66	Yes	0.454	0.160	0.62	Yes	1.00	**5.31**
		U_6 - L_7				44.18	-380.90	-30	-8	49	-101	-118	-151	-22	-305	0.072	0.195	0.27	Yes	0.040	0.107	0.15	Yes	0.816	0.178	1.00	Yes	0.730	0.116	0.85	Yes	1.00	**3.26**
		U_8 - L_7				589.65	-----	-177	149	-29	-22	-267	-403	-307	-215	0.752	0.241	1.00	Yes	0.473	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		U_8 - L_9				703.18	-----	-323	243	-126	47	-405	-390	-412	-243	0.762	0.233	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		U_{10} - L_9				791.71	-----	-304	227	-111	73	-472	-464	-228	-178	0.783	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		U_{11} - L_{10}				866.07	-----	-333	283	-132	112	-441	-483	-74	-138	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		U_{12} - L_{11}				858.16	-----	-364	352	-142	148	-447	-392	12	-48	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		U_{13} - L_{12}				757.19	-----	-428	382	-152	152	-221	-191	349	138	0.749	0.251	1.00	Yes	0.412	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		U_{14} - L_{13}				747.35	-----	-270	422	-34	147	-275	-164	371	183	0.739	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		U_{14} - L_{15}				641.84	-----	-221	346	32	65	132	221	201	-43	0.759	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		U_{15} - L_{16}				624.82	-----	-372	348	-54	63	-247	8	-58	13	0.739	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		U_{16} - L_{17}				710.44	-----	-318	337	-66	92	-269	318	-156	58	0.769	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		U_{17} - L_{18}				654.03	-----	-281	295	-62	74	-7	274	-34	96	0.773	0.217	1.00	Yes	0.425	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		U_{18} - L_{19}				674.55	-----	-274	271	-44	62	117	254	25	14	0.797	0.201	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		U_{19} - L_{20}				623.35	-----	-192	194	-40	12	124	143	107	-24	0.795	0.202	1.00	Yes	0.437	0.113	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		U_{20} - L_{21}				452.93	-23.92	-123	117	-10	-8	46	72	-1	-96	0.815	0.185	1.00	Yes	0.448	0.102	0.55	Yes	0.057	0.062	0.12	Yes	0.051	0.158	0.21	Yes	1.00	**3.58**
		U_{21} - L_{22}				447.82	-259.74	-103	70	23	-90	19	16	73	-199	0.805	0.189	1.00	Yes	0.443	0.104	0.55	Yes	0.614	0.137	0.76	Yes	0.550	0.131	0.69	Yes	1.00	**5.63**
		U_{23} - L_{22}				432.43	-295.79	-108	66	57	-100	-267	-276	-234	-43	0.778	0.217	1.00	Yes	0.428	0.120	0.55	Yes	0.704	0.205	0.91	Yes	0.626	0.137	0.77	Yes	1.00	**5.87**
		U_{24} - L_{23}				424.13	-36.69	-118	106	-1	-16	-275	-237	-253	-57	0.763	0.230	1.00	Yes	0.420	0.127	0.55	Yes	0.088	0.130	0.22	Yes	0.078	0.151	0.23	Yes	1.00	**3.37**
		U_{25} - L_{24}				580.33	-----	-190	179	-9	24	-426	-348	84	16	0.740	0.257	1.00	Yes	0.407	0.146	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		U_{26} - L_{25}				657.49	-----	-271	264	-24	35	-352	-378	127	51	0.777	0.222	1.00	Yes	0.428	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		U_{27} - L_{26}				642.79	-----	-288	285	-42	54	-384	-307	186	75	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		U_{28} - L_{27}				705.84	-----	-331	357	-45	64	-292	-287	208	116	0.765	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		U_{29} - L_{28}				635.44	-----	-360	345	-71	70	-174	-194	216	105	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		U_{30} - L_{29}				632.58	-----	-220	356	-13	76	-270	-160	196	109	0.748	0.250	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		U_{30} - L_{31}				761.50	-----	-286	431	24	64	158	131	264	-3	0.753	0.239	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		U_{31} - L_{32}				763.88	-----	-435	390	-64	70	-207	248	-13	40	0.756	0.239	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		U_{32} - L_{33}				888.39	-----	-345	358	-53	92	-259	253	-153	151	0.809	0.187	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		U_{33} - L_{34}				882.73	-----	-339	293	-110	82	-6	361	40	130	0.804	0.193	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		U_{34} - L_{35}				829.67	-----	-293	257	-101	53	138	180	237	-1	0.821	0.171	1.00	Yes	0.451	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		U_{35} - L_{36}				749.49	-----	-327	265	-105	35	36	63	44	-99	0.812	0.183	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_{36} - L_{37}				618.39	-----	-176	170	-44	-16	-63	6	33	-242	0.789	0.207	1.00	Yes	0.496	0.117	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		U_{38} - L_{37}				38.58	-387.06	-29	-4	68	-101	-180	-217	-216	-85	0.063	0.171	0.24	Yes	0.035	0.094	0.13	Yes	0.836	0.157	1.00	Yes	0.742	0.115	0.86	Yes	1.00	**3.48**
		U_{38} - L_{39}				405.61	-304.10	-118	70	79	-117	-321	-309	-393	-119	0.730	0.264	1.00	Yes	0.401	0.145	0.55	Yes	0.725	0.250	0.98	Yes	0.643	0.151	0.80	Yes	1.00	**5.66**
		U_{40} - L_{39}				402.55	-62.71	-132	97	7	-26	-355	-311	-214	-129	0.724	0.271	1.00	Yes	0.398	0.149	0.55	Yes	0.150	0.186	0.34	Yes	0.133	0.168	0.31	Yes	1.00	**3.83**
		U_{41} - L_{40}				564.43	-----	-171	128	-14	-1	-401	-381	-87	-73	0.752	0.240	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		U_{42} - L_{41}				609.75	-----	-320	262	-44	28	-527	-441	-63	-59	0.721	0.277	1.00	Yes	0.396	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		U_{43} - L_{42}				750.41	-----	-386	310	-61	41	-510	-470	-1	-43	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		U_{44} - L_{43}				739.20	-----	-286	318	-92	78	-784	-398	61	-21	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
	Structure 3	U_0 - L_1				596.33	-----	-419	316	-114	95	-822	51	-60	-51	0.646	0.350	1.00	Yes	0.355	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		U_1 - L_2				721.68	-----	-341	260	-98	66	-234	-72	-123	-43	0.782	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		U_2 - L_3				647.72	-----	-330	244	-96	62	-242	87	-47	79	0.766	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.26**
		U_3 - L_4				554.71	-----	-147	115	-41	8	-134	-55	96	-14	0.813	0.181	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		U_4 - L_5				426.28	-78.18	-132	92	-15	-27	-200	21	-10	-165	0.767	0.226	1.00	Yes	0.422	0.124	0.55	Yes	0.185	0.107	0.30	Yes	0.165	0.168	0.34	Yes	1.00	**3.97**
		U_5 - L_6				349.74	-329.63	-77	15	29	-109	-158	-166	-73	-325	0.629	0.233	0.87	Yes	0.346	0.128	0.48	Yes	0.772	0.219	1.00	Yes	0.697	0.139	0.84	Yes	1.00	**5.64**
		U_7 - L_6				431.95	-60.06	-80	43	-5	-46	-218	-276	-386	-221	0.777	0.214	1.00	Yes	0.427	0.118	0.55	Yes	0.140	0.174	0.32	Yes	0.127	0.103	0.23	Yes	1.00	**4.70**
		U_8 - L_7				589.25	-----	-190	144	-82	25	-413	-395	-572	-229	0.718	0.278	1.00	Yes	0.452	0.159	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		U_9 - L_8				772.41	-----	-236	103	-135	11	-502	-531	-791	-398	0.764	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		U_{10} - L_9				955.29	-----	-237	182	-75	68	-557	-613	-89	-139	0.807	0.190	1.00	Yes	0.499	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		U_{11} - L_{10}				990.09	-----	-301	257	-95	85	-510	-447	52	-21	0.791	0.199	1.00	Yes	0.490	0.112	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		U_{12} - L_{11}				984.06	-----	-103	361	-9	129	-380	-313	237	123	0.787	0.209	1.00	Yes	0.487	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		U_{12} - L_{13}				664.61	-----	-108	283	30	73	168	239	276	-19	0.786	0.211	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		U_{13} - L_{14}				668.44	-----	-279	251	-15	56	-88	242	-48	32	0.790	0.203	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		U_{14} - L_{15}				694.27	-----	-173	240	-21	66	-89	191	-63	72	0.821	0.171	1.00	Yes	0.451	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		U_{15} - L_{16}				462.77	-----	40	198	-89	-43	491	496	154	171	0.679	0.316	1.00	Yes	0.373	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.68**
		U_{17} - L_{18}				-----	-349.51	32	1	14	-88	360	223	-178	41	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1.00	Yes	0.740	0.113	0.86	Yes	1.00	**5.53**
		U_{18} - L_{17}				182.78	-331.34	-51	12	-32	-62	-161	-130	-681	-15	0.329	0.276	0.61	Yes	0.181	0.152	0.34	Yes	0.763	0.235	1.00	Yes	0.701	0.079	0.79	Yes	1.00	**5.87**
		U_{19} - L_{18}				409.75	-162.48	-100	27	32	-23	-457	-350	208	163	0.737	0.260	1.00	Yes	0.405	0.143	0.55	Yes	0.373	0.245	0.62	Yes	0.344	0.128	0.48	Yes	1.00	**3.79**
		U_{20} - L_{19}				598.41	-93.81	-32	39	-15	-8	-667	-455	128	144	0.785	0.213	1.00	Yes	0.474	0.117	0.60	Yes	0.160	0.212	0.38	Yes	0.145	0.045	0.19	Yes	1.00	**3.49**

Moment (End) AB Operating

Operating Loads - 5C1

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 - Upper Chord	Structure 1	$U_0 - U_1$	1.300	1.300	18.67	-511.32	-175	109	380	-1255	5	-24	-57	-446	0.021	0.374	0.40	Yes	0.015	0.256	0.28	Yes	0.696	0.299	1	Yes	0.690	0.298	0.99	Yes	1.00	**5.03**
		$U_1 - U_2$			73.06	-542.48	-48	120	-210	-894	-23	40	18	170	0.084	0.241	0.33	Yes	0.057	0.166	0.23	Yes	0.738	0.259	1	Yes	0.732	0.213	0.95	Yes	1.00	**3.47**
		$U_2 - U_3$			182.29	-531.09	-72	299	-264	-802	-26	-90	321	-78	0.209	0.245	0.46	Yes	0.141	0.160	0.31	Yes	0.723	0.276	1	Yes	0.716	0.191	0.91	Yes	1.00	**3.57**
		$U_3 - U_4$			445.54	-518.22	155	342	-78	-1104	-144	-95	-24	-246	0.511	0.304	0.82	Yes	0.350	0.208	0.56	Yes	0.705	0.291	1	Yes	0.699	0.263	0.97	Yes	1.00	**5.21**
		$U_4 - U_5$			504.73	-589.21	158	392	-31	-680	-136	66	-111	-207	0.579	0.197	0.78	Yes	0.397	0.135	0.54	Yes	0.802	0.191	1	Yes	0.795	0.162	0.96	Yes	1.00	**6.19**
		$U_5 - U_6$			-----	-557.74	-846	708	-123	-488	83	-412	-330	-505	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1	Yes	0.752	0.201	0.96	Yes	1.00	**9.63**
		$U_6 - U_7$			856.73	-----	330	224	407	-586	-333	128	-385	-57	0.819	0.177	1.00	Yes	0.573	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_7 - U_8$			730.24	-----	-1898	3006	-55	678	-364	212	-245	163	0.506	0.493	1.00	Yes	0.353	0.335	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.81**
		$U_8 - U_9$			712.76	-----	777	-4	2031	-1791	-127	50	235	554	0.584	0.409	1.00	Yes	0.400	0.278	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		$U_9 - U_{10}$			611.84	-212.85	219	296	289	-1061	87	321	354	583	0.664	0.331	1.00	Yes	0.449	0.222	0.68	Yes	0.274	0.188	0.47	Yes	0.272	0.238	0.51	Yes	1.00	**7.38**
		$U_{10} - U_{11}$			167.28	-576.66	244	-57	207	-1176	206	56	390	87	0.181	0.326	0.51	Yes	0.121	0.209	0.34	Yes	0.743	0.236	0.98	Yes	0.736	0.263	1.00	Yes	1.00	**4.49**
		$U_{11} - U_{12}$			-----	-875.63	187	-100	79	-1031	144	54	295	64	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.169	1	Yes	0.821	0.171	1.00	Yes	1.00	**3.78**
		$U_{12} - U_{13}$			-----	-1159.31	-119	-156	-7	-1345	359	-180	261	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.206	1	Yes	0.774	0.185	0.96	Yes	1.00	**3.81**
		$U_{13} - U_{14}$			-----	-1299.96	-500	-327	-311	-1924	290	36	127	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.241	1	Yes	0.745	0.212	0.96	Yes	1.00	**3.73**
		$U_{14} - U_{15}$			-----	-1366.31	-338	-159	-422	-1334	183	-224	184	-118	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.201	1	Yes	0.783	0.147	0.94	Yes	1.00	**4.06**
		$U_{15} - U_{16}$			-----	-1302.99	-612	-286	160	-2009	419	-65	-105	-427	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.241	1	Yes	0.747	0.222	0.97	Yes	1.00	**6.00**
		$U_{16} - U_{17}$			-----	-1272.38	-404	-73	-691	-1487	311	-353	-200	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.255	1	Yes	0.729	0.164	0.90	Yes	1.00	**6.54**
		$U_{17} - U_{18}$			-----	-1069.13	-713	196	-353	-540	-108	-485	-152	-261	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.152	1	Yes	0.837	0.116	0.96	Yes	1.00	**4.11**
		$U_{18} - U_{19}$			-----	-747.11	-464	309	-157	-481	-44	-128	-157	-398	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.146	1	Yes	0.841	0.097	0.94	Yes	1.00	**6.05**
		$U_{19} - U_{20}$			-----	-552.51	-1261	1378	111	-1878	-422	-197	-135	-875	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.319	0.95	Yes	0.622	0.378	1.00	Yes	1.00	**9.35**
	Structure 2	$U_0 - U_1$			-----	-601.01	169	-129	230	-1690	94	182	-16	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.714	0.218	0.94	Yes	0.710	0.287	1.00	Yes	1.00	**5.80**
		$U_1 - U_2$			-----	-764.95	-106	-133	-76	-1195	344	665	296	445	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.252	1	Yes	0.738	0.181	0.92	Yes	1.00	**3.45**
		$U_2 - U_3$			-----	-1091.54	-81	-203	-83	-1883	610	-2	635	25	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1	Yes	0.775	0.192	0.97	Yes	1.00	**3.64**
		$U_3 - U_4$			-----	-1320.72	-374	-248	-800	-2036	242	-332	267	-265	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.237	1	Yes	0.752	0.181	0.94	Yes	1.00	**3.76**
		$U_4 - U_5$			-----	-1425.79	-343	-283	-495	-2554	-91	-375	49	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.261	1	Yes	0.732	0.212	0.95	Yes	1.00	**3.84**
		$U_5 - U_6$			-----	-1430.56	-596	64	-1072	-1937	18	-455	-52	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.252	1	Yes	0.734	0.161	0.90	Yes	1.00	**3.75**
		$U_6 - U_7$			-----	-1248.58	-221	-36	-784	-2206	-112	-276	-72	-374	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.277	1	Yes	0.711	0.197	0.91	Yes	1.00	**3.63**
		$U_7 - U_8$			-----	-1386.04	-111	-137	-870	-1473	-219	-238	-224	-388	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1	Yes	0.789	0.131	0.93	Yes	1.00	**4.01**
		$U_8 - U_9$			161.42	-1131.98	-206	299	-659	-1421	-209	-84	-187	-434	0.093	0.187	0.29	Yes	0.065	0.123	0.19	Yes	0.773	0.226	1	Yes	0.768	0.151	0.92	Yes	1.00	**5.89**
		$U_9 - U_{10}$			524.59	-924.52	125	590	-792	-1118	-212	28	-231	-407	0.385	0.180	0.57	Yes	0.261	0.122	0.39	Yes	0.803	0.188	1	Yes	0.798	0.136	0.94	Yes	1.00	**7.19**
		$U_{10} - U_{11}$			961.25	-390.48	373	639	-128	-1022	-246	-9	-332	-248	0.812	0.185	1.00	Yes	0.553	0.120	0.68	Yes	0.390	0.188	0.58	Yes	0.388	0.144	0.54	Yes	1.00	**8.75**
		$U_{11} - U_{12}$			-----	-768.47	-1301	1548	-388	-1534	-828	-915	-663	-731	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.223	1	Yes	0.764	0.218	0.99	Yes	1.00	**17.45**
		$U_{12} - U_{13}$			795.89	-----	99	274	197	-2675	-905	-1233	-898	-391	0.537	0.454	1.00	Yes	0.383	0.310	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.54**
		$U_{13} - U_{14}$			844.73	-----	-1070	5625	-423	1478	-912	93	-554	-206	0.415	0.583	1.00	Yes	0.294	0.382	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.80**
		$U_{14} - U_{15}$			1117.13	-----	1628	227	4366	-2804	-580	-207	61	503	0.549	0.444	1.00	Yes	0.389	0.291	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_{15} - U_{16}$			1164.35	-----	233	581	-477	-1852	-129	287	453	963	0.704	0.292	1.00	Yes	0.501	0.198	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_{16} - U_{17}$			935.54	-----	658	317	944	-1904	188	64	642	194	0.689	0.307	1.00	Yes	0.459	0.202	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		$U_{17} - U_{18}$			718.82	-204.28	479	345	358	-1440	-41	-7	216	48	0.722	0.276	1.00	Yes	0.480	0.183	0.67	Yes	0.243	0.288	0.54	Yes	0.241	0.244	0.49	Yes	1.00	**5.96**
		$U_{18} - U_{19}$			610.10	-577.35	572	280	399	-1843	-18	81	155	-53	0.612	0.335	0.95	Yes	0.402	0.213	0.62	Yes	0.686	0.134	0.83	Yes	0.683	0.313	1.00	Yes	1.00	**6.52**
		$U_{19} - U_{20}$			317.30	-714.98	345	195	-205	-1301	-3	174	126	39	0.298	0.232	0.53	Yes	0.197	0.152	0.35	Yes	0.794	0.195	0.99	Yes	0.789	0.208	1.00	Yes	1.00	**4.79**
		$U_{20} - U_{21}$			91.20	-799.55	-34	176	-97	-1821	46	-96	162	-186	0.071	0.284	0.36	Yes	0.050	0.182	0.24	Yes	0.735	0.259	1	Yes	0.730	0.264	1.00	Yes	1.00	**4.71**
		$U_{21} - U_{22}$			98.71	-782.04	16	47	-462	-1660	-33	-60	10	-116	0.077	0.253	0.33	Yes	0.054	0.168	0.23	Yes	0.719	0.277	1	Yes	0.714	0.241	0.96	Yes	1.00	**4.29**
		$U_{22} - U_{23}$			112.83	-829.78	9	9	-295	-1355	-106	-105	-50	-232	0.088	0.222	0.31	Yes	0.062	0.148	0.22	Yes	0.763	0.229	1	Yes	0.757	0.196	0.96	Yes	1.00	**4.56**
		$U_{23} - U_{24}$			298.26	-786.51	62	240	157	-1699	-297	-116	-208	-431	0.231	0.293	0.53	Yes	0.162	0.189	0.36	Yes	0.723	0.268	1	Yes	0.718	0.246	0.97	Yes	1.00	**6.48**
		$U_{24} - U_{25}$			375.81	-647.25	221	374	-421	-1260	-331	-7	-175	-281	0.352	0.246	0.60	Yes	0.234	0.162	0.40	Yes	0.719	0.281	1	Yes	0.714	0.202	0.92	Yes	1.00	**5.95**
		$U_{25} - U_{26}$			-----	-672.50	-1186	721	-48	-1000	-65	-71	-215	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.108	0.91	Yes	0.794	0.201	1.00	Yes	1.00	**7.58**
		$U_{26} - U_{27}$			-----	-552.37	-1831	1182	-208	-2042	-185	-213	-388	-262	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.239	0.9	Yes	0.652	0.347	1.00	Yes	1.00	**14.67**
		$U_{27} - U_{28}$			-----	-437.65	-4933	3626	-728	-4005	-566	-1388	-887	-1493	-----	-----	-----	-----	-----	-----	-----	-----	0.382	0.527	0.91	Yes	0.379	0.620	1.00	Yes	1.00	**30.42**
		$U_{28} - U_{29}$			1039.80	-----	-79	368	622	-2626	-806	-564	-792	-165	0.629	0.367	1.00	Yes	0.447	0.246	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.16**
		$U_{29} - U_{30}$			859.23	-----	-687	5536	-142	1280	-838	235	-118	341	0.423	0.570	1.00	Yes	0.299	0.373	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.16**
		$U_{30} - U_{31}$			1141.26	-----	1566	135	4125	-2886	-489	-240	333	711	0.561	0.430	1.00	Yes	0.397	0.282	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.02**
		$U_{31} - U_{32}$			1082.29	-----	156	511	-121	-1500	-80	199	673	836	0.731	0.269	1.00	Yes	0.521	0.183	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.84**
		$U_{32} - U_{33}$			805.76	-173.30	534	291	415	-1695	184	49	645	101	0.681	0.318	1.00	Yes	0.457	0.212	0.67	Yes	0.173	0.165	0.34	Yes	0.172	0.239	0.42	Yes	1.00	**5.81**
		$U_{33} - U_{34}$			752.51	-737.22	518	386	-105	-1858	19	41	316	54	0.636	0.301	0.94	Yes	0.433	0.194	0.63	Yes	0.737	0.233	0.98	Yes	0.733	0.262	1.00	Yes	1.00	**7.11**
		$U_{34} - U_{35}$			340.34	-890.62	436	49	156	-1871	103	23	204	-132	0.250	0.250	0.50	Yes	0.169	0.169	0.34	Yes	0.773	0.177	0.96	Yes	0.769	0.228	1.00	Yes	1.00	**4.76**
		$U_{35} - U_{36}$			20.61	-1139.99	188	-194	-255	-1988	69	36	165	-57	0.012	0.225	0.24	Yes	0.008	0.146	0.16	Yes	0.779	0.215	1	Yes	0.773	0.211	0.99	Yes	1.00	**4.22**
		$U_{36} - U_{37}$			-----	-1310.09	-97	-16	-548	-2203	163	-35	279	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.245	1	Yes	0.746	0.196	0.95	Yes	1.00	**3.78**
		$U_{37} - U_{38}$			-----	-1402.47	131	-162	-498	-1894	19	46	51	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.187	1	Yes	0.799	0.169	0.97	Yes	1.00	**4.45**
		$U_{38} - U_{39}$			-----	-1420.83	190	-330	-102	-2916	90	-63	80	-415	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.258	1	Yes	0.729	0.242	0.98	Yes	1.00	**5.42**
		$U_{39} - U_{40}$			-----	-1351.25	-813	-357	-982	-2529	157	-174	-239	-516	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.295	1	Yes	0.694	0.210	0.91	Yes	1.00	**5.34**
		$U_{40} - U_{41}$			-----	-1341.64	-449	-409	-855	-1646	59	-281	-260	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.223	1	Yes	0.764	0.147	0.92	Yes	1.00	**3.84**
		$U_{41} - U_{42}$			-----	-1096.86	-1101	234	-777	-1105	-216	-1170	-150	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.207	1	Yes	0.778	0.113	0.90	Yes	1.00	**5.27**
		$U_{42} - U_{43}$			-----	-870.31	-571	300	-560	-865	202	-137	148	-357	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.145	1	Yes	0.840	0.131	0.98	Yes	1.00	**7.02**
		$U_{43} - U_{44}$			-----	-543.84	-1347	1346	116	-1954	-473	-207	-81	-828	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.350	1	Yes	0.642	0.332	0.98	Yes	1.00	**9.60**
	Structure 3	$U_0 - U_1$			-----	-572.17	-629	-145	1092	-1756	340	157	80	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.222	0.88	Yes	0.644	0.353	1.00	Yes	1.00	**7.55**
		$U_1 - U_2$			-----	-679.46	-68	-113	2	-792	259	532	200	11	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.225	1	Yes	0.764	0.159	0.93	Yes	1.00	**3.16**
		$U_2 - U_3$			-----	-983.95	-78	-117	128	-1154	513	6	666	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.770	0.188	0.96	Yes	1.00	**3.57**
		$U_3 - U_4$			-----	-1349.47	-136	-190	-354	-1709	140	-265	270	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.216	1	Yes	0.774	0.189	0.97	Yes	1.00	**4.33**
		$U_4 - U_5$			-----	-1278.86	-813	-25	-548	-1528	283	-189	11	-429	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1	Yes	0.733	0.169	0.91	Yes	1.00	**3.80**
		$U_5 - U_6$			-----	-1262.08	-141	-205	-390	-1982	-66	-229	-86	-302	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.261	1	Yes	0.724	0.219	0.95	Yes	1.00	**4.24**
		$U_6 - U_7$			-----	-1354.54	-294	-72	-432	-1164	-107	-238	-19	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.207	1	Yes	0.777	0.128	0.91	Yes	1.00	**4.20**
		$U_7 - U_8$			-----	-1172.88	-714	82	-419	-883	80	-194	-225	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.202	1	Yes	0.783	0.122	0.91	Yes	1.00	**4.42**
		$U_8 - U_9$			-----	-924.10	-532	337	-221	-705	125	-292	-228	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.117	1	Yes	0.867	0.117	0.99	Yes	1.00	**6.84**
		$U_9 - U_{10}$			-----	-592.35	-1059	437	-357	-240	-178	-384	-251	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.219	0.99	Yes	0.756	0.237	1.00	Yes	1.00	**6.80**
		$U_{10} - U_{11}$			450.91	-33.25	-1010	1144	62	-1488	-1063	-789	-647	-393	0.489	0.504	1.00	Yes	0.331	0.338	0.67	Yes	0.043	0.368	0.42	Yes	0.042	0.333	0.38	Yes	1.00	**24.80**
		$U_{11} - U_{12}$			652.50	-----	-744	2301	-165	609	-568	146	-284	19	0.535	0.456	1.00	Yes	0.366	0.310	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**
		$U_{12} - U_{13}$			865.19	-----	867	105	2313	-1504	-433	-75	-146	262	0.599	0.394	1.00	Yes	0.418	0.269	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_{13} - U_{14}$			798.24	-----	226	366	95	-697	-158	285	118	579	0.763	0.228	1.00	Yes	0.533	0.157	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{14} - U_{15}$			613.92	-300.02	407	240	348	-1010	50	157	303	-32	0.704	0.291	1.00	Yes	0.475	0.190	0.67	Yes	0.408	0.311	0.72	Yes	0.405	0.240	0.65	Yes	1.00	**4.97**
		$U_{15} - U_{16}$			415.84	-532.38	329	178	-73	-1160	-34	166	98	100	0.477	0.304	0.79	Yes	0.327	0.208	0.54	Yes	0.724	0.230	0.96	Yes	0.718	0.276	1.00	Yes	1.00	**4.97**
		$U_{16} - U_{17}$			459.48	-540.93	397	132	376	-1123	10	111	86	-131	0.527	0.289	0.82	Yes	0.361	0.198	0.56	Yes	0.736	0.134	0.87	Yes	0.729	0.267	1.00	Yes	1.00	**5.62**
		$U_{17} - U_{18}$			-----	-572.89	-37	-65	-111	-925	30	-197	-46	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.200	0.98	Yes	0.773	0.220	1.00	Yes	1.00	**4.26**
		$U_{18} - U_{19}$			-----	-561.00	-244	115	-169	-889	-27	158	88	5	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.234	1	Yes	0.756	0.211	0.97	Yes	1.00	**5.71**
		$U_{19} - U_{20}$			-----	-400.75	-603	672	97	-1797	11	-71	113	-619	-----	-----	-----	-----	-----	-----	-----	-----	0.545	0.452	1	Yes	0.540	0.427	0.97	Yes	1.00	**7.13**

Moment (End) AB Operating

Operating Loads - 5C1

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	-----	-162.30	-305	202	908	-2343	50	182	-3	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.295	0.502	0.8	Yes	0.292	0.703	1.00	Yes	1.00	**19.69**
		L_1 - L_2	434.63	-84.37	42	80	264	-1056	52	2	10	12	0.665	0.328	1.00	Yes	0.406	0.223	0.63	Yes	0.153	0.188	0.35	Yes	0.152	0.317	0.47	Yes	1.00	**5.79**
		L_2 - L_3	618.19	-184.96	23	155	-163	-1038	-4	-19	-226	-65	0.711	0.287	1.00	Yes	0.411	0.172	0.59	Yes	0.253	0.286	0.54	Yes	0.250	0.251	0.51	Yes	1.00	**5.98**
		L_3 - L_4	622.47	-323.89	92	355	-104	-1082	-10	2	-98	46	0.716	0.277	1.00	Yes	0.425	0.180	0.61	Yes	0.443	0.227	0.67	Yes	0.438	0.261	0.70	Yes	1.00	**5.87**
		L_4 - L_5	538.44	-----	-847	844	-622	-902	-23	64	-308	171	0.697	0.294	1.00	Yes	0.418	0.192	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.26**
		L_5 - L_6	-----	-753.60	143	584	-273	-47	9	64	-36	76	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.118	1	Yes	0.869	0.129	1.00	Yes	1.00	**4.43**
		L_6 - L_7	-----	-951.04	-738	853	-741	-1476	-17	-237	120	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.117	0.9	Yes	0.766	0.232	1.00	Yes	1.00	**11.78**
		L_7 - L_8	-----	-1144.25	-170	2018	-26	578	-21	-15	35	75	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.255	0.99	Yes	0.725	0.267	1.00	Yes	1.00	**5.72**
		L_8 - L_9	-----	-1183.49	777	47	1826	-593	24	-17	19	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.210	0.97	Yes	0.750	0.242	1.00	Yes	1.00	**6.44**
		L_9 - L_{10}	-----	-1002.37	145	195	789	-1208	47	65	121	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.066	0.89	Yes	0.807	0.190	1.00	Yes	1.00	**9.71**
		L_{10} - L_{11}	-----	-518.87	465	-8	442	-787	98	25	6	8	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.088	0.89	Yes	0.791	0.208	1.00	Yes	1.00	**6.19**
		L_{11} - L_{12}	529.28	-300.92	426	-130	601	-1117	-17	-8	-98	1	0.685	0.313	1.00	Yes	0.411	0.207	0.62	Yes	0.463	0.125	0.59	Yes	0.458	0.296	0.76	Yes	1.00	**6.97**
		L_{12} - L_{13}	1010.24	-----	125	-70	-115	-970	-32	-50	-189	-2	0.797	0.194	1.00	Yes	0.510	0.116	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{13} - L_{14}	1206.04	-----	258	-363	583	-1894	-103	52	-294	49	0.709	0.285	1.00	Yes	0.459	0.174	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_{14} - L_{15}	1664.74	-----	-1354	75	-1167	-1330	-36	148	-206	36	0.813	0.178	1.00	Yes	0.529	0.108	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		L_{15} - L_{16}	1630.53	-----	-342	-310	-938	-1519	45	180	-105	-34	0.797	0.196	1.00	Yes	0.511	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		L_{16} - L_{17}	1261.43	-----	-849	372	-1237	-755	-52	-23	-125	114	0.798	0.193	1.00	Yes	0.518	0.118	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		L_{17} - L_{18}	948.78	-----	-631	382	-803	-452	-95	2	45	-38	0.826	0.167	1.00	Yes	0.529	0.100	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.61**
		L_{18} - L_{19}	413.21	-----	-893	579	-537	-33	-160	-81	-150	468	0.632	0.365	1.00	Yes	0.428	0.231	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_{19} - L_{20}	97.36	-192.57	-2099	1129	-103	17	1057	237	-36	-8	0.149	0.849	1.00	Yes	0.091	0.564	0.66	Yes	0.350	0.494	0.85	Yes	0.347	0.630	0.98	Yes	1.00	**15.05**
	Structure 2	L_0 - L_1	34.83	-5.74	-202	166	1087	-3329	18	63	-487	-1692	0.042	0.955	1.00	Yes	0.025	0.605	0.64	Yes	0.008	0.672	0.69	Yes	0.008	0.677	0.69	Yes	1.00	**19.73**
		L_1 - L_2	556.26	-----	140	-166	523	-1362	84	94	-255	185	0.676	0.319	1.00	Yes	0.402	0.205	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_2 - L_3	972.10	-----	-25	-86	343	-1445	112	172	91	89	0.766	0.227	1.00	Yes	0.502	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		L_3 - L_4	1319.83	-----	48	-258	-571	-1725	47	127	8	204	0.775	0.218	1.00	Yes	0.522	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		L_4 - L_5	1676.04	-----	-191	-140	-573	-2136	15	-12	-149	-31	0.781	0.212	1.00	Yes	0.517	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.97**
		L_5 - L_6	1733.85	-----	12	-187	-311	-2569	-90	56	-372	-44	0.744	0.251	1.00	Yes	0.499	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_6 - L_7	1746.53	-12.49	-221	72	-1169	-2827	57	-46	-155	121	0.739	0.258	1.00	Yes	0.491	0.150	0.65	Yes	0.006	0.399	0.41	Yes	0.006	0.248	0.26	Yes	1.00	**7.35**
		L_7 - L_8	1406.90	-243.09	-78	420	-1239	-1503	-50	81	-331	-65	0.807	0.193	1.00	Yes	0.530	0.114	0.65	Yes	0.165	0.202	0.37	Yes	0.164	0.166	0.33	Yes	1.00	**6.46**
		L_8 - L_9	1168.14	-----	-877	742	-1173	-849	51	110	-144	160	0.817	0.173	1.00	Yes	0.550	0.108	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		L_9 - L_{10}	747.96	-799.44	-25	786	-993	-613	46	139	-20	-12	0.668	0.176	0.85	Yes	0.389	0.109	0.50	Yes	0.845	0.115	0.96	Yes	0.839	0.159	1.00	Yes	1.00	**7.59**
		L_{10} - L_{11}	564.50	-----	-2256	1865	-1452	-1267	-106	-10	-254	-160	0.564	0.429	1.00	Yes	0.330	0.271	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.78**
		L_{11} - L_{12}	-----	-910.10	-1281	1826	-1494	-200	15	134	-80	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.147	0.9	Yes	0.746	0.249	1.00	Yes	1.00	**12.62**
		L_{12} - L_{13}	-----	-1072.10	-116	243	-929	-2738	-611	-542	47	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.351	1	Yes	0.641	0.272	0.92	Yes	1.00	**9.53**
		L_{13} - L_{14}	-----	-1211.63	-1619	4376	-476	1312	-116	-149	-201	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.615	0.267	0.89	Yes	0.610	0.382	1.00	Yes	1.00	**6.50**
		L_{14} - L_{15}	-----	-1247.74	1512	-403	4192	-2414	217	186	-137	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.633	0.233	0.87	Yes	0.628	0.366	1.00	Yes	1.00	**6.54**
		L_{15} - L_{16}	-----	-1238.64	-437	478	-2391	-1336	-42	148	-1	51	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.741	0.238	0.98	Yes	1.00	**7.86**
		L_{16} - L_{17}	-----	-1101.82	1080	146	1545	-1020	183	52	-66	-62	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.141	0.96	Yes	0.802	0.191	1.00	Yes	1.00	**6.33**
		L_{17} - L_{18}	-----	-817.89	492	228	790	-828	18	-48	-41	48	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.075	0.94	Yes	0.859	0.133	1.00	Yes	1.00	**4.84**
		L_{18} - L_{19}	-----	-637.97	635	89	600	-746	-48	-79	-68	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.111	0.97	Yes	0.850	0.144	1.00	Yes	1.00	**4.67**
		L_{19} - L_{20}	512.00	-588.28	531	190	210	-1071	-28	-37	-116	107	0.580	0.225	0.81	Yes	0.343	0.144	0.49	Yes	0.789	0.152	0.95	Yes	0.784	0.207	1.00	Yes	1.00	**6.04**
		L_{20} - L_{21}	830.10	-648.65	618	108	289	-2132	-12	-58	-194	-113	0.662	0.332	1.00	Yes	0.434	0.197	0.64	Yes	0.613	0.221	0.84	Yes	0.609	0.311	0.92	Yes	1.00	**9.29**
		L_{21} - L_{22}	860.18	-137.85	103	-22	8	-2007	-49	56	-145	154	0.686	0.309	1.00	Yes	0.459	0.193	0.66	Yes	0.130	0.217	0.35	Yes	0.129	0.293	0.43	Yes	1.00	**5.57**
		L_{22} - L_{23}	908.07	-294.36	-90	257	-834	-1679	40	-42	-234	-64	0.724	0.270	1.00	Yes	0.484	0.169	0.66	Yes	0.278	0.307	0.59	Yes	0.276	0.245	0.53	Yes	1.00	**6.11**
		L_{23} - L_{24}	952.29	-508.45	66	461	-1017	-1537	7	76	-65	1	0.759	0.232	1.00	Yes	0.498	0.137	0.64	Yes	0.480	0.271	0.76	Yes	0.477	0.224	0.71	Yes	1.00	**7.50**
		L_{24} - L_{25}	711.93	-----	-557	564	-849	-650	106	88	-50	174	0.806	0.190	1.00	Yes	0.477	0.121	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		L_{25} - L_{26}	623.91	-7.52	-1296	1307	-975	-1312	159	253	-119	-67	0.707	0.292	1.00	Yes	0.408	0.174	0.59	Yes	0.010	0.145	0.16	Yes	0.010	0.253	0.27	Yes	1.00	**12.90**
		L_{26} - L_{27}	164.33	-692.17	-1357	1694	-1174	-1139	121	85	-65	175	0.147	0.292	0.44	Yes	0.085	0.182	0.27	Yes	0.732	0.160	0.9	Yes	0.727	0.271	1.00	Yes	1.00	**13.86**
		L_{27} - L_{28}	-----	-1032.65	-1015	1951	-1123	148	132	293	35	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.184	0.95	Yes	0.752	0.241	1.00	Yes	1.00	**9.62**
		L_{28} - L_{29}	-----	-1106.29	138	101	-1060	-3055	-111	-246	0	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.323	1	Yes	0.662	0.304	0.97	Yes	1.00	**9.06**
		L_{29} - L_{30}	-----	-1221.34	-1616	4405	-495	1158	-93	-88	99	135	-----	-----	-----	-----	-----	-----	-----	-----	0.620	0.257	0.88	Yes	0.615	0.385	1.00	Yes	1.00	**7.04**
		L_{30} - L_{31}	-----	-1231.84	1180	-279	4278	-2502	-352	-253	8	42	-----	-----	-----	-----	-----	-----	-----	-----	0.626	0.251	0.88	Yes	0.620	0.374	1.00	Yes	1.00	**7.18**
		L_{31} - L_{32}	-----	-1313.38	-223	383	-414	-1445	-183	-52	108	92	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.207	1	Yes	0.786	0.144	0.93	Yes	1.00	**7.52**
		L_{32} - L_{33}	-----	-1031.92	950	94	1085	-1051	19	-41	52	29	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.087	0.95	Yes	0.846	0.148	1.00	Yes	1.00	**5.83**
		L_{33} - L_{34}	-----	-717.45	517	128	685	-890	-21	4	-15	95	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.068	0.92	Yes	0.843	0.156	1.00	Yes	1.00	**4.64**
		L_{34} - L_{35}	384.56	-734.91	731	11	720	-1392	-11	-71	-58	-50	0.343	0.231	0.58	Yes	0.200	0.145	0.35	Yes	0.777	0.093	0.87	Yes	0.772	0.223	1.00	Yes	1.00	**6.63**
		L_{35} - L_{36}	1051.93	-645.51	654	90	796	-1734	-73	-19	-300	30	0.736	0.262	1.00	Yes	0.496	0.164	0.66	Yes	0.535	0.112	0.65	Yes	0.531	0.234	0.77	Yes	1.00	**7.92**
		L_{36} - L_{37}	1300.80	-167.62	419	-3	46	-2085	12	-19	62	173	0.746	0.244	1.00	Yes	0.490	0.143	0.64	Yes	0.114	0.197	0.32	Yes	0.113	0.230	0.35	Yes	1.00	**5.61**
		L_{37} - L_{38}	1733.85	-----	121	-366	-634	-2746	-65	38	-314	-23	0.734	0.261	1.00	Yes	0.488	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		L_{38} - L_{39}	1879.53	-----	-303	-55	-1675	-2093	-5	-67	-16	97	0.806	0.192	1.00	Yes	0.541	0.116	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		L_{39} - L_{40}	1717.46	-----	-1083	-84	-1240	-1864	91	211	-56	-42	0.801	0.190	1.00	Yes	0.530	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		L_{40} - L_{41}	1341.61	-----	-1171	428	-1640	-1208	-45	-6	-153	-21	0.788	0.204	1.00	Yes	0.531	0.126	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.87**
		L_{41} - L_{42}	1015.81	-----	-788	490	-982	-892	-486	-229	97	15	0.801	0.194	1.00	Yes	0.525	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.23**
		L_{42} - L_{43}	533.69	-----	-1186	652	-693	-188	-12	-58	-113	656	0.648	0.349	1.00	Yes	0.386	0.221	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.74**
		L_{43} - L_{44}	17.41	-128.93	-3783	1295	69	-116	1258	367	-82	-24	0.021	0.976	1.00	Yes	0.013	0.623	0.64	Yes	0.185	0.654	0.84	Yes	0.184	0.770	0.96	Yes	1.00	**23.23**
	Structure 3	L_0 - L_1	31.07	-----	-57	-2	1247	-2222	1	5	-298	-1351	0.048	0.947	1.00	Yes	0.029	0.626	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.16**
		L_1 - L_2	433.61	-----	149	-170	502	-914	40	60	-50	280	0.664	0.332	1.00	Yes	0.449	0.208	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_2 - L_3	894.94	-----	-26	-127	129	-980	79	123	114	211	0.779	0.216	1.00	Yes	0.499	0.129	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.13**
		L_3 - L_4	1238.31	-----	46	-296	125	-1289	33	119	25	250	0.783	0.211	1.00	Yes	0.508	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_4 - L_5	1565.91	-----	-245	-100	-629	-1831	27	10	-147	34	0.765	0.231	1.00	Yes	0.491	0.134	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.94**
		L_5 - L_6	1514.33	-----	-30	-293	-70	-1978	-64	129	-157	241	0.740	0.255	1.00	Yes	0.481	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		L_6 - L_7	1335.87	-----	-1348	579	-990	-1001	138	288	-163	148	0.786	0.210	1.00	Yes	0.509	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		L_7 - L_8	1053.66	-----	-405	161	-716	-737	80	277	-9	97	0.831	0.163	1.00	Yes	0.532	0.098	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		L_8 - L_9	593.29	-----	-810	598	-557	-337	52	-16	-57	-75	0.768	0.228	1.00	Yes	0.461	0.150	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.81**
		L_9 - L_{10}	537.14	-355.92	-923	882	-1054	-407	-28	107	0	121	0.696	0.300	1.00	Yes	0.405	0.182	0.59	Yes	0.547	0.167	0.72	Yes	0.542	0.279	0.83	Yes	1.00	**12.43**
		L_{10} - L_{11}	-----	-1028.88	-949	1077	-517	-860	141	-341	96	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.065	0.91	Yes	0.828	0.169	1.00	Yes	1.00	**11.80**
		L_{11} - L_{12}	-----	-1164.17	-214	1962	-57	532	-58	-84	-90	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.245	1	Yes	0.737	0.260	1.00	Yes	1.00	**6.46**
		L_{12} - L_{13}	-----	-1153.36	844	59	1984	-615	-279	-232	-125	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.253	1	Yes	0.730	0.263	1.00	Yes	1.00	**5.79**
		L_{13} - L_{14}	-----	-1081.83	87	272	129	-821	-114	-61	-16	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.074	0.96	Yes	0.871	0.129	1.00	Yes	1.00	**6.48**
		L_{14} - L_{15}	-----	-747.78	576	156	504	-513	56	-46	-27	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.115	0.99	Yes	0.863	0.127	1.00	Yes	1.00	**4.81**
		L_{15} - L_{16}	50.79	-518.21	458	140	488	-781	9	-79	-96	134	0.066	0.231	0.30	Yes	0.039	0.152	0.20	Yes	0.797	0.094	0.9	Yes	0.790	0.207	1.00	Yes	1.00	**4.07**
		L_{16} - L_{17}	626.11	-----	-439	64	-96	-1059	51	-6	-118	89	0.720	0.275	1.00	Yes	0.428	0.178	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_{17} - L_{18}	628.55	-----	-263	-23	-490	-896	-27	353	-25	98	0.723	0.273	1.00	Yes	0.418	0.163	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		L_{18} - L_{19}	452.62	-----	-527	230	-513	-729	49	-147	17	387	0.693	0.302	1.00	Yes	0.423	0.200	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{19} - L_{20}	-----	-68.62	-2914	1902	219	-302	1428	388	-211	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.125	0.747	0.88	Yes	0.124	0.875	1.00	Yes	1.00	**28.17**

Moment (End) AB Operating

Operating Loads - 5C1

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																		
Center Truss - Verticals	Structure 1	$U_0 - L_0$	-----	-341.86	-131	184	-18	41	-493	-158	-85	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.723	0.235	0.96	Yes	1.00	**1.68**
		$U_1 - L_1$	50.84	-301.52	-274	276	39	-35	495	223	84	39	0.091	0.497	0.59	Yes	0.050	0.273	0.33	Yes	0.659	0.229	0.89	Yes	0.638	0.353	1.00	Yes	1.00	**4.89**
		$U_2 - L_2$	115.59	-276.49	-291	323	102	-115	275	177	71	8	0.208	0.493	0.71	Yes	0.114	0.271	0.39	Yes	0.604	0.206	0.82	Yes	0.585	0.413	1.00	Yes	1.00	**7.09**
		$U_3 - L_3$	243.31	-231.35	-361	362	375	-347	68	261	246	174	0.438	0.554	1.00	Yes	0.241	0.305	0.55	Yes	0.507	0.156	0.67	Yes	0.490	0.479	0.97	Yes	1.00	**11.10**
		$U_4 - L_4$	26.35	-239.90	-95	65	379	-358	-64	79	-95	-90	0.047	0.512	0.56	Yes	0.026	0.282	0.31	Yes	0.527	0.138	0.67	Yes	0.508	0.484	1.00	Yes	1.00	**9.20**
		$U_5 - L_5$	-----	-426.33	44	-58	229	-251	-103	-80	-125	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.103	0.88	Yes	0.736	0.255	1.00	Yes	1.00	**3.93**
		$U_6 - L_6$	-----	-520.64	73	-69	272	-289	-98	68	71	57	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.086	0.88	Yes	0.747	0.253	1.00	Yes	1.00	**3.91**
		$U_7 - L_7$	-----	-445.42	118	-132	295	-317	-129	46	-29	80	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.122	0.87	Yes	0.687	0.312	1.00	Yes	1.00	**2.53**
		$U_8 - L_8$	-----	-1291.59	-397	469	442	-527	-157	-66	-218	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.050	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.33**
		$U_9 - L_9$	-----	-646.85	-414	481	-167	190	-272	-228	-219	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.141	0.92	Yes	0.731	0.267	1.00	Yes	1.00	**3.50**
		$U_{10} - L_{10}$	-----	-795.19	-399	404	-132	101	-242	-181	-218	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.102	0.93	Yes	0.785	0.209	1.00	Yes	1.00	**5.26**
		$U_{11} - L_{11}$	-----	-662.19	-398	486	-113	158	2	93	-192	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.100	0.9	Yes	0.771	0.225	1.00	Yes	1.00	**4.85**
		$U_{12} - L_{12}$	-----	-501.67	-361	348	-59	61	-33	124	-173	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.111	0.84	Yes	0.688	0.308	1.00	Yes	1.00	**4.54**
		$U_{13} - L_{13}$	-----	-359.84	-254	270	-8	21	-19	147	-96	82	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.111	0.84	Yes	0.689	0.308	1.00	Yes	1.00	**3.78**
		$U_{14} - L_{14}$	-----	-227.19	-389	402	204	-197	44	101	-143	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.507	0.176	0.69	Yes	0.481	0.513	1.00	Yes	1.00	**9.66**
		$U_{15} - L_{15}$	186.70	-316.52	-156	143	239	-254	-152	-140	12	-176	0.336	0.375	0.72	Yes	0.185	0.206	0.40	Yes	0.709	0.163	0.88	Yes	0.670	0.325	1.00	Yes	1.00	**5.44**
		$U_{16} - L_{16}$	70.25	-319.60	-32	14	244	-249	-108	-85	-125	-203	0.126	0.377	0.51	Yes	0.069	0.208	0.28	Yes	0.720	0.164	0.89	Yes	0.676	0.319	1.00	Yes	1.00	**4.16**
		$U_{17} - L_{17}$	-----	-439.73	46	-58	216	-235	-173	-102	-48	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.133	0.96	Yes	0.759	0.238	1.00	Yes	1.00	**3.34**
		$U_{18} - L_{18}$	-----	-532.05	123	-128	435	-445	-162	-62	96	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.093	0.88	Yes	0.740	0.252	1.00	Yes	1.00	**3.54**
		$U_{19} - L_{19}$	-----	-653.28	137	-150	490	-513	-66	10	410	60	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.148	0.97	Yes	0.760	0.238	1.00	Yes	1.00	**3.93**
		$U_{20} - L_{20}$	-----	-597.66	166	-213	405	-493	29	4	610	80	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1	Yes	0.696	0.229	0.93	Yes	1.00	**2.67**
	Structure 2	$U_0 - L_0$	-----	-613.94	-439	524	-108	172	-1114	-189	-262	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.256	1	Yes	0.658	0.222	0.89	Yes	1.00	**2.87**
		$U_1 - L_1$	-----	-714.98	-514	534	-103	110	-652	-150	51	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.167	0.99	Yes	0.766	0.227	1.00	Yes	1.00	**4.34**
		$U_2 - L_2$	-----	-582.29	-493	491	-70	78	-61	53	108	47	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.084	0.87	Yes	0.742	0.252	1.00	Yes	1.00	**4.33**
		$U_3 - L_3$	-----	-489.52	-246	253	-36	42	80	194	27	135	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.112	0.95	Yes	0.768	0.231	1.00	Yes	1.00	**4.02**
		$U_4 - L_4$	40.38	-326.28	-235	229	14	1	-41	148	-101	63	0.073	0.343	0.42	Yes	0.040	0.189	0.23	Yes	0.740	0.103	0.85	Yes	0.690	0.300	1.00	Yes	1.00	**4.16**
		$U_5 - L_5$	166.18	-315.78	-243	254	115	-106	-45	170	-109	96	0.299	0.374	0.68	Yes	0.164	0.206	0.38	Yes	0.713	0.124	0.84	Yes	0.668	0.325	1.00	Yes	1.00	**5.57**
		$U_6 - L_6$	360.57	-237.20	-234	234	214	-224	13	165	-132	93	0.649	0.347	1.00	Yes	0.357	0.191	0.55	Yes	0.534	0.101	0.64	Yes	0.502	0.300	0.81	Yes	1.00	**6.75**
		$U_7 - L_7$	-----	-229.01	-138	138	354	-396	-123	7	-135	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.517	0.185	0.71	Yes	0.485	0.507	1.00	Yes	1.00	**10.14**
		$U_8 - L_8$	-----	-464.46	33	-54	360	-370	-140	-111	-198	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.125	0.8	Yes	0.669	0.323	1.00	Yes	1.00	**3.76**
		$U_9 - L_9$	-----	-694.64	122	-149	579	-590	-162	-108	-225	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.093	0.87	Yes	0.744	0.250	1.00	Yes	1.00	**4.58**
		$U_{10} - L_{10}$	-----	-798.16	153	-165	543	-566	-115	-82	-3	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.088	0.88	Yes	0.746	0.250	1.00	Yes	1.00	**4.83**
		$U_{11} - L_{11}$	-----	-822.41	172	-183	512	-521	-53	-66	-111	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.079	0.91	Yes	0.769	0.230	1.00	Yes	1.00	**4.38**
		$U_{12} - L_{12}$	-----	-886.79	173	-157	527	-535	81	51	144	113	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.090	0.95	Yes	0.769	0.230	1.00	Yes	1.00	**4.35**
		$U_{13} - L_{13}$	-----	-745.67	242	-240	574	-560	-90	42	66	91	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.113	0.95	Yes	0.719	0.274	1.00	Yes	1.00	**3.29**
		$U_{14} - L_{14}$	-----	-1301.48	-493	454	598	-573	-129	26	40	87	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.042	1	Yes	0.863	0.106	0.97	Yes	1.00	**5.30**
		$U_{15} - L_{15}$	-----	-674.55	-549	545	-164	166	-742	-163	-77	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.244	1	Yes	0.650	0.262	0.92	Yes	1.00	**3.83**
		$U_{16} - L_{16}$	-----	-715.67	-534	518	-122	91	-502	-310	-161	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.153	0.98	Yes	0.767	0.227	1.00	Yes	1.00	**4.62**
		$U_{17} - L_{17}$	-----	-640.99	-547	536	-118	115	-139	-38	-93	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.088	0.88	Yes	0.746	0.254	1.00	Yes	1.00	**4.47**
		$U_{18} - L_{18}$	-----	-577.48	-502	508	-91	91	-31	50	-78	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.074	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.41**
		$U_{19} - L_{19}$	-----	-467.95	-312	297	-40	47	-106	44	-156	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.099	0.81	Yes	0.699	0.300	1.00	Yes	1.00	**4.18**
		$U_{20} - L_{20}$	16.30	-369.38	-251	251	4	1	-72	80	-156	12	0.027	0.327	0.36	Yes	0.015	0.180	0.20	Yes	0.757	0.111	0.87	Yes	0.708	0.287	1.00	Yes	1.00	**4.17**
		$U_{21} - L_{21}$	75.45	-319.86	-240	248	52	-47	-42	87	-148	31	0.136	0.360	0.50	Yes	0.075	0.198	0.28	Yes	0.723	0.123	0.85	Yes	0.677	0.317	1.00	Yes	1.00	**4.45**
		$U_{22} - L_{22}$	33.10	-225.02	-399	405	340	-358	-35	32	-215	-80	0.060	0.580	0.64	Yes	0.033	0.319	0.36	Yes	0.506	0.188	0.7	Yes	0.476	0.518	1.00	Yes	1.00	**13.20**
		$U_{23} - L_{23}$	119.36	-320.18	-90	78	238	-248	-98	-51	-128	-124	0.215	0.354	0.57	Yes	0.118	0.195	0.32	Yes	0.723	0.132	0.86	Yes	0.677	0.317	1.00	Yes	1.00	**4.51**
		$U_{24} - L_{24}$	24.93	-377.12	-14	5	230	-237	-90	-62	-117	-102	0.041	0.301	0.35	Yes	0.022	0.166	0.19	Yes	0.773	0.109	0.89	Yes	0.722	0.271	1.00	Yes	1.00	**3.80**
		$U_{25} - L_{25}$	-----	-473.83	35	-51	296	-294	-98	-30	-13	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.084	0.8	Yes	0.708	0.285	1.00	Yes	1.00	**3.66**
		$U_{26} - L_{26}$	-----	-569.63	102	-109	507	-532	-163	-31	-125	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.094	0.86	Yes	0.726	0.272	1.00	Yes	1.00	**3.99**
		$U_{27} - L_{27}$	-----	-630.71	139	-140	549	-556	-151	-1	4	37	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.083	0.87	Yes	0.734	0.258	1.00	Yes	1.00	**3.85**
		$U_{28} - L_{28}$	-----	-712.20	135	-132	551	-547	-119	21	109	100	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.075	0.9	Yes	0.763	0.234	1.00	Yes	1.00	**3.90**
		$U_{29} - L_{29}$	-----	-713.08	202	-208	641	-628	-118	23	53	82	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.122	0.92	Yes	0.687	0.307	1.00	Yes	1.00	**4.04**
		$U_{30} - L_{30}$	-----	-1287.63	-538	478	589	-584	-182	-20	-100	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.942	0.056	1	Yes	0.854	0.104	0.96	Yes	1.00	**5.49**
		$U_{31} - L_{31}$	-----	-724.60	-550	534	-176	171	-396	-177	-113	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.699	0.263	0.97	Yes	1.00	**3.90**
		$U_{32} - L_{32}$	-----	-892.68	-520	504	-122	91	-284	-131	-187	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.130	0.99	Yes	0.774	0.223	1.00	Yes	1.00	**5.27**
		$U_{33} - L_{33}$	-----	-837.41	-473	479	-163	141	-119	8	-143	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.081	0.93	Yes	0.783	0.211	1.00	Yes	1.00	**4.91**
		$U_{34} - L_{34}$	-----	-795.86	-570	568	-113	128	-76	101	-183	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.087	0.88	Yes	0.744	0.252	1.00	Yes	1.00	**5.90**
		$U_{35} - L_{35}$	-----	-694.53	-590	584	-106	127	-73	141	-175	45	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.073	0.85	Yes	0.744	0.250	1.00	Yes	1.00	**5.25**
		$U_{36} - L_{36}$	-----	-471.27	-353	359	-42	59	12	160	-143	71	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.096	0.78	Yes	0.679	0.314	1.00	Yes	1.00	**4.09**
		$U_{37} - L_{37}$	48.73	-42.39	-610	662	220	-243	-63	111	-199	-38	0.088	0.903	1.00	Yes	0.048	0.497	0.55	Yes	0.096	0.265	0.37	Yes	0.090	0.846	0.94	Yes	1.00	**17.15**
		$U_{38} - L_{38}$	350.95	-174.13	-241	242	168	-166	-101	-104	-153	-184	0.631	0.362	1.00	Yes	0.347	0.199	0.55	Yes	0.392	0.138	0.53	Yes	0.368	0.309	0.68	Yes	1.00	**5.50**
		$U_{39} - L_{39}$	167.04	-328.79	-133	120	214	-232	-135	-106	-132	-170	0.300	0.346	0.65	Yes	0.165	0.190	0.36	Yes	0.743	0.158	0.91	Yes	0.696	0.297	1.00	Yes	1.00	**5.13**
		$U_{40} - L_{40}$	52.84	-339.20	-31	8	219	-220	-107	-78	-35	-110	0.095	0.313	0.41	Yes	0.052	0.172	0.23	Yes	0.769	0.120	0.89	Yes	0.718	0.281	1.00	Yes	1.00	**3.95**
		$U_{41} - L_{41}$	-----	-486.87	39	-46	247	-259	-105	-42	-113	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.105	0.94	Yes	0.764	0.236	1.00	Yes	1.00	**3.74**
		$U_{42} - L_{42}$	-----	-580.41	96	-106	496	-502	-85	-50	144	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.090	0.87	Yes	0.740	0.257	1.00	Yes	1.00	**3.90**
		$U_{43} - L_{43}$	-----	-707.94	132	-149	536	-555	-43	-22	432	57	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.127	0.94	Yes	0.759	0.235	1.00	Yes	1.00	**3.95**
		$U_{44} - L_{44}$	-----	-685.07	188	-232	469	-592	-45	-8	489	83	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.180	1	Yes	0.734	0.251	0.99	Yes	1.00	**3.18**
	Structure 3	$U_0 - L_0$	-----	-555.20	-426	482	-101	166	-945	-124	-251	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.261	1	Yes	0.646	0.224	0.88	Yes	1.00	**3.01**
		$U_1 - L_1$	-----	-662.11	-467	481	-109	116	-283	-29	4	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.124	0.95	Yes	0.771	0.223	1.00	Yes	1.00	**4.46**
		$U_2 - L_2$	-----	-531.49	-457	454	-86	91	-14	62	87	34	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.081	0.86	Yes	0.739	0.259	1.00	Yes	1.00	**4.61**
		$U_3 - L_3$	-----	-439.31	-216	229	-32	43	-10	175	2	120	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.113	0.94	Yes	0.758	0.232	1.00	Yes	1.00	**3.87**
		$U_4 - L_4$	56.73	-321.30	-246	247	24	-14	-20	224	-163	81	0.102	0.381	0.49	Yes	0.056	0.209	0.27	Yes	0.724	0.116	0.85	Yes	0.680	0.316	1.00	Yes	1.00	**4.54**
		$U_5 - L_5$	209.44	-299.82	-275	284	140	-138	-122	160	-150	72	0.377	0.409	0.79	Yes	0.207	0.225	0.44	Yes	0.672	0.136	0.81	Yes	0.634	0.363	1.00	Yes	1.00	**6.33**
		$U_6 - L_6$	6.19	-224.94	-250	247	397	-403	-89	72	-234	-95	0.011	0.582	0.60	Yes	0.006	0.320	0.33	Yes	0.502	0.192	0.7	Yes	0.476	0.515	1.00	Yes	1.00	**10.38**
		$U_7 - L_7$	-----	-370.07	-3	-10	232	-254	-176	-133	-215	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.155	0.91	Yes	0.709	0.289	1.00	Yes	1.00	**3.42**
		$U_8 - L_8$	-----	-511.00	44	-51	343	-341	-174	-125	-239	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.135	0.88	Yes	0.701	0.293	1.00	Yes	1.00	**4.26**
		$U_9 - L_9$	-----	-659.20	100	-148	399	-500	-69	-77	-196	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.107	0.9	Yes	0.767	0.232	1.00	Yes	1.00	**4.44**
		$U_{10} - L_{10}$	-----	-788.21	124	-111	396	-428	105	112	104	124	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.072	0.89	Yes	0.778	0.222	1.00	Yes	1.00	**4.68**
		$U_{11} - L_{11}$	-----	-649.44	183	-213	417	-470	-45	65	82	138	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.103	0.88	Yes	0.734	0.261	1.00	Yes	1.00	**2.90**
		$U_{12} - L_{12}$	-----	-1290.22	-379	402	404	-536	-38	21	70	80	-----	-----	-----	-----	-----	-----	-----	-----	0.932	0.043	0.98	Yes	0.895	0.100	1.00	Yes	1.00	**5.06**
		$U_{13} - L_{13}$	-----	-438.61	-300	324	-105	116	-157	-133	-104	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.149	0.89	Yes	0.677	0.319	1.00	Yes	1.00	**2.96**
		$U_{14} - L_{14}$	-----	-513.85	-296	291	-64	56	-239	-127	-214	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.132	0.92	Yes	0.737	0.259	1.00	Yes	1.00	**5.12**
		$U_{15} - L_{15}$	-----	-427.31	-239	251	-43	49	-159	7	-179	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.114	0.89	Yes	0.737	0.255	1.00	Yes	1.00	**4.85**
		$U_{16} - L_{16}$	-----	-249.94	-368	349	72	-43	-41	75	-268	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.550	0.187	0.74	Yes	0.529	0.470	1.00	Yes	1.00	**8.97**
		$U_{17} - L_{17}$	291.74	-230.22	-311	316	191	-213	-219	-94	-101	-189	0.525	0.467	1.00	Yes	0.289	0.257	0.55	Yes	0.504	0.153	0.66	Yes	0.487	0.404	0.90	Yes	1.00	**7.37**
		$U_{18} - L_{18}$	70.29	-286.81	-133	128	267	-304	17	-1	-209	-157	0.126	0.448	0.58	Yes	0.070	0.247	0.32	Yes	0.627	0.169	0.8	Yes	0.607	0.388	1.00	Yes	1.00	**6.06**
		$U_{19} - L_{19}$	29.66	-322.75	-41	29	245	-245	-171	-94	-6	-52	0.053	0.362	0.42	Yes	0.029	0.199	0.23	Yes	0.705	0.135	0.85	Yes	0.683	0.313	1.00	Yes	1.00	**4.14**
		$U_{20} - L_{20}$	-----	-334.45	43	-49	170	-225	-199	-64	224	72	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.165	0.92	Yes	0.708	0.288	1.00	Yes	1.00	**2.08**

Moment (End) AB Operating

Operating Loads - 5C1

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	$U_0 - L_1$	402.02	-68.68	-224	103	15	-14	-820	-174	-36	-15	0.527	0.468	1.00	Yes	0.318	0.258	0.58	Yes	0.117	0.323	0.45	Yes	0.106	0.262	0.37	Yes	1.00	**5.27**
		$U_1 - L_2$	376.24	-----	-74	40	-27	-42	54	-91	-781	-384	0.677	0.321	1.00	Yes	0.372	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		$U_2 - L_3$	314.22	-323.03	-54	41	-43	-92	-133	-361	-391	-197	0.565	0.231	0.80	Yes	0.311	0.127	0.44	Yes	0.744	0.252	1	Yes	0.684	0.118	0.81	Yes	1.00	**8.57**
		$U_3 - L_4$	-----	-380.27	17	-7	16	-67	-74	9	-220	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.127	1	Yes	0.805	0.086	0.90	Yes	1.00	**4.28**
		$U_4 - L_4$	538.14	-----	-8	85	-126	-25	355	282	-75	-139	0.789	0.211	1.00	Yes	0.434	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		$U_4 - L_5$	706.31	-----	-182	225	-35	76	34	-95	186	93	0.835	0.162	1.00	Yes	0.459	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		$U_5 - L_5$	651.03	-----	-302	258	-77	85	320	129	294	169	0.770	0.230	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_5 - L_7$	649.52	-----	-107	311	-8	115	298	193	240	172	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_8 - L_9$	970.17	-----	-98	355	-4	136	482	193	106	116	0.776	0.219	1.00	Yes	0.480	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_9 - L_{10}$	1046.58	-----	-293	288	-97	85	221	180	89	104	0.837	0.159	1.00	Yes	0.518	0.089	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		$U_{10} - L_{11}$	1024.14	-----	-221	217	-91	68	-181	-225	-9	-9	0.865	0.132	1.00	Yes	0.535	0.074	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		$U_{11} - L_{12}$	846.13	-----	-228	170	-105	-18	-356	-379	-126	-152	0.837	0.163	1.00	Yes	0.460	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{12} - L_{13}$	617.98	-----	-181	173	-56	2	-413	-381	-244	-259	0.753	0.239	1.00	Yes	0.474	0.136	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{13} - L_{14}$	442.09	-35.90	-77	49	-12	-33	-312	-341	-291	-320	0.795	0.198	1.00	Yes	0.437	0.109	0.55	Yes	0.083	0.161	0.25	Yes	0.076	0.099	0.18	Yes	1.00	**3.92**
		$U_{15} - L_{14}$	273.98	-328.54	-60	19	74	-110	-240	-370	-195	-316	0.493	0.247	0.74	Yes	0.271	0.136	0.41	Yes	0.770	0.230	1	Yes	0.695	0.140	0.84	Yes	1.00	**6.02**
		$U_{16} - L_{15}$	417.02	-131.48	-123	90	22	-52	-224	-293	-159	-167	0.750	0.242	1.00	Yes	0.413	0.133	0.55	Yes	0.312	0.173	0.49	Yes	0.278	0.157	0.44	Yes	1.00	**4.93**
		$U_{17} - L_{16}$	535.84	-----	-146	108	-18	-14	-160	-256	-136	-134	0.786	0.208	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{18} - L_{17}$	657.40	-----	-335	266	-97	54	-149	-177	-100	-66	0.777	0.222	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{19} - L_{18}$	731.89	-----	-356	268	-87	63	-23	-125	-89	-13	0.793	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{20} - L_{19}$	652.31	-----	-393	317	-127	106	-539	-135	1	35	0.707	0.290	1.00	Yes	0.389	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
	Structure 2	$U_0 - L_1$	683.26	-----	-430	363	-62	72	-813	-75	-119	54	0.676	0.321	1.00	Yes	0.372	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_1 - L_2$	805.40	-----	-399	343	-67	42	-15	-102	66	19	0.797	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_2 - L_3$	651.50	-----	-317	264	-54	40	-185	-251	-70	-181	0.770	0.225	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_3 - L_4$	579.34	-----	-169	147	-43	-4	-343	-336	-319	-217	0.772	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_4 - L_5$	412.68	-132.14	-118	96	12	-42	-346	-303	-216	-216	0.742	0.251	1.00	Yes	0.408	0.138	0.55	Yes	0.326	0.196	0.53	Yes	0.280	0.151	0.44	Yes	1.00	**4.73**
		$U_5 - L_6$	369.53	-306.69	-99	70	67	-109	-453	-329	-375	-257	0.665	0.271	0.94	Yes	0.366	0.149	0.52	Yes	0.724	0.275	1	Yes	0.649	0.139	0.79	Yes	1.00	**5.66**
		$U_6 - L_7$	33.78	-371.99	-19	-8	55	-94	-313	-268	-297	-263	0.055	0.188	0.25	Yes	0.030	0.104	0.14	Yes	0.796	0.195	1	Yes	0.713	0.107	0.82	Yes	1.00	**3.22**
		$U_8 - L_7$	613.50	-----	-176	145	-10	-20	-148	-279	-150	-233	0.782	0.214	1.00	Yes	0.492	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_8 - L_9$	732.45	-----	-330	261	-94	24	-149	-219	-122	-143	0.793	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{10} - L_9$	837.21	-----	-305	243	-86	60	-89	-175	33	-24	0.828	0.168	1.00	Yes	0.456	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{11} - L_{10}$	902.62	-----	-345	302	-113	104	99	-49	161	77	0.822	0.168	1.00	Yes	0.452	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		$U_{12} - L_{11}$	855.17	-----	-359	343	-105	145	169	64	460	263	0.779	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{13} - L_{12}$	758.79	-----	-430	383	-178	173	291	148	272	154	0.751	0.243	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		$U_{14} - L_{13}$	755.88	-----	-270	434	-61	175	301	156	236	139	0.748	0.246	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{14} - L_{15}$	623.61	-----	-209	361	5	99	311	34	40	31	0.737	0.261	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{15} - L_{16}$	625.91	-----	-367	325	-108	101	245	63	59	66	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{16} - L_{17}$	753.76	-----	-350	348	-68	92	6	-10	4	1	0.816	0.181	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{17} - L_{18}$	680.70	-----	-291	299	-57	73	-95	-87	-64	-38	0.805	0.187	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{18} - L_{19}$	679.27	-----	-268	265	-58	43	-224	-174	-134	-93	0.803	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{19} - L_{20}$	604.74	-14.60	-186	195	-21	-4	-246	-218	-136	-137	0.771	0.224	1.00	Yes	0.424	0.126	0.56	Yes	0.024	0.101	0.13	Yes	0.022	0.174	0.20	Yes	1.00	**5.04**
		$U_{20} - L_{21}$	432.66	-66.93	-112	111	2	-23	-244	-198	-234	-166	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	0.159	0.113	0.28	Yes	0.142	0.143	0.29	Yes	1.00	**4.31**
		$U_{21} - L_{22}$	403.54	-337.40	-84	72	40	-85	-286	-306	-317	-292	0.726	0.200	0.93	Yes	0.399	0.110	0.51	Yes	0.797	0.194	1	Yes	0.714	0.109	0.83	Yes	1.00	**6.25**
		$U_{22} - L_{22}$	424.84	-350.03	-94	79	82	-106	-107	-285	-179	-281	0.764	0.219	0.99	Yes	0.420	0.120	0.55	Yes	0.834	0.162	1	Yes	0.741	0.136	0.88	Yes	1.00	**7.45**
		$U_{24} - L_{23}$	445.71	-92.20	-121	107	18	-32	-72	-134	-89	-86	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	0.221	0.063	0.29	Yes	0.195	0.155	0.35	Yes	1.00	**4.43**
		$U_{25} - L_{24}$	625.02	-----	-195	184	2	-8	-4	-114	30	-31	0.797	0.198	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_{26} - L_{25}$	690.47	-----	-282	269	-40	41	110	-25	99	42	0.816	0.180	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{27} - L_{26}$	670.37	-----	-306	296	-64	76	147	41	174	76	0.793	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{28} - L_{27}$	720.36	-----	-338	358	-81	101	210	101	184	108	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{29} - L_{28}$	622.68	-----	-379	341	-122	116	236	126	215	108	0.736	0.257	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		$U_{30} - L_{29}$	630.49	-----	-214	365	-36	125	228	124	176	100	0.745	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_{30} - L_{31}$	755.40	-----	-278	443	-17	127	260	-43	59	35	0.747	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{31} - L_{32}$	777.77	-----	-462	386	-122	126	105	-3	37	48	0.769	0.230	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{32} - L_{33}$	904.61	-----	-355	351	-124	124	-121	-106	-96	-82	0.824	0.167	1.00	Yes	0.453	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{33} - L_{34}$	900.98	-----	-329	322	-119	87	-281	-259	-181	-105	0.821	0.178	1.00	Yes	0.451	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		$U_{34} - L_{35}$	824.17	-----	-280	248	-97	50	-342	-339	-167	-208	0.815	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{35} - L_{36}$	712.04	-----	-301	262	-109	22	-439	-358	-393	-282	0.771	0.226	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{36} - L_{37}$	600.32	-44.66	-158	165	-23	-26	-378	-390	-364	-348	0.765	0.227	1.00	Yes	0.482	0.129	0.62	Yes	0.074	0.134	0.21	Yes	0.067	0.148	0.22	Yes	1.00	**5.21**
		$U_{38} - L_{37}$	69.02	-386.08	-33	-7	81	-104	-157	-253	-158	-244	0.112	0.184	0.30	Yes	0.062	0.101	0.17	Yes	0.834	0.159	1	Yes	0.740	0.118	0.86	Yes	1.00	**3.76**
		$U_{39} - L_{38}$	376.74	-334.87	-111	66	92	-120	-241	-280	-192	-199	0.678	0.234	0.92	Yes	0.373	0.129	0.51	Yes	0.798	0.196	1	Yes	0.709	0.153	0.87	Yes	1.00	**5.95**
		$U_{40} - L_{39}$	431.33	-113.64	-126	93	29	-49	-144	-206	-62	-96	0.776	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.272	0.134	0.41	Yes	0.240	0.161	0.41	Yes	1.00	**4.66**
		$U_{41} - L_{40}$	597.82	-----	-179	137	-25	-8	-71	-164	-66	-59	0.797	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{42} - L_{41}$	661.14	-----	-335	275	-66	43	-70	-105	-1	-1	0.782	0.209	1.00	Yes	0.430	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{43} - L_{42}$	799.73	-----	-396	320	-88	58	-68	-110	-7	-32	0.791	0.200	1.00	Yes	0.435	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{44} - L_{43}$	776.20	-----	-396	374	-134	117	-320	-136	37	3	0.768	0.232	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
	Structure 3	$U_0 - L_1$	606.33	-----	-426	313	-69	72	-749	-146	-133	50	0.657	0.341	1.00	Yes	0.361	0.188	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_1 - L_2$	726.53	-----	-368	257	-88	54	-15	-115	38	12	0.787	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		$U_2 - L_3$	650.42	-----	-308	267	-71	42	-188	-298	-72	-168	0.769	0.228	1.00	Yes	0.423	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_3 - L_4$	524.00	-----	-135	112	-24	-18	-371	-390	-330	-234	0.768	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		$U_4 - L_5$	403.28	-219.83	-113	101	14	-59	-428	-361	-361	-249	0.725	0.268	1.00	Yes	0.399	0.147	0.55	Yes	0.521	0.233	0.76	Yes	0.465	0.144	0.61	Yes	1.00	**5.77**
		$U_5 - L_6$	226.00	-282.28	-43	10	35	-97	-400	-365	-605	-437	0.406	0.299	0.71	Yes	0.224	0.164	0.39	Yes	0.661	0.333	1	Yes	0.597	0.124	0.73	Yes	1.00	**4.59**
		$U_7 - L_6$	447.28	-72.69	-81	50	5	-36	-112	-291	-139	-262	0.804	0.188	1.00	Yes	0.442	0.103	0.55	Yes	0.169	0.121	0.3	Yes	0.154	0.104	0.26	Yes	1.00	**4.44**
		$U_8 - L_7$	639.77	-----	-190	155	-62	6	-174	-242	-185	-146	0.780	0.213	1.00	Yes	0.491	0.120	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_8 - L_9$	855.07	-----	-253	137	-133	-5	-28	-199	-145	-96	0.846	0.147	1.00	Yes	0.465	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_{10} - L_9$	1023.77	-----	-248	197	-74	67	85	-47	136	56	0.865	0.132	1.00	Yes	0.535	0.074	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{11} - L_{10}$	1006.04	-----	-310	266	-101	87	444	279	306	197	0.804	0.194	1.00	Yes	0.498	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{12} - L_{11}$	972.55	-----	-105	369	-13	141	397	284	281	211	0.777	0.215	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{13} - L_{12}$	658.17	-----	-88	307	-3	106	228	154	112	90	0.778	0.216	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{13} - L_{14}$	680.61	-----	-287	235	-70	76	128	76	95	120	0.805	0.187	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{14} - L_{15}$	687.65	-----	-163	233	-53	63	-136	-195	-269	-77	0.813	0.182	1.00	Yes	0.447	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		$U_{15} - L_{16}$	519.13	-----	-55	86	-62	-26	-215	-245	-643	-451	0.761	0.237	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{17} - L_{16}$	177.72	-94.64	31	20	-241	-291	128	16	-1046	-1031	0.320	0.674	1.00	Yes	0.176	0.371	0.55	Yes	0.216	0.426	0.65	Yes	0.200	0.371	0.58	Yes	1.00	**27.19**
		$U_{18} - L_{17}$	163.21	-380.20	-35	22	-23	-62	12	-192	-285	-60	0.294	0.162	0.46	Yes	0.161	0.089	0.26	Yes	0.875	0.121	1	Yes	0.804	0.079	0.89	Yes	1.00	**6.22**
		$U_{19} - L_{18}$	464.92	-33.39	-94	35	28	-41	53	-123	-74	-89	0.836	0.156	1.00	Yes	0.460	0.086	0.55	Yes	0.077	0.068	0.15	Yes	0.071	0.121	0.20	Yes	1.00	**5.73**
		$U_{20} - L_{19}$	406.32	-61.75	-192	120	-14	-3	-936	-63	40	-9	0.533	0.460	1.00	Yes	0.322	0.254	0.58	Yes	0.105	0.293	0.4	Yes	0.095	0.224	0.32	Yes	1.00	**6.02**

Moment (End) AB Operating

Operating Loads - 5C1

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

DL Factor: 1.300 Pedestrian 1.300
LL Factor: 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	$U_0 - U_1$	42.75	-532.36	-168	123	373	-1158	-96	159	31	-864	0.049	0.421	0.48	Yes	0.034	0.288	0.33	Yes	0.724	0.211	0.94	Yes	0.718	0.275	1.00	Yes	1.00	**6.69**
		$U_1 - U_2$	75.38	-530.45	-90	146	-298	-771	-172	163	-128	-444	0.086	0.258	0.35	Yes	0.059	0.177	0.24	Yes	0.722	0.277	1	Yes	0.715	0.183	0.90	Yes	1.00	**4.06**
		$U_2 - U_3$	329.11	-556.04	-37	449	-367	-627	-135	207	-456	-534	0.377	0.239	0.62	Yes	0.254	0.158	0.42	Yes	0.757	0.236	1	Yes	0.750	0.149	0.90	Yes	1.00	**5.75**
		$U_3 - U_4$	588.00	-595.59	196	481	-398	-649	-242	0	-361	-328	0.674	0.215	0.89	Yes	0.463	0.147	0.61	Yes	0.810	0.183	1	Yes	0.803	0.154	0.96	Yes	1.00	**6.18**
		$U_4 - U_5$	674.89	-585.04	299	522	-492	-410	-96	15	-548	462	0.774	0.217	1.00	Yes	0.531	0.148	0.68	Yes	0.796	0.187	0.99	Yes	0.789	0.124	0.92	Yes	1.00	**7.12**
		$U_5 - U_6$	731.99	-86.88	302	520	-339	175	102	152	-201	136	0.839	0.158	1.00	Yes	0.566	0.103	0.67	Yes	0.118	0.146	0.27	Yes	0.117	0.124	0.25	Yes	1.00	**5.42**
		$U_6 - U_7$	853.36	-----	398	213	332	-92	307	268	16	694	0.816	0.180	1.00	Yes	0.570	0.124	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_7 - U_8$	864.52	-----	-694	2087	136	584	393	702	778	695	0.599	0.395	1.00	Yes	0.418	0.270	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**
		$U_8 - U_9$	765.92	-----	1049	-151	1856	-1135	250	450	481	-396	0.628	0.370	1.00	Yes	0.429	0.252	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_9 - U_{10}$	629.81	-251.45	235	253	236	-832	2	306	73	-759	0.683	0.308	1.00	Yes	0.463	0.207	0.67	Yes	0.324	0.169	0.5	Yes	0.321	0.186	0.51	Yes	1.00	**7.38**
		$U_{10} - U_{11}$	90.56	-622.44	260	-164	166	-910	49	110	111	-536	0.098	0.290	0.39	Yes	0.065	0.187	0.26	Yes	0.801	0.168	0.97	Yes	0.794	0.204	1.00	Yes	1.00	**4.08**
		$U_{11} - U_{12}$	-----	-911.18	164	-201	58	-822	13	107	-41	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.131	1	Yes	0.855	0.136	1.00	Yes	1.00	**3.09**
		$U_{12} - U_{13}$	-----	-1227.10	-44	-267	-238	-903	84	9	-44	-462	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.163	1	Yes	0.820	0.124	0.95	Yes	1.00	**3.42**
		$U_{13} - U_{14}$	-----	-1389.96	-196	-506	-483	-1392	-42	-8	-190	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.191	1	Yes	0.797	0.154	0.96	Yes	1.00	**3.03**
		$U_{14} - U_{15}$	-----	-1421.21	-402	-289	-1022	-851	43	-276	-236	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.167	1	Yes	0.815	0.113	0.93	Yes	1.00	**3.22**
		$U_{15} - U_{16}$	-----	-1443.26	-257	-430	-518	-1006	-36	-252	-309	68	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.157	1	Yes	0.827	0.111	0.94	Yes	1.00	**3.67**
		$U_{16} - U_{17}$	-----	-1445.00	-375	-192	-932	-698	12	-218	-74	362	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.157	1	Yes	0.828	0.103	0.94	Yes	1.00	**4.72**
		$U_{17} - U_{18}$	-----	-1109.04	-695	109	-301	-238	-61	-219	-298	564	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.117	1	Yes	0.868	0.113	0.99	Yes	1.00	**4.37**
		$U_{18} - U_{19}$	-----	-731.12	-681	111	-411	-60	104	-336	668	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.167	1	Yes	0.823	0.137	0.96	Yes	1.00	**4.26**
		$U_{19} - U_{20}$	-----	-656.80	-1269	629	-368	-222	-316	-107	332	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.246	1	Yes	0.739	0.255	1.00	Yes	1.00	**12.90**
	Structure 2	$U_0 - U_1$	-----	-567.69	242	-292	1367	-1887	57	50	323	-701	-----	-----	-----	-----	-----	-----	-----	-----	0.675	0.158	0.84	Yes	0.670	0.320	1.00	Yes	1.00	**6.88**
		$U_1 - U_2$	-----	-811.40	-150	-313	-210	-1094	-23	26	42	-406	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.203	1	Yes	0.783	0.166	0.95	Yes	1.00	**3.49**
		$U_2 - U_3$	-----	-1154.89	-137	-414	-198	-1345	-36	-54	51	-641	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1	Yes	0.820	0.137	0.96	Yes	1.00	**3.46**
		$U_3 - U_4$	-----	-1359.74	-526	-525	-808	-1595	-121	-34	-260	-440	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.218	1	Yes	0.774	0.142	0.92	Yes	1.00	**3.12**
		$U_4 - U_5$	-----	-1477.56	-574	-530	-1003	-1757	-128	-78	-246	-645	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1	Yes	0.759	0.146	0.91	Yes	1.00	**3.27**
		$U_5 - U_6$	-----	-1562.13	-541	64	-1391	-1313	-201	-37	-301	-626	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.189	1	Yes	0.802	0.115	0.92	Yes	1.00	**3.81**
		$U_6 - U_7$	-----	-1333.66	-240	-140	-945	-1519	-171	-72	-390	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.231	1	Yes	0.759	0.135	0.90	Yes	1.00	**4.18**
		$U_7 - U_8$	-----	-1416.61	-314	-156	-909	-1166	-74	-171	-465	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.185	1	Yes	0.807	0.104	0.92	Yes	1.00	**3.71**
		$U_8 - U_9$	-----	-1205.38	-312	268	-1298	-564	-6	-179	-455	102	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.173	1	Yes	0.818	0.138	0.96	Yes	1.00	**4.20**
		$U_9 - U_{10}$	427.99	-940.39	-2	631	-1250	-226	-110	-204	-663	-120	0.314	0.224	0.54	Yes	0.213	0.151	0.37	Yes	0.816	0.182	1	Yes	0.812	0.152	0.97	Yes	1.00	**5.56**
		$U_{10} - U_{11}$	941.90	-487.47	421	680	-753	-271	-167	-71	-768	442	0.796	0.200	1.00	Yes	0.541	0.132	0.68	Yes	0.487	0.159	0.65	Yes	0.484	0.106	0.60	Yes	1.00	**7.36**
		$U_{11} - U_{12}$	698.76	-----	-1942	1466	-478	58	-487	-1062	-658	548	0.590	0.403	1.00	Yes	0.396	0.269	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.19**
		$U_{12} - U_{13}$	1150.74	-----	608	195	541	-767	423	541	-84	1233	0.777	0.214	1.00	Yes	0.554	0.149	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.25**
		$U_{13} - U_{14}$	1148.69	-----	-936	3845	-32	1478	400	1108	866	1065	0.565	0.432	1.00	Yes	0.400	0.284	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		$U_{14} - U_{15}$	1260.21	-----	2401	-62	3470	-1192	536	650	828	12	0.620	0.378	1.00	Yes	0.439	0.248	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{15} - U_{16}$	1341.14	-----	139	414	-21	-1265	181	426	-24	-473	0.811	0.184	1.00	Yes	0.577	0.124	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.69**
		$U_{16} - U_{17}$	1063.18	-----	671	218	654	-1072	-29	319	-103	-733	0.783	0.212	1.00	Yes	0.521	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.91**
		$U_{17} - U_{18}$	782.44	-205.75	503	276	206	-947	-60	296	-100	-352	0.785	0.212	1.00	Yes	0.523	0.141	0.67	Yes	0.244	0.175	0.42	Yes	0.243	0.161	0.41	Yes	1.00	**5.18**
		$U_{18} - U_{19}$	667.72	-621.41	653	207	363	-1229	3	178	-183	-770	0.670	0.321	1.00	Yes	0.440	0.206	0.65	Yes	0.738	0.248	0.99	Yes	0.734	0.209	0.95	Yes	1.00	**6.34**
		$U_{19} - U_{20}$	274.22	-731.52	297	128	-220	-997	-54	143	-183	-324	0.257	0.203	0.47	Yes	0.170	0.133	0.31	Yes	0.812	0.183	1	Yes	0.807	0.160	0.97	Yes	1.00	**4.20**
		$U_{20} - U_{21}$	113.56	-842.25	-66	92	-433	-976	-94	-6	23	-584	0.088	0.205	0.30	Yes	0.062	0.135	0.20	Yes	0.774	0.218	1	Yes	0.769	0.141	0.92	Yes	1.00	**4.48**
		$U_{21} - U_{22}$	60.00	-805.22	-76	-28	-483	-1242	-206	-115	-330	-174	0.047	0.216	0.27	Yes	0.033	0.145	0.18	Yes	0.740	0.258	1	Yes	0.735	0.180	0.92	Yes	1.00	**4.38**
		$U_{22} - U_{23}$	103.99	-858.82	1	-71	-676	-898	-34	-154	-274	110	0.081	0.160	0.25	Yes	0.057	0.107	0.17	Yes	0.790	0.208	1	Yes	0.784	0.130	0.92	Yes	1.00	**4.07**
		$U_{23} - U_{24}$	202.63	-896.69	-122	230	-694	-718	4	-76	-450	184	0.157	0.153	0.32	Yes	0.110	0.101	0.22	Yes	0.824	0.168	1	Yes	0.818	0.104	0.93	Yes	1.00	**5.01**
		$U_{24} - U_{25}$	788.54	-680.58	506	668	-437	-934	-16	12	-496	796	0.740	0.257	1.00	Yes	0.490	0.168	0.66	Yes	0.756	0.204	0.96	Yes	0.751	0.150	0.91	Yes	1.00	**10.33**
		$U_{25} - U_{26}$	802.04	-220.74	279	736	-318	-220	28	-16	-461	395	0.805	0.193	1.00	Yes	0.528	0.123	0.66	Yes	0.262	0.149	0.42	Yes	0.261	0.125	0.39	Yes	1.00	**7.94**
		$U_{26} - U_{27}$	-----	-386.32	-2270	1663	-1095	-908	-1248	-633	-2218	1560	-----	-----	-----	-----	-----	-----	-----	-----	0.459	0.537	1	Yes	0.456	0.385	0.85	Yes	1.00	**27.34**
		$U_{27} - U_{28}$	929.14	-----	-1239	1687	225	-64	-285	-640	-36	913	0.685	0.308	1.00	Yes	0.456	0.203	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.84**
		$U_{28} - U_{29}$	1344.21	-----	94	276	343	-779	-92	247	0	1147	0.813	0.186	1.00	Yes	0.578	0.128	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.35**
		$U_{29} - U_{30}$	1148.18	-----	-483	3706	105	1510	570	1185	1024	1208	0.565	0.426	1.00	Yes	0.400	0.280	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.31**
		$U_{30} - U_{31}$	1223.59	-----	2368	-236	3681	-1548	600	599	828	-140	0.602	0.397	1.00	Yes	0.426	0.261	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{31} - U_{32}$	1216.28	-----	85	363	-204	-914	206	392	94	-615	0.821	0.174	1.00	Yes	0.585	0.119	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		$U_{32} - U_{33}$	881.54	-124.00	606	164	404	-1045	5	230	177	-813	0.745	0.247	1.00	Yes	0.500	0.164	0.67	Yes	0.124	0.129	0.26	Yes	0.123	0.147	0.28	Yes	1.00	**5.39**
		$U_{33} - U_{34}$	757.55	-786.88	555	251	117	-1506	-35	248	-166	-649	0.640	0.292	0.94	Yes	0.435	0.190	0.63	Yes	0.787	0.203	0.99	Yes	0.782	0.212	1.00	Yes	1.00	**6.65**
		$U_{34} - U_{35}$	150.78	-956.84	424	-160	28	-1350	43	54	-12	-516	0.111	0.220	0.34	Yes	0.075	0.149	0.23	Yes	0.831	0.159	0.99	Yes	0.826	0.164	1.00	Yes	1.00	**4.11**
		$U_{35} - U_{36}$	-----	-1208.98	127	-444	-316	-1473	-18	100	89	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.174	1	Yes	0.820	0.157	0.98	Yes	1.00	**3.40**
		$U_{36} - U_{37}$	-----	-1426.05	-271	-296	-920	-1328	-20	-116	106	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1	Yes	0.812	0.118	0.94	Yes	1.00	**3.18**
		$U_{37} - U_{38}$	-----	-1426.30	-178	-404	-668	-1398	-93	-192	-386	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.179	1	Yes	0.812	0.125	0.94	Yes	1.00	**3.18**
		$U_{38} - U_{39}$	-----	-1587.53	-131	-619	-901	-1607	12	-203	-340	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.178	1	Yes	0.815	0.133	0.95	Yes	1.00	**3.35**
		$U_{39} - U_{40}$	-----	-1581.85	-619	-512	-1445	-1302	26	-104	-291	180	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.181	1	Yes	0.812	0.120	0.94	Yes	1.00	**3.61**
		$U_{40} - U_{41}$	-----	-1426.79	-486	-477	-1007	-1198	101	-146	135	359	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1	Yes	0.812	0.107	0.92	Yes	1.00	**4.21**
		$U_{41} - U_{42}$	-----	-1216.68	-1206	96	-921	-395	62	-217	-209	428	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.124	1	Yes	0.863	0.123	0.99	Yes	1.00	**4.77**
		$U_{42} - U_{43}$	-----	-877.56	-904	46	-368	-131	-87	-436	54	253	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.143	1	Yes	0.847	0.137	0.99	Yes	1.00	**5.00**
		$U_{43} - U_{44}$	-----	-626.43	-1397	731	-147	-262	-379	-171	-123	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.251	1	Yes	0.740	0.237	0.98	Yes	1.00	**11.13**
	Structure 3	$U_0 - U_1$	-----	-583.63	360	-297	1572	-1676	88	74	442	-961	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.217	0.88	Yes	0.657	0.337	1.00	Yes	1.00	**9.04**
		$U_1 - U_2$	-----	-704.01	-82	-227	-20	-791	-21	6	-21	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1	Yes	0.792	0.159	0.96	Yes	1.00	**3.39**
		$U_2 - U_3$	-----	-1031.58	-54	-239	47	-839	-33	-57	-70	-682	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1	Yes	0.807	0.137	0.95	Yes	1.00	**3.45**
		$U_3 - U_4$	-----	-1360.49	-221	-366	-484	-1326	-109	-33	-213	-486	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.780	0.146	0.93	Yes	1.00	**3.83**
		$U_4 - U_5$	-----	-1370.01	-437	-117	-661	-966	-94	-43	-313	-712	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.196	1	Yes	0.785	0.107	0.90	Yes	1.00	**3.93**
		$U_5 - U_6$	-----	-1351.54	-260	-383	-568	-1341	-185	-152	-357	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.775	0.148	0.93	Yes	1.00	**3.13**
		$U_6 - U_7$	-----	-1414.56	-490	-147	-1125	-741	-117	-298	-361	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.811	0.124	0.94	Yes	1.00	**3.66**
		$U_7 - U_8$	-----	-1234.96	-185	132	-543	-634	-80	-310	-417	129	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.157	1	Yes	0.825	0.087	0.92	Yes	1.00	**6.53**
		$U_8 - U_9$	-----	-897.89	-98	295	-622	-125	-229	-185	-544	328	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.142	1	Yes	0.842	0.103	0.95	Yes	1.00	**4.85**
		$U_9 - U_{10}$	-----	-598.20	-1034	436	-798	97	-202	-412	-316	309	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.184	0.96	Yes	0.763	0.232	1.00	Yes	1.00	**7.77**
		$U_{10} - U_{11}$	590.57	-----	-317	447	400	-88	-390	-197	-346	1551	0.641	0.350	1.00	Yes	0.434	0.234	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.37**
		$U_{11} - U_{12}$	781.20	-----	-624	1728	-96	667	4	522	508	499	0.640	0.354	1.00	Yes	0.438	0.241	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_{12} - U_{13}$	952.90	-----	1135	-3	1925	-867	63	462	274	-306	0.660	0.339	1.00	Yes	0.461	0.231	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{13} - U_{14}$	869.77	-----	230	373	90	-469	-109	387	-189	-467	0.832	0.164	1.00	Yes	0.581	0.113	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		$U_{14} - U_{15}$	625.64	-315.23	450	221	237	-671	-58	257	-136	-702	0.717	0.278	1.00	Yes	0.484	0.184	0.67	Yes	0.429	0.225	0.66	Yes	0.425	0.160	0.59	Yes	1.00	**5.24**
		$U_{15} - U_{16}$	368.93	-592.56	312	158	-170	-815	-74	225	12	101	0.423	0.232	0.66	Yes	0.290	0.159	0.45	Yes	0.806	0.176	0.99	Yes	0.799	0.194	1.00	Yes	1.00	**4.79**
		$U_{16} - U_{17}$	407.37	-617.35	404	81	-325	-675	210	-45	42	294	0.467	0.210	0.68	Yes	0.320	0.144	0.47	Yes	0.840	0.156	1	Yes	0.832	0.160	1.00	Yes	1.00	**5.34**
		$U_{17} - U_{18}$	188.78	-592.69	314	-149	-185	-740	85	38	-157	241	0.216	0.217	0.44	Yes	0.146	0.141	0.29	Yes	0.806	0.187	1	Yes	0.799	0.176	0.98	Yes	1.00	**5.11**
		$U_{18} - U_{19}$	-----	-557.85	-12	-66	-545	-273	193	-203	-126	430	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.237	1	Yes	0.752	0.130	0.89	Yes	1.00	**4.49**
		$U_{19} - U_{20}$	-----	-444.52	-142	103	-645	-738	-975	-112	1254	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.390	1	Yes	0.599	0.175	0.78	Yes	1.00	**12.62**

Moment (End) AB Operating

Operating Loads - 5C1

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	26.93	-128.93	-220	86	654	-1466	66	245	-656	-2410	0.041	0.957	1.00	Yes	0.024	0.571	0.60	Yes	0.234	0.696	0.93	Yes	0.232	0.440	0.68	Yes	1.00	**16.03**
		L_1 - L_2	400.34	-62.59	-27	87	75	-865	410	-189	-569	435	0.613	0.382	1.00	Yes	0.374	0.252	0.63	Yes	0.114	0.226	0.34	Yes	0.113	0.260	0.38	Yes	1.00	**5.83**
		L_2 - L_3	641.28	-192.49	-1	131	-527	-680	-194	141	427	-592	0.738	0.259	1.00	Yes	0.427	0.154	0.59	Yes	0.263	0.246	0.51	Yes	0.261	0.164	0.43	Yes	1.00	**5.28**
		L_3 - L_4	679.91	-396.13	49	442	-335	-663	352	-268	-52	-16	0.782	0.217	1.00	Yes	0.465	0.138	0.61	Yes	0.541	0.200	0.75	Yes	0.536	0.160	0.70	Yes	1.00	**5.75**
		L_4 - L_5	30.96	-564.07	104	469	-357	199	-73	200	85	-372	0.040	0.190	0.24	Yes	0.024	0.122	0.15	Yes	0.867	0.125	1	Yes	0.859	0.124	0.99	Yes	1.00	**3.15**
		L_5 - L_6	-----	-750.36	125	591	-158	297	162	-240	23	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.123	1	Yes	0.866	0.131	1.00	Yes	1.00	**3.00**
		L_6 - L_7	-----	-1108.52	-278	388	15	-361	259	792	-576	-926	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.095	1	Yes	0.892	0.061	0.96	Yes	1.00	**5.88**
		L_7 - L_8	-----	-1228.05	-123	1277	-6	608	359	553	487	247	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.204	1	Yes	0.778	0.169	0.95	Yes	1.00	**4.12**
		L_8 - L_9	-----	-1120.57	889	-2	1265	-215	205	315	194	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.275	1	Yes	0.710	0.167	0.88	Yes	1.00	**3.98**
		L_9 - L_{10}	-----	-1043.31	139	137	876	-999	431	-296	-49	702	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.080	0.93	Yes	0.840	0.157	1.00	Yes	1.00	**9.48**
		L_{10} - L_{11}	-----	-526.89	493	-61	316	-736	-274	44	-155	-797	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.140	0.96	Yes	0.803	0.195	1.00	Yes	1.00	**6.26**
		L_{11} - L_{12}	481.89	-119.96	364	-228	291	-813	131	-92	-889	206	0.624	0.371	1.00	Yes	0.374	0.237	0.62	Yes	0.184	0.196	0.39	Yes	0.183	0.215	0.40	Yes	1.00	**4.61**
		L_{12} - L_{13}	1046.86	-----	68	-150	-379	-608	-159	121	4	-506	0.826	0.167	1.00	Yes	0.528	0.101	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		L_{13} - L_{14}	1314.58	-----	194	-519	107	-1489	147	20	-153	204	0.773	0.222	1.00	Yes	0.501	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		L_{14} - L_{15}	1567.59	-----	-570	-153	-1470	-654	-153	162	-102	-758	0.766	0.230	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		L_{15} - L_{16}	1695.77	-----	-302	-368	-868	-1322	118	-136	-95	39	0.828	0.169	1.00	Yes	0.532	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.37**
		L_{16} - L_{17}	1219.40	-----	-1074	250	-798	-201	469	384	-277	-738	0.771	0.223	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		L_{17} - L_{18}	920.22	-----	-664	227	-491	-182	-34	-115	-481	-281	0.801	0.190	1.00	Yes	0.513	0.115	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.27**
		L_{18} - L_{19}	392.40	-----	-895	546	-430	162	39	230	-101	-593	0.601	0.391	1.00	Yes	0.406	0.249	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		L_{19} - L_{20}	45.08	-356.04	-1178	734	-158	57	-158	-35	137	31	0.069	0.386	0.46	Yes	0.042	0.261	0.31	Yes	0.647	0.203	0.85	Yes	0.641	0.354	1.00	Yes	1.00	**14.19**
	Structure 2	L_0 - L_1	56.00	-300.44	-71	-112	768	-2327	38	131	-575	-1997	0.068	0.802	0.87	Yes	0.040	0.503	0.55	Yes	0.432	0.565	1	Yes	0.429	0.474	0.91	Yes	1.00	**14.70**
		L_1 - L_2	472.18	-----	164	-295	672	-1553	165	-80	-434	638	0.573	0.421	1.00	Yes	0.341	0.268	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		L_2 - L_3	983.44	-----	-59	-248	64	-1069	-75	153	-76	-595	0.775	0.218	1.00	Yes	0.508	0.132	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_3 - L_4	1295.01	-----	-19	-480	-75	-1495	188	-18	-778	279	0.761	0.237	1.00	Yes	0.512	0.149	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		L_4 - L_5	1740.53	-----	-420	-338	-839	-1595	-101	160	415	-452	0.811	0.181	1.00	Yes	0.537	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_5 - L_6	1848.80	-----	-209	-447	-641	-1946	198	-97	90	388	0.793	0.197	1.00	Yes	0.532	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		L_6 - L_7	1880.02	-----	-533	-172	-1876	-1383	-164	222	259	-535	0.796	0.198	1.00	Yes	0.529	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_7 - L_8	1460.84	-130.15	-254	476	-1156	-765	236	-135	-345	60	0.838	0.156	1.00	Yes	0.550	0.093	0.65	Yes	0.088	0.126	0.22	Yes	0.088	0.128	0.22	Yes	1.00	**5.08**
		L_8 - L_9	1039.77	-807.47	195	835	-901	-97	-38	215	-315	-1516	0.727	0.264	1.00	Yes	0.490	0.171	0.67	Yes	0.669	0.187	0.86	Yes	0.664	0.122	0.79	Yes	1.00	**8.14**
		L_9 - L_{10}	306.44	-800.90	-198	957	-604	55	248	-237	-614	-565	0.274	0.227	0.51	Yes	0.159	0.139	0.30	Yes	0.847	0.112	0.96	Yes	0.841	0.153	1.00	Yes	1.00	**5.82**
		L_{10} - L_{11}	189.82	-496.91	-1854	1468	-852	59	1018	649	-553	-2241	0.190	0.626	0.82	Yes	0.111	0.382	0.50	Yes	0.588	0.410	1	Yes	0.584	0.324	0.91	Yes	1.00	**16.66**
		L_{11} - L_{12}	-----	-1030.66	-72	1111	-295	678	72	-352	157	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.122	0.98	Yes	0.845	0.151	1.00	Yes	1.00	**3.70**
		L_{12} - L_{13}	-----	-1275.32	-329	-79	-201	-1454	-137	293	-610	-859	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.222	1	Yes	0.763	0.145	0.91	Yes	1.00	**6.20**
		L_{13} - L_{14}	-----	-1460.37	-1116	2934	-406	1258	280	321	735	621	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.217	0.96	Yes	0.735	0.256	1.00	Yes	1.00	**5.43**
		L_{14} - L_{15}	-----	-1283.23	1542	-471	2758	-1166	429	394	149	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.342	1	Yes	0.646	0.241	0.89	Yes	1.00	**3.33**
		L_{15} - L_{16}	-----	-1491.65	-799	372	-618	-958	226	-362	-629	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.096	1	Yes	0.892	0.095	0.99	Yes	1.00	**8.13**
		L_{16} - L_{17}	-----	-1160.13	1201	64	1251	-780	-410	-9	-92	-657	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.138	1	Yes	0.845	0.154	1.00	Yes	1.00	**5.91**
		L_{17} - L_{18}	-----	-839.02	537	243	682	-735	129	-221	-369	264	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.072	0.96	Yes	0.881	0.118	1.00	Yes	1.00	**4.56**
		L_{18} - L_{19}	-----	-641.49	719	34	299	-627	-210	60	2	-419	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.115	0.98	Yes	0.855	0.139	1.00	Yes	1.00	**4.66**
		L_{19} - L_{20}	605.05	-569.87	568	196	293	-1153	152	-191	-70	573	0.685	0.310	1.00	Yes	0.405	0.195	0.61	Yes	0.764	0.159	0.93	Yes	0.759	0.223	0.99	Yes	1.00	**6.56**
		L_{20} - L_{21}	975.91	-356.30	476	-50	-526	-1159	-193	67	453	-466	0.778	0.219	1.00	Yes	0.510	0.132	0.65	Yes	0.337	0.168	0.51	Yes	0.334	0.169	0.51	Yes	1.00	**6.43**
		L_{21} - L_{22}	903.72	-25.34	-23	-176	-484	-1775	139	-159	-188	83	0.721	0.279	1.00	Yes	0.482	0.175	0.66	Yes	0.024	0.232	0.26	Yes	0.024	0.259	0.29	Yes	1.00	**4.82**
		L_{22} - L_{23}	904.24	-129.82	-266	157	-1328	-768	-46	216	105	-761	0.721	0.276	1.00	Yes	0.482	0.175	0.66	Yes	0.123	0.220	0.35	Yes	0.122	0.194	0.32	Yes	1.00	**5.01**
		L_{23} - L_{24}	980.85	-448.92	-6	571	-1111	-789	178	-145	-440	-22	0.782	0.210	1.00	Yes	0.513	0.127	0.64	Yes	0.424	0.149	0.58	Yes	0.421	0.162	0.59	Yes	1.00	**7.46**
		L_{24} - L_{25}	293.73	-641.81	264	580	-617	-138	-99	146	-110	-1257	0.333	0.311	0.65	Yes	0.197	0.190	0.39	Yes	0.861	0.137	1	Yes	0.855	0.119	0.98	Yes	1.00	**7.44**
		L_{25} - L_{26}	86.45	-641.27	28	730	-260	182	100	-164	-46	-88	0.098	0.166	0.27	Yes	0.057	0.099	0.16	Yes	0.860	0.104	0.97	Yes	0.855	0.141	1.00	Yes	1.00	**4.63**
		L_{26} - L_{27}	-----	-777.70	-876	1092	-176	127	679	522	-262	-799	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.170	1	Yes	0.817	0.175	1.00	Yes	1.00	**8.38**
		L_{27} - L_{28}	-----	-1124.60	-408	1419	-122	692	344	-144	197	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.139	0.97	Yes	0.819	0.175	1.00	Yes	1.00	**5.48**
		L_{28} - L_{29}	-----	-1378.48	55	-219	-227	-1530	-73	336	-382	-659	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.159	1	Yes	0.825	0.152	0.98	Yes	1.00	**6.22**
		L_{29} - L_{30}	-----	-1469.65	-1236	2903	-540	1280	234	363	757	854	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.217	0.97	Yes	0.740	0.253	1.00	Yes	1.00	**5.44**
		L_{30} - L_{31}	-----	-1322.92	1694	-498	2568	-973	483	422	142	13	-----	-----	-----	-----	-----	-----	-----	-----	0.672	0.326	1	Yes	0.666	0.224	0.89	Yes	1.00	**2.49**
		L_{31} - L_{32}	-----	-1441.29	-441	154	-194	-903	224	-270	112	376	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.126	1	Yes	0.862	0.090	0.96	Yes	1.00	**5.83**
		L_{32} - L_{33}	-----	-1050.71	1011	-69	922	-713	-326	26	37	-385	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.112	0.99	Yes	0.862	0.138	1.00	Yes	1.00	**4.20**
		L_{33} - L_{34}	-----	-734.72	602	27	682	-742	91	-150	-194	400	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.071	0.94	Yes	0.863	0.130	1.00	Yes	1.00	**3.77**
		L_{34} - L_{35}	303.31	-749.80	833	-102	497	-1299	-214	95	314	-804	0.271	0.305	0.58	Yes	0.158	0.187	0.35	Yes	0.793	0.124	0.92	Yes	0.787	0.208	1.00	Yes	1.00	**6.74**
		L_{35} - L_{36}	953.16	-444.12	651	-76	390	-1460	175	-148	-1365	354	0.667	0.325	1.00	Yes	0.449	0.208	0.66	Yes	0.368	0.163	0.54	Yes	0.365	0.197	0.57	Yes	1.00	**6.83**
		L_{36} - L_{37}	1354.39	-----	348	-227	-533	-1588	-211	147	414	-495	0.777	0.216	1.00	Yes	0.510	0.128	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		L_{37} - L_{38}	1787.03	-----	-306	-625	-1180	-2330	113	-179	-561	94	0.756	0.239	1.00	Yes	0.503	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_{38} - L_{39}	1805.89	-----	-587	-216	-1964	-1189	-103	172	76	-794	0.775	0.224	1.00	Yes	0.520	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		L_{39} - L_{40}	1798.77	-----	-420	-307	-1330	-1431	131	-117	-39	308	0.839	0.156	1.00	Yes	0.555	0.093	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		L_{40} - L_{41}	1292.59	-----	-1189	201	-1373	-336	378	373	-119	-881	0.759	0.231	1.00	Yes	0.511	0.146	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.17**
		L_{41} - L_{42}	1017.50	-----	-987	334	-679	-260	166	-6	-441	-97	0.802	0.190	1.00	Yes	0.526	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.66**
		L_{42} - L_{43}	548.28	-----	-1265	640	-560	86	317	434	-86	-399	0.666	0.329	1.00	Yes	0.396	0.210	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.56**
		L_{43} - L_{44}	114.15	-274.23	-2985	1252	31	-116	1219	355	-80	-23	0.139	0.808	0.95	Yes	0.082	0.514	0.60	Yes	0.394	0.530	0.93	Yes	0.392	0.608	1.00	Yes	1.00	**26.96**
	Structure 3	L_0 - L_1	-----	-413.43	44	-160	468	-841	27	120	-126	-569	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.232	0.99	Yes	0.744	0.253	1.00	Yes	1.00	**5.94**
		L_1 - L_2	206.68	-3.59	180	-212	916	-1553	158	-67	-403	1016	0.316	0.677	1.00	Yes	0.214	0.431	0.65	Yes	0.007	0.610	0.62	Yes	0.006	0.466	0.48	Yes	1.00	**10.51**
		L_2 - L_3	837.09	-----	-22	-204	163	-890	-64	166	26	-739	0.729	0.266	1.00	Yes	0.467	0.162	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.01**
		L_3 - L_4	1168.73	-----	26	-403	122	-1315	192	1	-40	714	0.739	0.257	1.00	Yes	0.479	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_4 - L_5	1667.84	-----	-386	-234	-1140	-1066	-47	216	429	-544	0.815	0.176	1.00	Yes	0.523	0.104	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_5 - L_6	1544.19	-----	-142	-450	-268	-1730	248	-37	175	442	0.754	0.240	1.00	Yes	0.490	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		L_6 - L_7	1224.66	-----	-1490	392	-962	-256	584	308	-209	-862	0.720	0.277	1.00	Yes	0.467	0.171	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		L_7 - L_8	1124.26	-101.39	-79	206	-510	-398	155	-171	-123	34	0.887	0.111	1.00	Yes	0.567	0.066	0.64	Yes	0.095	0.097	0.2	Yes	0.094	0.091	0.19	Yes	1.00	**6.77**
		L_8 - L_9	463.00	-----	-833	525	-496	114	365	271	-179	-981	0.600	0.392	1.00	Yes	0.360	0.250	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		L_9 - L_{10}	-----	-564.00	-63	526	-464	204	144	-154	-86	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.075	0.95	Yes	0.859	0.139	1.00	Yes	1.00	**5.28**
		L_{10} - L_{11}	-----	-967.12	-563	774	-95	-271	437	811	-790	-1766	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.207	1	Yes	0.778	0.122	0.91	Yes	1.00	**7.91**
		L_{11} - L_{12}	-----	-1255.77	-160	1256	-24	615	80	291	397	119	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.186	1	Yes	0.795	0.166	0.97	Yes	1.00	**4.67**
		L_{12} - L_{13}	-----	-1123.86	959	-9	1339	-193	-129	65	-108	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.278	1	Yes	0.712	0.177	0.89	Yes	1.00	**2.98**
		L_{13} - L_{14}	-----	-1131.81	63	248	403	-560	275	-304	-454	84	-----	-----	-----	-----	-----	-----	-----	-----	0.921	0.041	0.97	Yes	0.911	0.088	1.00	Yes	1.00	**6.00**
		L_{14} - L_{15}	-----	-745.71	584	117	336	-339	-262	83	213	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.129	1	Yes	0.860	0.129	0.99	Yes	1.00	**4.06**
		L_{15} - L_{16}	168.90	-530.48	469	123	346	-711	259	-212	-306	241	0.219	0.243	0.47	Yes	0.131	0.158	0.29	Yes	0.816	0.146	0.97	Yes	0.808	0.188	1.00	Yes	1.00	**4.14**
		L_{16} - L_{17}	655.89	-167.87	296	-59	-453	-634	-173	189	54	-561	0.755	0.243	1.00	Yes	0.448	0.154	0.61	Yes	0.229	0.183	0.42	Yes	0.227	0.153	0.39	Yes	1.00	**4.40**
		L_{17} - L_{18}	685.27	-97.70	65	-87	-530	-781	106	-110	19	31	0.788	0.206	1.00	Yes	0.456	0.124	0.59	Yes	0.133	0.220	0.36	Yes	0.132	0.189	0.33	Yes	1.00	**5.83**
		L_{18} - L_{19}	348.08	-----	-782	158	-241	-190	188	414	93	-1078	0.533	0.466	1.00	Yes	0.325	0.302	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.12**
		L_{19} - L_{20}	80.76	-94.48	-1439	1384	364	-474	-2071	-563	221	60	0.124	0.876	1.00	Yes	0.073	0.523	0.60	Yes	0.172	0.712	0.89	Yes	0.170	0.432	0.61	Yes	1.00	**34.03**

Moment (End) AB Operating

Operating Loads - 5C1

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	$U_0 - L_0$			-280.80	-100	158	-11	49	-1007	-323	205	66	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.370	1	Yes	0.594	0.202	0.80	Yes	1.00	**1.73**
		$U_1 - L_1$		58.55	-319.17	-250	248	57	-48	-719	-259	631	208	0.105	0.527	0.64	Yes	0.058	0.290	0.35	Yes	0.697	0.274	0.98	Yes	0.675	0.319	1.00	Yes	1.00	**5.45**
		$U_2 - L_2$		130.86	-214.46	-140	177	116	-130	-1807	-596	882	247	0.235	0.750	0.99	Yes	0.129	0.412	0.55	Yes	0.469	0.529	1	Yes	0.454	0.227	0.69	Yes	1.00	**6.70**
		$U_3 - L_3$		258.95	-104.53	-109	118	204	-242	-456	-59	761	171	0.466	0.530	1.00	Yes	0.256	0.291	0.55	Yes	0.229	0.266	0.5	Yes	0.221	0.309	0.54	Yes	1.00	**12.12**
		$U_4 - L_4$		-----	-185.62	56	-64	264	-259	1060	336	-1862	-850	-----	-----	-----	-----	-----	-----	-----	-----	0.408	0.587	1	Yes	0.393	0.338	0.74	Yes	1.00	**8.42**
		$U_5 - L_5$		-----	-362.20	78	-84	180	-204	1077	612	-64	142	-----	-----	-----	-----	-----	-----	-----	-----	0.655	0.335	1	Yes	0.625	0.207	0.84	Yes	1.00	**3.57**
		$U_6 - L_6$		-----	-398.65	76	-64	199	-206	1646	787	637	365	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.391	1	Yes	0.572	0.180	0.76	Yes	1.00	**3.22**
		$U_7 - L_7$		-----	-388.90	98	-111	262	-281	1201	296	470	183	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.349	1	Yes	0.600	0.277	0.88	Yes	1.00	**3.14**
		$U_8 - L_8$		-----	-1226.22	-424	502	225	-275	-1032	-620	-255	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.885	0.111	1	Yes	0.850	0.094	0.95	Yes	1.00	**5.99**
		$U_9 - L_9$		-----	-653.99	-409	449	-231	256	-262	-25	826	317	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1	Yes	0.739	0.250	0.99	Yes	1.00	**2.85**
		$U_{10} - L_{10}$		-----	-779.23	-396	433	-165	144	-469	-29	683	304	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.185	1	Yes	0.769	0.224	1.00	Yes	1.00	**4.39**
		$U_{11} - L_{11}$		-----	-627.44	-327	440	-166	218	-1049	-125	635	368	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.241	1	Yes	0.730	0.204	0.94	Yes	1.00	**3.83**
		$U_{12} - L_{12}$		-----	-522.14	-319	326	-137	138	-417	8	686	361	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.225	0.98	Yes	0.716	0.279	1.00	Yes	1.00	**4.88**
		$U_{13} - L_{13}$		-----	-372.31	-213	241	-68	90	-524	87	18	60	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1	Yes	0.713	0.275	0.99	Yes	1.00	**4.50**
		$U_{14} - L_{14}$		-----	-191.03	-240	254	120	-121	-40	-581	-1918	-671	-----	-----	-----	-----	-----	-----	-----	-----	0.426	0.564	1	Yes	0.404	0.325	0.73	Yes	1.00	**12.53**
		$U_{15} - L_{15}$		18.69	-274.62	-21	17	204	-224	437	87	-1138	-232	0.034	0.615	0.65	Yes	0.018	0.339	0.36	Yes	0.616	0.384	1	Yes	0.581	0.286	0.87	Yes	1.00	**5.92**
		$U_{16} - L_{16}$		-----	-321.12	46	-51	239	-248	473	107	-559	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.242	0.97	Yes	0.679	0.318	1.00	Yes	1.00	**4.46**
		$U_{17} - L_{17}$		-----	-420.46	80	-94	204	-222	505	201	108	105	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.212	1	Yes	0.725	0.225	0.96	Yes	1.00	**3.10**
		$U_{18} - L_{18}$		-----	-531.83	176	-182	433	-446	682	173	-69	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.183	0.97	Yes	0.740	0.253	1.00	Yes	1.00	**4.01**
		$U_{19} - L_{19}$		-----	-649.86	182	-195	490	-511	588	113	-167	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.158	0.97	Yes	0.756	0.237	1.00	Yes	1.00	**4.99**
		$U_{20} - L_{20}$		-----	-609.66	236	-284	447	-538	453	59	206	27	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.187	1	Yes	0.710	0.250	0.96	Yes	1.00	**4.02**
	Structure 2	$U_0 - L_0$		-----	-624.06	-309	459	-160	266	-1036	-176	41	7	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.249	1	Yes	0.669	0.195	0.87	Yes	1.00	**2.07**
		$U_1 - L_1$		-----	-712.65	-548	548	-203	210	-289	27	630	160	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.147	0.97	Yes	0.764	0.232	1.00	Yes	1.00	**3.74**
		$U_2 - L_2$		-----	-598.80	-437	459	-149	165	-577	154	626	282	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.178	0.98	Yes	0.763	0.235	1.00	Yes	1.00	**3.47**
		$U_3 - L_3$		-----	-459.42	-219	234	-70	81	145	264	551	262	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1	Yes	0.720	0.214	0.94	Yes	1.00	**3.15**
		$U_4 - L_4$		-----	-322.12	-194	203	-12	23	-249	127	569	231	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.262	1	Yes	0.682	0.259	0.95	Yes	1.00	**4.05**
		$U_5 - L_5$		83.75	-264.15	-148	173	68	-62	-1076	24	564	177	0.151	0.533	0.69	Yes	0.083	0.293	0.38	Yes	0.597	0.403	1	Yes	0.559	0.222	0.79	Yes	1.00	**5.74**
		$U_6 - L_6$		348.06	-93.01	-123	129	197	-203	-324	14	-375	-259	0.626	0.368	1.00	Yes	0.344	0.202	0.55	Yes	0.209	0.161	0.37	Yes	0.197	0.259	0.46	Yes	1.00	**8.79**
		$U_7 - L_7$		-----	-175.74	14	-17	357	-410	77	-235	-1801	-482	-----	-----	-----	-----	-----	-----	-----	-----	0.397	0.601	1	Yes	0.372	0.524	0.90	Yes	1.00	**12.44**
		$U_8 - L_8$		-----	-472.95	155	-174	331	-354	539	56	-484	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.173	0.86	Yes	0.681	0.310	1.00	Yes	1.00	**3.54**
		$U_9 - L_9$		-----	-691.16	278	-278	576	-589	1160	623	-548	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.219	0.99	Yes	0.741	0.250	1.00	Yes	1.00	**4.49**
		$U_{10} - L_{10}$		-----	-750.87	234	-234	506	-530	1190	708	-224	166	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.258	1	Yes	0.702	0.234	0.94	Yes	1.00	**4.42**
		$U_{11} - L_{11}$		-----	-730.65	227	-220	453	-457	1193	676	398	474	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.683	0.202	0.89	Yes	1.00	**3.54**
		$U_{12} - L_{12}$		-----	-716.86	186	-168	411	-404	1500	649	930	494	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.305	1	Yes	0.621	0.176	0.80	Yes	1.00	**3.44**
		$U_{13} - L_{13}$		-----	-612.00	223	-221	483	-471	1291	296	405	180	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.317	1	Yes	0.590	0.231	0.83	Yes	1.00	**3.52**
		$U_{14} - L_{14}$		-----	-1220.89	-605	560	478	-459	-662	-537	774	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.100	1	Yes	0.810	0.107	0.92	Yes	1.00	**7.44**
		$U_{15} - L_{15}$		-----	-675.37	-602	575	-260	252	-102	-6	769	84	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.242	1	Yes	0.651	0.288	0.94	Yes	1.00	**4.30**
		$U_{16} - L_{16}$		-----	-700.49	-547	531	-201	169	36	143	817	175	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.182	1	Yes	0.751	0.232	0.99	Yes	1.00	**3.84**
		$U_{17} - L_{17}$		-----	-646.56	-520	524	-193	194	-667	91	594	193	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.167	0.97	Yes	0.753	0.243	1.00	Yes	1.00	**3.89**
		$U_{18} - L_{18}$		-----	-580.75	-483	501	-151	157	4	134	623	212	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.168	0.95	Yes	0.740	0.256	1.00	Yes	1.00	**4.09**
		$U_{19} - L_{19}$		-----	-480.74	-289	288	-82	84	-287	117	518	192	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.168	0.9	Yes	0.718	0.279	1.00	Yes	1.00	**3.88**
		$U_{20} - L_{20}$		-----	-362.45	-194	207	-36	41	-658	-24	518	179	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.252	1	Yes	0.694	0.236	0.94	Yes	1.00	**3.98**
		$U_{21} - L_{21}$		39.68	-319.57	-235	251	30	-20	-126	110	-122	-175	0.071	0.372	0.45	Yes	0.039	0.205	0.25	Yes	0.722	0.147	0.87	Yes	0.676	0.321	1.00	Yes	1.00	**6.49**
		$U_{22} - L_{22}$		-----	-212.06	-245	256	314	-347	-699	-723	-1510	-694	-----	-----	-----	-----	-----	-----	-----	-----	0.477	0.521	1	Yes	0.449	0.444	0.90	Yes	1.00	**16.88**
		$U_{23} - L_{23}$		-----	-321.96	8	-11	224	-242	523	165	-606	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1	Yes	0.681	0.310	1.00	Yes	1.00	**4.47**
		$U_{24} - L_{24}$		-----	-368.68	49	-54	224	-232	583	203	51	85	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1	Yes	0.706	0.265	0.98	Yes	1.00	**3.60**
		$U_{25} - L_{25}$		-----	-475.41	96	-98	298	-297	588	223	-79	120	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.183	0.9	Yes	0.710	0.287	1.00	Yes	1.00	**3.54**
		$U_{26} - L_{26}$		-----	-574.14	165	-173	495	-519	707	300	50	240	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.189	0.96	Yes	0.732	0.266	1.00	Yes	1.00	**3.94**
		$U_{27} - L_{27}$		-----	-634.92	198	-201	553	-557	769	312	397	429	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.193	0.98	Yes	0.739	0.259	1.00	Yes	1.00	**4.38**
		$U_{28} - L_{28}$		-----	-610.35	155	-128	456	-440	1675	560	716	371	-----	-----	-----	-----	-----	-----	-----	-----	0.705	0.291	1	Yes	0.654	0.193	0.85	Yes	1.00	**3.92**
		$U_{29} - L_{29}$		-----	-591.98	151	-154	547	-531	1443	194	298	149	-----	-----	-----	-----	-----	-----	-----	-----	0.660	0.335	1	Yes	0.571	0.262	0.84	Yes	1.00	**5.04**
		$U_{30} - L_{30}$		-----	-1230.83	-627	556	319	-332	-660	-393	482	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.099	1	Yes	0.816	0.111	0.93	Yes	1.00	**6.54**
		$U_{31} - L_{31}$		-----	-714.31	-543	519	-304	296	-248	33	519	94	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.200	1	Yes	0.689	0.260	0.95	Yes	1.00	**3.18**
		$U_{32} - L_{32}$		-----	-847.30	-455	451	-218	191	-692	3	611	186	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.184	1	Yes	0.734	0.195	0.93	Yes	1.00	**3.64**
		$U_{33} - L_{33}$		-----	-823.83	-508	502	-247	229	-158	182	553	233	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.159	0.99	Yes	0.770	0.224	1.00	Yes	1.00	**4.28**
		$U_{34} - L_{34}$		-----	-809.31	-526	546	-244	239	-713	-17	486	212	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.183	0.99	Yes	0.757	0.241	1.00	Yes	1.00	**4.89**
		$U_{35} - L_{35}$		-----	-686.78	-542	564	-254	269	-1178	-111	630	378	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.229	1	Yes	0.736	0.239	0.98	Yes	1.00	**4.61**
		$U_{36} - L_{36}$		-----	-474.18	-329	351	-134	158	-28	141	210	156	-----	-----	-----	-----	-----	-----	-----	-----	0.688	0.122	0.81	Yes	0.683	0.307	1.00	Yes	1.00	**4.51**
		$U_{37} - L_{37}$		-----	-203.10	-283	317	18	-14	-1215	-546	-1085	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.459	0.538	1	Yes	0.430	0.405	0.84	Yes	1.00	**11.38**
		$U_{38} - L_{38}$		223.00	-165.03	-137	139	162	-172	29	-352	-1300	-348	0.401	0.596	1.00	Yes	0.221	0.328	0.55	Yes	0.371	0.362	0.74	Yes	0.349	0.219	0.57	Yes	1.00	**8.17**
		$U_{39} - L_{39}$		52.43	-295.51	-50	43	195	-217	527	154	-834	-95	0.094	0.519	0.62	Yes	0.052	0.285	0.34	Yes	0.668	0.327	1	Yes	0.625	0.277	0.91	Yes	1.00	**5.52**
		$U_{40} - L_{40}$		-----	-325.17	32	-40	213	-218	599	172	-169	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.688	0.278	0.97	Yes	1.00	**3.79**
		$U_{41} - L_{41}$		-----	-461.11	85	-94	233	-246	579	192	97	104	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.224	0.95	Yes	1.00	**3.15**
		$U_{42} - L_{42}$		-----	-576.89	167	-176	492	-499	668	170	220	118	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.172	0.95	Yes	0.735	0.255	1.00	Yes	1.00	**4.10**
		$U_{43} - L_{43}$		-----	-710.52	184	-203	537	-557	620	186	411	215	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.153	0.97	Yes	0.761	0.236	1.00	Yes	1.00	**4.98**
		$U_{44} - L_{44}$		-----	-666.37	248	-305	468	-599	541	92	578	98	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.193	1	Yes	0.714	0.254	0.97	Yes	1.00	**4.15**
	Structure 3	$U_0 - L_0$		-----	-582.39	-294	428	-134	236	-694	-91	111	15	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.228	1	Yes	0.678	0.199	0.88	Yes	1.00	**2.29**
		$U_1 - L_1$		-----	-645.95	-521	506	-207	206	-56	126	621	143	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.164	0.98	Yes	0.752	0.242	1.00	Yes	1.00	**3.86**
		$U_2 - L_2$		-----	-543.50	-399	416	-158	169	-272	189	662	307	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.195	1	Yes	0.756	0.236	1.00	Yes	1.00	**3.48**
		$U_3 - L_3$		-----	-407.37	-177	199	-69	84	-378	186	565	271	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1	Yes	0.703	0.202	0.91	Yes	1.00	**2.75**
		$U_4 - L_4$		-----	-299.19	-203	214	-32	38	-787	69	613	225	-----	-----	-----	-----	-----	-----	-----	-----	0.674	0.317	1	Yes	0.633	0.273	0.91	Yes	1.00	**4.52**
		$U_5 - L_5$		79.30	-279.61	-213	233	63	-52	-919	14	-220	-157	0.143	0.564	0.71	Yes	0.078	0.310	0.39	Yes	0.627	0.369	1	Yes	0.592	0.298	0.89	Yes	1.00	**7.90**
		$U_6 - L_6$		-----	-182.91	-59	58	296	-316	164	-330	-1910	-735	-----	-----	-----	-----	-----	-----	-----	-----	0.408	0.588	1	Yes	0.387	0.404	0.80	Yes	1.00	**11.11**
		$U_7 - L_7$		-----	-367.75	83	-101	228	-254	529	16	-337	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.219	0.97	Yes	0.705	0.290	1.00	Yes	1.00	**3.56**
		$U_8 - L_8$		-----	-500.99	148	-146	325	-326	942	436	-519	-131	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.269	1	Yes	0.687	0.279	0.97	Yes	1.00	**4.06**
		$U_9 - L_9$		-----	-602.84	181	-227	363	-459	1242	738	307	369	-----	-----	-----	-----	-----	-----	-----	-----	0.723	0.268	1	Yes	0.702	0.213	0.92	Yes	1.00	**3.94**
		$U_{10} - L_{10}$		-----	-606.69	153	-141	304	-317	1864	958	977	628	-----	-----	-----	-----	-----	-----	-----	-----	0.628	0.366	1	Yes	0.599	0.164	0.77	Yes	1.00	**3.44**
		$U_{11} - L_{11}$		-----	-587.73	190	-222	383	-432	1288	574	576	391	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.291	1	Yes	0.664	0.240	0.91	Yes	1.00	**3.33**
		$U_{12} - L_{12}$		-----	-1136.76	-341	358	305	-412	-1590	-550	683	182	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1	Yes	0.788	0.077	0.87	Yes	1.00	**6.25**
		$U_{13} - L_{13}$		-----	-441.55	-268	287	-154	167	-749	-69	633	151	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.257	1	Yes	0.681	0.282	0.97	Yes	1.00	**2.43**
		$U_{14} - L_{14}$		-----	-497.15	-266	284	-100	84	-29	26	850	279	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.245	1	Yes	0.713	0.249	0.97	Yes	1.00	**4.38**
		$U_{15} - L_{15}$		-----	-405.92	-198	224	-79	84	-685	-126	785	256	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.259	1	Yes	0.700	0.228	0.93	Yes	1.00	**4.74**
		$U_{16} - L_{16}$		-----	-199.52	-380	368	-6	23	-64	-694	-1693	-941	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.557	1	Yes	0.422	0.485	0.91	Yes	1.00	**17.55**
		$U_{17} - L_{17}$		173.21	-156.51	-172	192	114	-133	451	163	-1524	-560	0.312	0.687	1.00	Yes	0.171	0.378	0.55	Yes	0.343	0.452	0.8	Yes	0.331	0.246	0.58	Yes	1.00	**8.39**
		$U_{18} - L_{18}$		108.48	-274.13	-114	124	219	-258	464	148	-1120	-509	0.195	0.654	0.85	Yes	0.107	0.360	0.47	Yes	0.599	0.395	1	Yes	0.580	0.330	0.92	Yes	1.00	**7.40**
		$U_{19} - L_{19}$		8.91	-329.60	-38	22	228	-236	418	216	131	86	0.016	0.423	0.44	Yes	0.009	0.233	0.25	Yes	0.720	0.209	0.93	Yes	0.697	0.302	1.00	Yes	1.00	**5.58**
		$U_{20} - L_{20}$		-----	-322.77	75	-85	195	-242	602	193	288	92	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.273	1	Yes	0.683	0.309	1.00	Yes	1.00	**3.20**

Moment (End) AB Operating

Operating Loads - 5C1

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 - Diagonals	Structure 1	$U_0 - L_1$		434.87	-40.01	-100	60	3	-12	-1235	-485	76	150	0.571	0.428	1.00	Yes	0.344	0.236	0.59	Yes	0.068	0.350	0.42	Yes	0.062	0.117	0.18	Yes	1.00	**4.60**
		$U_1 - L_2$		308.54	-----	-73	23	-20	-28	-300	-78	-1193	-419	0.555	0.438	1.00	Yes	0.305	0.241	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		$U_2 - L_3$		130.60	-197.43	-46	-2	-38	-71	-29	-148	-1745	-399	0.235	0.595	0.84	Yes	0.129	0.327	0.46	Yes	0.454	0.538	1	Yes	0.418	0.090	0.51	Yes	1.00	**9.04**
		$U_3 - L_4$		-----	-282.91	38	0	-55	-136	880	548	-248	-507	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.344	1	Yes	0.599	0.174	0.78	Yes	1.00	**10.34**
		$U_4 - L_4$		518.80	-----	4	101	-93	19	-86	181	-179	559	0.761	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.72**
		$U_4 - L_5$		684.89	-----	-197	224	-44	103	-189	309	-250	30	0.810	0.183	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.13**
		$U_5 - L_6$		606.73	-----	-263	248	-27	82	-324	69	-715	-51	0.717	0.279	1.00	Yes	0.395	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		$U_6 - L_7$		650.88	-----	-93	312	34	75	-143	98	-287	-224	0.770	0.230	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.26**
		$U_8 - L_9$		947.96	-----	-80	369	-22	174	-218	-265	542	172	0.758	0.233	1.00	Yes	0.469	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_9 - L_{10}$		1014.84	-----	-302	263	-123	116	-377	-411	364	142	0.811	0.187	1.00	Yes	0.503	0.105	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		$U_{10} - L_{11}$		952.00	-----	-228	194	-95	90	-561	-617	85	-99	0.804	0.186	1.00	Yes	0.498	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{11} - L_{12}$		712.78	-----	-218	96	-169	24	-426	-422	-1275	-747	0.705	0.292	1.00	Yes	0.388	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{12} - L_{13}$		540.87	-----	-182	130	-113	48	-268	-488	-902	-370	0.659	0.335	1.00	Yes	0.415	0.193	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		$U_{13} - L_{14}$		346.30	-----	-70	27	-37	-28	-85	-188	-978	-377	0.623	0.372	1.00	Yes	0.343	0.205	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{15} - L_{14}$		391.63	-280.98	-104	11	34	-117	-253	-487	402	-164	0.704	0.290	1.00	Yes	0.387	0.160	0.55	Yes	0.658	0.327	0.99	Yes	0.595	0.149	0.75	Yes	1.00	**12.82**
		$U_{16} - L_{15}$		408.30	-----	-146	93	-26	-7	-180	83	-251	-128	0.734	0.259	1.00	Yes	0.404	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{17} - L_{16}$		525.98	-----	-143	98	-47	24	-335	-59	-303	-103	0.771	0.223	1.00	Yes	0.424	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{18} - L_{17}$		621.95	-----	-333	254	-132	90	-343	37	-400	-110	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{19} - L_{18}$		692.38	-----	-336	253	-134	97	-356	-91	-457	-203	0.750	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{20} - L_{19}$		701.05	-----	-384	327	-176	142	-171	-2	-260	-141	0.759	0.239	1.00	Yes	0.418	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
	Structure 2	$U_0 - L_1$		682.09	-----	-280	308	-100	127	-1207	-365	-156	6	0.675	0.323	1.00	Yes	0.371	0.178	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		$U_1 - L_2$		741.77	-----	-390	302	-157	112	-400	-539	159	-17	0.734	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_2 - L_3$		597.76	-----	-314	249	-112	83	-305	-619	139	-16	0.707	0.290	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.30**
		$U_3 - L_4$		568.29	-----	-177	127	-43	17	-366	-373	202	34	0.758	0.239	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_4 - L_5$		375.76	-70.09	-131	86	11	-24	-291	-515	268	56	0.676	0.316	1.00	Yes	0.372	0.174	0.55	Yes	0.173	0.180	0.36	Yes	0.148	0.167	0.32	Yes	1.00	**5.65**
		$U_5 - L_6$		252.15	-227.21	-76	29	45	-104	-315	-201	-1420	-208	0.453	0.544	1.00	Yes	0.249	0.299	0.55	Yes	0.537	0.319	0.86	Yes	0.481	0.133	0.62	Yes	1.00	**7.25**
		$U_6 - L_7$		-----	-363.30	1	-41	38	-98	81	-83	-584	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.213	1	Yes	0.696	0.112	0.81	Yes	1.00	**3.39**
		$U_8 - L_7$		592.51	-----	-187	149	-90	47	-280	14	336	-199	0.755	0.236	1.00	Yes	0.476	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_8 - L_9$		731.62	-----	-337	255	-172	120	-202	-30	-136	-53	0.792	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_{10} - L_9$		829.08	-----	-310	253	-157	129	-120	198	-216	-55	0.820	0.176	1.00	Yes	0.451	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{11} - L_{10}$		886.11	-----	-342	308	-177	163	-199	229	-319	11	0.807	0.189	1.00	Yes	0.444	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{12} - L_{11}$		850.46	-----	-332	348	-131	175	-526	218	-561	60	0.775	0.224	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_{13} - L_{12}$		712.00	-----	-399	371	-159	163	-484	68	-686	-55	0.704	0.288	1.00	Yes	0.387	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		$U_{14} - L_{13}$		765.59	-----	-263	442	-9	113	-17	140	-228	-234	0.757	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{14} - L_{15}$		596.83	-----	-192	344	-20	164	105	-287	533	245	0.706	0.291	1.00	Yes	0.388	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{15} - L_{16}$		607.91	-----	-358	328	-174	162	179	-328	428	104	0.719	0.280	1.00	Yes	0.395	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.96**
		$U_{16} - L_{17}$		696.53	-----	-328	355	-125	151	39	-324	374	111	0.754	0.243	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{17} - L_{18}$		647.02	-----	-285	281	-108	123	-34	-398	360	91	0.765	0.233	1.00	Yes	0.421	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{18} - L_{19}$		653.36	-----	-277	270	-74	87	-184	-378	302	89	0.772	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		$U_{19} - L_{20}$		579.95	-----	-190	164	-34	40	-260	-409	310	96	0.739	0.254	1.00	Yes	0.407	0.144	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{20} - L_{21}$		379.12	-----	-113	101	-27	-2	-138	-202	-569	-88	0.682	0.309	1.00	Yes	0.375	0.170	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		$U_{21} - L_{22}$		219.28	-203.12	-51	57	-1	-91	297	69	-1541	-370	0.394	0.563	0.96	Yes	0.217	0.310	0.53	Yes	0.480	0.515	1	Yes	0.430	0.117	0.55	Yes	1.00	**7.94**
		$U_{23} - L_{22}$		390.51	-84.93	-106	56	-11	-39	-257	-103	542	-142	0.702	0.292	1.00	Yes	0.386	0.161	0.55	Yes	0.202	0.216	0.42	Yes	0.180	0.135	0.32	Yes	1.00	**6.27**
		$U_{24} - L_{23}$		426.17	-----	-122	107	-16	15	-184	69	-257	-64	0.766	0.230	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{25} - L_{24}$		597.58	-----	-189	179	-38	46	-188	55	-302	-84	0.762	0.231	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{26} - L_{25}$		664.98	-----	-280	276	-77	95	-56	211	-255	-58	0.786	0.205	1.00	Yes	0.432	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{27} - L_{26}$		646.94	-----	-279	294	-105	124	-271	188	-342	-9	0.765	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_{28} - L_{27}$		670.57	-----	-303	341	-93	147	-384	250	-556	44	0.726	0.266	1.00	Yes	0.399	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{29} - L_{28}$		568.91	-----	-330	321	-92	106	-352	83	-727	-36	0.673	0.318	1.00	Yes	0.370	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{30} - L_{29}$		622.47	-----	-189	356	39	62	-129	77	-261	-302	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		$U_{30} - L_{31}$		729.46	-----	-255	426	-66	220	25	-487	416	184	0.722	0.270	1.00	Yes	0.397	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{31} - L_{32}$		738.55	-----	-430	376	-235	215	-150	-419	305	73	0.731	0.262	1.00	Yes	0.402	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.87**
		$U_{32} - L_{33}$		845.94	-----	-340	338	-160	192	-191	-575	284	59	0.771	0.223	1.00	Yes	0.424	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{33} - L_{34}$		873.59	-----	-327	295	-176	152	-432	-428	86	-99	0.796	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_{34} - L_{35}$		782.18	-----	-291	234	-155	121	-390	-576	2	-143	0.774	0.221	1.00	Yes	0.426	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{35} - L_{36}$		660.73	-----	-298	229	-188	100	-329	-280	-754	-336	0.716	0.276	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_{36} - L_{37}$		540.85	-----	-171	134	-82	22	-118	-539	-770	-270	0.690	0.310	1.00	Yes	0.434	0.178	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{38} - L_{37}$		-----	-337.81	-24	-29	30	-86	-333	-167	524	-309	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.263	1	Yes	0.647	0.098	0.75	Yes	1.00	**4.21**
		$U_{39} - L_{38}$		435.56	-142.83	-133	64	39	-77	-159	-39	-67	-63	0.783	0.216	1.00	Yes	0.431	0.119	0.55	Yes	0.340	0.171	0.52	Yes	0.302	0.170	0.48	Yes	1.00	**8.57**
		$U_{40} - L_{39}$		396.37	-18.48	-131	90	-4	-11	-277	106	-382	-103	0.713	0.278	1.00	Yes	0.392	0.153	0.55	Yes	0.044	0.162	0.21	Yes	0.039	0.167	0.21	Yes	1.00	**4.92**
		$U_{41} - L_{40}$		561.20	-----	-176	126	-54	28	-292	-47	-416	-181	0.748	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{42} - L_{41}$		627.64	-----	-323	264	-118	88	-402	-19	-405	-173	0.742	0.256	1.00	Yes	0.408	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{43} - L_{42}$		770.03	-----	-378	309	-133	100	-373	-57	-375	-195	0.762	0.232	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{44} - L_{43}$		803.96	-----	-374	373	-159	151	-106	62	-170	12	0.795	0.199	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
	Structure 3	$U_0 - L_1$		569.01	-----	-278	260	-78	103	-1416	-209	-154	1	0.616	0.375	1.00	Yes	0.339	0.206	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_1 - L_2$		653.70	-----	-342	241	-159	109	-397	-703	160	-43	0.708	0.291	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_2 - L_3$		596.49	-----	-310	247	-121	83	-417	-645	141	-21	0.705	0.292	1.00	Yes	0.388	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_3 - L_4$		508.51	-----	-140	97	-38	16	-467	-442	176	-11	0.746	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_4 - L_5$		345.87	-48.89	-120	84	-30	-18	-324	-408	-742	-176	0.622	0.368	1.00	Yes	0.342	0.203	0.55	Yes	0.116	0.209	0.33	Yes	0.103	0.154	0.26	Yes	1.00	**6.58**
		$U_5 - L_6$		127.08	-258.67	-38	-16	17	-112	-76	-70	-1360	-377	0.229	0.538	0.77	Yes	0.126	0.296	0.43	Yes	0.606	0.386	1	Yes	0.547	0.144	0.70	Yes	1.00	**6.79**
		$U_7 - L_6$		451.26	-----	-93	41	-28	-8	-179	-218	-149	-113	0.812	0.182	1.00	Yes	0.446	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_8 - L_7$		640.80	-----	-209	161	-89	57	-168	103	78	-79	0.781	0.215	1.00	Yes	0.491	0.120	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		$U_8 - L_9$		768.76	-----	-237	114	-143	51	-145	88	848	275	0.761	0.237	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{10} - L_9$		997.58	-----	-235	203	-92	98	-255	328	-206	53	0.843	0.152	1.00	Yes	0.522	0.085	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		$U_{11} - L_{10}$		987.21	-----	-286	281	-65	100	-258	197	-649	-191	0.789	0.210	1.00	Yes	0.489	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		$U_{12} - L_{11}$		967.82	-----	-83	370	21	117	80	356	-461	-173	0.774	0.224	1.00	Yes	0.479	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_{12} - L_{13}$		613.21	-----	-88	293	-19	144	-127	-378	572	269	0.725	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{13} - L_{14}$		619.57	-----	-286	230	-113	115	-534	-431	452	158	0.732	0.260	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_{14} - L_{15}$		629.22	-----	-180	196	-53	98	-784	-606	325	98	0.744	0.254	1.00	Yes	0.409	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		$U_{15} - L_{16}$		373.49	-----	-3	98	-100	-8	558	309	-1505	-854	0.548	0.451	1.00	Yes	0.301	0.248	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		$U_{17} - L_{16}$		-----	-316.78	58	-8	-51	-81	-190	35	614	7	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.270	1	Yes	0.670	0.104	0.78	Yes	1.00	**7.34**
		$U_{18} - L_{17}$		210.33	-214.39	-77	5	-62	-53	-324	-225	1370	-178	0.378	0.495	0.88	Yes	0.208	0.272	0.49	Yes	0.493	0.500	1	Yes	0.454	0.098	0.56	Yes	1.00	**10.33**
		$U_{19} - L_{18}$		440.99	-130.28	-87	16	23	-23	-317	-283	-199	-114	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	0.299	0.187	0.49	Yes	0.276	0.111	0.39	Yes	1.00	**6.61**
		$U_{20} - L_{19}$		601.76	-28.52	-125	82	-27	1	-244	-24	-61	13	0.789	0.208	1.00	Yes	0.477	0.114	0.60	Yes	0.049	0.117	0.17	Yes	0.044	0.146	0.20	Yes	1.00	**6.81**

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: 5C1 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

* 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
Structure 1	U_1 - U_1	-71.60	19.48	-76.88			0.90	1.24	21.68	-85.59	0.00	0.00	Vehicle	Vehicle	-----	-204.35	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	-----	-----	5.77	5.77
	U_1 - U_2	-90.76	39.30	-128.82			0.90	1.24	43.75	-143.42	0.00	0.00	Vehicle	Vehicle	-----	-304.43	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	-----	-----	3.31	3.31
	U_1 - U_3	-61.05	58.35	-137.98			0.90	1.24	64.96	-153.61	0.00	0.00	Vehicle	Vehicle	5.08	-279.05	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	11.27	11.27	3.28	3.28
	U_1 - U_4	10.82	76.42	-127.70			0.90	1.24	85.08	-142.17	0.00	0.00	Vehicle	Vehicle	124.67	-170.76	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	7.76	7.76	4.05	4.05
	U_1 - U_5	12.98	76.83	-127.17			0.90	1.24	85.54	-141.58	0.00	0.00	Vehicle	Vehicle	128.08	-167.18	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	7.69	7.69	4.08	4.08
	U_1 - U_6	121.44	88.84	-96.65			0.90	1.24	98.91	-107.60	0.00	0.00	Vehicle	Vehicle	286.46	-----	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	-----	-----	5.56	5.56	-----	-----
	U_2 - U_2	249.52	98.23	-50.22			0.90	1.24	109.36	-55.91	0.00	0.00	Vehicle	Vehicle	466.54	-----	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	-----	-----	5.07	5.07	-----	-----
	U_2 - U_3	376.85	100.07	-9.19			0.90	1.24	111.41	-10.23	0.00	0.00	Vehicle	Vehicle	634.74	-----	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	-----	-----	6.58	6.58	-----	-----
	U_3 - U_3	319.70	90.90	-0.31			0.90	1.20	98.01	-0.33	0.00	0.00	Vehicle	Vehicle	543.01	-----	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	-----	-----	6.32	6.32	-----	-----
	U_3 - U_{10}	128.80	84.67	-41.82			0.90	1.20	91.29	-45.09	0.00	0.00	Vehicle	Vehicle	286.11	-----	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	-----	-----	6.36	6.36	-----	-----
	U_{10} - U_{11}	-70.81	76.65	-101.58			0.90	1.20	82.64	-109.53	0.00	0.00	Vehicle	Vehicle	15.37	-234.44	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	9.44	9.44	4.81	4.81
	U_{11} - U_{12}	-252.85	68.51	-155.72			0.90	1.20	73.87	-167.90	0.00	0.00	Vehicle	Vehicle	-----	-546.97	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	-----	-----	3.33	3.33
	U_{12} - U_{13}	-391.81	59.19	-192.39			0.90	1.20	63.81	-207.43	0.00	0.00	Vehicle	Vehicle	-----	-779.01	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	-----	-----	3.60	3.60
	U_{13} - U_{14}	-482.83	49.75	-212.54			0.90	1.20	53.64	-229.16	0.00	0.00	Vehicle	Vehicle	-----	-925.60	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	-----	-----	3.69	3.69
	U_{14} - U_{15}	-484.28	49.57	-212.91			0.90	1.20	53.44	-229.56	0.00	0.00	Vehicle	Vehicle	-----	-928.00	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	-----	-----	3.67	3.67
	U_{15} - U_{16}	-501.86	38.10	-222.54			0.90	1.20	41.08	-239.94	0.00	0.00	Vehicle	Vehicle	-----	-964.34	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	-----	-----	3.44	3.44
	U_{16} - U_{17}	-467.82	27.72	-208.33			0.90	1.20	29.89	-224.62	0.00	0.00	Vehicle	Vehicle	-----	-900.17	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	-----	-----	3.83	3.83
	U_{17} - U_{18}	-368.70	17.11	-164.14			0.90	1.20	18.44	-176.98	0.00	0.00	Vehicle	Vehicle	-----	-709.39	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	-----	-----	3.40	3.40
	U_{18} - U_{19}	-251.42	8.48	-107.97			0.90	1.20	9.15	-116.41	0.00	0.00	Vehicle	Vehicle	-----	-478.18	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	-----	-----	3.66	3.66
	U_{19} - U_{20}	-117.77	2.11	-46.64			0.90	1.20	2.27	-50.29	0.00	0.00	Vehicle	Vehicle	-----	-218.47	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	-----	-----	11.13	11.13
Structure 2	U_1 - U_1	-118.16	7.84	-57.20			0.90	1.18	8.35	-60.90	0.00	0.00	Vehicle	Vehicle	-----	-232.77	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	-----	-----	8.69	8.69
	U_1 - U_2	-239.45	17.95	-114.33			0.90	1.18	19.12	-121.73	0.00	0.00	Vehicle	Vehicle	-----	-469.53	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	-----	-----	4.53	4.53
	U_1 - U_3	-350.29	29.93	-165.70			0.90	1.18	31.87	-176.42	0.00	0.00	Vehicle	Vehicle	-----	-684.72	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	0.69	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	-----	-----	4.12	4.12
	U_1 - U_4	-448.96	44.60	-205.95			0.90	1.18	47.48	-219.28	0.00	0.00	Vehicle	Vehicle	-----	-868.71	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	-----	-----	4.07	4.07
	U_1 - U_5	-483.05	54.10	-225.15			0.90	1.18	53.27	-239.69	0.00	0.00	Vehicle	Vehicle	-----	-939.56	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	-----	-----	4.19	4.19
	U_1 - U_6	-485.65	75.04	-242.41			0.90	1.18	79.89	-258.10	0.00	0.00	Vehicle	Vehicle	-----	-966.87	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	-----	-----	3.88	3.88
	U_1 - U_7	-428.66	88.81	-239.05			0.90	1.18	94.55	-254.51	0.00	0.00	Vehicle	Vehicle	-----	-888.13	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	-----	-----	3.59	3.59
	U_1 - U_8	-428.18	89.02	-238.63			0.90	1.18	94.78	-254.07	0.00	0.00	Vehicle	Vehicle	-----	-886.92	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	-----	-----	3.59	3.59
	U_1 - U_9	-335.25	101.97	-219.25			0.90	1.18	108.57	-233.44	0.00	0.00	Vehicle	Vehicle	-----	-739.30	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	-----	-----	3.39	3.39
	U_9 - U_{10}	-200.15	110.18	-175.37			0.90	1.18	117.31	-186.72	0.00	0.00	Vehicle	Vehicle	-----	-502.93	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	-----	-----	3.67	3.67
	U_{10} - U_{11}	-52.03	116.88	-131.61			0.90	1.18	124.44	-140.13	0.00	0.00	Vehicle	Vehicle	94.13	-249.81	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	7.74	7.74	5.12	5.12
	U_{11} - U_{12}	107.09	116.64	-77.14			0.90	1.18	124.19	-82.13	0.00	0.00	Vehicle	Vehicle	300.66	-----	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	-----	-----	6.47	6.47	-----	-----
	U_{12} - U_{13}	259.37	115.52	-25.00			0.90	1.18	123.00	-26.62	0.00	0.00	Vehicle	Vehicle	497.08	-----	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	-----	-----	7.15	7.15	-----	-----
	U_{13} - U_{14}	391.99	108.88	-22.30			0.90	1.18	115.93	-23.74	0.00	0.00	Vehicle	Vehicle	660.29	-----	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	-----	-----	10.11	10.11	-----	-----
	U_{14} - U_{15}	439.40	110.59	-19.35			0.90	1.17	116.35	-20.36	0.00	0.00	Vehicle	Vehicle	722.47	-----	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	-----	-----	9.67	9.67	-----	-----
	U_{15} - U_{16}	369.68	108.84	-16.37			0.90	1.17	114.51	-17.23	0.00	0.00	Vehicle	Vehicle	629.45	-----	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	-----	-----	7.88	7.88	-----	-----
	U_{16} - U_{17}	271.42	104.96	-41.58			0.90	1.17	110.43	-43.75	0.00	0.00	Vehicle	Vehicle	496.40	-----	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	-----	-----	7.00	7.00	-----	-----
	U_{17} - U_{18}	171.80	100.07	-76.82			0.90	1.17	105.29	-80.82	0.00	0.00	Vehicle	Vehicle	360.21	-----	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	-----	-----	5.65	5.65	-----	-----
	U_{18} - U_{19}	72.84	91.29	-115.86			0.90	1.17	96.05	-121.90	0.00	0.00	Vehicle	Vehicle	219.55	-63.78	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	7.22	7.22	5.91	5.91
	U_{19} - U_{20}	-8.04	81.38	-148.82			0.90	1.17	85.62	-156.58	0.00	0.00	Vehicle	Vehicle	100.85	-214.00	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	9.67	9.67	4.37	4.37
	U_{20} - U_{21}	-60.07	68.79	-173.35			0.90	1.17	72.38	-182.38	0.00	0.00	Vehicle	Vehicle	16.00	-315.19	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	14.53	14.53	4.26	4.26
	U_{21} - U_{22}	-82.15	54.72	-187.94			0.90	1.17	57.57	-197.73	0.00	0.00	Vehicle	Vehicle	-----	-363.84	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	-----	-----	3.82	3.82
	U_{22} - U_{23}	-82.37	54.52	-187.84			0.90	1.17	57.36	-197.62	0.00	0.00	Vehicle	Vehicle	-----	-363.99	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	-----	-----	3.82	3.82
	U_{23} - U_{24}	-65.94	67.53	-184.33			0.90	1.17	71.05	-193.93	0.00	0.00	Vehicle	Vehicle	6.65	-337.83	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	14.88	14.88	3.97	3.97
	U_{24} - U_{25}	-11.98	80.53	-155.55			0.90	1.17	84.72	-174.28	0.00	0.00	Vehicle	Vehicle	86.76	-249.95	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	9.89	9.89	4.52	4.52
	U_{25} - U_{26}	54.95	91.46	-136.19			0.90	1.17	96.23	-143.28	0.00	0.00	Vehicle	Vehicle	196.53	-114.83	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	7.39	7.39	4.90	4.90
	U_{26} - U_{27}	135.89	100.54	-96.28			0.90	1.17	105.77	-101.29	0.00	0.00	Vehicle	Vehicle	314.16	-----	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	-----	-----	5.96	5.96	-----	-----
	U_{27} - U_{28}	216.69	104.79	-52.01			0.90	1.17	110.25	-54.72	0.00	0.00	Vehicle	Vehicle	425.02	-----	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	-----	-----	7.50	7.50	-----	-----
	U_{28} - U_{29}	293.53	107.20	-22.34			0.90	1.17	112.78	-23.51	0.00	0.00	Vehicle	Vehicle	528.21	-----	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	-----	-----	8.68	8.68	-----	-----
	U_{29} - U_{30}	357.86	105.83	-26.74			0.90	1.17	111.34	-28.13	0.00	0.00	Vehicle	Vehicle	609.96	-----	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	-----	-----	10.84	10.84	-----	-----
	U_{30} - U_{31}	339.12	120.24	-30.53			0.90	1.18	128.02	-32.51	0.00	0.00	Vehicle	Vehicle	607.28	-----	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	-----	-----	9.57	9.57	-----	-----
	U_{31} - U_{32}	251.34	120.03	-31.13			0.90	1.18	127.80	-33.15	0.00	0.00	Vehicle	Vehicle	492.87	-----	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

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: 5C1 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 (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	L_0- L_1	4.73	5.88	-4.09			0.90	1.24	6.55	-4.56	0.00	0.00	Vehicle	Vehicle	14.66	-----	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	-----	-----	**76.02**	**76.02**	-----	-----
	L_1 - L_2	74.19	73.59	-22.82			0.90	1.24	81.92	-25.41	0.00	0.00	Vehicle	Vehicle	202.94	-----	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	-----	-----	**5.23**	**5.23**	-----	-----
	L_2 - L_3	97.64	121.84	-42.76			0.90	1.24	135.64	-47.60	0.00	0.00	Vehicle	Vehicle	303.26	-----	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	-----	-----	**4.21**	**4.21**	-----	-----
	L_3 - L_4	66.79	131.55	-61.53			0.90	1.24	146.45	-68.50	0.00	0.00	Vehicle	Vehicle	277.21	-2.23	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	**4.11**	**4.11**	**9.19**	**9.19**
	L_4 - L_5	-108.59	91.01	-92.41			0.90	1.24	101.32	-102.88	0.00	0.00	Vehicle	Vehicle	-----	-274.91	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	-----	-----	**3.81**	**3.81**
	L_5 - L_6	-237.42	44.70	-101.99			0.90	1.24	49.77	-113.55	0.00	0.00	Vehicle	Vehicle	-----	-456.26	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	-----	-----	**3.72**	**3.72**
	L_6 - L_7	-362.38	2.88	-106.90			0.90	1.24	3.21	-119.01	0.00	0.00	Vehicle	Vehicle	-----	-625.81	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	-----	-----	**4.89**	**4.89**
	L_7 - L_8	-478.62	0.28	-105.47			0.90	1.24	0.31	-117.42	0.00	0.00	Vehicle	Vehicle	-----	-774.85	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	-----	-----	**6.14**	**6.14**
	L_8 - L_9	-476.97	0.19	-118.51			0.90	1.20	0.21	-127.78	0.00	0.00	Vehicle	Vehicle	-----	-786.17	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	-----	-----	**5.65**	**5.65**
	L_9 - L_{10}	-301.47	1.86	-86.80			0.90	1.20	2.00	-93.58	0.00	0.00	Vehicle	Vehicle	-----	-513.57	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	-----	-----	**6.88**	**6.88**
	L_{10} - L_{11}	-104.56	19.40	-77.28			0.90	1.20	20.92	-83.32	0.00	0.00	Vehicle	Vehicle	-----	-244.24	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	-----	-----	**4.75**	**4.75**
	L_{11} - L_{12}	96.98	75.27	-69.20			0.90	1.20	81.16	-74.61	0.00	0.00	Vehicle	Vehicle	231.58	-----	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	-----	-----	**6.12**	**6.12**	-----	-----
	L_{12} - L_{13}	268.60	120.33	-60.06			0.90	1.20	129.74	-64.76	0.00	0.00	Vehicle	Vehicle	517.85	-----	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	-----	-----	**5.44**	**5.44**	-----	-----
	L_{13} - L_{14}	405.49	155.80	-50.78			0.90	1.20	167.98	-54.75	0.00	0.00	Vehicle	Vehicle	745.52	-----	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	-----	-----	**5.37**	**5.37**	-----	-----
	L_{14} - L_{15}	502.59	178.68	-28.70			0.90	1.20	192.65	-30.95	0.00	0.00	Vehicle	Vehicle	903.82	-----	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	-----	-----	**5.56**	**5.56**	-----	-----
	L_{15} - L_{16}	469.06	163.50	-22.28			0.90	1.20	176.28	-24.02	0.00	0.00	Vehicle	Vehicle	838.95	-----	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	-----	-----	**6.27**	**6.27**	-----	-----
	L_{16} - L_{17}	365.26	113.56	-14.88			0.90	1.20	122.44	-16.04	0.00	0.00	Vehicle	Vehicle	634.00	-----	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	-----	-----	**6.95**	**6.95**	-----	-----
	L_{17} - L_{18}	248.52	66.23	-10.72			0.90	1.20	71.41	-11.56	0.00	0.00	Vehicle	Vehicle	415.91	-----	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	-----	-----	**8.89**	**8.89**	-----	-----
	L_{18} - L_{19}	112.87	41.27	-35.82			0.90	1.20	44.50	-38.62	0.00	0.00	Vehicle	Vehicle	204.57	-----	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	-----	-----	**8.76**	**8.76**	-----	-----
	L_{19} - L_{20}	-14.36	30.56	-75.21			0.90	1.20	32.95	-81.09	0.00	0.00	Vehicle	Vehicle	24.16	-124.08	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	**15.69**	**15.69**	**5.05**	**5.05**
Structure 2	L_0- L_1	15.25	12.09	-12.24			0.90	1.18	12.87	-13.03	0.00	0.00	Vehicle	Vehicle	36.56	-----	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	-----	-----	**48.01**	**48.01**	-----	-----
	L_1 - L_2	136.09	47.90	-8.31			0.90	1.18	50.99	-8.85	0.00	0.00	Vehicle	Vehicle	243.21	-----	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	-----	-----	**9.75**	**9.75**	-----	-----
	L_2 - L_3	262.77	94.90	-16.58			0.90	1.18	101.04	-17.66	0.00	0.00	Vehicle	Vehicle	472.95	-----	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	-----	-----	**6.93**	**6.93**	-----	-----
	L_3 - L_4	373.14	145.71	-28.22			0.90	1.18	155.13	-30.04	0.00	0.00	Vehicle	Vehicle	686.76	-----	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	-----	-----	**5.95**	**5.95**	-----	-----
	L_4 - L_5	456.57	183.88	-42.45			0.90	1.18	195.71	-45.20	0.00	0.00	Vehicle	Vehicle	848.06	-----	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	-----	-----	**6.10**	**6.10**	-----	-----
	L_5 - L_6	489.37	203.17	-57.28			0.90	1.18	216.31	-60.96	0.00	0.00	Vehicle	Vehicle	917.39	-----	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	-----	-----	**6.03**	**6.03**	-----	-----
	L_6 - L_7	479.01	219.10	-72.55			0.90	1.18	233.27	-77.24	0.00	0.00	Vehicle	Vehicle	925.96	-----	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	-----	-----	**5.74**	**5.74**	-----	-----
	L_7 - L_8	330.07	195.79	-98.92			0.90	1.18	208.45	-105.32	0.00	0.00	Vehicle	Vehicle	700.09	-----	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	-----	-----	**4.85**	**4.85**	-----	-----
	L_8 - L_9	188.98	151.32	-106.94			0.90	1.18	161.11	-113.86	0.00	0.00	Vehicle	Vehicle	455.12	-----	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	-----	-----	**5.65**	**5.65**	-----	-----
	L_9 - L_{10}	39.77	109.68	-113.72			0.90	1.18	116.78	-121.07	0.00	0.00	Vehicle	Vehicle	203.52	-105.69	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	**7.04**	**7.04**	**6.34**	**6.34**
	L_{10} - L_{11}	-127.39	54.66	-114.64			0.90	1.18	58.20	-122.06	0.00	0.00	Vehicle	Vehicle	-----	-324.28	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	-----	-----	**4.29**	**4.29**
	L_{11} - L_{12}	-282.64	27.73	-113.51			0.90	1.18	29.52	-120.86	0.00	0.00	Vehicle	Vehicle	-----	-524.55	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	-----	-----	**5.36**	**5.36**
	L_{12} - L_{13}	-426.73	26.99	-109.78			0.90	1.18	28.73	-116.88	0.00	0.00	Vehicle	Vehicle	-----	-706.70	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	-----	-----	**7.26**	**7.26**
	L_{13} - L_{14}	-536.42	25.10	-140.75			0.90	1.18	26.73	-149.85	0.00	0.00	Vehicle	Vehicle	-----	-892.16	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	-----	-----	**6.53**	**6.53**
	L_{14} - L_{15}	-537.75	29.92	-121.85			0.90	1.17	31.48	-128.20	0.00	0.00	Vehicle	Vehicle	-----	-865.74	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	-----	-----	**7.62**	**7.62**
	L_{15} - L_{16}	-475.65	27.83	-120.00			0.90	1.17	29.07	-126.25	0.00	0.00	Vehicle	Vehicle	-----	-782.46	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	-----	-----	**6.34**	**6.34**
	L_{16} - L_{17}	-384.35	27.95	-108.63			0.90	1.17	29.41	-114.29	0.00	0.00	Vehicle	Vehicle	-----	-648.23	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	-----	-----	**5.80**	**5.80**
	L_{17} - L_{18}	-281.86	31.04	-104.43			0.90	1.17	32.66	-109.87	0.00	0.00	Vehicle	Vehicle	-----	-509.24	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	-----	-----	**4.06**	**4.06**
	L_{18} - L_{19}	-175.17	59.42	-95.35			0.90	1.17	62.52	-100.32	0.00	0.00	Vehicle	Vehicle	-----	-358.12	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	-----	-----	**3.97**	**3.97**
	L_{19} - L_{20}	-76.53	94.75	-86.44			0.90	1.17	99.69	-90.95	0.00	0.00	Vehicle	Vehicle	30.10	-217.72	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**	**5.47**	**5.47**
	L_{20} - L_{21}	4.38	119.07	-73.67			0.90	1.17	125.27	-77.51	0.00	0.00	Vehicle	Vehicle	168.55	-95.07	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	**7.56**	**7.56**	**10.42**	**10.42**
	L_{21} - L_{22}	55.94	138.25	-61.16			0.90	1.17	145.46	-64.34	0.00	0.00	Vehicle	Vehicle	261.82	-10.92	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	**6.16**	**6.16**	**13.36**	**13.36**
	L_{22} - L_{23}	62.99	135.39	-38.94			0.90	1.17	142.44	-40.97	0.00	0.00	Vehicle	Vehicle	267.06	-----	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	-----	-----	**6.24**	**6.24**	-----	-----
	L_{23} - L_{24}	15.54	113.83	-51.90			0.90	1.17	119.76	-54.60	0.00	0.00	Vehicle	Vehicle	175.89	-50.78	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	**7.82**	**7.82**	**15.00**	**15.00**
	L_{24} - L_{25}	-56.00	76.92	-58.74			0.90	1.17	80.92	-61.80	0.00	0.00	Vehicle	Vehicle	32.40	-153.14	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	**9.08**	**9.08**	**8.38**	**8.38**
	L_{25} - L_{26}	-136.37	48.60	-67.80			0.90	1.17	51.13	-71.33	0.00	0.00	Vehicle	Vehicle	-----	-270.01	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	-----	-----	**6.13**	**6.13**
	L_{26} - L_{27}	-217.73	37.51	-89.13			0.90	1.17	39.46	-93.78	0.00	0.00	Vehicle	Vehicle	-----	-404.96	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	-----	-----	**5.44**	**5.44**
	L_{27} - L_{28}	-296.25	39.21	-130.58			0.90	1.17	41.25	-137.38	0.00	0.00	Vehicle	Vehicle	-----	-563.73	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	-----	-----	**5.47**	**5.47**
	L_{28} - L_{29}	-364.18	47.33	-173.34			0.90	1.17	49.79	-182.37	0.00	0.00	Vehicle	Vehicle	-----	-710.51	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	-----	-----	**5.00**	**5.00**
	L_{29} - L_{30}	-418.23	50.62	-200.35			0.90	1.17	53.26	-210.79	0.00	0.00	Vehicle	Vehicle	-----	-817.73	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	-----	-----	**5.20**	**5.20**
	L_{30} - L_{31}	-350.38	25.28	-133.27			0.90	1.18	26.91	-141.89	0.00	0.00	Vehicle	Vehicle	-----	-639.95	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	-----	-----	**8.21**	**8.21**
	L_{31} - L_{32}	-275.46	25.91	-107.04			0.90	1.18	27.58	-113.97	0.00	0.00	Vehicle	Vehicle	-----	-506.25	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	-----	-----	**8.68**	**8.68**
	L_{32} - L_{33}	-179.08	29.01	-94.42			0.90	1.18	30.89	-100.53	0.00	0.00	Vehicle	Vehicle	-----	-363.49	7.48

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: 5C1 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	17.55	-89.86			0.90	1.24	19.53	-100.04	0.00	0.00	Vehicle	Vehicle	------	-230.39	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	------	------	------	------	------	2.34	2.34
	U_1 - L_1	-33.88	15.74	-61.37			0.90	1.24	17.52	-68.32	0.00	0.00	Vehicle	Vehicle	------	-132.85	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	------	------	------	------	------	4.66	4.66
	U_2 - L_2	10.43	14.78	-49.53			0.90	1.24	16.46	-55.14	0.00	0.00	Vehicle	Vehicle	34.96	-58.12	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	------	------	------	25.35	25.35	6.57	6.57
	U_3 - L_3	44.39	14.76	-33.16			0.90	1.24	16.43	-36.92	0.00	0.00	Vehicle	Vehicle	79.06	------	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	------	------	------	23.33	23.33	------	------
	U_4 - L_4	-16.67	1.40	-51.59			0.90	1.24	1.56	-57.44	0.00	0.00	Vehicle	Vehicle	------	-96.34	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	------	------	------	------	------	5.80	5.80
	U_5 - L_5	-109.51	0.16	-65.58			0.90	1.24	0.18	-73.00	0.00	0.00	Vehicle	Vehicle	------	-237.26	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	------	------	------	------	------	4.32	4.32
	U_6 - L_6	-143.60	0.15	-86.84			0.90	1.24	0.17	-96.68	0.00	0.00	Vehicle	Vehicle	------	-312.37	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	------	------	------	------	------	3.49	3.49
	U_7 - L_7	-142.61	2.86	-97.07			0.90	1.24	3.19	-108.06	0.00	0.00	Vehicle	Vehicle	------	-325.88	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	------	------	------	------	------	2.68	2.68
	U_8 - L_8	-391.97	0.10	-131.19			0.90	1.24	0.11	-146.06	0.00	0.00	Vehicle	Vehicle	------	-699.43	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	------	------	------	------	------	4.61	4.61
	U_9 - L_9	-223.13	9.85	-97.51			0.90	1.20	10.62	-105.13	0.00	0.00	Vehicle	Vehicle	------	-426.75	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	------	------	------	------	------	3.86	3.86
	U_{10} - L_{10}	-225.77	7.01	-96.40			0.90	1.20	7.56	-103.93	0.00	0.00	Vehicle	Vehicle	------	-428.62	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	------	------	------	------	------	4.67	4.67
	U_{11} - L_{11}	-198.79	4.04	-93.68			0.90	1.20	4.36	-101.00	0.00	0.00	Vehicle	Vehicle	------	-389.72	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	------	------	------	------	------	4.38	4.38
	U_{12} - L_{12}	-154.77	3.84	-76.78			0.90	1.20	4.14	-82.78	0.00	0.00	Vehicle	Vehicle	------	-308.82	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	------	------	------	------	------	4.56	4.56
	U_{13} - L_{13}	-109.04	13.30	-67.15			0.90	1.20	14.34	-72.40	0.00	0.00	Vehicle	Vehicle	------	-235.88	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	------	------	------	------	------	3.75	3.75
	U_{14} - L_{14}	-12.30	1.32	-48.59			0.90	1.24	1.42	-52.39	0.00	0.00	Vehicle	Vehicle	------	-84.10	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	------	------	------	------	------	6.35	6.35
	U_{15} - L_{15}	-5.62	19.79	-49.41			0.90	1.20	21.34	-53.27	0.00	0.00	Vehicle	Vehicle	20.44	-76.56	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	------	------	------	20.30	20.30	6.34	6.34
	U_{16} - L_{16}	-51.74	11.62	-60.34			0.90	1.20	12.52	-65.05	0.00	0.00	Vehicle	Vehicle	------	-151.82	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	------	------	------	------	------	4.45	4.45
	U_{17} - L_{17}	-127.31	11.45	-86.82			0.90	1.20	12.35	-93.61	0.00	0.00	Vehicle	Vehicle	------	-287.19	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	------	------	------	------	------	3.03	3.03
	U_{18} - L_{18}	-159.89	10.57	-100.78			0.90	1.20	11.40	-108.67	0.00	0.00	Vehicle	Vehicle	------	-349.12	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	------	------	------	------	------	3.36	3.36
	U_{19} - L_{19}	-191.17	8.98	-106.46			0.90	1.20	9.69	-114.79	0.00	0.00	Vehicle	Vehicle	------	-397.74	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	------	------	------	------	------	3.70	3.70
	U_{20} - L_{20}	-211.94	9.04	-119.82			0.90	1.20	9.74	-129.19	0.00	0.00	Vehicle	Vehicle	------	-443.47	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	------	------	------	------	------	2.66	2.66
Structure 2	U_0 - L_0	-206.53	13.35	-100.93			0.90	1.18	14.21	-107.46	0.00	0.00	Vehicle	Vehicle	------	-408.19	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	------	------	------	------	------	3.78	3.78
	U_1 - L_1	-188.72	13.71	-98.89			0.90	1.18	14.59	-105.28	0.00	0.00	Vehicle	Vehicle	------	-382.21	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	------	------	------	------	------	4.59	4.59
	U_2 - L_2	-155.84	14.42	-93.47			0.90	1.18	15.35	-99.52	0.00	0.00	Vehicle	Vehicle	------	-331.97	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	------	------	------	------	------	4.21	4.21
	U_3 - L_3	-134.53	16.32	-88.51			0.90	1.18	17.37	-94.24	0.00	0.00	Vehicle	Vehicle	------	-297.39	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	------	------	------	------	------	3.37	3.37
	U_4 - L_4	-64.47	15.53	-65.45			0.90	1.18	16.53	-69.68	0.00	0.00	Vehicle	Vehicle	------	-174.39	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	------	------	------	------	------	3.94	3.94
	U_5 - L_5	-19.94	20.56	-60.16			0.90	1.18	21.89	-64.05	0.00	0.00	Vehicle	Vehicle	2.54	-109.18	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	------	------	------	20.45	20.45	5.01	5.01
	U_6 - L_6	40.07	29.91	-41.67			0.90	1.18	31.85	-44.37	0.00	0.00	Vehicle	Vehicle	93.49	-5.59	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	------	------	------	12.17	12.17	8.61	8.61
	U_7 - L_7	-26.03	0.41	-49.04			0.90	1.18	0.44	-52.21	0.00	0.00	Vehicle	Vehicle	------	-101.72	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	------	------	------	------	------	6.02	6.02
	U_8 - L_8	-125.22	14.24	-69.09			0.90	1.18	15.17	-73.56	0.00	0.00	Vehicle	Vehicle	------	-258.41	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	------	------	------	------	------	5.51	5.51
	U_9 - L_9	-174.50	4.60	-91.78			0.90	1.18	4.89	-97.72	0.00	0.00	Vehicle	Vehicle	------	-353.88	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	------	------	------	------	------	5.29	5.29
	U_{10} - L_{10}	-202.62	1.47	-104.86			0.90	1.18	1.57	-111.64	0.00	0.00	Vehicle	Vehicle	------	-408.54	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	------	------	------	------	------	5.16	5.16
	U_{11} - L_{11}	-229.48	2.96	-113.50			0.90	1.18	3.15	-120.85	0.00	0.00	Vehicle	Vehicle	------	-455.42	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	------	------	------	------	------	4.43	4.43
	U_{12} - L_{12}	-250.80	4.19	-122.78			0.90	1.18	4.46	-130.72	0.00	0.00	Vehicle	Vehicle	------	-495.98	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	5.68	12.00	Pass	------	------	------	------	------	4.21	4.21
	U_{13} - L_{13}	-223.27	13.81	-118.45			0.90	1.18	14.71	-126.11	0.00	0.00	Vehicle	Vehicle	------	-454.19	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	------	------	------	------	------	3.70	3.70
	U_{14} - L_{14}	-343.24	2.69	-127.59			0.90	1.18	2.86	-135.85	0.00	0.00	Vehicle	Vehicle	------	-822.82	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	------	------	------	------	------	5.22	5.22
	U_{15} - L_{15}	-123.12	13.57	-93.27			0.90	1.17	14.28	-98.13	0.00	0.00	Vehicle	Vehicle	------	-287.62	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	------	------	------	------	------	5.78	5.78
	U_{16} - L_{16}	-156.68	9.85	-94.05			0.90	1.17	10.36	-98.95	0.00	0.00	Vehicle	Vehicle	------	-332.31	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	------	------	------	------	------	5.15	5.15
	U_{17} - L_{17}	-147.89	10.04	-98.09			0.90	1.17	10.56	-103.20	0.00	0.00	Vehicle	Vehicle	------	-326.41	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	------	------	------	------	------	4.61	4.61
	U_{18} - L_{18}	-142.21	12.59	-93.83			0.90	1.17	13.24	-98.71	0.00	0.00	Vehicle	Vehicle	------	-313.20	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	------	------	------	------	------	4.41	4.41
	U_{19} - L_{19}	-111.47	14.07	-83.48			0.90	1.17	14.80	-87.82	0.00	0.00	Vehicle	Vehicle	------	-259.08	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	------	------	------	------	------	4.55	4.55
	U_{20} - L_{20}	-76.56	15.64	-73.38			0.90	1.17	16.46	-77.20	0.00	0.00	Vehicle	Vehicle	------	-199.89	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	------	------	------	------	------	3.87	3.87
	U_{21} - L_{21}	-44.33	20.32	-62.56			0.90	1.17	21.38	-65.82	0.00	0.00	Vehicle	Vehicle	------	-143.20	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	------	------	------	------	------	4.50	4.50
	U_{22} - L_{22}	-21.25	1.41	-49.50			0.90	1.17	1.48	-52.07	0.00	0.00	Vehicle	Vehicle	------	-95.32	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	------	------	------	------	------	6.16	6.16
	U_{23} - L_{23}	-39.04	24.14	-53.21			0.90	1.17	25.39	-55.98	0.00	0.00	Vehicle	Vehicle	------	-123.53	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	------	------	------	------	------	5.39	5.39
	U_{24} - L_{24}	-74.80	17.32	-69.45			0.90	1.17	18.22	-73.07	0.00	0.00	Vehicle	Vehicle	------	-192.23	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	------	------	------	------	------	4.11	4.11
	U_{25} - L_{25}	-103.21	17.24	-87.86			0.90	1.17	18.13	-92.44	0.00	0.00	Vehicle	Vehicle	------	-254.35	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	------	------	------	------	------	4.41	4.41
	U_{26} - L_{26}	-120.15	16.26	-95.31			0.90	1.17	17.11	-100.27	0.00	0.00	Vehicle	Vehicle	------	-286.54	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	------	------	------	------	------	4.56	4.56
	U_{27} - L_{27}	-123.87	13.45	-105.63			0.90	1.17	14.15	-111.14	0.00	0.00	Vehicle	Vehicle	------	-305.50	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	6.06	12.00	Pass	------	------	------	------	------	4.49	4.49
	U_{28} - L_{28}	-135.49	12.23	-114.85			0.90	1.17	12.87	-120.83	0.00	0.00	Vehicle	Vehicle	------	-333.21	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	------	------	------	------	------	4.39	4.39
	U_{29} - L_{29}	-116.90	7.19	-105.40			0.90	1.17	7.57	-110.89	0.00	0.00	Vehicle	Vehicle	------	-296.12	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	------	------	------	------	------	5.17	5.17
	U_{30} - L_{30}	-261.40	5.20	-119.97			0.90	1.18	5.53	-127.73	0.00	0.00	Vehicle	Vehicle	------	-505.87	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	------	------	------	------	------	6.04	6.04
	U_{31} - L_{31}	-156.06	16.71	-94.18			0.90	1.18	17.79	-100.27	0.00	0.00	Vehicle	Vehicle	------	-333.23	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	------	------	------	------	------	5.33	5.33
	U_{32} - L_{32}	-185.16	11.48	-106.48			0.90	1.18	12.23	-113.36	0.00	0.00	Vehicle	Vehicle	------	-388.08	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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, 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	94.14	-24.57			0.90	1.24	104.81	-27.35	0.00	0.00	Vehicle	Vehicle	249.85	-----	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	-----	-----	-----	-----	-----	**4.76**	**4.76**	-----	-----
	U_1 - L_2	23.29	77.20	-24.48			0.90	1.24	85.94	-27.26	0.00	0.00	Vehicle	Vehicle	142.01	-5.15	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	-----	-----	-----	**4.71**	**4.71**	**13.16**	**13.16**
	U_2 - L_3	-37.87	49.14	-23.79			0.90	1.24	54.71	-26.49	0.00	0.00	Vehicle	Vehicle	21.89	-83.66	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	-----	-----	-----	**8.51**	**8.51**	**11.19**	**11.19**
	U_3 - L_4	-92.23	25.91	-49.04			0.90	1.24	28.84	-54.59	0.00	0.00	Vehicle	Vehicle	-----	-190.87	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	-----	-----	-----	**----**	**----**	**4.47**	**4.47**
	U_3 - L_4	143.29	67.20	-7.85			0.90	1.24	74.82	-8.74	0.00	0.00	Vehicle	Vehicle	283.54	-----	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	-----	-----	-----	-----	-----	**5.03**	**5.03**	-----	-----
	U_4 - L_5	177.89	87.27	-0.20			0.90	1.24	97.16	-0.22	0.00	0.00	Vehicle	Vehicle	357.56	-----	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	-----	-----	-----	-----	-----	**4.87**	**4.87**	-----	-----
	U_5 - L_6	184.40	106.05	-2.45			0.90	1.24	118.07	-2.72	0.00	0.00	Vehicle	Vehicle	393.21	-----	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	-----	-----	-----	-----	-----	**3.95**	**3.95**	-----	-----
	U_6 - L_7	179.98	107.90	-4.22			0.90	1.24	120.13	-4.69	0.00	0.00	Vehicle	Vehicle	390.14	-----	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	-----	-----	-----	-----	-----	**3.92**	**3.92**	-----	-----
	U_8 - L_9	268.90	105.75	-11.68			0.90	1.20	114.02	-12.60	0.00	0.00	Vehicle	Vehicle	497.79	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
	U_9 - L_{10}	278.76	110.77	-11.20			0.90	1.20	119.44	-12.08	0.00	0.00	Vehicle	Vehicle	517.65	-----	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	-----	-----	-----	-----	-----	**5.72**	**5.72**	-----	-----
	U_{10} - L_{11}	284.98	117.35	-5.31			0.90	1.20	126.53	-5.73	0.00	0.00	Vehicle	Vehicle	534.96	-----	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	-----	-----	-----	-----	-----	**4.95**	**4.95**	-----	-----
	U_{11} - L_{12}	250.55	102.44	-5.67			0.90	1.20	110.45	-6.11	0.00	0.00	Vehicle	Vehicle	469.30	-----	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	-----	-----	-----	-----	-----	**4.77**	**4.77**	-----	-----
	U_{12} - L_{13}	189.62	90.96	-18.30			0.90	1.20	98.08	-19.73	0.00	0.00	Vehicle	Vehicle	374.00	-----	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	-----	-----	-----	-----	-----	**4.50**	**4.50**	-----	-----
	U_{13} - L_{14}	123.30	71.82	-27.14			0.90	1.20	77.43	-29.26	0.00	0.00	Vehicle	Vehicle	260.95	-----	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	-----	-----	-----	-----	-----	**3.93**	**3.93**	-----	-----
	U_{14} - L_{14}	-24.40	47.44	-42.44			0.90	1.20	51.15	-45.76	0.00	0.00	Vehicle	Vehicle	34.78	-91.21	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	-----	-----	-----	**8.84**	**8.84**	**6.64**	**6.64**
	U_{15} - L_{15}	48.54	67.52	-26.39			0.90	1.20	72.79	-28.46	0.00	0.00	Vehicle	Vehicle	157.73	-----	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	-----	-----	-----	-----	-----	**5.21**	**5.21**	-----	-----
	U_{16} - L_{16}	146.57	91.09	-15.66			0.90	1.20	98.21	-16.88	0.00	0.00	Vehicle	Vehicle	318.22	-----	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	-----	-----	-----	-----	-----	**3.85**	**3.85**	-----	-----
	U_{18} - L_{17}	182.43	103.47	-13.49			0.90	1.20	111.57	-14.55	0.00	0.00	Vehicle	Vehicle	382.20	-----	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	-----	-----	-----	-----	-----	**4.20**	**4.20**	-----	-----
	U_{19} - L_{18}	223.79	113.84	-11.36			0.90	1.20	122.74	-12.25	0.00	0.00	Vehicle	Vehicle	450.49	-----	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	-----	-----	-----	-----	-----	**3.96**	**3.96**	-----	-----
	U_{20} - L_{19}	232.63	112.21	-9.49			0.90	1.20	120.98	-10.23	0.00	0.00	Vehicle	Vehicle	459.70	-----	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	-----	-----	-----	-----	-----	**3.95**	**3.95**	-----	-----
Structure 2	U_1 - L_1	213.47	102.20	-14.24			0.90	1.18	108.81	-15.16	0.00	0.00	Vehicle	Vehicle	418.96	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
	U_1 - L_2	200.39	105.49	-16.71			0.90	1.18	112.31	-17.79	0.00	0.00	Vehicle	Vehicle	406.52	-----	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	-----	-----	-----	-----	-----	**5.14**	**5.14**	-----	-----
	U_2 - L_3	172.76	99.97	-18.65			0.90	1.18	106.44	-19.85	0.00	0.00	Vehicle	Vehicle	362.96	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
	U_3 - L_4	147.11	91.12	-21.92			0.90	1.18	97.02	-23.34	0.00	0.00	Vehicle	Vehicle	317.37	-----	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	-----	-----	-----	-----	-----	**4.43**	**4.43**	-----	-----
	U_3 - L_5	49.07	75.32	-24.83			0.90	1.18	80.20	-26.44	0.00	0.00	Vehicle	Vehicle	168.05	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.41	29.25	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U_4 - L_6	2.97	62.52	-33.09			0.90	1.18	66.57	-35.23	0.00	0.00	Vehicle	Vehicle	90.39	-41.94	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	-----	-----	-----	**6.38**	**6.38**	**9.33**	**9.33**
	U_4 - L_7	-85.72	39.18	-59.65			0.90	1.18	41.72	-63.51	0.00	0.00	Vehicle	Vehicle	-----	-194.00	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	-----	-----	-----	**----**	**----**	**4.31**	**4.31**
	U_5 - L_7	140.27	79.38	-31.59			0.90	1.18	84.52	-33.64	0.00	0.00	Vehicle	Vehicle	292.22	-----	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	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
	U_5 - L_8	204.17	99.11	-11.39			0.90	1.18	105.53	-12.13	0.00	0.00	Vehicle	Vehicle	402.61	-----	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	-----	-----	-----	-----	-----	**4.80**	**4.80**	-----	-----
	U_6 - L_9	234.82	112.34	-5.06			0.90	1.18	119.61	-5.39	0.00	0.00	Vehicle	Vehicle	460.76	-----	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	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U_{11} - L_{10}	263.04	126.36	-3.08			0.90	1.18	134.53	-3.27	0.00	0.00	Vehicle	Vehicle	516.84	-----	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	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
	U_{11} - L_{11}	273.97	124.35	-3.75			0.90	1.18	132.39	-3.99	0.00	0.00	Vehicle	Vehicle	528.26	-----	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	-----	-----	-----	-----	-----	**4.31**	**4.31**	-----	-----
	U_{12} - L_{12}	254.88	123.89	-14.32			0.90	1.18	131.91	-15.25	0.00	0.00	Vehicle	Vehicle	502.82	-----	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	-----	-----	-----	-----	-----	**3.96**	**3.96**	-----	-----
	U_{13} - L_{13}	217.66	111.83	-17.19			0.90	1.18	119.07	-18.31	0.00	0.00	Vehicle	Vehicle	437.74	-----	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	-----	-----	-----	-----	-----	**4.70**	**4.70**	-----	-----
	U_{14} - L_{15}	110.03	84.13	-14.14			0.90	1.17	88.52	-14.87	0.00	0.00	Vehicle	Vehicle	258.11	-----	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	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
	U_{15} - L_{16}	132.26	85.30	-14.69			0.90	1.17	89.74	-15.46	0.00	0.00	Vehicle	Vehicle	288.61	-----	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	-----	-----	-----	-----	-----	**5.78**	**5.78**	-----	-----
	U_{16} - L_{17}	172.87	102.99	-10.53			0.90	1.17	108.36	-11.08	0.00	0.00	Vehicle	Vehicle	365.60	-----	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	-----	-----	-----	-----	-----	**4.96**	**4.96**	-----	-----
	U_{17} - L_{18}	160.16	102.77	-12.54			0.90	1.17	108.12	-13.19	0.00	0.00	Vehicle	Vehicle	348.77	-----	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	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U_{18} - L_{19}	152.33	98.20	-16.39			0.90	1.17	103.31	-17.24	0.00	0.00	Vehicle	Vehicle	332.33	-----	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	-----	-----	-----	-----	-----	**4.82**	**4.82**	-----	-----
	U_{19} - L_{20}	120.67	94.26	-18.75			0.90	1.17	99.17	-19.73	0.00	0.00	Vehicle	Vehicle	285.79	-----	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	-----	-----	-----	-----	-----	**4.87**	**4.87**	-----	-----
	U_{20} - L_{21}	76.10	77.42	-25.08			0.90	1.17	81.45	-26.39	0.00	0.00	Vehicle	Vehicle	204.81	-----	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	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
	U_{21} - L_{22}	31.50	61.01	-39.02			0.90	1.17	64.19	-41.05	0.00	0.00	Vehicle	Vehicle	124.39	-12.42	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	-----	-----	-----	**6.17**	**6.17**	**8.70**	**8.70**
	U_{22} - L_{23}	24.27	60.08	-48.27			0.90	1.17	63.21	-50.78	0.00	0.00	Vehicle	Vehicle	113.72	-34.47	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	-----	-----	-----	**6.38**	**6.38**	**6.84**	**6.84**
	U_{23} - L_{23}	72.21	71.58	-31.30			0.90	1.17	75.31	-32.93	0.00	0.00	Vehicle	Vehicle	191.78	-----	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	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U_{24} - L_{24}	112.05	94.66	-22.96			0.90	1.17	99.59	-24.16	0.00	0.00	Vehicle	Vehicle	275.14	-----	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	-----	-----	-----	-----	-----	**4.93**	**4.93**	-----	-----
	U_{25} - L_{25}	127.76	106.75	-20.76			0.90	1.17	112.31	-21.84	0.00	0.00	Vehicle	Vehicle	312.09	-----	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	-----	-----	-----	-----	-----	**4.66**	**4.66**	-----	-----
	U_{26} - L_{26}	132.58	108.95	-16.84			0.90	1.17	114.63	-17.72	0.00	0.00	Vehicle	Vehicle	321.37	-----	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	-----	-----	-----	-----	-----	**4.52**	**4.52**	-----	-----
	U_{26} - L_{27}	137.86	115.49	-14.51			0.90	1.17	121.51	-15.26	0.00	0.00	Vehicle	Vehicle	337.18	-----	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	-----	-----	-----	-----	-----	**4.71**	**4.71**	-----	-----
	U_{28} - L_{28}	109.81	98.32	-8.61			0.90	1.17	103.44	-11.07	0.00	0.00	Vehicle	Vehicle	267.84	-----	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	-----	-----	-----	-----	-----	**4.57**	**4.57**	-----	-----
	U_{29} - L_{29}	102.60	98.32	-10.52			0.90	1.17	103.44	-11.07	0.00	0.00	Vehicle	Vehicle	267.84	-----	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	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
	U_{30} - L_{31}	139.84	85.53	-17.19			0.90	1.18	91.07	-18.31	0.00	0.00	Vehicle	Vehicle	300.17	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
	U_{31} - L_{32}	166.63	96.61	-18.78			0.90	1.18	102.86	-20.00	0.00	0.00	Vehicle	Vehicle	350.35	-----	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	-----	-----	-----	-----	-----	**5.58**	**5.58**	-----	-----
	U_{32} - L_{33}	202.12	114.09	-10.77			0.90	1.18	121.47	-11.47	0.00	0.00	Vehicle	Vehicle	420.67	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U_{33} - L_{34}	201.72	111.89	-10.84			0.90	1.18	119.13	-11.54	0.00	0.00	Vehicle	Vehicle	417.10	-----	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	-----	-----	-----	-----	-----	**5.40**	**5.40**	-----	-----
	U_{35} - L_{35}	180.72	113.23	-7.70			0.90	1.18	120.55	-8.19	0.00	0.00	Vehicle	Vehicle	391.65	-----	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	-----

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: 5C1 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

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 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	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	20.51	-74.19			0.75	1.24	19.03	-68.83	0.00	0.00	Vehicle	Vehicle	-----	-157.99	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	-----	-----	7.45	7.45
		U_1 - U_2	-61.66	36.61	-111.14			0.75	1.24	33.96	-103.11	0.00	0.00	Vehicle	Vehicle	-----	-214.19	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	-----	-----	4.89	4.89
		U_2 - U_3	-27.05	50.55	-122.49			0.75	1.24	46.90	-113.64	0.00	0.00	Vehicle	Vehicle	25.80	-182.90	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	14.89	14.89	4.74	4.74
		U_3 - U_4	32.90	64.15	-110.73			0.75	1.24	59.52	-102.73	0.00	0.00	Vehicle	Vehicle	120.15	-90.77	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	10.72	10.72	5.82	5.82
		U_4 - U_5	34.76	64.45	-110.31			0.75	1.24	59.79	-102.34	0.00	0.00	Vehicle	Vehicle	122.91	-87.86	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	10.64	10.64	5.86	5.86
		U_5 - U_6	124.19	76.43	-87.66			0.75	1.24	70.91	-81.32	0.00	0.00	Vehicle	Vehicle	253.62	-----	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	-----	-----	7.71	7.71	-----	-----
		U_6 - U_7	223.31	90.30	-46.82			0.75	1.24	83.77	-43.44	0.00	0.00	Vehicle	Vehicle	399.21	-----	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	-----	-----	6.94	6.94	-----	-----
		U_7 - U_8	331.92	100.84	0.00			0.75	1.24	93.56	0.00	0.00	0.00	Vehicle	Vehicle	553.11	-----	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	-----	-----	8.32	8.32	-----	-----
		U_8 - U_9	267.71	75.55	0.00			0.75	1.20	67.88	0.00	0.00	0.00	Vehicle	Vehicle	436.27	-----	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	-----	-----	9.89	9.89	-----	-----
		U_9 - U_{10}	89.12	66.58	-39.50			0.75	1.20	59.82	-35.49	0.00	0.00	Vehicle	Vehicle	193.62	-----	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	-----	-----	10.37	10.37	-----	-----
		U_{10} - U_{11}	-76.89	57.27	-90.88			0.75	1.20	51.46	-81.66	0.00	0.00	Vehicle	Vehicle	-----	-206.11	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	-----	-----	6.37	6.37
		U_{11} - U_{12}	-230.86	48.74	-131.13			0.75	1.20	43.79	-117.82	0.00	0.00	Vehicle	Vehicle	-----	-453.29	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	-----	-----	4.94	4.94
		U_{12} - U_{13}	-342.15	41.29	-162.82			0.75	1.20	37.10	-146.29	0.00	0.00	Vehicle	Vehicle	-----	-634.97	10.88	53.38	42.4950	1761.38	131.71	10.6328	5.4393	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	-----	-----	5.44	5.44
		U_{13} - U_{14}	-421.98	34.63	-182.68			0.75	1.20	31.12	-164.14	0.00	0.00	Vehicle	Vehicle	-----	-761.96	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}	-422.87	34.49	-182.74			0.75	1.20	30.98	-164.19	0.00	0.00	Vehicle	Vehicle	-----	-763.18	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	-----	-----	5.51	5.51
		U_{15} - U_{16}	-440.39	26.98	-194.65			0.75	1.20	24.24	-174.89	0.00	0.00	Vehicle	Vehicle	-----	-799.87	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	-----	-----	5.07	5.07
		U_{16} - U_{17}	-422.93	20.55	-186.83			0.75	1.20	18.47	-167.86	0.00	0.00	Vehicle	Vehicle	-----	-768.04	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_{17} - U_{18}	-341.45	13.77	-156.02			0.75	1.20	12.38	-140.19	0.00	0.00	Vehicle	Vehicle	-----	-626.12	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	-----	-----	4.49	4.49
		U_{18} - U_{19}	-247.63	8.36	-106.69			0.75	1.20	7.51	-95.86	0.00	0.00	Vehicle	Vehicle	-----	-446.53	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	-----	-----	4.48	4.48
		U_{19} - U_{20}	-132.06	4.11	-52.42			0.75	1.20	3.70	-47.10	0.00	0.00	Vehicle	Vehicle	-----	-232.90	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	-----	-----	11.58	11.58
	Structure 2	U_0 - U_1	-131.63	10.92	-64.36			0.75	1.18	9.69	-57.11	0.00	0.00	Vehicle	Vehicle	-----	-245.36	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	-----	-----	9.03	9.03
		U_1 - U_2	-247.12	23.34	-119.17			0.75	1.18	20.71	-105.74	0.00	0.00	Vehicle	Vehicle	-----	-458.71	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	-----	-----	5.15	5.15
		U_2 - U_3	-347.28	36.23	-154.87			0.75	1.18	32.14	-137.41	0.00	0.00	Vehicle	Vehicle	-----	-630.10	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	-----	-----	5.31	5.31
		U_3 - U_4	-437.20	50.81	-181.17			0.75	1.18	45.08	-160.74	0.00	0.00	Vehicle	Vehicle	-----	-777.32	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	-----	-----	5.63	5.63
		U_4 - U_5	-468.83	62.31	-200.53			0.75	1.18	55.28	-177.92	0.00	0.00	Vehicle	Vehicle	-----	-840.77	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	-----	-----	5.72	5.72
		U_5 - U_6	-471.14	73.66	-210.06			0.75	1.18	65.36	-186.38	0.00	0.00	Vehicle	Vehicle	-----	-854.78	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	-----	-----	5.45	5.45
		U_6 - U_7	-414.50	82.08	-199.03			0.75	1.18	72.82	-176.59	0.00	0.00	Vehicle	Vehicle	-----	-768.42	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	-----	-----	5.25	5.25
		U_7 - U_8	-413.54	82.19	-198.48			0.75	1.18	72.92	-176.10	0.00	0.00	Vehicle	Vehicle	-----	-766.54	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	-----	-----	5.27	5.27
		U_8 - U_9	-322.06	89.81	-179.18			0.75	1.18	79.68	-158.98	0.00	0.00	Vehicle	Vehicle	-----	-625.35	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	-----	-----	5.06	5.06
		U_9 - U_{10}	-182.16	94.10	-146.95			0.75	1.18	83.49	-130.38	0.00	0.00	Vehicle	Vehicle	-----	-406.30	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	-----	-----	5.40	5.40
		U_{10} - U_{11}	-32.61	99.48	-110.36			0.75	1.18	88.26	-97.92	0.00	0.00	Vehicle	Vehicle	72.34	-169.69	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	10.69	10.69	7.52	7.52
		U_{11} - U_{12}	133.57	102.32	-70.50			0.75	1.18	90.78	-62.55	0.00	0.00	Vehicle	Vehicle	291.65	-----	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	-----	-----	8.56	8.56	-----	-----
		U_{12} - U_{13}	289.98	105.20	-28.86			0.75	1.18	93.34	-25.61	0.00	0.00	Vehicle	Vehicle	498.32	-----	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	-----	-----	9.10	9.10	-----	-----
		U_{13} - U_{14}	434.77	106.57	-27.97			0.75	1.18	94.55	-24.82	0.00	0.00	Vehicle	Vehicle	688.12	-----	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	-----	-----	11.95	11.95	-----	-----
		U_{14} - U_{15}	474.48	90.75	-23.58			0.75	1.17	79.57	-20.68	0.00	0.00	Vehicle	Vehicle	720.26	-----	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	-----	-----	13.70	13.70	-----	-----
		U_{15} - U_{16}	383.31	88.29	-18.71			0.75	1.17	77.41	-16.41	0.00	0.00	Vehicle	Vehicle	598.94	-----	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	-----	-----	11.49	11.49	-----	-----
		U_{16} - U_{17}	279.61	83.38	-51.35			0.75	1.17	73.10	-45.02	0.00	0.00	Vehicle	Vehicle	458.52	-----	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	-----	-----	7.11	-----	-----	10.46	10.46	-----	-----
		U_{17} - U_{18}	172.67	77.46	-82.29			0.75	1.17	67.91	-72.15	0.00	0.00	Vehicle	Vehicle	312.75	-----	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	-----	-----	8.74	8.74	-----	-----
		U_{18} - U_{19}	74.40	69.09	-110.86			0.75	1.17	60.57	-97.19	0.00	0.00	Vehicle	Vehicle	175.46	-29.63	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	11.42	11.42	7.43	7.43
		U_{19} - U_{20}	-9.98	60.55	-128.67			0.75	1.17	53.09	-112.81	0.00	0.00	Vehicle	Vehicle	56.04	-159.63	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	15.64	15.64	6.05	6.05
	Structure 3	U_0 - U_1	-62.02	50.76	-148.76			0.75	1.17	44.51	-130.42	0.00	0.00	Vehicle	Vehicle	-----	-250.17	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	-----	-----	5.94	5.94
		U_1 - U_2	-88.69	43.82	-150.20			0.75	1.17	38.42	-131.69	0.00	0.00	Vehicle	Vehicle	-----	-286.48	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	-----	-----	5.68	5.68
		U_2 - U_3	-88.87	44.01	-150.05			0.75	1.17	38.59	-131.55	0.00	0.00	Vehicle	Vehicle	-----	-286.54	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	-----	-----	5.69	5.69
		U_3 - U_4	-76.60	53.87	-150.24			0.75	1.17	47.23	-131.72	0.00	0.00	Vehicle	Vehicle	-----	-270.81	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	-----	-----	5.77	5.77
		U_4 - U_5	-37.55	62.80	-134.14			0.75	1.17	55.06	-117.61	0.00	0.00	Vehicle	Vehicle	22.76	-201.71	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	15.58	15.58	5.57	5.57
		U_5 - U_6	37.36	70.54	-113.75			0.75	1.17	61.85	-99.73	0.00	0.00	Vehicle	Vehicle	128.96	-81.08	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	11.79	11.79	6.87	6.87
		U_6 - U_7	128.18	78.46	-82.12			0.75	1.17	68.79	-72.00	0.00	0.00	Vehicle	Vehicle	256.06	-----	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	-----	-----	9.28	9.28	-----	-----
		U_7 - U_8	233.91	83.87	-49.13			0.75	1.17	73.53	-43.07	0.00	0.00	Vehicle	Vehicle	399.67	-----	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	-----	-----	7.11	-----	-----	11.02	11.02	-----	-----
		U_8 - U_9	337.95	88.15	-18.05			0.75	1.17	77.29	-15.83	0.00	0.00	Vehicle	Vehicle	539.80	-----	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	-----	-----	12.09	12.09	-----	-----
		U_9 - U_{10}	437.48	91.47	-22.09			0.75	1.17	80.19	-19.37	0.00	0.00	Vehicle	Vehicle	672.97	-----	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	-----	-----	14.05	14.05	-----	-----
		U_{10} - U_{11}	420.86	108.30	-25.98			0.75	1.18	96.09	-23.05	0.00	0.00	Vehicle	Vehicle	672.03	-----	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	-----	-----	11.90	11.90	-----	-----
		U_{11} - U_{12}	300.88	107.22	-27.12			0.75	1.18	95.13	-24.06	0.00	0.00	Vehicle	Vehicle	514.81	-----	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	-----	-----	8.81	8.81	-----	-----

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: 5C1 **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
Center Truss - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	10.40	-8.82			0.75	1.24	9.65	-8.19	0.00	0.00	Vehicle	Vehicle	23.56	-----	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	-----	-----	**51.22**	**51.22**	-----	-----
		L$_1$ - L$_2$	50.83	73.43	-21.54			0.75	1.24	68.13	-19.99	0.00	0.00	Vehicle	Vehicle	154.65	-----	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	-----	-----	**6.63**	**6.63**	-----	-----
		L$_2$ - L$_3$	61.27	104.35	-36.65			0.75	1.24	96.81	-34.00	0.00	0.00	Vehicle	Vehicle	205.50	-----	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	-----	-----	**6.27**	**6.27**	-----	-----
		L$_3$ - L$_4$	25.72	113.13	-50.49			0.75	1.24	104.96	-46.84	0.00	0.00	Vehicle	Vehicle	169.88	-27.46	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	**6.13**	**6.13**	**12.57**	**12.57**
		L$_4$ - L$_5$	-118.55	76.40	-74.01			0.75	1.24	70.88	-68.66	0.00	0.00	Vehicle	Vehicle	-----	-243.38	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	-----	-----	**5.56**	**5.56**
		L$_5$ - L$_6$	-217.97	35.42	-88.09			0.75	1.24	32.86	-81.72	0.00	0.00	Vehicle	Vehicle	-----	-389.60	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	-----	-----	**5.40**	**5.40**
		L$_6$ - L$_7$	-320.57	0.15	-100.01			0.75	1.24	0.14	-92.78	0.00	0.00	Vehicle	Vehicle	-----	-537.35	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	-----	-----	**6.73**	**6.73**
		L$_7$ - L$_8$	-417.42	0.21	-106.33			0.75	1.24	0.19	-98.65	0.00	0.00	Vehicle	Vehicle	-----	-670.88	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	-----	-----	**7.93**	**7.93**
		L$_8$ - L$_9$	-411.08	0.00	-112.00			0.75	1.20	0.00	-100.63	0.00	0.00	Vehicle	Vehicle	-----	-665.23	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	-----	-----	**7.83**	**7.83**
		L$_9$ - L$_{10}$	-247.97	0.01	-74.08			0.75	1.20	0.01	-66.56	0.00	0.00	Vehicle	Vehicle	-----	-408.88	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	-----	-----	**10.48**	**10.48**
		L$_{10}$ - L$_{11}$	-65.37	44.79	-63.92			0.75	1.20	40.24	-57.43	0.00	0.00	Vehicle	Vehicle	-----	-159.64	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	-----	-----	**7.57**	**7.57**
		L$_{11}$ - L$_{12}$	101.81	90.37	-54.88			0.75	1.20	81.19	-49.31	0.00	0.00	Vehicle	Vehicle	237.91	-----	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	-----	-----	**6.06**	**6.06**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	128.68	-47.19			0.75	1.20	115.62	-42.40	0.00	0.00	Vehicle	Vehicle	493.58	-----	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	-----	-----	**6.15**	**6.15**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	155.35	-40.01			0.75	1.20	139.58	-35.94	0.00	0.00	Vehicle	Vehicle	667.40	-----	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	-----	-----	**6.69**	**6.69**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	174.00	-26.42			0.75	1.20	156.34	-23.73	0.00	0.00	Vehicle	Vehicle	822.75	-----	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	-----	-----	**7.02**	**7.02**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	164.95	-19.97			0.75	1.20	148.21	-17.95	0.00	0.00	Vehicle	Vehicle	790.97	-----	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	-----	-----	**7.52**	**7.52**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	134.45	-13.37			0.75	1.20	120.80	-12.02	0.00	0.00	Vehicle	Vehicle	653.14	-----	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	-----	-----	**6.91**	**6.91**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	87.77	-8.12			0.75	1.20	78.86	-7.29	0.00	0.00	Vehicle	Vehicle	478.46	-----	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	-----	-----	**7.53**	**7.53**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	37.33	-6.74			0.75	1.20	33.54	-6.05	0.00	0.00	Vehicle	Vehicle	272.81	-----	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	-----	-----	**9.73**	**9.73**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	18.57	-21.54			0.75	1.20	16.69	-19.36	0.00	0.00	Vehicle	Vehicle	112.33	-----	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	-----	-----	**25.94**	**25.94**	-----	-----
	Structure 2	L$_0$ - L$_1$	24.42	7.16	-9.21			0.75	1.18	6.35	-8.17	0.00	0.00	Vehicle	Vehicle	40.00	-----	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	-----	-----	**76.45**	**76.45**	-----	-----
		L$_1$ - L$_2$	138.42	63.35	-12.10			0.75	1.18	56.21	-10.73	0.00	0.00	Vehicle	Vehicle	253.02	-----	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	-----	-----	**8.81**	**8.81**	-----	-----
		L$_2$ - L$_3$	252.76	121.28	-25.15			0.75	1.18	107.60	-22.32	0.00	0.00	Vehicle	Vehicle	468.47	-----	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	-----	-----	**6.72**	**6.72**	-----	-----
		L$_3$ - L$_4$	352.26	156.10	-38.06			0.75	1.18	138.50	-33.77	0.00	0.00	Vehicle	Vehicle	637.99	-----	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	-----	-----	**6.91**	**6.91**	-----	-----
		L$_4$ - L$_5$	447.15	182.39	-52.70			0.75	1.18	161.83	-46.76	0.00	0.00	Vehicle	Vehicle	791.68	-----	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	-----	-----	**7.43**	**7.43**	-----	-----
		L$_5$ - L$_6$	477.91	200.78	-64.19			0.75	1.18	178.14	-56.95	0.00	0.00	Vehicle	Vehicle	852.87	-----	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	-----	-----	**7.38**	**7.38**	-----	-----
		L$_6$ - L$_7$	482.67	201.03	-75.55			0.75	1.18	178.36	-67.03	0.00	0.00	Vehicle	Vehicle	859.34	-----	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	-----	-----	**7.48**	**7.48**	-----	-----
		L$_7$ - L$_8$	336.57	164.01	-91.39			0.75	1.18	145.52	-81.09	0.00	0.00	Vehicle	Vehicle	626.72	-----	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	-----	-----	**6.91**	**6.91**	-----	-----
		L$_8$ - L$_9$	196.00	133.44	-95.16			0.75	1.18	118.40	-84.43	0.00	0.00	Vehicle	Vehicle	408.72	-----	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	-----	-----	**7.63**	**7.63**	-----	-----
		L$_9$ - L$_{10}$	45.53	97.53	-99.43			0.75	1.18	86.53	-88.22	0.00	0.00	Vehicle	Vehicle	171.69	-55.50	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	**9.43**	**9.43**	**8.76**	**8.76**
		L$_{10}$ - L$_{11}$	-126.32	59.03	-101.79			0.75	1.18	52.37	-90.31	0.00	0.00	Vehicle	Vehicle	-----	-281.63	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	-----	-----	**5.80**	**5.80**
		L$_{11}$ - L$_{12}$	-284.95	29.92	-104.51			0.75	1.18	26.54	-92.73	0.00	0.00	Vehicle	Vehicle	-----	-490.98	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	-----	-----	**6.96**	**6.96**
		L$_{12}$ - L$_{13}$	-433.89	30.01	-110.23			0.75	1.18	26.63	-97.80	0.00	0.00	Vehicle	Vehicle	-----	-691.20	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	-----	-----	**8.60**	**8.60**
		L$_{13}$ - L$_{14}$	-552.76	29.22	-111.61			0.75	1.18	25.93	-99.03	0.00	0.00	Vehicle	Vehicle	-----	-847.32	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	-----	-----	**9.72**	**9.72**
		L$_{14}$ - L$_{15}$	-573.53	28.97	-116.59			0.75	1.17	25.40	-102.22	0.00	0.00	Vehicle	Vehicle	-----	-878.47	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	-----	-----	**9.21**	**9.21**
		L$_{15}$ - L$_{16}$	-493.00	25.24	-95.10			0.75	1.17	22.13	-83.38	0.00	0.00	Vehicle	Vehicle	-----	-749.29	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	-----	-----	**9.38**	**9.38**
		L$_{16}$ - L$_{17}$	-395.34	19.38	-90.02			0.75	1.17	16.99	-78.93	0.00	0.00	Vehicle	Vehicle	-----	-616.54	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	-----	-----	**8.26**	**8.26**
		L$_{17}$ - L$_{18}$	-288.08	52.43	-84.87			0.75	1.17	45.96	-74.41	0.00	0.00	Vehicle	Vehicle	-----	-471.24	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	-----	-----	**5.90**	**5.90**
		L$_{18}$ - L$_{19}$	-175.85	83.78	-78.82			0.75	1.17	73.45	-69.10	0.00	0.00	Vehicle	Vehicle	-----	-318.43	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	-----	-----	**5.76**	**5.76**
		L$_{19}$ - L$_{20}$	-78.08	104.55	-70.70			0.75	1.17	91.67	-61.99	0.00	0.00	Vehicle	Vehicle	17.67	-182.08	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	**8.26**	**8.26**	**7.99**	**7.99**
		L$_{20}$ - L$_{21}$	7.59	131.35	-62.24			0.75	1.17	115.16	-54.57	0.00	0.00	Vehicle	Vehicle	159.59	-61.07	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**8.31**	**8.31**	**15.06**	**15.06**
		L$_{21}$ - L$_{22}$	59.10	140.65	-52.42			0.75	1.17	123.32	-45.96	0.00	0.00	Vehicle	Vehicle	237.14	-----	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	-----	-----	**7.34**	**7.34**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	140.53	-55.77			0.75	1.17	123.21	-48.90	0.00	0.00	Vehicle	Vehicle	253.80	-----	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	-----	-----	**7.24**	**7.24**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	122.64	-64.60			0.75	1.17	107.53	-56.64	0.00	0.00	Vehicle	Vehicle	183.42	-29.99	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	**8.66**	**8.66**	**14.97**	**14.97**
		L$_{24}$ - L$_{25}$	-45.06	99.79	-71.77			0.75	1.17	87.49	-62.93	0.00	0.00	Vehicle	Vehicle	55.17	-140.38	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	**8.28**	**8.28**	**8.40**	**8.40**
		L$_{25}$ - L$_{26}$	-134.95	66.62	-78.65			0.75	1.17	58.40	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-265.08	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	-----	-----	**6.36**	**6.36**
		L$_{26}$ - L$_{27}$	-245.92	31.03	-82.73			0.75	1.17	27.21	-72.53	0.00	0.00	Vehicle	Vehicle	-----	-413.99	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	-----	-----	**6.64**	**6.64**
		L$_{27}$ - L$_{28}$	-351.86	16.79	-87.08			0.75	1.17	14.72	-76.35	0.00	0.00	Vehicle	Vehicle	-----	-556.68	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	-----	-----	**9.11**	**9.11**
		L$_{28}$ - L$_{29}$	-458.41	20.71	-94.66			0.75	1.17	18.16	-82.99	0.00	0.00	Vehicle	Vehicle	-----	-703.82	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	-----	-----	**9.84**	**9.84**
		L$_{29}$ - L$_{30}$	-542.36	23.73	-122.85			0.75	1.17	20.80	-107.71	0.00	0.00	Vehicle	Vehicle	-----	-845.10	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	-----	-----	**9.03**	**9.03**
		L$_{30}$ - L$_{31}$	-514.21	28.58	-107.39			0.75	1.18	25.36	-95.28	0.00	0.00	Vehicle	Vehicle	-----	-792.35	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	-----	-----	**10.50**	**10.50**
		L$_{31}$ - L$_{32}$	-411.27	29.57	-105.49			0.75	1.18	26.23	-93.60	0.00	0.00	Vehicle	Vehicle	-----	-656.32	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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 (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 - Verticals	Structure 1	U_0 - L_0	-67.68	14.37	-170.99			0.75	1.24	13.33	-158.64	0.00	0.00	Vehicle	Vehicle	-----	-294.21	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	43.13	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	1.74	1.74
		U_1 - L_1	-24.09	13.94	-62.88			0.75	1.24	12.93	-58.34	0.00	0.00	Vehicle	Vehicle	-----	-107.15	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	-----	-----	-----	-----	-----	5.62	5.62
		U_2 - L_2	12.87	11.57	-50.04			0.75	1.24	10.74	-46.43	0.00	0.00	Vehicle	Vehicle	30.69	-43.62	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	38.63	38.63	7.86	7.86
		U_3 - L_3	37.37	20.98	-37.66			0.75	1.24	19.47	-34.94	0.00	0.00	Vehicle	Vehicle	73.89	-----	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	-----	-----	-----	-----	-----	20.05	20.05	-----	-----
		U_4 - L_4	-15.55	12.65	-61.06			0.75	1.24	11.73	-56.64	0.00	0.00	Vehicle	Vehicle	-----	-93.85	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	-----	-----	5.90	5.90
		U_5 - L_5	-92.59	4.02	-64.60			0.75	1.24	3.73	-59.93	0.00	0.00	Vehicle	Vehicle	-----	-198.28	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	-----	-----	5.55	5.55
		U_6 - L_6	-117.07	0.10	-78.74			0.75	1.24	0.09	-73.05	0.00	0.00	Vehicle	Vehicle	-----	-247.15	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	-----	-----	5.35	5.35
		U_7 - L_7	-127.52	0.25	-95.63			0.75	1.24	0.23	-88.72	0.00	0.00	Vehicle	Vehicle	-----	-281.10	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	-----	-----	3.75	3.75
		U_8 - L_8	-368.71	3.00	-159.78			0.75	1.24	2.79	-148.23	0.00	0.00	Vehicle	Vehicle	-----	-672.03	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	-----	-----	4.70	4.70
		U_9 - L_9	-214.56	4.44	-111.87			0.75	1.20	3.99	-100.52	0.00	0.00	Vehicle	Vehicle	-----	-409.60	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	-----	-----	4.28	4.28
		U_{10} - L_{10}	-198.68	1.35	-105.68			0.75	1.20	1.21	-94.95	0.00	0.00	Vehicle	Vehicle	-----	-381.72	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	-----	-----	5.73	5.73
		U_{11} - L_{11}	-171.40	2.95	-93.95			0.75	1.20	2.65	-84.41	0.00	0.00	Vehicle	Vehicle	-----	-332.55	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	-----	-----	5.57	5.57
		U_{12} - L_{12}	-128.37	13.31	-78.53			0.75	1.20	11.96	-70.55	0.00	0.00	Vehicle	Vehicle	-----	-258.60	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	-----	-----	5.73	5.73
		U_{13} - L_{13}	-96.65	20.88	-73.28			0.75	1.20	18.76	-65.84	0.00	0.00	Vehicle	Vehicle	-----	-211.23	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	-----	-----	4.31	4.31
		U_{14} - L_{14}	-11.04	11.58	-56.95			0.75	1.20	10.40	-51.17	0.00	0.00	Vehicle	Vehicle	-----	-80.88	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	-----	-----	6.52	6.52
		U_{15} - L_{15}	-2.47	29.91	-49.27			0.75	1.20	26.87	-44.27	0.00	0.00	Vehicle	Vehicle	31.72	-60.77	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	16.01	16.01	7.70	7.70
		U_{16} - L_{16}	-31.27	22.86	-57.42			0.75	1.20	20.54	-51.59	0.00	0.00	Vehicle	Vehicle	-----	-107.72	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	-----	-----	6.01	6.01
		U_{17} - L_{17}	-105.05	10.42	-79.30			0.75	1.20	9.37	-71.25	0.00	0.00	Vehicle	Vehicle	-----	-229.19	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	-----	-----	4.30	4.30
		U_{18} - L_{18}	-126.74	5.84	-88.92			0.75	1.20	5.24	-79.90	0.00	0.00	Vehicle	Vehicle	-----	-268.63	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	-----	-----	4.99	4.99
		U_{19} - L_{19}	-166.77	5.47	-95.23			0.75	1.20	4.92	-85.56	0.00	0.00	Vehicle	Vehicle	-----	-328.03	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	-----	-----	5.25	5.25
		U_{20} - L_{20}	-184.59	5.08	-114.81			0.75	1.20	4.56	-103.16	0.00	0.00	Vehicle	Vehicle	-----	-374.07	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	-----	-----	3.85	3.85
	Structure 2	U_0 - L_0	-203.59	16.17	-111.56			0.75	1.18	14.35	-98.98	0.00	0.00	Vehicle	Vehicle	-----	-393.34	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	-----	-----	4.43	4.43
		U_1 - L_1	-176.11	17.57	-107.34			0.75	1.18	15.59	-95.24	0.00	0.00	Vehicle	Vehicle	-----	-352.75	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	-----	-----	5.21	5.21
		U_2 - L_2	-137.55	16.69	-97.11			0.75	1.18	14.81	-86.16	0.00	0.00	Vehicle	Vehicle	-----	-290.82	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	-----	-----	5.07	5.07
		U_3 - L_3	-117.62	17.37	-86.70			0.75	1.18	15.41	-76.92	0.00	0.00	Vehicle	Vehicle	-----	-252.90	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	-----	-----	4.35	4.35
		U_4 - L_4	-50.97	22.22	-67.21			0.75	1.18	19.72	-59.63	0.00	0.00	Vehicle	Vehicle	-----	-143.78	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	-----	-----	4.83	4.83
		U_5 - L_5	-13.78	28.66	-61.58			0.75	1.18	25.43	-54.63	0.00	0.00	Vehicle	Vehicle	15.15	-88.93	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	17.36	17.36	5.98	5.98
		U_6 - L_6	45.47	39.11	-47.29			0.75	1.18	34.70	-41.96	0.00	0.00	Vehicle	Vehicle	104.22	-----	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	-----	-----	-----	-----	-----	11.02	11.02	-----	-----
		U_7 - L_7	-22.33	6.43	-59.02			0.75	1.18	5.70	-52.36	0.00	0.00	Vehicle	Vehicle	-----	-97.10	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	-----	-----	6.08	6.08
		U_8 - L_8	-120.08	25.26	-71.04			0.75	1.18	22.41	-63.03	0.00	0.00	Vehicle	Vehicle	-----	-238.04	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	-----	-----	6.51	6.51
		U_9 - L_9	-177.03	16.14	-88.00			0.75	1.18	14.32	-78.08	0.00	0.00	Vehicle	Vehicle	-----	-331.64	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	-----	-----	6.59	6.59
		U_{10} - L_{10}	-205.88	10.64	-95.22			0.75	1.18	9.44	-84.49	0.00	0.00	Vehicle	Vehicle	-----	-377.47	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	-----	-----	6.78	6.78
		U_{11} - L_{11}	-239.23	6.82	-101.32			0.75	1.18	6.05	-89.90	0.00	0.00	Vehicle	Vehicle	-----	-427.87	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	-----	-----	5.85	5.85
		U_{12} - L_{12}	-257.95	1.68	-109.92			0.75	1.18	1.49	-97.53	0.00	0.00	Vehicle	Vehicle	-----	-462.13	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	-----	-----	5.58	5.58
		U_{13} - L_{13}	-243.82	7.93	-112.98			0.75	1.18	7.04	-100.24	0.00	0.00	Vehicle	Vehicle	-----	-447.29	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	-----	-----	4.45	4.45
		U_{14} - L_{14}	-420.85	7.11	-151.90			0.75	1.18	6.31	-134.77	0.00	0.00	Vehicle	Vehicle	-----	-722.31	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	-----	-----	4.68	4.68
		U_{15} - L_{15}	-158.83	13.45	-108.04			0.75	1.17	11.79	-94.73	0.00	0.00	Vehicle	Vehicle	-----	-329.63	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	-----	-----	5.61	5.61
		U_{16} - L_{16}	-174.02	10.75	-104.22			0.75	1.17	9.42	-91.37	0.00	0.00	Vehicle	Vehicle	-----	-345.02	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	-----	-----	5.39	5.39
		U_{17} - L_{17}	-156.46	12.34	-103.25			0.75	1.17	10.82	-90.53	0.00	0.00	Vehicle	Vehicle	-----	-321.08	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	-----	-----	5.16	5.16
		U_{18} - L_{18}	-142.21	13.05	-91.79			0.75	1.17	11.44	-80.48	0.00	0.00	Vehicle	Vehicle	-----	-289.49	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_{19} - L_{19}	-113.66	17.27	-82.83			0.75	1.17	15.14	-72.62	0.00	0.00	Vehicle	Vehicle	-----	-242.16	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	-----	-----	5.48	5.48
		U_{20} - L_{20}	-76.51	24.37	-74.56			0.75	1.17	21.37	-65.37	0.00	0.00	Vehicle	Vehicle	-----	-184.45	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	-----	-----	4.57	4.57
		U_{21} - L_{21}	-45.77	26.60	-64.09			0.75	1.17	23.32	-56.19	0.00	0.00	Vehicle	Vehicle	-----	-132.55	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	-----	-----	5.25	5.25
		U_{22} - L_{22}	-17.72	11.02	-56.80			0.75	1.17	9.66	-49.80	0.00	0.00	Vehicle	Vehicle	-----	-87.77	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	-----	-----	6.51	6.51
		U_{23} - L_{23}	-30.69	31.01	-54.60			0.75	1.17	27.18	-47.87	0.00	0.00	Vehicle	Vehicle	-----	-102.12	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	-----	-----	6.47	6.47
		U_{24} - L_{24}	-62.06	24.34	-68.37			0.75	1.17	21.34	-59.95	0.00	0.00	Vehicle	Vehicle	-----	-158.61	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	-----	-----	5.22	5.22
		U_{25} - L_{25}	-103.15	16.69	-81.46			0.75	1.17	14.63	-71.42	0.00	0.00	Vehicle	Vehicle	-----	-226.93	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	-----	-----	5.72	5.72
		U_{26} - L_{26}	-134.38	11.69	-86.93			0.75	1.17	10.24	-76.22	0.00	0.00	Vehicle	Vehicle	-----	-273.78	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	-----	-----	5.81	5.81
		U_{27} - L_{27}	-156.03	10.72	-97.97			0.75	1.17	9.40	-85.89	0.00	0.00	Vehicle	Vehicle	-----	-314.50	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	6.06	12.00	Pass	-----	-----	5.44	5.44
		U_{28} - L_{28}	-179.40	9.21	-107.83			0.75	1.17	8.08	-94.54	0.00	0.00	Vehicle	Vehicle	-----	-356.13	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	-----	-----	5.15	5.15
		U_{29} - L_{29}	-171.60	6.51	-107.10			0.75	1.17	5.71	-93.90	0.00	0.00	Vehicle	Vehicle	-----	-345.15	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	-----	-----	5.52	5.52
		U_{30} - L_{30}	-393.29	10.69	-150.00			0.75	1.18	9.48	-133.09	0.00	0.00	Vehicle	Vehicle	-----	-684.29	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	-----	-----	4.95	4.95
		U_{31} - L_{31}	-203.49	13.83	-113.20			0.75	1.18	12.27	-100.44	0.00	0.00	Vehicle	Vehicle	-----	-395.10	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	-----	-----	4.85	4.85
		U_{32} - L_{32}	-222.61	5.21	-116.01			0.75	1.18	4.62	-102.93	0.00	0.00	Vehicle	Vehicle	-----	-423.20	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	-----	-----	5.63	5.63
		U_{33} - L_{33}	-211.72	3.25	-106.59			0.75	1.18	2.88	-94.57	0.00	0.00	Vehicle	Vehicle	-----	-398.17	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	-----	-----	5.85	5.85
		U_{34} - L_{34}	-191.28	9.76	-96.28			0.75	1.18	8.66	-85.42	0.00	0.00	Vehicle	Vehicle	-----	-359.71	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	-----	-----	6.88	6.88
		U_{35} - L_{35}	-171.54	15.80	-93.20			0.75	1.18	14.02	-82.69	0.00	0.00	Vehicle	Vehicle	-----	-330.50	0.00	33.27	33.2657	1097.77	131.71	11.3776	2.8573	35

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: 5C1
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 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	94.43	-21.70			0.75	1.24	87.61	-20.13	0.00	0.00	Vehicle	Vehicle	183.17	-----	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	-----	-----	-----	-----	-----	6.08	6.08	-----	-----
		U_1 - L_2	10.80	70.91	-19.92			0.75	1.24	65.78	-18.48	0.00	0.00	Vehicle	Vehicle	99.56	-9.99	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	-----	-----	-----	6.34	6.34	18.73	18.73
		U_2 - L_3	-44.05	55.03	-32.79			0.75	1.24	51.05	-30.42	0.00	0.00	Vehicle	Vehicle	9.10	-96.82	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	-----	-----	-----	9.24	9.24	9.54	9.54
		U_3 - L_4	-76.77	37.92	-57.87			0.75	1.24	35.18	-53.69	0.00	0.00	Vehicle	Vehicle	-----	-169.61	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	-----	-----	-----	-----	-----	4.84	4.84
		U_4 - L_4	118.48	68.99	-25.71			0.75	1.24	64.01	-23.85	0.00	0.00	Vehicle	Vehicle	237.24	-----	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	-----	-----	-----	-----	-----	6.34	6.34	-----	-----
		U_5 - L_5	137.62	86.48	-5.31			0.75	1.24	80.23	-4.92	0.00	0.00	Vehicle	Vehicle	283.20	-----	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	-----	-----	-----	-----	-----	6.39	6.39	-----	-----
		U_6 - L_6	157.39	90.90	-0.25			0.75	1.24	84.34	-0.23	0.00	0.00	Vehicle	Vehicle	314.24	-----	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	-----	-----	-----	-----	-----	5.85	5.85	-----	-----
		U_7 - L_7	149.33	102.44	-0.28			0.75	1.24	95.04	-0.26	0.00	0.00	Vehicle	Vehicle	317.68	-----	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	-----	-----	-----	-----	-----	5.27	5.27	-----	-----
		U_8 - L_8	249.21	121.37	-5.05			0.75	1.20	109.05	-4.54	0.00	0.00	Vehicle	Vehicle	465.74	-----	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	-----	-----	-----	-----	-----	6.54	6.54	-----	-----
		U_9 - L_{10}	260.39	120.66	-4.07			0.75	1.20	108.41	-3.66	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	-----	-----	-----	-----	-----	6.47	6.47	-----	-----
		U_{10} - L_{11}	236.43	117.11	-3.91			0.75	1.20	105.23	-3.51	0.00	0.00	Vehicle	Vehicle	444.15	-----	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	-----	-----	-----	-----	-----	6.41	6.41	-----	-----
		U_{11} - L_{12}	212.05	100.74	-18.31			0.75	1.20	90.52	-16.46	0.00	0.00	Vehicle	Vehicle	393.34	-----	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	-----	-----	-----	-----	-----	6.25	6.25	-----	-----
		U_{12} - L_{13}	151.78	96.07	-28.96			0.75	1.20	86.32	-26.02	0.00	0.00	Vehicle	Vehicle	309.54	-----	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	-----	-----	-----	-----	-----	5.55	5.55	-----	-----
		U_{13} - L_{14}	108.73	76.85	-38.66			0.75	1.20	69.05	-34.73	0.00	0.00	Vehicle	Vehicle	231.10	-----	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	-----	-----	-----	-----	-----	4.62	4.62	-----	-----
		U_{14} - L_{14}	-24.56	55.96	-56.15			0.75	1.20	50.28	-50.45	0.00	0.00	Vehicle	Vehicle	33.44	-97.51	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	-----	-----	-----	8.99	8.99	6.02	6.02
		U_{15} - L_{15}	23.90	67.02	-40.51			0.75	1.20	60.21	-36.40	0.00	0.00	Vehicle	Vehicle	109.35	-16.24	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	-----	-----	-----	6.71	6.71	9.57	9.57
		U_{17} - L_{16}	120.04	81.60	-22.94			0.75	1.20	73.32	-20.61	0.00	0.00	Vehicle	Vehicle	251.36	-----	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	-----	-----	-----	-----	-----	5.52	5.52	-----	-----
		U_{18} - L_{17}	144.84	94.36	-12.36			0.75	1.20	84.78	-11.11	0.00	0.00	Vehicle	Vehicle	298.51	-----	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	-----	-----	-----	-----	-----	5.97	5.97	-----	-----
		U_{19} - L_{18}	193.27	97.48	-7.09			0.75	1.20	87.59	-6.37	0.00	0.00	Vehicle	Vehicle	365.12	-----	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	-----	-----	-----	-----	-----	5.90	5.90	-----	-----
		U_{20} - L_{19}	193.75	100.24	-5.78			0.75	1.20	90.07	-5.19	0.00	0.00	Vehicle	Vehicle	368.96	-----	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	-----	-----	-----	-----	-----	5.73	5.73	-----	-----
		U_0 - L_1	202.60	110.92	-18.33			0.75	1.18	98.41	-16.26	0.00	0.00	Vehicle	Vehicle	391.32	-----	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	-----	-----	-----	-----	-----	5.84	5.84	-----	-----
		U_1 - L_2	190.84	104.32	-20.53			0.75	1.18	92.55	-18.22	0.00	0.00	Vehicle	Vehicle	368.41	-----	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	-----	-----	-----	-----	-----	6.34	6.34	-----	-----
		U_2 - L_3	155.90	97.12	-20.06			0.75	1.18	86.17	-17.80	0.00	0.00	Vehicle	Vehicle	314.69	-----	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	-----	-----	-----	-----	-----	5.74	5.74	-----	-----
		U_3 - L_4	134.06	87.62	-23.58			0.75	1.18	77.74	-20.92	0.00	0.00	Vehicle	Vehicle	275.34	-----	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	-----	-----	-----	-----	-----	5.70	5.70	-----	-----
		U_4 - L_5	46.01	73.94	-35.21			0.75	1.18	65.60	-31.24	0.00	0.00	Vehicle	Vehicle	145.08	-----	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	-----	-----	-----	-----	-----	5.82	5.82	-----	-----
		U_5 - L_6	3.43	61.11	-47.65			0.75	1.18	54.22	-42.28	0.00	0.00	Vehicle	Vehicle	74.94	-50.51	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	-----	-----	-----	7.83	7.83	7.79	7.79
		U_6 - L_7	-84.31	46.57	-70.69			0.75	1.18	41.32	-62.72	0.00	0.00	Vehicle	Vehicle	-----	-191.14	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	-----	-----	-----	-----	-----	4.38	4.38
		U_7 - L_7	137.33	84.36	-41.66			0.75	1.18	74.85	-36.96	0.00	0.00	Vehicle	Vehicle	275.83	-----	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	-----	-----	-----	-----	-----	6.23	6.23	-----	-----
		U_8 - L_8	210.92	94.41	-30.42			0.75	1.18	83.77	-26.99	0.00	0.00	Vehicle	Vehicle	383.09	-----	0.00	27.98	27.9777	923.26	131.71	13.7917	2.2289	43.88	31.17	-741.22	16.32	0.54	11.53	0.88	-----	-----	16.32	-----	-----	30.50	-----	-----	6.59	-----	-----	-----	-----	-----	5.96	5.96	-----	-----
		U_{10} - L_9	236.39	106.92	-19.36			0.75	1.18	94.87	-17.18	0.00	0.00	Vehicle	Vehicle	430.63	-----	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	-----	-----	-----	-----	-----	5.70	5.70	-----	-----
		U_{11} - L_{10}	274.65	109.66	-12.66			0.75	1.18	97.30	-11.23	0.00	0.00	Vehicle	Vehicle	483.53	-----	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	-----	-----	-----	-----	-----	5.86	5.86	-----	-----
		U_{12} - L_{11}	281.09	110.79	-8.01			0.75	1.18	98.30	-7.11	0.00	0.00	Vehicle	Vehicle	493.20	-----	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	-----	-----	-----	-----	-----	5.73	5.73	-----	-----
		U_{13} - L_{12}	278.14	108.19	-8.60			0.75	1.18	95.99	-7.63	0.00	0.00	Vehicle	Vehicle	486.37	-----	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	-----	-----	-----	-----	-----	5.20	5.20	-----	-----
		U_{14} - L_{13}	235.47	106.03	-10.09			0.75	1.18	94.07	-8.95	0.00	0.00	Vehicle	Vehicle	428.41	-----	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	-----	-----	-----	-----	-----	5.76	5.76	-----	-----
		U_{14} - L_{15}	143.01	96.67	-13.55			0.75	1.17	84.75	-11.88	0.00	0.00	Vehicle	Vehicle	296.10	-----	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	-----	-----	-----	-----	-----	5.99	5.99	-----	-----
		U_{15} - L_{16}	171.90	103.45	-13.12			0.75	1.17	90.70	-11.50	0.00	0.00	Vehicle	Vehicle	341.38	-----	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	-----	-----	-----	-----	-----	5.28	5.28	-----	-----
		U_{16} - L_{17}	181.04	107.15	-13.06			0.75	1.17	93.94	-11.45	0.00	0.00	Vehicle	Vehicle	357.47	-----	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	-----	-----	-----	-----	-----	5.63	5.63	-----	-----
		U_{17} - L_{18}	171.16	96.90	-14.74			0.75	1.17	84.96	-12.93	0.00	0.00	Vehicle	Vehicle	332.95	-----	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	-----	-----	-----	-----	-----	5.64	5.64	-----	-----
		U_{18} - L_{19}	150.64	96.36	-19.92			0.75	1.17	84.49	-17.46	0.00	0.00	Vehicle	Vehicle	305.67	-----	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	-----	-----	-----	-----	-----	5.92	5.92	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	88.88	-30.99			0.75	1.17	77.92	-27.17	0.00	0.00	Vehicle	Vehicle	264.92	-----	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}	76.04	77.41	-33.72			0.75	1.17	67.87	-29.57	0.00	0.00	Vehicle	Vehicle	187.08	-----	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	-----	-----	-----	-----	-----	5.18	5.18	-----	-----
		U_{21} - L_{22}	38.33	61.68	-54.34			0.75	1.17	54.08	-47.64	0.00	0.00	Vehicle	Vehicle	120.14	-12.10	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	-----	-----	-----	7.20	7.20	7.64	7.64
		U_{23} - L_{22}	18.05	62.00	-58.00			0.75	1.17	54.36	-50.85	0.00	0.00	Vehicle	Vehicle	94.13	-42.64	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	-----	-----	-----	7.54	7.54	6.71	6.71
		U_{24} - L_{23}	58.57	73.20	-40.91			0.75	1.17	64.18	-35.87	0.00	0.00	Vehicle	Vehicle	159.58	-----	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	-----	-----	-----	-----	-----	5.75	5.75	-----	-----
		U_{25} - L_{24}	114.98	87.77	-31.73			0.75	1.17	76.95	-27.82	0.00	0.00	Vehicle	Vehicle	249.51	-----	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	-----	-----	-----	-----	-----	6.35	6.35	-----	-----
		U_{26} - L_{25}	143.00	98.78	-20.04			0.75	1.17	86.60	-17.57	0.00	0.00	Vehicle	Vehicle	298.48	-----	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	-----	-----	-----	-----	-----	5.86	5.86	-----	-----
		U_{27} - L_{26}	173.82	96.44	-13.41			0.75	1.17	84.55	-11.75	0.00	0.00	Vehicle	Vehicle	335.88	-----	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	-----	-----	-----	-----	-----	5.64	5.64	-----	-----
		U_{28} - L_{27}	186.60	106.73	-11.67			0.75	1.17	93.58	-10.24	0.00	0.00	Vehicle	Vehicle	364.22	-----	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	-----	-----	-----	-----	-----	5.60	5.60	-----	-----
		U_{29} - L_{28}	190.75	103.69	-7.89			0.75	1.17	90.91	-6.92	0.00	0.00	Vehicle	Vehicle	366.15	-----	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	-----	-----	-----	-----	-----	5.06	5.06	-----	-----
		U_{30} - L_{29}	161.86	98.42	-7.43			0.75	1.17	86.29	-6.52	0.00	0.00	Vehicle	Vehicle	322.60	-----	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	-----	-----	-----	-----	-----	5.66	5.66	-----	-----
		U_{30} - L_{31}	191.72	102.18	-13.62			0.75	1.18	90.66	-12.08	0.00	0.00	Vehicle	Vehicle	367.09	-----	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	-----	-----	-----	-----	-----	6.46	6.46	-----	-----
		U_{31} - L_{32}	226.45	108.14	-14.82			0.75	1.18	95.94	-13.15	0.00	0.00	Vehicle	Vehicle	419.11	-----	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	-----	-----	-----	-----	-----	5.74	5.74	-----	-----
		U_{32} - L_{33}	243.42	111.25	-3.98			0.75	1.18	98.71	-3.53	0.00	0.00	Vehicle	Vehicle	444.77	-----	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	-----	-----	-----	-----	-----	6.09	6.09	-----	-----
		U_{33} - L_{34}	239.13	106.05	-11.86			0.75	1.18	94.09	-10.52	0.00	0.00	Vehicle	Vehicle	433.18	-----	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	-----	-----	-----	-----	-----	6.43	6.43	-----	-----
		U_{34} - L_{35}	222.16	107.36	-18.37			0.75	1.18	95.26	-16.30	0.00	0.00	Vehicle	Vehicle	412.64	-----	0.00	30.63	30.6305	1010.81	131.71	13

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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 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 - Upper Chord	Structure 1	U$_0$ - U$_1$	-66.70	13.39	-46.03	2.21	-8.83	0.90	1.24	14.90	-51.25	2.21	-8.83	Vehicle	Vehicle	-----	-153.34	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	-----	-----	9.73	9.73
		U$_1$ - U$_2$	-86.55	31.98	-72.52	6.01	-16.34	0.90	1.24	35.60	-80.74	6.01	-16.34	Vehicle	Vehicle	-----	-217.47	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	-----	-----	5.93	5.93
		U$_2$ - U$_3$	-48.14	47.13	-77.20	9.46	-19.05	0.90	1.24	52.47	-85.95	9.46	-19.05	Vehicle	Vehicle	5.62	-174.32	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	13.71	13.71	6.02	6.02
		U$_3$ - U$_4$	36.58	60.46	-71.89	12.74	-17.47	0.90	1.24	67.31	-80.04	12.74	-17.47	Vehicle	Vehicle	135.06	-56.49	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	9.43	9.43	7.52	7.52
		U$_4$ - U$_5$	38.93	60.64	-71.49	12.80	-17.38	0.90	1.24	67.51	-79.59	12.80	-17.38	Vehicle	Vehicle	138.38	-52.86	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	9.36	9.36	7.59	7.59
		U$_5$ - U$_6$	154.60	67.79	-47.43	15.16	-12.03	0.90	1.24	75.47	-52.80	15.16	-12.03	Vehicle	Vehicle	299.09	-----	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	-----	-----	6.84	6.84	-----	-----
		U$_6$ - U$_7$	288.38	73.74	-16.97	17.14	-4.31	0.90	1.24	82.09	-18.89	17.14	-4.31	Vehicle	Vehicle	481.61	-----	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	-----	-----	6.29	6.29	-----	-----
		U$_7$ - U$_8$	410.94	75.40	-0.78	22.63	0.00	0.90	1.24	83.94	-0.87	22.63	0.00	Vehicle	Vehicle	643.34	-----	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	-----	-----	8.33	8.33	-----	-----
		U$_8$ - U$_9$	311.57	50.88	-0.16	19.08	0.00	0.90	1.20	54.86	-0.17	19.08	0.00	Pedestrian	Vehicle	501.18	-----	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	-----	-----	8.48	8.48	-----	-----
		U$_9$ - U$_{10}$	78.52	51.03	-34.26	12.28	-6.79	0.90	1.20	55.02	-36.94	12.28	-6.79	Vehicle	Vehicle	173.60	-----	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	-----	-----	11.46	11.46	-----	-----
		U$_{10}$ - U$_{11}$	-141.43	48.01	-76.89	11.10	-18.41	0.90	1.20	51.76	-82.90	11.10	-18.41	Vehicle	Vehicle	-----	-291.63	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	-----	-----	5.50	5.50
		U$_{11}$ - U$_{12}$	-338.03	44.13	-112.81	9.77	-27.93	0.90	1.20	47.59	-121.63	9.77	-27.93	Vehicle	Vehicle	-----	-597.56	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	-----	-----	3.90	3.90
		U$_{12}$ - U$_{13}$	-480.08	38.60	-136.72	8.23	-34.32	0.90	1.20	41.62	-147.41	8.23	-34.32	Vehicle	Vehicle	-----	-815.74	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	-----	-----	4.46	4.46
		U$_{13}$ - U$_{14}$	-570.65	32.76	-152.56	6.68	-37.21	0.90	1.20	35.32	-164.49	6.68	-37.21	Vehicle	Vehicle	-----	-955.68	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	-----	-----	4.60	4.60
		U$_{14}$ - U$_{15}$	-571.07	32.60	-152.43	6.65	-37.22	0.90	1.20	35.15	-164.35	6.65	-37.22	Vehicle	Vehicle	-----	-956.05	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	-----	-----	4.60	4.60
		U$_{15}$ - U$_{16}$	-581.88	25.45	-147.40	4.98	-36.12	0.90	1.20	27.44	-158.93	4.98	-36.12	Vehicle	Vehicle	-----	-963.05	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	-----	-----	4.69	4.69
		U$_{16}$ - U$_{17}$	-539.46	19.00	-131.78	3.52	-31.85	0.90	1.20	20.49	-142.08	3.52	-31.85	Vehicle	Vehicle	-----	-886.01	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	-----	-----	5.55	5.55
		U$_{17}$ - U$_{18}$	-422.33	12.30	-99.60	2.26	-25.05	0.90	1.20	13.26	-107.39	2.26	-25.05	Vehicle	Vehicle	-----	-688.63	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	-----	-----	5.11	5.11
		U$_{18}$ - U$_{19}$	-286.19	6.95	-64.42	1.28	-16.96	0.90	1.20	7.49	-69.46	1.28	-16.96	Vehicle	Vehicle	-----	-462.34	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	-----	-----	5.63	5.63
		U$_{19}$ - U$_{20}$	-140.84	2.95	-28.56	0.55	-8.68	0.90	1.20	3.18	-30.80	0.55	-8.68	Vehicle	Vehicle	-----	-223.13	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	-----	-----	17.43	17.43
	Structure 2	U$_0$ - U$_1$	-147.44	7.16	-39.48	0.45	-4.88	0.90	1.18	7.62	-42.04	0.45	-4.88	Vehicle	Vehicle	-----	-246.32	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	-----	-----	11.89	11.89
		U$_1$ - U$_2$	-319.06	14.89	-82.12	1.96	-13.36	0.90	1.18	15.86	-87.44	1.96	-13.36	Vehicle	Vehicle	-----	-528.45	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	-----	-----	5.40	5.40
		U$_2$ - U$_3$	-460.91	26.71	-116.16	3.77	-20.95	0.90	1.18	28.43	-123.67	3.77	-20.95	Vehicle	Vehicle	-----	-759.96	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	-----	-----	4.99	4.99
		U$_3$ - U$_4$	-580.03	40.62	-145.56	5.92	-27.68	0.90	1.18	43.24	-154.97	5.92	-27.68	Vehicle	Vehicle	-----	-955.50	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	-----	-----	4.91	4.91
		U$_4$ - U$_5$	-616.49	52.67	-158.94	7.86	-31.35	0.90	1.18	56.08	-169.22	7.86	-31.35	Vehicle	Vehicle	-----	-1021.42	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	-----	-----	5.14	5.14
		U$_5$ - U$_6$	-604.71	64.81	-166.71	9.87	-32.88	0.90	1.18	69.00	-177.49	9.87	-32.88	Vehicle	Vehicle	-----	-1016.86	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	-----	-----	4.97	4.97
		U$_6$ - U$_7$	-514.78	74.07	-153.55	11.56	-31.23	0.90	1.18	78.86	-163.48	11.56	-31.23	Vehicle	Vehicle	-----	-881.74	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	-----	-----	5.06	5.06
		U$_7$ - U$_8$	-512.83	74.14	-153.28	11.57	-31.18	0.90	1.18	78.94	-163.19	11.57	-31.18	Vehicle	Vehicle	-----	-878.83	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	-----	-----	5.08	5.08
		U$_8$ - U$_9$	-373.51	82.43	-134.21	13.16	-27.41	0.90	1.18	87.76	-142.89	13.16	-27.41	Vehicle	Vehicle	-----	-671.32	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	-----	-----	5.27	5.27
		U$_9$ - U$_{10}$	-181.05	86.24	-99.99	14.25	-21.42	0.90	1.18	91.82	-106.46	14.25	-21.42	Vehicle	Vehicle	-----	-373.77	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	-----	-----	6.62	6.62
		U$_{10}$ - U$_{11}$	26.18	89.11	-64.61	15.21	-14.40	0.90	1.18	94.88	-68.79	15.21	-14.40	Vehicle	Vehicle	157.38	-55.39	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	9.32	9.32	11.57	11.57
		U$_{11}$ - U$_{12}$	237.39	86.94	-28.93	15.56	-6.85	0.90	1.18	92.57	-30.81	15.56	-6.85	Vehicle	Vehicle	428.94	-----	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	-----	-----	7.27	7.27	-----	-----
		U$_{12}$ - U$_{13}$	435.89	84.98	-22.80	18.37	0.00	0.90	1.18	90.47	-24.27	18.37	0.00	Vehicle	Vehicle	684.28	-----	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	-----	-----	7.77	7.77	-----	-----
		U$_{13}$ - U$_{14}$	595.84	80.71	-21.29	24.32	0.00	0.90	1.18	85.93	-22.67	24.32	0.00	Vehicle	Vehicle	886.29	-----	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	-----	-----	11.27	11.27	-----	-----
		U$_{14}$ - U$_{15}$	615.53	74.32	-18.44	24.37	0.00	0.90	1.17	78.19	-19.40	24.37	0.00	Vehicle	Vehicle	901.84	-----	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	-----	-----	12.13	12.13	-----	-----
		U$_{15}$ - U$_{16}$	486.15	77.44	-16.18	18.61	0.00	0.90	1.17	81.48	-17.02	18.61	0.00	Vehicle	Vehicle	737.91	-----	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	-----	-----	9.65	9.65	-----	-----
		U$_{16}$ - U$_{17}$	339.27	76.98	-36.47	14.66	-2.95	0.90	1.17	80.99	-38.37	14.66	-2.95	Vehicle	Vehicle	546.34	-----	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	-----	-----	8.70	8.70	-----	-----
		U$_{17}$ - U$_{18}$	192.13	75.24	-64.32	15.12	-9.49	0.90	1.17	79.16	-67.68	15.12	-9.49	Vehicle	Vehicle	352.69	-----	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	-----	-----	7.25	7.25	-----	-----
		U$_{18}$ - U$_{19}$	53.83	68.93	-89.70	15.12	-15.34	0.90	1.17	72.52	-94.37	15.12	-15.34	Vehicle	Vehicle	164.26	-52.70	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	9.82	9.82	7.43	7.43
		U$_{19}$ - U$_{20}$	-58.94	61.12	-114.00	15.07	-19.84	0.90	1.17	64.30	-119.94	15.07	-19.84	Vehicle	Vehicle	6.97	-232.54	5.50	32.31	26.8125	1066.31	131.71	10.6328	6.4980	14.73	32.79	-900.70	17.00	0.38	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	13.67	13.67	5.29	5.29
	Structure 3	U$_{20}$ - U$_{21}$	-125.32	50.98	-123.24	14.77	-22.39	0.90	1.17	53.63	-129.66	14.77	-22.39	Vehicle	Vehicle	-----	-331.47	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	-----	-----	5.49	5.49
		U$_{21}$ - U$_{22}$	-146.72	42.18	-125.25	14.37	-22.74	0.90	1.17	44.38	-131.77	14.37	-22.74	Vehicle	Vehicle	-----	-362.04	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	-----	-----	5.24	5.24
		U$_{22}$ - U$_{23}$	-146.49	42.31	-125.11	14.36	-22.72	0.90	1.17	44.51	-131.63	14.36	-22.72	Vehicle	Vehicle	-----	-361.56	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	-----	-----	5.24	5.24
		U$_{23}$ - U$_{24}$	-112.53	51.47	-116.50	13.88	-21.04	0.90	1.17	54.15	-122.57	13.88	-21.04	Vehicle	Vehicle	-----	-305.63	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	-----	-----	5.91	5.91
		U$_{24}$ - U$_{25}$	-36.03	59.33	-98.66	13.40	-17.33	0.90	1.17	62.42	-103.79	13.40	-17.33	Vehicle	Vehicle	34.32	-181.77	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	13.72	13.72	6.33	6.33
		U$_{25}$ - U$_{26}$	80.94	64.51	-69.91	12.93	-12.15	0.90	1.17	67.87	-73.55	12.93	-12.15	Vehicle	Vehicle	193.45	-----	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	-----	-----	10.10	10.10	-----	-----
		U$_{26}$ - U$_{27}$	220.82	68.56	-43.54	12.57	-7.08	0.90	1.17	72.14	-45.81	12.57	-7.08	Vehicle	Vehicle	380.84	-----	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	-----	-----	7.56	7.56	-----	-----
		U$_{27}$ - U$_{28}$	363.48	69.15	-16.04	14.90	-2.16	0.90	1.17	72.75	-16.88	14.90	-2.16	Vehicle	Vehicle	567.10	-----	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	-----	-----	9.35	9.35	-----	-----
		U$_{28}$ - U$_{29}$	503.92	69.30	-16.07	21.74	0.00	0.90	1.17	72.91	-16.90	21.74	0.00	Vehicle	Vehicle	749.88	-----	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	-----	-----	10.54	10.54	-----	-----
		U$_{29}$ - U$_{30}$	616.62	68.24	-18.90	27.08	0.00	0.90	1.17	71.79	-19.88	27.08	0.00	Pedestrian	Vehicle	930.14	-----	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.

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: 5C1 **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	9.35	-7.03	0.37	-2.06	0.90	1.24	10.41	-7.83	0.37	-2.06	Vehicle	Vehicle	11.01	-12.70	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	**48.46**	**48.46**	**53.88**	**53.88**
		L_1 - L_2	67.93	45.66	-17.88	9.23	-3.35	0.90	1.24	50.83	-19.90	9.23	-3.35	Vehicle	Vehicle	154.39	-----	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	-----	-----	**8.55**	**8.55**	-----	-----
		L_2 - L_3	78.83	76.92	-38.62	15.48	-7.39	0.90	1.24	85.63	-43.00	15.48	-7.39	Vehicle	Vehicle	213.80	-----	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	-----	-----	**6.89**	**6.89**	-----	-----
		L_3 - L_4	39.11	82.10	-53.72	18.09	-10.83	0.90	1.24	91.40	-59.81	18.09	-10.83	Vehicle	Vehicle	169.66	-26.91	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	**6.89**	**6.89**	**10.07**	**10.07**
		L_4 - L_5	-166.44	57.12	-76.62	10.96	-16.91	0.90	1.24	63.59	-85.30	10.96	-16.91	Vehicle	Vehicle	-----	-327.26	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	-----	-----	**3.91**	**3.91**
		L_5 - L_6	-301.30	25.03	-82.54	3.24	-18.94	0.90	1.24	27.87	-91.90	3.24	-18.94	Vehicle	Vehicle	-----	-511.15	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	44.32	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.90**	**3.90**
		L_6 - L_7	-439.01	6.10	-88.89	0.00	-26.52	0.90	1.24	6.80	-98.96	0.00	-26.52	Vehicle	Vehicle	-----	-699.36	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	-----	-----	**5.11**	**5.11**
		L_7 - L_8	-551.71	3.17	-88.99	0.00	-35.56	0.90	1.24	3.53	-99.08	0.00	-35.56	Vehicle	Pedestrian	-----	-892.24	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	-----	-----	**4.81**	**4.81**
		L_8 - L_9	-570.55	10.69	-97.74	0.00	-37.48	0.90	1.20	11.53	-105.39	0.00	-37.48	Vehicle	Pedestrian	-----	-927.44	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	44.41	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.40**	**4.40**
		L_9 - L_{10}	-355.55	11.85	-55.70	0.00	-24.70	0.90	1.20	12.77	-60.05	0.00	-24.70	Vehicle	Pedestrian	-----	-572.38	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	-----	-----	**6.96**	**6.96**
		L_{10} - L_{11}	-118.56	25.15	-42.50	0.00	-12.42	0.90	1.20	27.12	-45.83	0.00	-12.42	Vehicle	Vehicle	-----	-213.70	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	-----	-----	**8.33**	**8.33**
		L_{11} - L_{12}	103.33	62.96	-39.35	9.97	-9.47	0.90	1.20	67.88	-42.42	9.97	-9.47	Vehicle	Vehicle	222.58	-----	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	-----	-----	**7.23**	**7.23**	-----	-----
		L_{12} - L_{13}	300.47	103.97	-36.48	17.86	-8.15	0.90	1.20	112.10	-39.34	17.86	-8.15	Vehicle	Vehicle	536.33	-----	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	-----	-----	**6.02**	**6.02**	-----	-----
		L_{13} - L_{14}	441.01	129.33	-31.01	24.18	-6.62	0.90	1.20	139.45	-33.43	24.18	-6.62	Vehicle	Vehicle	754.60	-----	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	-----	-----	**6.22**	**6.22**	-----	-----
		L_{14} - L_{15}	546.80	140.71	-19.50	24.61	-3.50	0.90	1.20	151.71	-21.02	24.61	-3.50	Vehicle	Vehicle	908.06	-----	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	-----	-----	**6.77**	**6.77**	-----	-----
		L_{15} - L_{16}	505.90	122.78	-17.88	20.37	-2.04	0.90	1.20	132.38	-19.28	20.37	-2.04	Vehicle	Vehicle	829.76	-----	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	-----	-----	**8.07**	**8.07**	-----	-----
		L_{16} - L_{17}	398.64	92.88	-16.04	12.78	-0.84	0.90	1.20	100.14	-17.29	12.78	-0.84	Vehicle	Vehicle	648.41	-----	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	-----	-----	**8.17**	**8.17**	-----	-----
		L_{17} - L_{18}	263.76	62.24	-12.94	4.87	0.00	0.90	1.20	67.11	-13.95	4.87	0.00	Vehicle	Vehicle	430.12	-----	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	-----	-----	**9.23**	**9.23**	-----	-----
		L_{18} - L_{19}	118.86	49.78	-9.99	0.70	-3.28	0.90	1.20	53.67	-10.78	0.70	-3.28	Vehicle	Vehicle	224.29	-----	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	-----	-----	**7.15**	**7.15**	-----	-----
		L_{19} - L_{20}	-23.25	42.70	-8.67	1.27	-12.00	0.90	1.20	46.04	-9.34	1.27	-12.00	Vehicle	Pedestrian	29.63	-57.97	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	**10.39**	**10.39**	**16.88**	**16.88**
		L_0- L_1	-35.95	26.04	-17.95	1.33	-5.13	0.90	1.18	27.73	-19.11	1.33	-5.13	Vehicle	Vehicle	-----	-71.58	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	-----	-----	**26.11**	**26.11**
		L_1 - L_2	132.83	33.38	-6.81	2.94	-0.07	0.90	1.18	35.54	-7.25	2.94	-0.07	Vehicle	Vehicle	218.87	-----	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	-----	-----	**14.09**	**14.09**	-----	-----
		L_2 - L_3	304.11	80.09	-15.22	10.53	-1.80	0.90	1.18	85.27	-16.20	10.53	-1.80	Vehicle	Vehicle	506.19	-----	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	-----	-----	**7.88**	**7.88**	-----	-----
		L_3 - L_4	445.92	112.91	-27.15	18.16	-3.63	0.90	1.18	120.21	-28.91	18.16	-3.63	Vehicle	Vehicle	735.97	-----	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	-----	-----	**7.18**	**7.18**	-----	-----
		L_4 - L_5	567.84	146.87	-43.44	24.82	-6.10	0.90	1.18	156.37	-46.25	24.82	-6.10	Vehicle	Vehicle	941.46	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
		L_5 - L_6	603.64	160.54	-55.56	28.47	-8.06	0.90	1.18	170.93	-59.16	28.47	-8.06	Vehicle	Vehicle	1006.93	-----	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	-----	-----	**6.96**	**6.96**	-----	-----
		L_6 - L_7	599.48	172.81	-70.30	30.26	-10.41	0.90	1.18	183.99	-74.85	30.26	-10.41	Vehicle	Vehicle	1018.51	-----	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	-----	-----	**6.62**	**6.62**	-----	-----
		L_7 - L_8	373.94	138.78	-87.56	24.93	-13.66	0.90	1.18	147.76	-93.23	24.93	-13.66	Vehicle	Vehicle	678.20	-----	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	-----	-----	**6.55**	**6.55**	-----	-----
		L_8 - L_9	195.71	110.44	-94.17	19.52	-15.12	0.90	1.18	117.59	-100.26	19.52	-15.12	Vehicle	Vehicle	407.29	-----	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	-----	-----	**7.69**	**7.69**	-----	-----
		L_9 - L_{10}	-13.21	74.16	-97.23	12.45	-16.11	0.90	1.18	78.96	-103.52	12.45	-16.11	Vehicle	Vehicle	85.48	-151.75	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	**11.08**	**11.08**	**6.90**	**6.90**
		L_{10} - L_{11}	-217.32	38.89	-98.39	5.50	-17.02	0.90	1.18	41.40	-104.76	5.50	-17.02	Vehicle	Vehicle	-----	-418.69	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	-----	-----	**4.14**	**4.14**
		L_{11} - L_{12}	-419.93	26.78	-96.61	0.00	-23.34	0.90	1.18	28.51	-102.86	0.00	-23.34	Vehicle	Vehicle	-----	-679.63	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	-----	-----	**4.97**	**4.97**
		L_{12} - L_{13}	-591.41	26.86	-98.29	0.00	-30.09	0.90	1.18	28.59	-104.64	0.00	-30.09	Vehicle	Vehicle	-----	-904.87	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	-----	-----	**6.43**	**6.43**
		L_{13} - L_{14}	-724.23	25.17	-94.24	0.00	-35.12	0.90	1.18	26.80	-100.33	0.00	-35.12	Vehicle	Pedestrian	-----	-1117.58	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	-----	-----	**5.84**	**5.84**
		L_{14} - L_{15}	-747.05	28.99	-108.54	0.00	-36.29	0.90	1.17	30.50	-114.19	0.00	-36.29	Vehicle	Vehicle	-----	-1119.61	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	-----	-----	**6.73**	**6.73**
		L_{15} - L_{16}	-632.15	26.62	-88.78	0.00	-31.21	0.90	1.17	28.01	-93.41	0.00	-31.21	Vehicle	Pedestrian	-----	-983.81	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	44.37	Pass	6.56	12.00	Pass	6.56	12.00	Pass	-----	-----	**5.16**	**5.16**
		L_{16} - L_{17}	-488.62	22.75	-64.88	0.00	-25.39	0.90	1.17	23.93	-68.26	0.00	-25.39	Vehicle	Pedestrian	-----	-756.96	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	-----	-----	**5.97**	**5.97**
		L_{17} - L_{18}	-336.98	30.51	-64.29	0.00	-18.12	0.90	1.17	32.09	-67.64	0.00	-18.12	Vehicle	Vehicle	-----	-526.01	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	59.60	-63.26	4.48	-11.34	0.90	1.17	62.70	-66.55	4.48	-11.34	Vehicle	Vehicle	-----	-325.21	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	-----	-----	**5.86**	**5.86**
		L_{19} - L_{20}	-45.77	79.07	-56.88	8.92	-9.58	0.90	1.17	83.18	-59.84	8.92	-9.58	Vehicle	Vehicle	48.64	-137.29	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	**8.71**	**8.71**	**8.82**	**8.82**
	Structure 2	L_{20} - L_{21}	68.00	106.37	-50.54	11.57	-9.12	0.90	1.17	111.91	-53.17	11.57	-9.12	Vehicle	Vehicle	233.87	-----	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	-----	-----	**8.01**	**8.01**	-----	-----
		L_{21} - L_{22}	133.90	114.07	-40.40	13.61	-8.82	0.90	1.17	120.02	-42.51	13.61	-8.82	Vehicle	Vehicle	330.10	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
		L_{22} - L_{23}	122.50	108.72	-44.51	11.79	-7.58	0.90	1.17	114.39	-46.82	11.79	-7.58	Vehicle	Vehicle	307.96	-----	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	-----	-----	**7.36**	**7.36**	-----	-----
		L_{23} - L_{24}	46.70	90.16	-50.01	8.09	-7.09	0.90	1.17	94.86	-52.61	8.09	-7.09	Vehicle	Vehicle	184.02	-7.69	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	**9.68**	**9.68**	**16.36**	**16.36**
		L_{24} - L_{25}	-66.76	65.46	-55.63	3.32	-6.24	0.90	1.17	68.87	-58.53	3.32	-6.24	Vehicle	Vehicle	2.75	-162.87	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	**10.83**	**10.83**	**8.66**	**8.66**
		L_{25} - L_{26}	-205.83	57.60	-59.42	0.00	-11.78	0.90	1.17	60.60	-62.52	0.00	-11.78	Vehicle	Vehicle	-----	-348.85	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	-----	-----	**5.88**	**5.88**
		L_{26} - L_{27}	-350.61	53.68	-60.50	0.00	-18.88	0.90	1.17	56.47	-63.66	0.00	-18.88	Vehicle	Vehicle	-----	-538.54	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	-----	-----	**5.92**	**5.92**
		L_{27} - L_{28}	-494.76	45.11	-60.34	0.00	-25.89	0.90	1.17	47.46	-63.48	0.00	-25.89	Vehicle	Pedestrian	-----	-759.38	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	-----	-----	**6.19**	**6.19**
		L_{28} - L_{29}	-620.88	38.95	-67.46	0.00	-31.79	0.90	1.17	40.98	-70.97	0.00	-31.79	Vehicle	Pedestrian	-----	-940.72	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	-----	-----	**6.37**	**6.37**
		L_{29} - L_{30}	-716.82	30.65	-81.74	0.00	-36.30	0.90	1.17	32.25	-85.99	0.00	-36.30	Vehicle	Pedestrian	-----	-1090.84	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	-----	-----	**6.53**	**6.53**

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: 5C1 — 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, Artic
(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}	Impact & Pedestrian $Load_{MAX}$	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 - Verticals	Structure 1	U_0 - L_0	-93.63	17.52	-78.78	3.44	-12.32	0.90	1.24	19.50	-87.70	3.44	-12.32	Vehicle	Vehicle	-----	-235.73	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	-----	-----	-----	-----	-----	2.86	2.86
		U_1 - L_1	-46.50	15.10	-41.68	2.93	-9.05	0.90	1.24	16.81	-46.41	2.93	-9.05	Vehicle	Vehicle	-----	-120.77	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	-----	-----	-----	-----	-----	6.58	6.58
		U_2 - L_2	-0.07	13.51	-24.59	2.84	-5.68	0.90	1.24	15.04	-27.37	2.84	-5.68	Vehicle	Vehicle	19.47	-35.67	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	28.44	28.44	12.86	12.86			
		U_3 - L_3	39.61	11.83	-14.25	2.70	-2.12	0.90	1.24	13.17	-15.86	2.70	-2.12	Vehicle	Vehicle	68.62	-----	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	-----	-----	-----	-----	29.46	29.46	-----	-----
		U_4 - L_4	-30.21	2.08	-23.40	0.00	-3.47	0.90	1.24	2.32	-26.05	0.00	-3.47	Vehicle	Vehicle	-----	-73.13	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	-----	-----	12.27	12.27			
		U_5 - L_5	-130.50	2.83	-37.50	0.00	-10.24	0.90	1.24	3.15	-41.75	0.00	-10.24	Vehicle	Vehicle	-----	-223.93	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	-----	-----	7.06	7.06			
		U_6 - L_6	-158.19	8.87	-41.77	0.00	-13.06	0.90	1.24	9.87	-46.50	0.00	-13.06	Vehicle	Vehicle	-----	-266.10	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	-----	-----	7.52	7.52			
		U_7 - L_7	-152.33	14.16	-41.99	0.00	-13.25	0.90	1.24	15.77	-46.75	0.00	-13.25	Vehicle	Vehicle	-----	-258.79	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	-----	-----	6.59	6.59			
		U_8 - L_8	-455.44	16.06	-78.91	0.00	-31.72	0.90	1.24	17.88	-87.85	0.00	-31.72	Vehicle	Pedestrian	-----	-747.51	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	-----	-----	5.07	5.07			
		U_9 - L_9	-287.50	3.33	-76.03	0.00	-18.21	0.90	1.20	3.59	-81.98	0.00	-18.21	Vehicle	Vehicle	-----	-480.32	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	-----	-----	4.36	4.36			
		U_{10} - L_{10}	-276.27	1.61	-70.80	0.00	-17.55	0.90	1.20	1.73	-76.33	0.00	-17.55	Vehicle	Vehicle	-----	-458.38	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	-----	-----	6.11	6.11			
		U_{11} - L_{11}	-232.54	1.66	-60.50	0.00	-14.42	0.90	1.20	1.79	-65.23	0.00	-14.42	Vehicle	Vehicle	-----	-387.10	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	-----	-----	6.27	6.27			
		U_{12} - L_{12}	-178.38	1.00	-49.74	0.00	-11.20	0.90	1.20	1.07	-53.63	0.00	-11.20	Vehicle	Vehicle	-----	-301.62	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	-----	-----	6.60	6.60			
		U_{13} - L_{13}	-127.70	2.64	-36.06	0.00	-7.88	0.90	1.20	2.84	-38.87	0.00	-7.88	Vehicle	Vehicle	-----	-216.54	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	-----	-----	6.50	6.50			
		U_{14} - L_{14}	-30.38	1.17	-25.71	0.00	-3.03	0.90	1.20	1.26	-27.72	0.00	-3.03	Vehicle	Vehicle	-----	-75.52	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	-----	-----	11.34	11.34			
		U_{15} - L_{15}	-28.93	7.10	-28.59	1.55	-4.53	0.90	1.20	7.65	-30.82	1.55	-4.53	Vehicle	Vehicle	-----	-77.67	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	-----	-----	10.20	10.20			
		U_{16} - L_{16}	-75.99	6.57	-35.56	1.39	-7.07	0.90	1.20	7.08	-38.34	1.39	-7.07	Vehicle	Vehicle	-----	-148.63	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	-----	-----	6.92	6.92			
		U_{17} - L_{17}	-161.81	7.05	-48.74	1.30	-10.66	0.90	1.20	7.60	-52.55	1.30	-10.66	Vehicle	Vehicle	-----	-278.66	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	-----	-----	4.75	4.75			
		U_{18} - L_{18}	-190.09	6.05	-50.59	1.12	-12.69	0.90	1.20	6.53	-54.54	1.12	-12.69	Vehicle	Vehicle	-----	-318.03	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	-----	-----	6.15	6.15			
		U_{19} - L_{19}	-228.09	5.19	-50.47	0.97	-14.99	0.90	1.20	5.60	-54.41	0.97	-14.99	Vehicle	Vehicle	-----	-367.25	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	-----	-----	7.14	7.14			
		U_{20} - L_{20}	-242.54	4.70	-52.09	0.95	-15.62	0.90	1.20	5.07	-56.16	0.95	-15.62	Vehicle	Vehicle	-----	-388.30	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	-----	-----	5.06	5.06			
	Structure 2	U_0 - L_0	-302.99	13.76	-80.26	2.22	-15.08	0.90	1.18	14.65	-85.46	2.22	-15.08	Vehicle	Vehicle	-----	-504.98	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	-----	-----	3.97	3.97			
		U_1 - L_1	-268.80	14.00	-75.34	2.12	-13.67	0.90	1.18	14.90	-80.21	2.12	-13.67	Vehicle	Vehicle	-----	-453.72	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	-----	-----	5.03	5.03			
		U_2 - L_2	-220.88	15.05	-66.34	2.34	-12.32	0.90	1.18	16.03	-70.63	2.34	-12.32	Vehicle	Vehicle	-----	-378.96	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	-----	-----	5.00	5.00			
		U_3 - L_3	-175.24	16.13	-59.00	2.49	-10.35	0.90	1.18	17.17	-62.82	2.49	-10.35	Vehicle	Vehicle	-----	-309.48	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	-----	-----	4.40	4.40			
		U_4 - L_4	-82.09	13.96	-42.77	2.21	-6.62	0.90	1.18	14.86	-45.54	2.21	-6.62	Vehicle	Vehicle	-----	-165.91	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	-----	-----	5.65	5.65			
		U_5 - L_5	-19.91	13.79	-30.67	2.23	-4.16	0.90	1.18	14.68	-32.65	2.23	-4.16	Vehicle	Vehicle	-----	-68.33	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	-----	-----	9.82	9.82			
		U_6 - L_6	60.32	22.16	-16.97	1.75	-0.47	0.90	1.18	23.59	-18.07	1.75	-0.47	Vehicle	Vehicle	109.09	-----	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	-----	-----	-----	-----	15.57	15.57	-----	-----
		U_7 - L_7	-41.78	1.01	-22.67	0.00	-2.50	0.90	1.18	1.07	-24.14	0.00	-2.50	Vehicle	Vehicle	-----	-85.69	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	-----	-----	12.38	12.38			
		U_8 - L_8	-189.01	4.07	-46.43	0.00	-8.38	0.90	1.18	4.34	-49.44	0.00	-8.38	Vehicle	Vehicle	-----	-309.98	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	-----	-----	6.91	6.91			
		U_9 - L_9	-254.00	1.79	-58.15	0.00	-10.55	0.90	1.18	1.90	-61.91	0.00	-10.55	Vehicle	Vehicle	-----	-410.67	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	-----	-----	7.06	7.06			
		U_{10} - L_{10}	-290.02	4.37	-61.07	0.00	-12.18	0.90	1.18	4.65	-65.02	0.00	-12.18	Vehicle	Vehicle	-----	-461.54	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	-----	-----	7.51	7.51			
		U_{11} - L_{11}	-312.19	10.01	-66.32	0.00	-12.59	0.90	1.18	10.66	-70.61	0.00	-12.59	Vehicle	Vehicle	-----	-497.64	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	-----	-----	6.41	6.41			
		U_{12} - L_{12}	-327.27	14.94	-61.23	0.00	-13.75	0.90	1.18	15.90	-65.19	0.00	-13.75	Vehicle	Vehicle	-----	-510.19	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	-----	-----	7.28	7.28			
		U_{13} - L_{13}	-277.23	21.20	-51.63	0.45	-12.38	0.90	1.18	22.57	-54.97	0.45	-12.38	Vehicle	Vehicle	-----	-431.87	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	-----	-----	7.51	7.51			
		U_{14} - L_{14}	-505.47	24.56	-65.04	0.00	-21.42	0.90	1.18	26.14	-69.25	0.00	-21.42	Vehicle	Vehicle	-----	-747.13	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	-----	-----	7.89	7.89			
		U_{15} - L_{15}	-232.92	7.01	-68.78	1.67	-12.16	0.90	1.17	7.38	-72.36	1.67	-12.16	Vehicle	Vehicle	-----	-396.87	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	-----	-----	6.32	6.32			
		U_{16} - L_{16}	-260.09	8.24	-73.98	0.83	-13.04	0.90	1.17	8.67	-77.84	0.83	-13.04	Vehicle	Vehicle	-----	-439.30	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	-----	-----	5.22	5.22			
		U_{17} - L_{17}	-228.20	9.29	-67.28	0.66	-11.76	0.90	1.17	9.78	-70.79	0.66	-11.76	Vehicle	Vehicle	-----	-388.69	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	-----	-----	5.58	5.58			
		U_{18} - L_{18}	-209.23	11.15	-60.85	0.00	-11.28	0.90	1.17	11.74	-64.02	0.00	-11.28	Vehicle	Vehicle	-----	-355.22	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	-----	-----	5.75	5.75			
		U_{19} - L_{19}	-166.51	11.95	-54.86	0.00	-9.53	0.90	1.17	12.57	-57.72	0.00	-9.53	Vehicle	Vehicle	-----	-291.49	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	-----	-----	5.97	5.97			
		U_{20} - L_{20}	-113.91	11.98	-40.49	0.00	-7.50	0.90	1.17	12.60	-42.60	0.00	-7.50	Vehicle	Vehicle	-----	-203.46	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	-----	-----	6.13	6.13			
		U_{21} - L_{21}	-62.73	13.66	-31.21	0.00	-5.22	0.90	1.17	14.37	-32.83	0.00	-5.22	Vehicle	Vehicle	-----	-124.23	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	-----	-----	8.46	8.46			
		U_{22} - L_{22}	-38.93	0.93	-25.08	0.00	-2.15	0.90	1.17	0.97	-26.39	0.00	-2.15	Vehicle	Vehicle	-----	-84.91	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	-----	-----	11.48	11.48			
		U_{23} - L_{23}	-74.45	12.69	-36.84	0.48	-6.10	0.90	1.17	13.35	-38.76	0.48	-6.10	Vehicle	Vehicle	-----	-147.17	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	-----	-----	6.87	6.87			
		U_{24} - L_{24}	-121.37	12.44	-43.43	0.37	-8.17	0.90	1.17	13.09	-45.70	0.37	-8.17	Vehicle	Vehicle	-----	-217.19	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	-----	-----	5.55	5.55			
		U_{25} - L_{25}	-169.10	11.96	-52.80	0.43	-9.94	0.90	1.17	12.58	-55.56	0.43	-9.94	Vehicle	Vehicle	-----	-292.06	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	-----	-----	6.16	6.16			
		U_{26} - L_{26}	-207.93	10.82	-56.64	0.14	-11.42	0.90	1.17	11.38	-59.59	0.14	-11.42	Vehicle	Vehicle	-----	-347.77	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	-----	-----	6.20	6.20			
		U_{27} - L_{27}	-219.90	8.90	-58.26	0.16	-11.49	0.90	1.17	9.36	-61.30	0.16	-11.49	Vehicle	Vehicle	-----	-365.55	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	-----	-----	6.58	6.58			
		U_{28} - L_{28}	-240.66	13.46	-55.41	0.00	-12.59	0.90	1.17	14.16	-58.29	0.00	-12.59	Vehicle	Vehicle	-----	-388.63	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	-----	-----	7.30	7.30			
		U_{29} - L_{29}	-202.76	21.26	-47.67	0.00	-10.35	0.90	1.17	22.37	-50.15	0.00	-10.35	Vehicle	Vehicle	-----	-328.78	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	-----	-----	9.72	9.72			
		U_{30} - L_{30}	-516.45	19.95	-67.45	0.00	-22.02	0.90	1.18	21.24	-71.82	0.00	-22.02	Vehicle	Vehicle	-----	-764.74	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	-----	-----	6.91	6.91			
		U_{31} - L_{31}	-318.62	9.50	-72.78	0.86	-14.13	0.90	1.18	10.11	-77.49	0.86	-14.13	Vehicle	Vehicle	-----	-514.94	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	-----	-----	4.79	4.79			
		U_{32} - L_{32}	-358.52	4.20	-76.02	0.00	-14.87	0.90	1.18	4.47	-80.93	0.00	-14.87	Vehicle	V

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: 5C1 **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 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	63.48	-23.68	14.00	-4.60	0.90	1.24	70.67	-26.36	14.00	-4.60	Vehicle	Vehicle	205.76	-----	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	-----	-----	-----	-----	-----	7.06	7.06	-----	-----
		U$_1$ - L$_2$	23.84	41.64	-23.05	9.20	-4.72	0.90	1.24	46.36	-25.66	9.20	-4.72	Vehicle	Vehicle	91.26	-2.36	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	-----	-----	-----	8.71	8.71	14.00	14.00
		U$_2$ - L$_3$	-49.05	21.04	-19.08	3.33	-4.33	0.90	1.24	23.43	-21.25	3.33	-4.33	Vehicle	Vehicle	-----	-91.38	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	-----	-----	-----	-----	-----	13.42	13.42
		U$_3$ - L$_4$	-108.90	6.48	-25.27	0.00	-6.31	0.90	1.24	7.21	-28.13	0.00	-6.31	Vehicle	Vehicle	-----	-178.13	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	-----	-----	-----	-----	-----	8.09	8.09
		U$_3$ - L$_4$	153.14	43.67	-2.51	10.12	0.00	0.90	1.24	48.62	-2.79	10.12	0.00	Vehicle	Vehicle	262.29	-----	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$_5$	186.37	50.15	-3.84	13.44	0.00	0.90	1.24	55.84	-4.27	13.44	0.00	Vehicle	Vehicle	314.87	-----	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	-----	-----	-----	-----	-----	8.32	8.32	-----	-----
		U$_5$ - L$_6$	177.53	50.30	-15.21	14.14	0.00	0.90	1.24	55.99	-16.94	14.14	0.00	Vehicle	Vehicle	303.58	-----	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	-----	-----	-----	-----	-----	8.45	8.45	-----	-----
		U$_7$ - L$_7$	173.15	47.01	-15.80	13.87	0.00	0.90	1.24	52.34	-17.59	13.87	0.00	Vehicle	Vehicle	293.13	-----	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	-----	-----	-----	-----	-----	9.12	9.12	-----	-----
		U$_8$ - L$_8$	328.03	83.16	-4.33	19.45	-0.14	0.90	1.20	89.66	-4.67	19.45	-0.14	Vehicle	Vehicle	542.99	-----	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	-----	-----	-----	-----	-----	7.07	7.07	-----	-----
		U$_8$ - L$_{10}$	339.64	84.76	-3.01	19.75	0.00	0.90	1.20	91.39	-3.24	19.75	0.00	Vehicle	Vehicle	560.33	-----	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	-----	-----	-----	-----	-----	6.81	6.81	-----	-----
		U$_{10}$ - L$_{11}$	313.15	76.57	-2.20	18.15	0.00	0.90	1.20	82.56	-2.37	18.15	0.00	Vehicle	Vehicle	514.43	-----	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	-----	-----	-----	-----	-----	7.24	7.24	-----	-----
		U$_{11}$ - L$_{12}$	270.62	69.20	-2.19	14.84	0.00	0.90	1.20	74.61	-2.36	14.84	0.00	Vehicle	Vehicle	448.80	-----	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	-----	-----	-----	-----	-----	6.79	6.79	-----	-----
		U$_{12}$ - L$_{13}$	194.11	48.07	-3.69	10.79	0.00	0.90	1.20	51.83	-3.97	10.79	0.00	Vehicle	Vehicle	319.72	-----	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	-----	-----	-----	-----	-----	8.43	8.43	-----	-----
		U$_{13}$ - L$_{14}$	123.52	33.47	-11.90	5.97	0.00	0.90	1.20	36.08	-12.83	5.97	0.00	Vehicle	Vehicle	207.48	-----	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	-----	-----	-----	-----	-----	8.43	8.43	-----	-----
		U$_{15}$ - L$_{14}$	-16.31	30.47	-17.91	1.47	-2.35	0.90	1.20	32.85	-19.31	1.47	-2.35	Vehicle	Vehicle	21.50	-46.30	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	-----	-----	-----	13.52	13.52	16.16	16.16
		U$_{15}$ - L$_{15}$	59.11	39.33	-9.30	6.08	-2.09	0.90	1.20	42.41	-10.03	6.08	-2.09	Vehicle	Vehicle	131.97	-----	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	-----	-----	-----	-----	-----	8.69	8.69	-----	-----
		U$_{17}$ - L$_{16}$	172.05	58.50	-9.83	9.93	-1.86	0.90	1.20	63.08	-10.60	9.93	-1.86	Vehicle	Vehicle	305.67	-----	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	-----	-----	-----	-----	-----	5.59	5.59	-----	-----
		U$_{16}$ - L$_{17}$	210.69	58.10	-8.33	12.50	-1.53	0.90	1.20	62.64	-8.98	12.50	-1.53	Vehicle	Vehicle	355.33	-----	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	-----	-----	-----	-----	-----	7.02	7.02	-----	-----
		U$_{18}$ - L$_{18}$	242.30	60.14	-6.67	13.72	-1.21	0.90	1.20	64.84	-7.19	13.72	-1.21	Vehicle	Vehicle	399.29	-----	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	-----	-----	-----	-----	-----	7.22	7.22	-----	-----
		U$_{20}$ - L$_{19}$	257.77	53.26	-5.48	15.71	-1.03	0.90	1.20	57.42	-5.91	15.71	-1.03	Vehicle	Vehicle	409.75	-----	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	-----	-----	-----	-----	-----	7.88	7.88	-----	-----
		U$_0$ - L$_1$	299.01	78.05	-14.60	14.21	-2.21	0.90	1.18	83.10	-15.55	14.21	-2.21	Vehicle	Vehicle	496.74	-----	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	-----	-----	-----	-----	-----	5.76	5.76	-----	-----
		U$_1$ - L$_2$	284.23	77.55	-17.38	14.05	-2.66	0.90	1.18	82.57	-18.50	14.05	-2.66	Vehicle	Vehicle	476.83	-----	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	-----	-----	-----	-----	-----	5.97	5.97	-----	-----
		U$_2$ - L$_3$	221.45	67.80	-18.52	11.83	-2.85	0.90	1.18	72.19	-19.71	11.83	-2.85	Vehicle	Vehicle	381.72	-----	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	-----	-----	-----	-----	-----	5.95	5.95	-----	-----
		U$_3$ - L$_4$	178.33	64.25	-20.89	10.08	-3.23	0.90	1.18	68.40	-22.24	10.08	-3.23	Vehicle	Vehicle	320.75	-----	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	-----	-----	-----	-----	-----	5.83	5.83	-----	-----
		U$_4$ - L$_5$	53.52	39.17	-17.86	5.38	-2.87	0.90	1.18	41.70	-19.02	5.38	-2.87	Vehicle	Vehicle	123.79	-----	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	-----	-----	-----	-----	-----	8.97	8.97	-----	-----
		U$_5$ - L$_6$	-16.50	30.80	-20.50	2.23	-2.92	0.90	1.18	32.79	-21.82	2.23	-2.92	Vehicle	Vehicle	21.18	-49.82	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	-----	-----	-----	13.55	13.55	14.17	14.17
		U$_7$ - L$_6$	-133.20	13.55	-40.82	0.00	-5.36	0.90	1.18	14.42	-43.46	0.00	-5.36	Vehicle	Vehicle	-----	-229.66	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	-----	-----	-----	-----	-----	5.20	5.20
		U$_6$ - L$_7$	208.77	51.98	-9.14	8.33	0.00	0.90	1.18	55.34	-9.73	8.33	0.00	Vehicle	Vehicle	343.34	-----	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	-----	-----	-----	-----	-----	7.13	7.13	-----	-----
		U$_8$ - L$_8$	289.58	69.15	-2.22	10.70	0.00	0.90	1.18	73.63	-2.36	10.70	0.00	Vehicle	Vehicle	472.17	-----	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	-----	-----	-----	-----	-----	5.71	5.71	-----	-----
		U$_{10}$ - L$_9$	327.97	71.07	-2.51	12.66	0.00	0.90	1.18	75.67	-2.67	12.66	0.00	Vehicle	Vehicle	524.74	-----	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	-----	-----	-----	-----	-----	5.94	5.94	-----	-----
		U$_{11}$ - L$_{10}$	349.27	76.47	-10.48	12.70	0.00	0.90	1.18	81.41	-11.16	12.70	0.00	Vehicle	Vehicle	559.88	-----	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	-----	-----	-----	-----	-----	6.08	6.08	-----	-----
		U$_{12}$ - L$_{11}$	358.20	72.69	-11.28	13.52	0.00	0.90	1.18	77.40	-12.01	13.52	0.00	Vehicle	Vehicle	566.27	-----	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	-----	-----	-----	-----	-----	6.28	6.28	-----	-----
		U$_{13}$ - L$_{12}$	307.76	59.45	-21.99	12.26	-0.24	0.90	1.18	63.30	-23.41	12.26	-0.24	Vehicle	Vehicle	482.37	-----	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	-----	-----	-----	-----	-----	7.42	7.42	-----	-----
		U$_{14}$ - L$_{13}$	260.25	49.11	-19.77	11.73	-1.50	0.90	1.18	52.29	-21.04	11.73	-1.50	Vehicle	Vehicle	406.30	-----	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	-----	-----	-----	-----	-----	9.89	9.89	-----	-----
		U$_{14}$ - L$_{15}$	208.41	63.20	-9.41	11.04	-2.52	0.90	1.17	66.49	-9.90	11.04	-2.52	Vehicle	Vehicle	357.37	-----	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	-----	-----	-----	-----	-----	6.65	6.65	-----	-----
		U$_{15}$ - L$_{16}$	243.53	71.87	-6.29	11.54	-1.48	0.90	1.17	75.61	-6.61	11.54	-1.48	Vehicle	Vehicle	414.89	-----	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	-----	-----	-----	-----	-----	5.38	5.38	-----	-----
		U$_{16}$ - L$_{17}$	255.83	70.83	-9.79	12.23	-0.85	0.90	1.17	74.52	-10.30	12.23	-0.85	Vehicle	Vehicle	429.44	-----	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	-----	-----	-----	-----	-----	6.10	6.10	-----	-----
		U$_{17}$ - L$_{18}$	235.25	69.97	-11.47	11.35	-0.75	0.90	1.17	73.61	-12.07	11.35	-0.75	Vehicle	Vehicle	401.52	-----	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	-----	-----	-----	-----	-----	5.64	5.64	-----	-----
		U$_{18}$ - L$_{19}$	212.06	64.25	-13.98	11.09	0.00	0.90	1.17	67.60	-14.71	11.09	0.00	Vehicle	Vehicle	363.56	-----	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	-----	-----	-----	-----	-----	6.49	6.49	-----	-----
	Structure 2	U$_{19}$ - L$_{20}$	168.18	55.23	-15.48	9.14	0.00	0.90	1.17	58.10	-16.29	9.14	0.00	Vehicle	Vehicle	294.17	-----	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	-----	-----	-----	-----	-----	7.49	7.49	-----	-----
		U$_{20}$ - L$_{21}$	97.21	39.95	-16.62	6.66	0.00	0.90	1.17	42.03	-17.48	6.66	0.00	Vehicle	Vehicle	181.02	-----	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	-----	-----	-----	-----	-----	7.86	7.86	-----	-----
		U$_{21}$ - L$_{22}$	30.55	31.36	-25.65	3.66	-2.18	0.90	1.17	32.99	-26.98	3.66	-2.18	Vehicle	Vehicle	82.61	-----	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	-----	-----	-----	-----	-----	12.04	12.04	-----	-----
		U$_{23}$ - L$_{22}$	49.81	40.10	-18.03	5.11	-0.95	0.90	1.17	42.19	-18.97	5.11	-0.95	Vehicle	Vehicle	119.61	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	8.96	8.96	-----	-----
		U$_{24}$ - L$_{23}$	115.09	49.65	-16.87	8.00	-0.72	0.90	1.17	52.24	-17.74	8.00	-0.72	Vehicle	Vehicle	217.53	-----	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	-----	-----	-----	-----	-----	5.98	5.98	-----	-----
		U$_{25}$ - L$_{24}$	179.20	61.82	-16.40	10.10	-0.73	0.90	1.17	65.04	-17.26	10.10	-0.73	Vehicle	Vehicle	317.52	-----	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	-----	-----	-----	-----	-----	6.52	6.52	-----	-----
		U$_{26}$ - L$_{25}$	220.95	64.43	-14.39	11.89	-0.57	0.90	1.17	67.79	-15.14	11.89	-0.57	Vehicle	Vehicle	375.36	-----	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	-----	-----	-----	-----	-----	6.34	6.34	-----	-----
		U$_{27}$ - L$_{26}$	234.79	67.70	-11.44	11.44	-0.35	0.90	1.17	71.22	-12.04	11.44	-0.35	Vehicle	Vehicle	397.81	-----	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	-----	-----	-----	-----	-----	5.84	5.84	-----	-----
		U$_{28}$ - L$_{27}$	253.01	63.74	-10.10	12.25	-0.28	0.90	1.17	67.06	-10.62	12.25	-0.28	Vehicle	Vehicle	416.09	-----	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	-----	-----	-----	-----	-----	6.82	6.82	-----	-----
		U$_{29}$ - L$_{28}$	215.83	51.92	-22.14	10.20	0.00	0.90	1.17	54.62	-23.30	10.20	0.00	Vehicle	Vehicle	351.59	-----	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	-----	-----	-----	-----	-----	7.96	7.96	-----	-----
		U$_{30}$ - L$_{29}$	179.92	45.13	-20.12	8.89	-0.93	0.90	1.17	47.48	-21.17	8.89	-0.93	Vehicle	Vehicle	295.62	-----	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	-----	-----	-----	-----	-----	9.91	9.91	-----	-----
		U$_{30}$ - L$_{31}$	294.37	66.70	-11.20	12.88	-1.65	0.90	1.18	71.02	-11.92	12.88	-1.65	Vehicle	Vehicle	475.00	-----	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	-----	-----	-----	-----	-----	6.80	6.80	-----	-----
		U$_{31}$ - L$_{32}$	342.78	73.77	-9.82	13.71	-0.55	0.90	1.18	78.54	-10.45	13.71	-0.55	Vehicle	Vehicle	547.72	-----	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	-----	-----	-----	-----	-----	5.54	5.54	-----	-----
		U$_{32}$ - L$_{33}$	363.31	77.70	-5.12	14.15	0.00	0.90	1.18	82.73	-5.45	14.15	0.00	Vehicle	Vehicle	579.85	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.64	16.64	0.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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 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 (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	-0.10	1.75	-2.95	-10.37	-1.38	23.42	-39.38	-138.53
	U_0-U_1	-54.49	-51.15	0.28	3.06	-1.67	-18.30	3.70	40.91	-22.34	-244.43
	U_1-L_1	59.27	44.72	-0.34	-5.04	-5.56	-16.35	3.77	39.97	-67.39	-218.96
	U_1-L_2	-52.26	61.06	2.78	4.42	-5.28	-14.51	37.17	59.08	-70.49	-193.87
	U_1-U_2	-28.29	50.99	2.33	4.11	-5.37	-17.75	41.17	57.37	-77.70	-237.15
	L_1-L_2	28.29	50.99	3.65	4.06	-12.32	0.30	48.74	54.17	-164.68	4.02
	L_2-L_3	94.63	69.27	3.87	2.50	-13.51	0.30	51.74	32.74	-151.97	30.21
	L_3-L_4	49.92	60.38	2.24	5.80	-2.06	2.38	29.95	77.45	-27.45	31.85
	L_4-L_5	531.77	-129.19	9.33	0.41	-0.01	0.01	8.45	-1.61	0.09	0.08
	L_5-L_6	68.54	41.95	1.76	3.29	-2.29	7.42	23.91	41.87	-3.71	-96.60
	L_6-L_7	100.48	-176.70	3.37	2.77	2.58	-14.85	43.63	35.79	33.34	-192.12
	L_7-L_8	25.29	-160.14	2.88	2.23	0.28	-15.70	50.20	3.58	-5.30	-204.21
	L_8-L_9	-56.66	-218.08	3.04	1.11	-2.75	-16.90	39.35	14.30	-35.58	-218.68
	L_9-L_{10}	-153.90	-244.02	2.04	1.11	-6.33	-14.47	19.77	21.71	-68.97	-197.22
	L_{10}-L_{11}	-287.80	-237.44	2.64	1.54	-13.92	-12.91	34.18	19.87	-180.05	-167.00
	L_{11}-L_{12}	-196.20	-337.71	2.59	0.19	-22.18	-9.39	33.48	2.46	-286.92	-121.44
	L_{12}-L_{13}	-290.83	-154.75	0.99	-0.17	-23.95	-6.38	12.77	22.71	-387.99	-224.49
	L_{13}-L_{14}	-189.93	-29.96	0.86	-0.79	-15.21	1.63	11.14	-10.16	-196.75	21.09
	L_{14}-L_{15}	-179.63	-39.55	0.77	-1.32	-12.92	-0.04	9.92	-8.44	-164.02	0.00
	L_{15}-L_{16}	-249.78	258.69	0.54	-0.34	-15.67	10.34	7.03	-4.40	-202.68	133.72
	L_{16}-L_{17}	-28.62	-172.11	-0.56	1.49	3.37	-14.58	-7.14	18.97	43.03	-186.24
	L_{17}-L_{18}	-24.91	-195.34	-0.29	1.30	3.30	-15.74	-8.36	3.16	-37.16	-207.57
	L_{18}-L_{19}	-53.03	-283.30	-0.64	2.04	0.93	-26.48	-8.22	26.10	11.91	-338.28
	L_{19}-L_{20}	-339.66	-282.47	-0.64	1.52	4.19	-24.55	-10.21	16.68	-14.25	-344.26
	L_{20}-L_{21}	-360.46	-389.97	0.23	3.38	-12.02	-28.32	2.99	43.16	-153.96	-361.63
	L_{21}-L_{22}	-403.42	-377.79	2.53	0.61	-16.03	-18.67	3.00	24.28	-136.03	-158.47
	L_{22}-L_{23}	-349.63	-208.07	4.69	8.92	-33.64		59.96	58.67	-114.00	-429.85
	L_{23}-L_{24}	-253.78	-280.71	3.62	5.04	-35.46	-12.02	46.21	64.33	-453.10	-153.42
	L_{24}-L_{25}	-152.28	-33.84	1.34	0.60	-21.67	4.40	20.56	57.66	-252.62	-82.34
	L_{25}-L_{26}	-237.02	39.91	5.23	6.60	-21.67	-3.86	66.87	84.27	-276.90	-49.28
	L_{26}-L_{27}	-132.20	33.84	5.03	5.03	-21.67	4.41	82.05	74.60	-230.53	-82.34
	L_{27}-L_{28}	-116.69	170.75	5.56	4.49	-19.28	0.48	70.99	57.33	-246.28	6.11
	L_{28}-L_{29}	-58.54	151.61	2.49	2.41	-12.69	-2.72	79.23	37.16	-166.97	-19.20
	L_{29}-L_{30}	-211.04	121.68	3.87	7.86	-0.62	-0.66	49.38	100.42	-87.87	-8.41
	L_{30}-L_{31}	1028.71	-26.69	16.80	1.73	-1.25	0.08	212.05	21.82	-15.73	1.06
	L_{31}-L_{32}	8.97	84.61	1.44	0.44	0.01	0.01	16.91	42.30	-5.36	0.06
	L_{32}-L_{33}	271.38	25.19	3.87	3.64	2.11	-15.37	48.83	45.91	26.64	-194.05
	L_{33}-L_{34}	156.55	4.57	3.00	4.56	0.48	-17.21	55.92	45.91	26.64	-163.86
	L_{34}-L_{35}	156.55	-8.67	5.30	4.06	0.48	-17.21	66.95	51.28	6.10	-217.23
	L_{35}-L_{36}	48.55	11.41	5.28	4.26	-3.91	-14.37	66.66	53.77	-49.30	-181.47
	L_{36}-L_{37}	48.55	-41.66	4.09	4.26	-3.91	-14.37	66.66	53.77	-49.30	-181.47
	L_{37}-L_{38}	-92.57	-65.85	2.13	2.31	-6.35	-26.07	26.88	29.14	-80.13	-329.19
	L_{38}-L_{39}	-59.44	-91.51	2.13	2.31	-6.35	-26.07	26.88	29.14	-80.13	-329.19
	L_{39}-L_{40}	-48.31	-31.52	0.16	4.31	-23.03	-8.05	2.03	54.38	-290.77	-76.34
	L_{40}-L_{41}	10.77	137.63	3.90	4.90	-19.39	-0.53	41.60	61.88	-244.79	-6.65
	L_{41}-L_{42}	57.22	-122.85	4.19	3.68	-18.83	1.19	52.87	46.51	-237.76	14.99
	L_{42}-L_{43}	85.41	4.86	3.99	1.71	-0.52	-1.18	50.34	21.59	-5.63	-14.86
	L_{43}-L_{44}	156.52	808.37	2.91	0.59	-0.36	0.06	29.91	151.84	-3.39	-32.74
	L_{44}-L_{45}	821.42	-89.58	14.33	1.43	-1.65	-0.72	183.12	18.26	-21.03	-9.19
	L_{45}-L_{46}	25.32	37.80	1.07	1.07	-0.01	-0.01	13.67	17.41	-1.84	-13.61
	L_{46}-L_{47}	145.63	-52.49	3.62	4.73	-2.82	-12.48	48.86	60.41	36.07	-159.42
	L_{47}-L_{48}	17.52	-88.46	5.05	5.31	-0.96	-16.69	64.48	67.80	-12.24	-213.24
	L_{48}-L_{49}	25.32	37.80	1.07	1.07	-0.01	-0.01	13.67	17.41	-1.84	-13.61
	L_{49}-L_{50}	-75.13	-230.47	5.31	3.27	-1.16	-26.70	67.88	41.79	-147.16	-341.14
	L_{50}-L_{51}	-204.03	-37.47	5.31	3.27	-1.16	-26.70	66.94	58.08	-268.42	-225.07
	L_{51}-L_{52}	-84.17	-278.54	5.24	4.55	-21.01	-17.62	66.94	58.08	-268.42	-225.07
	L_{52}-L_{53}	-274.89	-274.53	3.40	0.43	-29.65	-18.27	42.37	5.53	-378.82	-233.36
	L_{53}-L_{54}	-296.96	-269.01	1.97	0.29	-33.70	-13.40	25.21	3.65	-430.56	-171.22
	L_{54}-L_{55}	-154.35	-34.80	1.33	-0.33	-17.07	-3.60	17.04	-4.18	-218.04	-45.93
	L_{55}-L_{56}	-154.35	-34.80	1.33	-0.33	-17.07	-3.60	17.04	-4.18	-218.04	-45.93
	L_{56}-L_{57}	40.05	-167.61	0.48	0.50	4.61	-10.99	-6.24	6.51	59.61	-142.14
	L_{57}-L_{58}	-10.43	-132.23	-0.36	0.64	1.52	-13.83	-4.71	8.27	19.69	-178.96
	L_{58}-L_{59}	-10.43	-132.23	-0.36	0.64	1.52	-13.83	-4.71	8.27	19.69	-178.96
	L_{59}-L_{60}	-187.01	-275.87	1.42	1.98	-6.90	-21.50	18.42	25.57	-89.26	-278.16
	L_{60}-L_{61}	-322.39	-144.33	1.61	0.61	-24.68	-12.86	25.21	3.65	-430.56	-171.22
	L_{61}-L_{62}	-162.87	-104.84	1.08	3.11	-17.41	-6.57	14.00	40.25	-225.30	-78.91
	L_{62}-L_{63}	-147.74	26.71	2.32	3.73	-18.26	-2.15	29.98	48.22	-236.26	-27.77
	L_{63}-L_{64}	-147.74	26.71	2.32	3.73	-18.26	-2.15	29.98	48.22	-236.26	-27.77
	L_{64}-L_{65}	10.81	46.01	3.38	1.85	-9.65	0.72	43.72	23.91	-124.80	9.33
	L_{65}-L_{66}	10.81	46.01	3.38	1.85	-9.65	0.72	43.72	23.91	-124.80	9.33
	L_{66}-L_{67}	-426.14	9.98	2.22	1.35	-6.03	-0.02	123.16	18.09	0.36	-0.27
	L_{67}-L_{68}	-426.14	9.98	2.22	1.35	-6.03	-0.02	123.16	18.09	0.36	-0.27
	L_{68}-L_{69}	128.06	64.05	4.28	3.75	-0.06	-10.78	57.82	52.08	-0.83	-144.04
	L_{69}-L_{70}	70.11	43.65	4.61	3.36	-2.30	-12.49	61.60	44.82	-30.75	-166.90
	L_{70}-L_{71}	83.40	-95.48	4.89	1.30	-16.09	-7.53	65.32	17.39	-274.50	-100.54
	L_{71}-L_{72}	-52.69	-52.69	3.92	4.71	-8.37	-2.84	37.94	-53.84	-208.52	-154.16

ZZ Axis Moment Properties

Member	Rcv. Pos. Mom. Start (k-in)	Rcv. Pos. Mom. End (k-in)	Rcv. Neg. Mom. Start (k-in)	Rcv. Neg. Mom. End (k-in)	S_{tot} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{tot} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term? F<Sb	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_b	C_b(calc)
U_0-L_1	-172.41	1.05	-221.52	-209.47	90.2	90.24	72.24	127.46	2147	1328.6	f	4206	0.99800041	2974.3	0.944	0.96
U_0-U_1	-66.02	-13.31	-99.87	-384.25	90.2	90.24	72.24	127.46	2147	1328.6	f	4206	0.99800041	2974.3	0.260	0.70
U_1-L_1	-158.68	-136.05	-359.52	-226.01	90.2	90.24	76.71	127.46	2147	1328.6	f	4206	0.99800041	2974.3	0.627	0.90
U_1-L_2	-19.62	156.17	-159.57	-172.67	90.2	90.24	72.24	127.46	2147	1328.6	f	4206	0.99800041	2974.3	0.924	0.97
U_1-U_2	18.76	76.76	-74.30	-74.30	90.2	90.24	72.24	127.46	2147	1328.6	f	4206	0.99800041	2974.3	0.025	0.61
U_2-L_2	66.12	258.09	-211.22	-163.89	90.2	90.24	76.71	127.46	2147	1328.6	f	4206	0.99800041	2974.3	0.255	0.70
L_1-L_2	190.54	106.61	-74.28	-24.79	71.1	97.11	78.18	142.56	2586	1649.1	f	4704	0.99801397	3201.5	0.560	0.82
L_2-L_3	-51.96	885.08	-126.58	825.80	138.2	138.17	111.77	198.97	3642	2197.7	f	6999	0.998945	4564.8	-0.099	0.58
L_3-L_4	848.25	-161.09	691.14	-167.85	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99800041	4292.8	-0.190	0.52
L_4-L_5	129.19	111.57	93.93	-67.95	91.6	90.61	73.12	128.29	2172	1367.9	f	4465	0.99801397	3184.1	0.029	0.67
L_5-L_6	187.34	-183.18	173.97	-479.46	96.6	96.61	83.55	130.29	2174	1387.9	f	4465	0.99801397	3184.1	-0.363	0.45
L_6-L_7	-124.09	-183.11	14.37	-414.68	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99800041	4292.8	-0.139	0.56
L_7-L_8	-74.51	-264.91	-171.92	-567.73	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99800041	5093.0	0.303	0.72
L_8-L_9	-192.13	-420.42	-132.74	-386.62	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99800041	5093.0	0.456	0.76
L_9-L_{10}	-329.79	-282.83	-608.20	-525.76	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899931	6214.6	0.864	0.95
L_{10}-L_{11}	-329.79	-282.83	-608.20	-525.76	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899931	6214.6	0.864	0.95
L_{11}-L_{12}	-211.53	-435.83	-528.06	-596.90	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899931	6214.6	0.950	0.98
L_{12}-L_{13}	-367.99	-250.09	-767.43	-308.44	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899931	6214.6	0.776	0.93
L_{13}-L_{14}	-232.43	-52.16	-522.69	-11.54	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99901716	4197.7	0.023	0.61
L_{14}-L_{15}	-225.62	-57.84	-427.25	-52.10	104.5	104.75	86.43	150.33	2559	1554.5	1.44	4971	0.99880542	3452.8	0.137	0.65
L_{15}-L_{16}	-315.57	330.58	-568.19	510.13	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880542	3452.6	0.857	0.25
L_{16}-L_{17}	-46.48	-199.08	18.74	-465.86	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.040	0.58
L_{17}-L_{18}	-37.16	-237.57	-43.45	-513.95	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.080	0.57
L_{18}-L_{19}	-76.61	-334.29	-53.66	-668.09	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99800041	5093.0	0.066	0.63
L_{19}-L_{20}	-433.19	-447.27	-537.55	-583.39	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99800041	5093.0	0.178	0.68
L_{20}-L_{21}	-464.76	-450.89	-668.22	-977.33	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99899181	8298.1	0.684	0.87
L_{21}-L_{22}	-482.36	-413.98	-1,000.36	-1,000.36	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99899181	8298.1	0.886	0.93
L_{22}-L_{23}	-416.27	92.42	-387.42	-219.52	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99899931	5702.3	0.222	0.69
L_{23}-L_{24}	-253.78	-139.53	-329.43	-155.84	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99899931	5702.3	0.000	0.62
L_{24}-L_{25}	-290.55	59.40	-211.46	-293.66	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.720	0.31
L_{25}-L_{26}	-149.77	84.72	-0.96	-221.03	104.9	104.75	86.43	150.33	2559	1554.5	1.44	4971	0.99880542	3452.8	0.102	0.65
L_{26}-L_{27}	-221.16	160.91	-668.07	-12.70	181.9	181.87	147.20	249.02	3787	2047.8	1.37	6918	0.99847797	5992.8	0.019	0.61
L_{27}-L_{28}	-61.00	139.33	-0.00	-244.81	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	0.069	0.64
L_{28}-L_{29}	-68.42	296.30	-471.86	-229.92	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.3	-0.487	0.41
L_{29}-L_{30}	-108.59	1,010.16	-588.97	-1,088.70	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.3	0.000	0.62
L_{30}-L_{31}	-2,710.16	1,088.73	-284.58	1,447.26	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7510.6	-0.154	0.55
L_{31}-L_{32}	1,612.99	-6.34	1,316.87	-33.32	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7510.6	-0.004	0.60
L_{32}-L_{33}	34.81	345.00	5.61	-1,000.36	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99899181	8298.1	0.886	0.93
L_{33}-L_{34}	416.27	92.42	387.42	-219.52	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99899931	5702.3	0.222	0.69
L_{34}-L_{35}	-253.78	-139.53	-329.43	-155.84	173.0	173.03	144.25	241.17	3969	2180.7	1.39	7999	0.99899931	5702.3	0.000	0.62
L_{35}-L_{36}	-290.55	59.40	-211.46	-293.66	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	-0.720	0.31
L_{36}-L_{37}	-149.77	84.72	-0.96	-221.03	104.9	104.75	86.43	150.33	2559	1554.5	1.44	4971	0.99880542	3452.8	0.102	0.65
L_{37}-L_{38}	-221.16	160.91	-668.07	-12.70	181.9	181.87	147.20	249.02	3787	2047.8	1.37	6918	0.99847797	5992.8	0.019	0.61
L_{38}-L_{39}	-61.00	139.33	-0.00	-244.81	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861312	4212.5	0.069	0.64
L_{39}-L_{40}	-68.42	296.30	-471.86	-229.92	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.3	-0.487	0.41
L_{40}-L_{41}	-108.59	1,010.16	-588.97	-1,088.70	156.6	156.80	126.72	214.81	3285	1852.3	1.37	7089	0.99854421	5168.3	0.000	0.62
L_{41}-L_{42}	-2,710.16	1,088.73	-284.58	1,447.26	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7510.6	-0.154	0.55
L_{42}-L_{43}	1,612.99	-6.34	1,316.87	-33.32	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7510.6	-0.004	0.60
L_{43}-L_{44}	34.81	345.00	5.61	-1,000.36	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12066	0.99899181	8298.1	0.886	0.93
L_{44}-L_{45}	821.42	-89.58	14.33	1.43	-1.65	-0.72	183.12	18.26	-21.03	-9.19	0.00	0.00	0.00	1300.90	92.69	1040.92
L_{45}-L_{46}	25.32	37.80	1.07	1.07	-0.01	-0.01	13.67	17.41	-1.84	-13.61	0.00	0.00	0.00	153.61	115.24	1228.92
L_{46}-L_{47}	145.63	-52.49	3.62	4.73	-2.82	-12.48	48.86	60.41	36.07	-159.42	0.00	0.00	0.00	252.81	10.30	236.18
L_{47}-L_{48}	17.52	-88.46	5.05	5.31	-0.96	-16.69	64.48	67.80	-12.24	-213.24	0.00	0.00	0.00	106.60	-26.85	9.86
L_{48}-L_{49}	25.32	37.80	1.07	1.07	-0.01	-0.01	13.67	17.41	-1.84	-13.61	0.00	0.00	0.00	153.61	115.24	1228.92
L_{49}-L_{50}	-75.13	-230.47	5.31	3.27	-1.16	-26.70	67.88	41.79	-147.16	-341.14	0.00	0.00	0.00	-9.42	-245.28	-116.85
L_{50}-L_{51}	-204.03	-37.47	5.31	3.27	-1.16	-26.70	66.94	58.08	-268.42	-225.07	0.00	0.00	0.00	-35.41	-286.59	-411.37
L_{51}-L_{52}	-84.17	-278.54	5.24	4.55	-21.01	-17.62	66.94	58.08	-268.42	-225.07	0.00	0.00	0.00	-35.41	-286.59	-411.37
L_{52}-L_{53}	-274.89	-274.53	3.40	0.43	-29.65	-18.27	42.37	5.53	-378.82	-233.36	0.00	0.00	0.00	-302.28	-349.73	-849.83
L_{53}-L_{54}	-296.96	-269.01	1.97	0.29	-33.70	-13.40	25.21	3.65	-430.56	-171.22	0.00	0.00	0.00	-315.57	330.58	-568.19
L_{54}-L_{55}	-154.35	-34.80	1.33	-0.33	-17.07	-3.60	17.04	-4.18	-218.04	-45.93	0.00	0.00	0.00	-178.50	-50.67	-464.11
L_{55}-L_{56}	-154.35	-34.80	1.33	-0.33	-17.07	-3.60	17.04	-4.18	-218.04	-45.93	0.00	0.00	0.00	-178.50	-50.67	-464.11
L_{56}-L_{57}	40.05	-167.61	0.48	0.50	4.61	-10.99	-6.24	6.51	59.61	-142.14	0.00	0.00	0.00	43.95	-209.70	129.55
L_{57}-L_{58}	-10.43	-132.23	-0.36	0.64	1.52	-13.83	-4.71	8.27	19.69	-178.96	0.00	0.00	0.00	-19.68	-187.15	12.04
L_{58}-L_{59}	-10.43	-132.23	-0.36	0.64	1.52	-13.83	-4.71	8.27	19.69	-178.96	0.00	0.00	0.00	-19.68	-187.15	12.04
L_{59}-L_{60}	-187.01	-275.87	1.42	1.98	-6.90	-21.50	18.42	25.57	-89.26	-278.16	0.00	0.00	0.00	-219.16	-325.40	-359.15
L_{60}-L_{61}	-322.39	-144.33	1.61	0.61	-24.68	-12.86	25.21	3.65	-430.56	-171.22	0.00	0.00	0.00	-315.57	330.58	-568.19
L_{61}-L_{62}	-162.87	-104.84	1.08	3.11	-17.41	-6.57	14.00	40.25	-225.30	-78.91	0.00	0.00	0.00	-193.53	-93.96	-554.61
L_{62}-L_{63}	-147.74	26.71	2.32	3.73	-18.26	-2.15	29.98	48.22	-236.26	-27.77	0.00	0.00	0.00	-153.09	97.41	-499.18
L_{63}-L_{64}	-147.74	26.71	2.32	3.73	-18.26	-2.15	29.98	48.22	-236.26	-27.77	0.00	0.00	0.00	-153.09	97.41	-499.18
L_{64}-L_{65}	10.81	46.01	3.38	1.85	-9.65	0.72	43.72	23.91	-124.80	9.33	0.00	0.00	0.00	70.89	80.89	-148.19
L_{65}-L_{66}	10.81	46.01	3.38	1.85	-9.65	0.72	43.72	23.91	-124.80	9.33	0.00	0.00	0.00	70.89	80.89	-148.19
L_{66}-L_{67}	-426.14	9.98	2.22	1.35	-6.03	-0.02	123.16	18.09	0.36	-0.27	0.00	0.00	0.00	114.10	35.31	554.45
L_{67}-L_{68}	-426.14	9.98	2.22	1.35	-6.03	-0.02	123.16	18.09	0.36	-0.27	0.00	0.00	0.00	114.10	35.31	554.45
L_{68}-L_{69}	128.06	64.05	4.28	3.75	-0.06	-10.78	57.82	52.08	-0.83	-144.04	0.00	0.00	0.00	240.88	139.41	168.40
L_{69}-L_{70}	70.11	43.65	4.61	3.36	-2.30	-12.49	61.60	44.82	-30.75	-166.90	0.00	0.00	0.00	171.22	115.01	511.16
L_{70}-L_{71}	83.40	-95.48	4.89	1.30	-16.09	-7.53	65.32	17.39	-274.50	-100.54	0.00	0.00	0.00	193.33	-101.51	-170.96
L_{71}-L_{72}	-52.69	-52.69	3.92	4.71	-8.37	-2.84	37.94	-53.84	-208.52	-154.16	0.00	0.00	0.00	38.40	-109.60	241.95

M_y Information

YY Axis Moments from STAAD

| Member | Dead Load Start (k-in) | Dead

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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
Guidelines 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 Max. Tension/Compression Load)

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

Maximum Axial with Moment Interaction Check

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Dead Load		Live Load (Max)		Live Load (Min)		Pedestrian Load (Max)		Pedestrian Load (Min)		Lane Reduction & Impact Live Load		Lane Reduction & Impact Live Load		Impact Pedestrian Load		Impact Pedestrian Load		Max. Pos. Mom.			Min. Neg. Mom.			Pass
		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	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	End	S_{top} (in^3)	Start	End	S_{bot} (in^3)	
Structure 1	L_0-L_1	-48.04	-101.19	0.47	-0.79	-0.76	0.90													-55.58	-145.30	-76.89	-115.86	83.6	83.58	74.65	100.97
	L_1-L_2	-130.93	-112.57	-3.55	-8.46	-0.38	2.43													108.50	-293.34	163.69	-104.07	83.6	83.58	67.49	100.97
	L_2-L_3	-139.77	-99.72	-0.62	-1.92	0.27	1.25													-262.06	-312.28	-53.64	-54.07	99.5	99.53	91.00	129.43
	L_3-L_4	18.53	15.80	-13.53	-7.03	1.39	5.16													-180.76	-93.86	18.50	68.88	0.00	0.00	0.00	0.00
	L_4-L_5	-68.87	310.29	-10.68	-3.92	-1.42	0.77													-275.09	94.37	-73.14	53.53	53.94	0.00	0.00	0.00
	L_5-L_6	7.25	228.45	-5.42	-4.20	3.11	6.09													-74.71	224.11	63.35	402.74	104.6	104.58	95.61	136.37
	L_6-L_7	62.67	177.71	-1.86	0.82	4.13	7.21													-113.69	237.53	-9.82	402.74	104.6	104.58	95.61	136.37
	L_7-L_8	7.98	461.19	-0.01	0.01	0.69	7.05													10.19	699.76	22.43	721.94	145.8	145.75	130.44	228.84
	L_8-L_9	439.37	-23.36	0.10	0.01	8.25	0.21													572.88	-30.23	709.91	26.85	145.8	145.75	130.74	228.84
	L_9-L_{10}	204.91	-118.77	0.63	-0.44	-2.15	3.03													276.96	-159.11	230.15	-103.88	144.9	144.85	129.09	192.04
	L_{10}-L_{11}	168.36	-118.36	-0.70	-4.96	4.76	2.24													207.16	-237.22	298.95	-116.21	92.6	92.58	83.65	114.47
	L_{11}-L_{12}	234.93	-217.11	0.35	-2.06	2.93	0.67													287.66	-410.04	344.79	-352.88	92.6	92.58	76.68	114.47
	L_{12}-L_{13}	-19.53	-128.46	-5.51	-5.44	2.94	1.44													-118.14	-258.53	24.06	-142.71	130.1	130.08	121.10	170.72
	L_{13}-L_{14}	179.75	-425.17	-5.53	-11.43	2.28	1.95													-71.39	-147.87	29.50	-25.57	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	408.18	-262.07	-2.67	-7.20	0.11	2.67													-742.55	214.13	-742.55	214.13	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-209.34	318.54	-10.05	-14.34	0.81	0.65													-441.11	-656.30	-298.92	-403.20	179.7	179.69	170.68	251.43
	L_{16}-L_{17}	-374.18	83.83	-12.69	-3.42	0.80	4.25													-764.20	-441.21	-702.67	-51.50	143.9	143.86	133.07	200.51
	L_{17}-L_{18}	-170.99	204.48	-6.20	-1.92	0.30	-0.04													-80.19	-24.84	3.91	-0.54	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	-207.50	250.73	-2.81	-0.39	3.46	1.36													-36.24	14.84	44.79	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	-99.23	0.16	1.87	-0.96	4.37	3.39													-24.21	11.67	-56.53	-43.71	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	5.36	-218.26	0.59	-1.75	3.24	4.87													7.53	-22.37	41.40	-87.76	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	18.16	-247.31	0.54	-0.45	1.18	1.18													12.02	-226.88	9.40	-43.00	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	1.07	-191.80	-1.11	-10.59	-0.52	1.15													-17.12	-425.18	-7.30	-230.79	157.0	157.00	151.98	208.63
	L_{23}-L_{24}	19.74	-979.62	-2.27	-0.19	0.20	0.20													-41.42	-1,196.96	-6.26	-31.71	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	-286.08	-268.86	-13.79	-12.60	-0.21	2.13													-176.24	-160.97	-373.45	-353.13	174.3	174.28	163.71	320.70
	L_{25}-L_{26}	-299.04	-422.03	-15.87	-19.87	0.20	-0.36													-222.70	-319.69	-376.89	-454.52	178.9	178.89	141.80	299.51
	L_{26}-L_{27}	-467.27	-273.20	-17.50	-19.87	3.11	4.60													-223.05	-253.82	39.67	58.73	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	-310.47	-45.78	-14.95	-14.56	3.75	6.54													-190.99	-185.97	47.90	88.60	0.00	0.00	0.00	0.00
	L_{28}-L_{29}	-272.10	223.27	-12.31	-13.31	-1.78	5.71													-133.31	-78.76	57.75	52.39	0.00	0.00	0.00	0.00
	L_{29}-L_{30}	-261.82	188.40	-10.44	-6.53	3.25	6.83													-133.35	-83.47	-224.74	87.22	0.00	0.00	0.00	0.00
	L_{30}-L_{31}	-171.20	233.97	-11.39	-7.41	1.16	2.94													-146.06	-417.76	385.78	-236.52	0.00	0.00	0.00	0.00
	L_{31}-L_{32}	-131.41	389.19	-8.89	-1.39	3.83	6.84													-11.42	-17.86	48.91	87.35	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	-164.24	-140.43	-1.49	-0.01	6.00	2.31													-18.97	-0.11	76.61	-29.45	0.00	0.00	0.00	0.00
	L_{33}-L_{34}	-267.38	999.22	-27.23	-0.19	0.19	0.19													-358.17	-182.70	-113.92	-220.64	226.0	226.00	226.00	226.00
	L_{34}-L_{35}	911.85	-326.76	-0.68	-0.50	8.66	0.66													-8.53	-6.35	109.32	1327.53	414.04	249.4	249.40	238.81
	L_{35}-L_{36}	-289.04	42.03	1.13	-0.01	0.00	0.00													-393.31	-51.49	329.55	1327.53	414.04	249.4	249.40	238.81
	L_{36}-L_{37}	515.61	35.20	-1.74	0.10	7.56	2.30													-21.90	1.25	99.46	28.99	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	116.61	-38.38	-2.16	-1.16	3.38	4.16													-47.83	-16.68	81.38	41.76	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	252.11	-25.04	-3.80	-7.79	6.50	2.84													-47.93	-58.29	82.03	-33.80	0.00	0.00	0.00	0.00
	L_{39}-L_{40}	230.58	-46.22	-5.63	-11.53	3.81	4.32													-71.04	-143.54	-66.13	54.53	0.00	0.00	0.00	0.00
	L_{40}-L_{41}	177.20	-23.37	-4.31	-9.01	3.16	3.56													-61.45	-121.04	-56.15	59.38	0.00	0.00	0.00	0.00
	L_{41}-L_{42}	43.89	-183.34	-10.14	-21.43	3.11	2.75													-128.07	-279.57	39.21	0.00	0.00	0.00	0.00	0.00
	L_{42}-L_{43}	39.78	-211.89	-10.26	-24.16	3.39	2.75													-127.22	-311.49	39.21	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	-104.37	-9.61	-8.42	-11.61	1.90	5.20													-106.35	-146.52	23.92	65.65	0.00	0.00	0.00	0.00
	L_{44}-L_{45}	26.78	313.89	-0.11	-0.53	0.13	0.13													-68.02	-42.43	31.37	42.62	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	-65.51	172.40	-7.76	-8.95	2.49	5.76													-68.02	-62.43	31.37	70.27	0.00	0.00	0.00	0.00
	L_{46}-L_{47}	-30.91	151.01	-3.92	-3.08	2.06	5.86													-45.50	4.76	-25.96	73.98	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	1.38	313.89	0.11	-0.53	0.13	0.13													1.38	313.89	0.11	-0.53	0.13	0.13	0.13	0.13
	L_{48}-L_{49}	-19.86	197.53	-1.12	-1.01	0.77	3.20													-14.15	-12.75	9.68	40.41	0.00	0.00	0.00	0.00
	L_{49}-L_{50}	29.47	113.09	-0.16	-0.35	2.70	2.85													1.40	-22.37	23.59	55.75	0.00	0.00	0.00	0.00
	L_{50}-L_{51}	747.52	-264.15	-1.44	0.12	13.19	-1.00													-18.41	1.56	168.52	-12.74	0.00	0.00	0.00	0.00
	L_{51}-L_{52}	-140.80	-80.21	0.28	-1.15	3.84	-0.39													3.62	-14.73	49.10	-14.44	0.00	0.00	0.00	0.00
	L_{52}-L_{53}	29.78	297.47	-13.09	-9.36	2.36	2.36													-118.19	-181.63	49.10	54.85	0.00	0.00	0.00	0.00
	L_{53}-L_{54}	192.40	-145.70	1.06	-0.41	2.65	4.72													13.48	-51.23	33.86	60.39	0.00	0.00	0.00	0.00
	L_{54}-L_{55}	95.68	-212.39	-3.35	-8.14	3.77	3.87													-22.25	-141.49	33.86	60.39	0.00	0.00	0.00	0.00
	L_{55}-L_{56}	77.36	-150.96	-4.19	-9.21	3.77	3.87													-42.76	-116.81	48.17	49.38	0.00	0.00	0.00	0.00
	L_{56}-L_{57}	-182.72	415.40	-11.28	-24.23	3.32	3.09													-144.11	-309.62	42.46	39.34	0.00	0.00	0.00	0.00
	L_{57}-L_{58}	-370.16	-165.14	-16.39	-18.84	3.07	0.61													-209.44	-240.71	29.26	9.63	0.00	0.00	0.00	0.00
	L_{58}-L_{59}	-370.16	-165.14	-16.39	-18.84	3.07	0.61													-514.58	-656.59	-298.61	-403.20	179.7	179.69	170.68	251.43
	L_{59}-L_{60}	-304.14	-22.17	-16.49	-8.03	1.48	-0.35													-669.32	-162.17	-370.79	-34.66	176.7	176.70	166.45	268.88
	L_{60}-L_{61}	-222.88	-59.03	-12.72	-1.86	0.93	-0.41													-140.66	-69.65	-246.11	-51.99	0.00	0.00	0.00	0.00
	L_{61}-L_{62}	79.62	63.86	2.23	-0.72	-0.26	0.46													-162.45	-23.78	1.84	-0.44	0.00	0.00	0.00	0.00
	L_{62}-L_{63}	42.77	-120.03	0.28	-1.38	3.81	-5.51													3.62	-17.79	49.32	64.62	0.00	0.00	0.00	0.00
	L_{63}-L_{64}	192.98	-177.52	0.50	-2.54	1.80	2.18													8.50	-32.80	23.28	-28.24	0.00	0.00	0.00	0.00
	L_{64}-L_{65}	55.38	-320.81	-3.40	-7.82	-0.15	0.75													-16.17	-78.12	-7.11	13.34	0.00	0.00	0.00	0.00
	L_{65}-L_{66}	55.38	-320.81	-3.40	-7.82	-0.15	0.75													-43.98	-101.11	-1.91	9.11	0.00	0.00	0.00	0.00
	L_{66}-L_{67}	-64.00	-370.85	-6.52	-19.12	0.61	2.15													-89.47	-247.42	0.10	27.77	0.00	0.00	0.00	0.00
	L_{67}-L_{68}	-370.60	82.40	-11.58	-5.65	1.40	2.40													-149.17	-119.64	-18.76	37.81	0.00	0.00	0.00	0.00
	L_{68}-L_{69}	-200.72	149.84	-9.58	-2.67	1.78	2.62													-111.06	-34.55	23.02	36.45	0.00	0.00	0.00	0.00
	L_{69}-L_{70}	-131.75	166.74	-1.16	-0.89	-3.13	5.41													-14.96	11.55	-40.50	70.05	0.00	0.00	0.00	0.00
	L_{70}-L_{71}	-31.28	166.74	-1.16	-0.89	-3.13	5.41													-14.96	11.55	-40.50	70.05	0.00	0.00	0.00	0.00
	L_{71}-L_{72}	361.79	-17.90	-0.04	0.01	9.81	0.16													-0.52	0.07	131.01	2.12	0.00	0.00	0.00	0.00
	L_{72}-L_{73}	61.95	21.70	-0.96	-1.98	3.90														12.79	-12.49	-25.06	52.09	0.00	0.00	0.00	0.00
	L_{73}-L_{74}	-31.28	166.74	-1.16	-0.89	-3.13	5.41													-14.96	11.55	-40.50	70.05	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	189.89	5.64	-3.11	-6.14	4.13	4.32													-41.55	-62.07	55.15	58.37	0.00	0.00	0.00	0.00
	L_{75}-L_{76}	189.89	5.64	-3.11	-6.14	4.13	4.32													-41.55	-62.07	55.15	58.37	0.00	0.00	0.00	0.00
	L_{76}-L_{77}	-38.98	-56.51	-6.68	-13.68	3.14	1.51													-115.91	-182.71	41.91	20.12	0.00	0.00	0.00	0.00
	L_{77}-L_{78}	-37.28	-56.51	-6.68	-13.68	3.14	1.51													-115.91	-182.71	41.91	20.12	0.00	0.00	0.00	0.00
	L_{78}-L_{79}	-66.65	-75.79	-1.26	-1.52	4.46	3.55													-16.83	-20.31	-59.64	-69.01	0.00	0.00	0.00	0.00

ZZ Axis Moments from STAAD

Location	Member	Dead Load		Live Load (Max)		Live Load (Min)		Pedestrian Load (Max)		Pedestrian Load (Min)		Lane Reduction & Impact Live Load		Lane Reduction & Impact Live Load		Impact Pedestrian Load		Impact Pedestrian Load		Max. Pos. Mom.			Min. Neg. Mom.			Pass
		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	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	End	S_{top} (in^3)	Start	End	S_{bot} (in^3)	
Structure 2	L_0-L_1	-49.54	-101.19	0.47	-0.79	-0.76	0.90													-55.58	-145.30	-76.89	-115.86	83.6	83.58	74.65	100.97
	L_1-L_2	-130.93	-112.57	-3.55	-8.46	-0.38	2.43													108.50	-293.34	163.69	-104.07	83.6	83.58	67.49	100.97
	L_2-L_3	-139.77	-99.72	-0.62	-1.92	0.27	1.25													-262.06	-312.28	-53.64	-54.07	99.5	99.53	91.00	129.43
	L_3-L_4	18.53	15.80	-13.53	-7.03	1.39	5.16													-180.76	-93.86	18.50	68.88	0.00	0.00	0.00	0.00
	L_4-L_5	-68.87	310.29	-10.68	-3.92	-1.42	0.77													-275.09	94.37	-73.14	53.53	53.94	0.00	0.00	0.00
	L_5-L_6	7.25	228.45	-5.42	-4.20	3.11	6.09													-74.71	224.11	63.35	402.74	104.6	104.58	95.61	136.37
	L_6-L_7	62.67	177.71	-1.86	0.82	4.13	7.21													-113.69	237.53	-9.82	402.74	104.6	104.58	95.61	136.37
	L_7-L_8	7.98	461.19	-0.01	0.01	0.69	7.05													10.19	699.76	22.43	721.94	145.8	145.75	130.44	228.84
	L_8-L_9	439.37	-23.36	0.10	0.01	8.25	0.21													572.88	-30.23	709.91	26.85	145.8	145.75	130.74	228.84
	L_9-L_{10}	204.91	-118.77	0.63	-0.44	-2.15	3.03													276.96	-159.11	230.15	-103.88	144.9	144.85	129.09	192.04
	L_{10}-L_{11}	168.36	-118.36	-0.70	-4.96	4.76	2.24													207.16	-237.22	298.95	-116.21	92.6	92.58	83.65	114.47
	L_{11}-L_{12}	234.93	-217.11	0.35	-2.06	2.93	0.67													287.66	-410.04	344.79	-352.88	92.6	92.58	76.68	114.47
	L_{12}-L_{13}	-19.53	-128.46	-5.51	-5.44	2.94	1.44													-118.14	-258.53	24.06	-142.71	130.1	130.08	121.10	170.72
	L_{13}-L_{14}	179.75	-425.17	-5.53	-11.43	2.28	1.95													-71.39	-147.87	29.50	-25.57	0.00	0.00	0.00	0.00
	L_{14}-L_{15}	408.18	-262.07	-2.67	-7.20	0.11	2.67													-742.55	214.13	-742.55	214.13	0.00	0.00	0.00	0.00
	L_{15}-L_{16}	-209.34	318.54	-10.05	-14.34	0.81	0.65													-441.11	-656.30	-298.92	-403.20	179.7	179.69	170.68	251.43
	L_{16}-L_{17}	-374.18	83.83	-12.69	-3.42	0.80	4.25													-764.20	-441.21	-702.67	-51.50	143.9	143.86	133.07	200.51
	L_{17}-L_{18}	-170.99	204.48	-6.20	-1.92	0.30	-0.04													-80.19	-24.84	3.91	-0.54	0.00	0.00	0.00	0.00
	L_{18}-L_{19}	-207.50	250.73	-2.81	-0.39	3.46	1.36													-36.24	14.84	44.79	0.00	0.00	0.00	0.00	0.00
	L_{19}-L_{20}	-99.23	0.16	1.87	-0.96	4.37	3.39													-24.21	11.67	-56.53	-43.71	0.00	0.00	0.00	0.00
	L_{20}-L_{21}	5.36	-218.26	0.59	-1.75	3.24	4.87													7.53	-22.37	41.40	-87.76	0.00	0.00	0.00	0.00
	L_{21}-L_{22}	18.16	-247.31	0.54	-0.45	1.18	1.18													12.02	-226.88	9.40	-43.00	0.00	0.00	0.00	0.00
	L_{22}-L_{23}	1.07	-191.80	-1.11	-10.59	-0.52	1.15													-17.12	-425.18	-7.30	-230.79	157.0	157.00	151.98	208.63
	L_{23}-L_{24}	19.74	-979.62	-2.27	-0.19	0.20	0.20													-41.42	-1,196.96	-6.26	-31.71	0.00	0.00	0.00	0.00
	L_{24}-L_{25}	-286.08	-268.86	-13.79	-12.60	-0.21	2.13													-176.24	-160.97	-373.45	-353.13	174.3	174.28	163.71	320.70
	L_{25}-L_{26}	-299.04	-422.03	-15.87	-19.87	0.20	-0.36													-222.70	-319.69	-376.89	-454.52	178.9	178.89	141.80	299.51
	L_{26}-L_{27}	-467.27	-273.20	-17.50	-19.87	3.11	4.60													-223.05	-253.82	39.67	58.73	0.00	0.00	0.00	0.00
	L_{27}-L_{28}	-310.47	-45.78	-14.95	-14.56	3.75	6.54													-190.99	-185.97	47.90	88.60	0.00	0.00	0.00	0.00
	L_{28}-L_{29}	-272.10	223.27	-12.31	-13.31	-1.78	5.71													-133.31	-78.76	57.75	52.39	0.00	0.00	0.00	0.00
	L_{29}-L_{30}	-261.82	188.40	-10.44	-6.53	3.25	6.83													-133.35	-83.47	-224.74	87.22	0.00	0.00	0.00	0.00
	L_{30}-L_{31}	-171.20	233.97	-11.39	-7.41	1.16	2.94													-146.06	-417.76	385.78	-236.52	0.00	0.00	0.00	0.00
	L_{31}-L_{32}	-131.41	389.19	-8.89	-1.39	3.83	6.84													-11.42	-17.86	48.91	87.35	0.00	0.00	0.00	0.00
	L_{32}-L_{33}	-164.24	-140.43	-1.49	-0.01	6.00	2.31													-18.97	-0.11	76.61	-29.45	0.00	0.00	0.00	0.00
	L_{33}-L_{34}	-267.38	999.22	-27.23	-0.19	0.19	0.19													-358.17	-182.70	-113.92	-220.64	226.0	226.00	226.00	226.00
	L_{34}-L_{35}	911.85	-326.76	-0.68	-0.50	8.66	0.66													-8.53	-6.35	109.32	1327.53	414.04	249.4	249.40	238.81
	L_{35}-L_{36}	-289.04	42.03	1.13	-0.01	0.00	0.00													-393.31	-51.49	329.55	1327.53	414.04	249.4	249.40	238.81
	L_{36}-L_{37}	515.61	35.20	-1.74	0.10	7.56	2.30													-21.90	1.25	99.46	28.99	0.00	0.00	0.00	0.00
	L_{37}-L_{38}	116.61	-38.38	-2.16	-1.16	3.38	4.16													-47.83	-16.68	81.38	41.76	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	252.11	-25.04	-3.80	-7.79	6.50	2.84													-47.93	-58.29	82.03	-33.80	0.00	0.00	0.00	0.00
	L_{39}-L_{40}	230.58	-46.22	-5.63	-11.53	3.81	4.32													-71.04	-143.54	-66.13	54.53	0.00	0.00	0.00	0.00
	L_{40}-L_{41}	177.20	-23.37	-4.31	-9.01	3.16	3.56													-61.45	-121.04	-56.15	59.38	0.00	0.00	0.00	0.00
	L_{41}-L_{42}	43.89	-183.34	-10.14	-21.43	3.11	2.75													-128.07	-279.57	39.21	0.00	0.00	0.00	0.00	0.00
	L_{42}-L_{43}	39.78	-211.89	-10.26	-24.16	3.39	2.75													-127.22	-311.49	39.21	0.00	0.00	0.00	0.00	0.00
	L_{43}-L_{44}	-104.37	-9.61	-8.42	-11.61	1.90	5.20													-106.35	-146.52	23.92	65.65	0.00	0.00	0.00	0.00
	L_{44}-L_{45}	26.78	313.89	-0.11	-0.53	0.13	0.13													-68.02	-42.43	31.37	42.62	0.00	0.00	0.00	0.00
	L_{45}-L_{46}	-65.51	172.40	-7.76	-8.95	2.49	5.76													-68.02	-62.43	31.37	70.27	0.00	0.00	0.00	0.00
	L_{46}-L_{47}	-30.91	151.01	-3.92	-3.08	2.06	5.86													-45.50	4.76	-25.96	73.98	0.00	0.00	0.00	0.00
	L_{47}-L_{48}	1.38	313.89	0.11	-0.53	0.13	0.13													1.38	313.89	0.11	-0.53	0.13	0.13	0.13	0.13
	L_{48}-L_{49}	-19.86	197.53	-1.12	-1.01	0.77	3.20

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: SC1
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
Governing Load Description 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-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)
North/East Vertical Structure 1	U_0~L_1	-55.75	82.39	0.69	-9.90	-3.38	4.17	9.22	-12.01	-45.18	55.66	0.00	0.00
	L_1~L_2	-14.37	23.26	0.91	-9.92	-2.77	3.01	12.17	-12.25	-37.01	40.24	0.00	0.00
	L_2~L_3	16.19	-5.17	1.09	-12.24	-1.68	2.37	14.59	-16.56	-22.48	31.61	0.00	0.00
	U_1~L_1	36.81	-39.20	0.96	-1.18	-0.76	1.24	12.84	-15.79	-10.21	16.55	0.00	0.00
	U_1~U_2	49.94	-49.31	0.89	-0.82	-0.97	1.01	9.27	-11.89	-11.88	12.44	0.00	0.00
	U_2~L_2	57.83	-70.07	-0.01	0.01	2.02	-2.66	-0.08	0.11	26.55	35.48	0.00	0.00
	U_2~L_3	67.82	-84.07	-0.01	0.01	1.79	-2.37	-0.07	0.10	31.57	-45.89	0.00	0.00
	L_3~L_4	102.14	-112.44	-0.13	0.10	5.00	-5.17	-1.70	1.31	-65.88	-69.00	0.00	0.00
	L_4~L_5	-10.55	7.04	0.00	-0.01	0.71	-0.81	-0.03	0.06	-10.33	-4.99	0.00	0.00
	L_5~L_6	-144.53	166.05	0.32	-0.32	-3.79	4.42	4.48	-4.10	-48.98	57.21	0.00	0.00
	U_3~L_4	-101.27	95.46	0.16	-0.35	-3.25	3.85	2.07	-4.52	-41.99	49.77	0.00	0.00
	U_3~U_4	52.79	-74.30	0.03	-0.04	1.62	-2.36	0.41	-0.48	21.62	-31.48	0.00	0.00
	U_4~L_5	-96.41	93.86	0.17	-0.16	-2.80	2.93	2.17	-2.01	-32.36	37.96	0.00	0.00
	U_4~U_5	-60.90	75.93	0.67	-0.65	-2.72	3.05	8.63	-8.42	-35.13	39.48	0.00	0.00
	U_5~L_6	-49.94	49.31	0.89	-0.82	-0.97	1.01	9.27	-11.89	-11.88	12.44	0.00	0.00
	U_5~U_6	8.32	-15.89	-1.30	1.26	3.16	-3.33	-16.82	16.30	40.83	43.12	0.00	0.00
	L_6~L_7	47.73	-50.39	-0.71	0.69	3.42	-3.48	9.21	-8.31	-44.79	46.32	0.00	0.00
	U_6~L_7	61.54	-72.81	-0.53	0.54	3.80	-3.95	-6.86	6.95	-49.19	53.13	0.00	0.00
	U_6~U_7	133.07	-138.05	-0.74	0.74	5.47	-5.60	-16.62	16.52	-63.22	66.08	0.00	0.00
	L_7~L_8	158.01	-164.56	-0.76	0.68	7.49	-7.37	-9.81	8.84	96.95	95.39	0.00	0.00
	U_7~L_8	131.43	-213.81	-0.32	0.55	5.08	-7.02	-4.08	7.06	65.77	-90.83	0.00	0.00
	L_8~L_9	-144.68	167.26	0.68	-0.86	-5.76	6.76	-16.86	20.15	69.38	-74.23	0.00	0.00
	U_8~L_9	-122.98	131.23	0.82	-0.84	-5.04	5.52	10.41	-10.74	-64.39	70.46	0.00	0.00
	L_9~L_{10}	117.12	129.44	0.35	-0.41	-4.76	5.26	14.59	-16.56	-22.48	31.61	0.00	0.00
	U_9~L_{10}	-62.37	-68.86	0.65	-0.66	-2.52	2.90	8.24	-8.42	-32.18	36.99	0.00	0.00
	L_{10}~L_{11}	-37.80	-43.18	0.83	-0.81	-2.00	2.31	10.74	-10.96	-28.51	32.80	0.00	0.00
	U_{10}~L_{11}	-9.12	-15.71	1.20	-1.15	-0.55	0.66	15.36	-14.65	-32.06	36.02	0.00	0.00
	L_{11}~L_{12}	14.83	-14.93	1.45	-1.53	-1.46	1.72	18.56	-19.54	-18.60	22.06	0.00	0.00
	U_{11}~L_{12}	39.68	-45.44	1.15	-1.04	-1.95	2.31	14.49	-17.42	-9.33	-11.10	0.00	0.00
	L_{12}~L_{13}	88.70	-97.90	-0.90	0.69	4.20	-4.41	-11.49	8.78	53.64	-56.38	0.00	0.00
	U_{12}~L_{13}	133.02	-133.05	0.45	-0.45	5.13	-5.60	-7.49	7.49	83.01	-84.77	0.00	0.00
	L_{13}~L_{14}	140.07	-146.97	-0.04	0.00	5.95	-6.29	-0.51	0.00	75.96	-79.81	0.00	0.00
	U_{13}~L_{14}	148.94	-153.41	0.14	0.26	5.84	-6.47	-1.82	3.37	74.67	-77.72	0.00	0.00
	L_{14}~L_{15}	135.37	-182.48	-0.64	0.57	7.23	-6.87	-8.13	7.26	92.34	-87.79	0.00	0.00
	U_{14}~L_{15}	72.78	-73.71	0.44	0.44	2.98	-3.19	5.19	-5.44	37.31	-39.24	0.00	0.00
	L_{15}~L_{16}	-128.23	-129.95	0.75	-0.67	-5.08	4.95	9.43	-8.41	-64.12	62.43	0.00	0.00
	U_{15}~L_{16}	-79.12	-80.62	0.88	-0.82	-3.16	3.07	8.24	-8.42	-32.18	36.99	0.00	0.00
	L_{16}~L_{17}	-125.93	-122.62	0.76	-0.71	-5.76	5.62	9.58	-9.01	-72.77	76.00	0.00	0.00
	U_{16}~L_{17}	-109.68	-106.90	1.00	-0.98	-5.06	5.85	12.61	-12.40	-63.90	70.91	0.00	0.00
	L_{17}~L_{18}	-53.02	-53.05	0.45	-0.45	-2.13	2.50	5.13	-5.60	-29.96	34.77	0.00	0.00
	U_{17}~L_{18}	-43.26	-43.75	0.72	-0.63	-2.63	3.06	9.06	-7.94	-35.74	38.66	0.00	0.00
	L_{18}~L_{19}	-29.76	-34.29	0.91	-0.89	-1.46	1.71	12.47	-12.49	-26.43	31.27	0.00	0.00
	U_{18}~L_{19}	-5.29	1.62	-1.18	1.39	0.07	-0.14	-14.69	17.51	0.93	-1.75	0.00	0.00
	L_{19}~L_{20}	28.80	-30.78	-1.46	1.46	2.63	-2.82	-16.82	16.30	40.83	43.12	0.00	0.00
	U_{19}~L_{20}	46.56	-51.19	-0.99	0.99	3.64	-3.77	-12.47	12.49	45.94	47.57	0.00	0.00
	L_{20}~L_{21}	62.64	-61.32	-1.01	0.97	4.82	-4.76	-12.70	12.26	60.83	-60.05	0.00	0.00
	U_{20}~L_{21}	92.68	-97.74	-0.74	0.74	5.47	-5.60	-16.62	16.52	-63.22	66.08	0.00	0.00
	L_{21}~L_{22}	108.55	-105.78	-1.07	1.04	7.88	-8.00	-13.53	13.13	99.47	-100.94	0.00	0.00
	U_{21}~L_{22}	76.77	-76.75	-0.74	0.74	5.47	-5.60	-16.62	16.52	-63.22	66.08	0.00	0.00
	L_{22}~L_{23}	114.59	-114.85	-0.53	0.44	7.56	-7.18	-6.63	5.53	95.40	-90.64	0.00	0.00
	U_{22}~L_{23}	112.83	-111.66	-0.58	0.57	7.44	-7.18	-6.63	5.53	95.40	-90.64	0.00	0.00
	L_{23}~L_{24}	-122.25	-119.98	0.80	-0.75	4.54	-4.53	10.27	-9.63	-58.06	57.81	0.00	0.00
	U_{23}~L_{24}	-93.65	87.71	0.64	-0.67	-4.47	4.69	8.13	-11.17	-57.11	59.95	0.00	0.00
	L_{24}~L_{25}	102.68	-97.74	0.74	0.74	5.47	-5.60	-16.62	16.52	-63.22	66.08	0.00	0.00
	U_{24}~L_{25}	-96.77	103.24	0.07	-0.29	-5.04	5.32	0.93	-3.68	-64.44	67.91	0.00	0.00
	L_{25}~L_{26}	-53.02	53.05	0.45	-0.45	-2.13	2.50	5.13	-5.60	-29.96	34.77	0.00	0.00
	U_{25}~L_{26}	-93.65	87.71	0.64	-0.67	-4.47	4.69	8.13	-11.17	-57.11	59.95	0.00	0.00
	L_{26}~L_{27}	43.45	70.98	0.51	0.45	3.13	3.60	6.55	-5.65	-39.96	46.00	0.00	0.00
	U_{26}~L_{27}	-32.67	38.68	-0.18	0.21	-0.67	0.73	-2.31	2.63	-8.59	9.26	0.00	0.00
	L_{27}~L_{28}	29.76	34.29	0.91	0.89	1.46	-1.71	12.47	12.49	45.94	47.57	0.00	0.00
	U_{27}~L_{28}	4.43	-8.37	1.30	1.23	2.87	-3.10	-16.56	15.65	36.71	-39.66	0.00	0.00
	L_{28}~L_{29}	-15.72	15.72	1.09	1.09	1.11	-1.11	18.50	-23.29	0.00	-47.67	0.00	0.00
	U_{28}~L_{29}	47.21	-50.58	-0.79	0.80	3.69	-3.87	-10.11	10.21	-47.14	51.00	0.00	0.00
	L_{29}~L_{30}	62.64	-61.32	-1.01	0.97	4.82	-4.76	-12.70	12.26	60.83	-60.05	0.00	0.00
	U_{29}~L_{30}	104.42	-111.67	-1.13	1.06	7.79	-7.64	-14.45	13.58	99.53	-97.57	0.00	0.00
	L_{30}~L_{31}	108.14	-102.78	-0.57	0.94	4.73	-7.40	-7.32	11.95	60.43	-94.53	0.00	0.00
	U_{30}~L_{31}	-123.31	123.31	0.65	-0.65	-4.55	4.55	8.01	-8.01	-58.06	57.81	0.00	0.00
	L_{31}~L_{32}	-109.30	117.29	0.49	-0.47	-5.18	5.42	6.31	-6.02	-67.01	70.13	0.00	0.00
	U_{31}~L_{32}	-93.65	87.71	0.64	-0.67	-4.47	4.69	8.13	-11.17	-57.11	59.95	0.00	0.00
	L_{32}~L_{33}	-48.62	58.77	0.41	-0.41	-2.60	2.93	5.24	-5.33	-33.67	37.96	0.00	0.00
	U_{32}~L_{33}	-39.13	42.86	-0.53	0.54	-2.80	3.00	6.55	-5.65	-39.96	46.00	0.00	0.00
	L_{33}~L_{34}	-5.41	11.54	1.00	1.02	-2.81	3.03	12.94	-13.24	-36.36	39.24	0.00	0.00
	U_{33}~L_{34}	27.84	-30.65	1.24	-1.38	0.70	-0.74	15.99	-17.82	9.01	-16.56	0.00	0.00
	L_{34}~L_{35}	39.13	-42.86	0.53	-0.54	2.80	-3.00	6.55	-5.65	39.96	-46.00	0.00	0.00
	U_{34}~L_{35}	85.72	-83.00	-0.43	0.30	4.05	-4.19	-5.54	3.87	52.35	54.19	0.00	0.00
	L_{35}~L_{36}	48.62	-58.77	-0.41	0.41	2.60	-2.93	5.24	-5.33	33.67	-37.96	0.00	0.00
	U_{35}~L_{36}	94.97	-87.87	0.07	0.18	4.70	-5.29	-0.93	2.35	60.77	-68.30	0.00	0.00
	L_{36}~L_{37}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{36}~L_{37}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{37}~L_{38}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{37}~L_{38}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{38}~L_{39}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{39}~L_{40}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{39}~L_{40}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{40}~L_{41}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{41}~L_{42}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{41}~L_{42}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{42}~L_{43}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{43}~L_{44}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{43}~L_{44}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{44}~L_{45}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{45}~L_{46}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{45}~L_{46}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{46}~L_{47}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{47}~L_{48}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{47}~L_{48}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{48}~L_{49}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{49}~L_{50}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{49}~L_{50}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{50}~L_{51}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{51}~L_{52}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{51}~L_{52}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{52}~L_{53}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{53}~L_{54}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{53}~L_{54}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{54}~L_{55}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{55}~L_{56}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{55}~L_{56}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{56}~L_{57}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{57}~L_{58}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{57}~L_{58}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{58}~L_{59}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{59}~L_{60}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{59}~L_{60}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{60}~L_{61}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{61}~L_{62}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{61}~L_{62}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{62}~L_{63}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{63}~L_{64}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{63}~L_{64}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{64}~L_{65}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{65}~L_{66}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{65}~L_{66}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{66}~L_{67}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{67}~L_{68}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{67}~L_{68}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{68}~L_{69}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{69}~L_{70}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{69}~L_{70}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{70}~L_{71}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{71}~L_{72}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{71}~L_{72}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{72}~L_{73}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{73}~L_{74}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{73}~L_{74}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{74}~L_{75}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{75}~L_{76}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{75}~L_{76}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{76}~L_{77}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{77}~L_{78}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{77}~L_{78}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{78}~L_{79}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{79}~L_{80}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{79}~L_{80}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{80}~L_{81}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{81}~L_{82}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{81}~L_{82}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{82}~L_{83}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{83}~L_{84}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{83}~L_{84}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{84}~L_{85}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{85}~L_{86}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{85}~L_{86}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{86}~L_{87}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{87}~L_{88}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{87}~L_{88}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{88}~L_{89}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{89}~L_{90}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{89}~L_{90}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{90}~L_{91}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{91}~L_{92}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{91}~L_{92}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{92}~L_{93}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{93}~L_{94}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68.30	0.00	0.00
	U_{93}~L_{94}	139.42	-154.57	-0.17	0.16	6.16	-6.67	-2.25	2.02	79.64	-86.29	0.00	0.00
	U_{94}~L_{95}	99.06	-131.45	0.03	0.03	4.76	-5.97	0.40	0.39	61.60	-77.28	0.00	0.00
	L_{95}~L_{96}	94.97	-87.87	-0.07	0.18	4.70	-5.28	-0.93	2.35	60.77	-68

Axial - 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: 5C1
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	-9.90	0.61	0.28	-0.23				
	U_1-L_2	-3.36	-8.44	-1.20	0.01	0.37	-0.14				
	U_1-L_3	8.71	-9.11	-0.15	0.00	-0.50	-0.16				
	U_1-L_4	7.94	-13.41	-0.58	-0.52	0.07	-0.73				
	U_1-L_5	-14.57	-18.47	-1.14	0.17	-0.77	-0.20				
	U_2-L_1	-37.80	-77.38	-2.42	2.09	0.00	-0.01				
	U_2-L_2	-73.38	-78.46	-4.26	2.07	0.29	-0.39				
	U_2-L_3	-9.33	-102.64	-1.96	3.92	0.34	0.10				
	U_2-L_4	-5.01	-118.90	-1.27	2.76	0.42	-0.19				
	U_2-L_5	-78.62	-149.21	-4.32	3.94	0.23	-0.39				
	U_3-L_1	-64.28	-73.68	-2.49	1.35	0.25	0.08				
	U_3-L_2	-37.91	-83.75	-2.91	2.37	0.50	-0.07				
	U_3-L_3	-65.20	-88.77	-2.23	1.66	0.00	-0.49				
	U_3-L_4	-24.89	-102.11	-1.32	0.34	0.18	-0.59				
	U_3-L_5	-0.81	-120.83	-0.11	0.11	0.52	-0.84				
	U_4-L_1	-25.30	-59.96	-1.56	1.28	-0.09	-0.41				
	U_4-L_2	-37.80	-70.20	-2.22	1.72	0.35	-0.31				
	U_4-L_3	-101.96	-74.35	-4.06	3.65	0.49	-0.48				
	U_4-L_4	-115.65	-79.79	-4.65	3.71	0.40	-0.41				
	U_4-L_5	-76.53	-79.74	-3.00	3.53	0.10	-0.24				
	L_1-L_2	-109.78	-99.44	-3.94	3.85	0.53	-0.55				
	L_2-L_3	-89.86	-78.41	-3.64	3.49	0.59	-0.59				
	L_3-L_4	-90.94	-71.81	-4.33	3.18	0.76	-0.66				
	L_4-L_5	-98.28	-63.38	-3.84	2.71	0.64	-0.58				
	L_1-U_1	-20.34	9.87	-1.86	1.39	0.28	-0.57				
	L_2-U_2	-1.38	-11.20	-1.60	0.60	0.37	-0.51				
	L_3-U_3	6.85	-23.86	-1.01	0.36	0.74	-1.30				
	L_4-U_4	-44.40	35.30	-2.01	1.38	-0.17	-0.76				
	L_5-U_5	-96.54	69.68	-4.39	3.01	-0.38	-0.13				
	U_1-L_2	-85.37	67.20	-3.71	2.69	-0.53	-0.25				
	U_2-L_3	-30.17	39.00	-2.12	1.32	0.47	0.28				
	U_3-L_4	-109.81	116.32	-4.67	4.14	0.43	0.07				
	U_4-L_5	-141.94	130.59	-5.90	5.15	0.85	-0.42				
	L_1-U_2	-82.17	33.38	-2.68	2.26	0.68	-0.31				
	L_2-U_3	-11.95	79.18	-2.88	3.42	0.66	-0.53				
	L_3-U_4	-77.25	127.40	-4.08	5.03	0.62	-0.72				
	L_4-U_5	-66.17	89.96	-4.10	3.89	0.35	-0.43				
	U_1-L_1	-56.25	12.68	-3.04	0.57	0.49	-0.36				
	U_2-L_2	-56.05	72.58	-3.45	3.02	0.49	-0.56				
	U_3-L_3	-31.83	37.59	-2.64	1.98	0.48	-0.49				
	U_4-L_4	-24.07	24.81	-2.35	1.61	0.47	-0.48				
	U_5-L_5	-10.04	3.78	-1.26	0.60	0.38	-1.03				
Structure 2	L_1-U_1	-19.42	19.56	-1.68	1.46	-0.12	-0.90				
	L_2-U_2	-42.17	33.38	-2.68	2.26	0.68	-0.31				
	L_3-U_3	-46.48	58.24	-3.81	3.41	0.66	-0.73				
	L_4-U_4	-54.27	68.32	-4.29	3.78	0.54	-0.67				
	L_5-U_5	-49.31	61.94	-3.97	3.47	0.20	-0.45				
	U_1-L_2	-69.31	71.94	-5.18	4.84	0.35	-0.45				
	U_2-L_3	-77.99	79.74	-5.98	5.24	0.40	-0.50				
	U_3-L_4	-36.18	94.54	-2.95	3.84	0.87	-0.71				
	U_4-L_5	-37.72	49.04	-3.08	3.11	0.08	-0.37				
	L_1-U_2	-77.05	85.18	-4.03	3.45	0.68	-0.26				
	L_2-U_3	-78.35	71.28	-3.56	3.03	0.61	-0.02				
	L_3-U_4	-44.90	116.84	-3.73	4.77	-0.24	0.00				
	L_4-U_5	-76.62	55.14	-4.07	2.56	-0.08	-0.56				
	U_1-L_1	-26.97	3.91	-2.11	0.20	0.28	-0.91				
	U_2-L_2	-6.27	-17.63	-0.86	0.07	0.56	-1.23				
	U_3-L_3	-1.05	-9.86	-1.27	0.88	0.25	-0.91				
	U_4-L_4	-37.39	-3.91	-2.11	0.20	0.28	-0.91				
	U_5-L_5	-33.68	19.58	-2.44	1.97	0.57	-0.51				
	L_1-U_1	-78.62	74.46	-2.78	2.23	-0.39	-0.13				
	L_2-U_2	-78.90	59.78	-3.25	4.29	0.77	-0.69				
	L_3-U_3	-42.54	94.54	-2.95	3.84	0.87	-0.71				
	L_4-U_4	-58.23	59.59	-3.42	3.44	0.27	-0.25				
	L_5-U_5	-90.31	64.36	-3.66	2.89	0.32	-0.29				
	U_1-L_2	-50.06	38.53	-3.20	2.39	0.34	-0.84				
	U_2-L_3	-33.50	18.26	-2.16	1.41	0.30	-0.27				
	U_3-L_4	-19.85	3.71	-1.62	0.42	0.30	-0.27				
	U_4-L_5	-1.49	-18.98	-1.18	0.22	0.33	-0.88				
	L_1-U_2	-53.83	37.97	-2.22	1.73	-0.23	-0.46				
	L_2-U_3	-61.79	22.37	-2.79	1.33	-0.58	-0.33				
	L_3-U_4	-70.75	50.47	-3.22	2.78	-0.75	-0.29				
	L_4-U_5	-73.25	65.79	-3.46	2.88	0.19	0.06				
	U_1-L_1	-11.90	10.30	-1.36	0.84	0.16	-0.36				
	U_2-L_2	-5.27	64.89	-1.70	2.94	0.35	-0.16				
	U_3-L_3	-38.98	50.40	-2.73	2.48	0.49	-0.06				
	U_4-L_4	-39.75	39.68	-2.73	2.48	0.49	-0.06				
	U_5-L_5	-7.78	19.68	-1.21	-0.14	-0.11	-0.06				
	L_1-U_1	-53.83	37.97	-2.22	1.73	-0.23	-0.46				
	L_2-U_2	-61.79	22.37	-2.79	1.33	-0.58	-0.33				
	L_3-U_3	-70.75	50.47	-3.22	2.78	-0.75	-0.29				
	L_4-U_4	-73.25	65.79	-3.46	2.88	0.19	0.06				
	L_5-U_5	-11.90	10.30	-1.36	0.84	0.16	-0.36				
	U_1-L_2	-5.27	64.89	-1.70	2.94	0.35	-0.16				
	U_2-L_3	-38.98	50.40	-2.73	2.48	0.49	-0.06				
	U_3-L_4	-39.75	39.68	-2.73	2.48	0.49	-0.06				
	U_4-L_5	-7.78	19.68	-1.21	-0.14	-0.11	-0.06				

ZZ Axis Moments from STAAD (cont.)

| Location | Member | 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_x (in^3) | I (in^4) | I_{DL} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F/S_{bc} | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Dead Load Start (k-in) | Dead Load End (k-in) | Live Load (Max) Start (k-in) | Live Load (Max) End (k-in) | Live Load (Min) Start (k-in) | Live Load (Min) End (k-in) | Pedestrian Load (Max) Start (k-in) | Pedestrian 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_{DL} (in^4) | Shape Factor | M_p (k-in) | P_{DL} (kip) | Formula 1.8 Term * F/S_{bc} | M_u (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Pass | Axial Force (kip) | Moment (k-in) | Total | Pass | Axial Force (kip) | Moment (k-in) | Total | Pass |
|---|---|---|---|---|---|---|---|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: SCI
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-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 - U_1	-75.17	-0.72	1.28	1.41	0.67	-13.99	14.22	15.64	7.44	-155.78
	U_1 - U_2	-46.82	-29.29	3.26	2.31	-2.17	-16.81	2.89	32.41	-24.15	-187.19
	U_2 - U_3	-112.29	86.52	1.43	3.62	-3.07	-16.68	15.95	40.33	-34.19	-185.72
	U_3 - U_4	-75.71	66.12	2.29	3.39	-3.26	-17.26	25.54	37.75	-37.75	-187.69
	U_4 - L_0	-9.25	61.62	2.32	3.37	-16.41	-3.79	25.81	37.50	-182.73	-42.22
	L_0 - U_5	42.76	120.21	2.57	3.67	-13.33	0.64	28.60	40.85	-148.38	7.17
	U_5 - L_1	93.19	43.60	2.29	2.29	-3.31	-2.28	29.46	22.45	-30.75	-25.39
	L_1 - U_6	-47.38	526.15	0.47	8.48	0.00	0.00	5.18	94.40	0.00	0.00
	U_6 - L_2	475.03	124.39	8.23	2.20	0.00	0.00	88.68	-0.01	0.00	0.00
	L_2 - U_7	46.82	20.59	1.61	2.31	0.53	-9.36	17.40	24.86	5.71	-100.93
	U_7 - L_3	64.59	138.78	2.29	1.97	1.96	-15.81	24.10	15.23	21.14	-176.48
	L_3 - U_8	27.91	140.51	3.04	3.41	-1.66	-14.59	32.74	15.23	-11.46	-156.86
	U_8 - L_4	-106.12	-155.13	2.19	0.81	-2.00	-19.61	23.59	8.74	-21.57	-211.39
	L_4 - U_9	-138.04	-262.92	1.16	0.19	-1.76	-25.62	16.19	1.76	-29.72	-279.22
	U_9 - L_5	-245.82	-183.07	1.53	1.13	-26.63	-10.16	16.46	12.15	-276.36	-109.55
	L_5 - U_{10}	-323.11	-327.01	1.84	3.38	-24.26	-26.17	19.00	34.71	-258.38	-284.26
	U_{10} - L_6	-269.97	-145.19	0.74	0.11	-24.23	-7.11	8.02	1.13	-262.29	-76.01
	L_6 - U_{11}	-134.36	-67.49	0.75	-0.33	-17.78	0.90	8.12	0.20	-185.35	-47.96
	U_{11} - L_7	-170.82	-20.32	0.59	-0.05	-10.84	-2.22	6.33	-0.58	-116.82	-2.35
	L_7 - U_{12}	-186.22	23.42	0.65	-0.52	-9.45	3.77	6.95	-5.57	-101.84	40.63
	U_{12} - L_8	-114.62	208.71	0.25	1.76	-5.05	11.75	2.62	-0.46	-66.25	197.96
	L_8 - U_{13}	-71.24	180.99	-0.28	2.15	-5.68	-19.83	-3.00	22.86	-9.41	-211.14
	U_{13} - L_9	-28.69	317.14	-0.62	1.68	-3.62	-14.42	-4.98	38.53	-27.53	-163.67
	L_9 - U_{14}	-327.34	-325.40	1.42	3.06	-11.68	-21.54	15.16	32.61	-135.49	-229.36
	U_{14} - L_{10}	-338.58	-273.61	1.79	3.66	-8.79	-20.71	19.50	31.75	-83.74	-221.38
	L_{10} - U_{15}	-396.14	-197.74	3.02	5.85	-7.81	-24.97	32.11	62.25	-83.16	-265.84
	U_{15} - L_{11}	-344.18	-179.44	4.51	3.93	-5.72	-37.74	48.06	41.87	-60.90	-401.94
	L_{11} - U_{16}	-226.16	-295.72	3.30	4.46	-3.05	-25.92	35.04	48.03	-24.75	-322.69
	U_{16} - L_{12}	-350.21	-90.73	3.85	5.00	-26.09	-6.13	40.59	53.27	-277.78	-65.21
	L_{12} - U_{17}	-87.79	29.74	4.50	5.14	-22.05	-4.29	47.23	55.37	-232.20	-44.77
	U_{17} - L_{13}	-167.09	39.84	4.87	4.85	-18.91	-4.63	51.87	51.60	-201.30	-49.32
	L_{13} - U_{18}	-109.78	170.74	4.39	5.88	-20.39	0.10	46.10	61.74	-217.08	1.02
	U_{18} - L_{14}	-46.10	47.34	4.77	5.36	-12.03	-5.19	49.70	56.24	-124.89	-54.79
	L_{14} - U_{19}	-261.01	1266.00	0.45	15.25	-0.78	-1.55	4.81	162.41	-8.29	16.62
	U_{19} - L_{15}	-1192.78	-1192.78	3.39	3.39	-13.27	-13.27	139.42	139.42	-139.42	-139.42
	L_{15} - U_{20}	-25.29	11.66	1.15	2.67	-0.66	-0.09	12.14	28.09	-6.90	-0.97
	U_{20} - L_{16}	-34.05	24.55	2.41	3.00	-0.85	-0.11	28.85	34.70	-9.92	-1.44
	L_{16} - U_{21}	-150.60	33.06	3.68	3.06	-1.64	-15.76	38.66	32.19	-10.92	-165.77
	U_{21} - L_{17}	-147.31	4.37	4.25	3.01	-0.18	-19.62	44.69	31.67	-1.87	-206.38
	L_{17} - U_{22}	-26.27	19.85	4.61	2.28	-0.09	-2.28	47.23	24.07	-0.96	-206.83
	U_{22} - L_{18}	-31.69	-33.99	3.50	0.68	-0.55	-22.59	36.83	7.15	-5.75	-237.62
	L_{18} - U_{23}	-98.03	27.13	2.79	1.52	-0.79	-10.47	22.89	13.73	-8.30	-264.92
	U_{23} - L_{19}	-60.96	-66.58	1.42	1.95	-26.32	-10.02	14.98	20.54	-276.98	-105.40
	L_{19} - U_{24}	-21.15	-51.05	1.00	1.44	-23.49	-9.14	10.56	15.21	-247.84	-97.27
	U_{24} - L_{20}	-33.01	-28.69	3.17	4.10	-21.39	-2.32	33.36	43.16	-225.09	-66.48
	L_{20} - U_{25}	-15.13	113.78	3.03	4.35	-21.82	-1.24	31.86	45.72	-229.55	-13.08
	U_{25} - L_{21}	-3.07	113.78	3.03	4.35	-21.82	-1.24	31.87	45.72	-229.55	-13.08
	L_{21} - U_{26}	-2.74	209.84	2.50	3.27	-21.25	1.57	26.30	34.38	-223.59	16.48
	U_{26} - L_{22}	64.59	138.78	2.29	1.97	1.96	-15.81	24.10	15.23	21.14	-176.48
	L_{22} - U_{27}	27.91	140.51	3.04	3.41	-1.66	-14.59	32.74	15.23	-11.46	-156.86
	U_{27} - L_{23}	-106.12	-155.13	2.19	0.81	-2.00	-19.61	23.59	8.74	-21.57	-211.39
	L_{23} - U_{28}	-138.04	-262.92	1.16	0.19	-1.76	-25.62	16.19	1.76	-29.72	-279.22
	U_{28} - L_{24}	-245.82	-183.07	1.53	1.13	-26.63	-10.16	16.46	12.15	-276.36	-109.55
	L_{24} - U_{29}	-323.11	-327.01	1.84	3.38	-24.26	-26.17	19.00	34.71	-258.38	-284.26
	U_{29} - L_{25}	-269.97	-145.19	0.74	0.11	-24.23	-7.11	8.02	1.13	-262.29	-76.01
	L_{25} - U_{30}	-134.36	-67.49	0.75	-0.33	-17.78	0.90	8.12	0.20	-185.35	-47.96
	U_{30} - L_{26}	-170.82	-20.32	0.59	-0.05	-10.84	-2.22	6.33	-0.58	-116.82	-2.35
	L_{26} - U_{31}	-186.22	23.42	0.65	-0.52	-9.45	3.77	6.95	-5.57	-101.84	40.63
	U_{31} - L_{27}	-114.62	208.71	0.25	1.76	-5.05	11.75	2.62	-0.46	-66.25	197.96
	L_{27} - U_{32}	-71.24	180.99	-0.28	2.15	-5.68	-19.83	-3.00	22.86	-9.41	-211.14
	U_{32} - L_{28}	-28.69	317.14	-0.62	1.68	-3.62	-14.42	-4.98	38.53	-27.53	-163.67
	L_{28} - U_{33}	-327.34	-325.40	1.42	3.06	-11.68	-21.54	15.16	32.61	-135.49	-229.36
	U_{33} - L_{29}	-338.58	-273.61	1.79	3.66	-8.79	-20.71	19.50	31.75	-83.74	-221.38
	L_{29} - U_{34}	-396.14	-197.74	3.02	5.85	-7.81	-24.97	32.11	62.25	-83.16	-265.84
	U_{34} - L_{30}	-344.18	-179.44	4.51	3.93	-5.72	-37.74	48.06	41.87	-60.90	-401.94
	L_{30} - U_{35}	-226.16	-295.72	3.30	4.46	-3.05	-25.92	35.04	48.03	-24.75	-322.69
	U_{35} - L_{31}	-350.21	-90.73	3.85	5.00	-26.09	-6.13	40.59	53.27	-277.78	-65.21
	L_{31} - U_{36}	-87.79	29.74	4.50	5.14	-22.05	-4.29	47.23	55.37	-232.20	-44.77
	U_{36} - L_{32}	-167.09	39.84	4.87	4.85	-18.91	-4.63	51.87	51.60	-201.30	-49.32
	L_{32} - U_{37}	-109.78	170.74	4.39	5.88	-20.39	0.10	46.10	61.74	-217.08	1.02
	U_{37} - L_{33}	-46.10	47.34	4.77	5.36	-12.03	-5.19	49.70	56.24	-124.89	-54.79
	L_{33} - U_{38}	-261.01	1266.00	0.45	15.25	-0.78	-1.55	4.81	162.41	-8.29	16.62
	U_{38} - L_{34}	-1192.78	-1192.78	3.39	3.39	-13.27	-13.27	139.42	139.42	-139.42	-139.42
	L_{34} - U_{39}	-25.29	11.66	1.15	2.67	-0.66	-0.09	12.14	28.09	-6.90	-0.97
	U_{39} - L_{35}	-34.05	24.55	2.41	3.00	-0.85	-0.11	28.85	34.70	-9.92	-1.44
	L_{35} - U_{40}	-150.60	33.06	3.68	3.06	-1.64	-15.76	38.66	32.19	-10.92	-165.77
	U_{40} - L_{36}	-147.31	4.37	4.25	3.01	-0.18	-19.62	44.69	31.67	-1.87	-206.38
	L_{36} - U_{41}	-26.27	19.85	4.61	2.28	-0.09	-2.28	47.23	24.07	-0.96	-206.83
	U_{41} - L_{37}	-31.69	-33.99	3.50	0.68	-0.55	-22.59	36.83	7.15	-5.75	-237.62
	L_{37} - U_{42}	-98.03	27.13	2.79	1.52	-0.79	-10.47	22.89	13.73	-8.30	-264.92
	U_{42} - L_{38}	-60.96	-66.58	1.42	1.95	-26.32	-10.02	14.98	20.54	-276.98	-105.40
	L_{38} - U_{43}	-21.15	-51.05	1.00	1.44	-23.49	-9.14	10.56	15.21	-247.84	-97.27
	U_{43} - L_{39}	-33.01	-28.69	3.17	4.10	-21.39	-2.32	33.36	43.16	-225.09	-66.48
	L_{39} - U_{44}	-15.13	113.78	3.03	4.35	-21.82	-1.24	31.86	45.72	-229.55	-13.08
	U_{44} - L_{40}	-3.07	113.78	3.03	4.35	-21.82	-1.24	31.87	45.72	-229.55	-13.08
	L_{40} - U_{45}	-2.74	209.84	2.50	3.27	-21.25	1.57	26.30	34.38	-223.59	16.48
	U_{45} - L_{41}	-122.51	1157.56	0.35	15.75	0.14	-1.96	3.63	165.69	1.43	-20.01
	L_{41} - U_{46}	-1154.91	-197.36	12.24	1.53	-1.21	-0.90	130.27	16.27	-12.85	-9.54
	U_{46} - L_{42}	-67.84	62.29	1.74	1.19	-0.25	-0.03	14.79	6.35	-2.65	-0.35
	L_{42} - U_{47}	-178.89	-59.81	3.90	4.22	-2.28	-18.67	41.48	44.90	-24.28	-198.79
	U_{47} - L_{43}	-68.66	-178.68	5.22	4.18	-3.54	-20.41	55.60	44.48	-37.73	-217.35
	L_{43} - U_{48}	-68.66	-178.68	5.22	4.18	-3.54	-20.41	55.60	44.48	-37.73	-217.35
	U_{48} - L_{44}	-236.51	-153.14	4.01	3.49	-4.60	-38.28	42.69	37.14	-48.98	-407.24
	L_{44} - U_{49}	-98.60	-313.21	4.21	3.98	-38.61	-11.18	44.77	42.35	-411.09	-119.04
	U_{49} - L_{45}	-134.36	-67.49	0.75	-0.33	-17.78	0.90	8.12	0.20	-185.35	-47.96
	L_{45} - U_{50}	-350.37	-386.86	3.14	0.89	-40.45	-12.00	33.45	9.40	-430.62	-127.76
	U_{50} - L_{46}	-252.51	-371.61	1.32	-0.42	-30.14	-9.24	14.01	-4.46	-329.01	-98.44
	L_{46} - U_{51}	-279.98	-117.76	2.12	-0.55	-30.98	-3.24	22.55	-5.89	-329.79	-34.46
	U_{51} - L_{47}	-252.51	-371.61	1.32	-0.42	-30.14	-9.24	14.01	-4.46	-329.01	-98.44
	L_{47} - U_{52}	-196.94	-8.53	1.90	-0.46	-13.46	9.21	19.56	-0.73	-143.29	98.06
	U_{52} - L_{48}	-139.08	-187.97	-0.11	0.80	3.39	-13.10	-1.15	8.66	36.55	-141.21
	L_{48} - U_{53}	-47.38	-139.53	0.43	1.43	1.42	-14.36	11.42	10.25	26.14	-154.85
	U_{53} - L_{49}	-52.58	-229.17	-0.20	-1.02	0.58	-16.27	-2.12	10.99	6.28	-175.41
	L_{49} - U_{54}	-41.03	-505.94	0.91	-2.16	1.91	-16.27	-7.11	-13.63	6.19	-395.55
	U_{54} - L_{50}	-277.84	-111.68	0.78	1.98	4.94	-20.80	8.37	21.34	-53.30	-224.23
	L_{50} - U_{55}	-166.98	-243.52	1.36	1.87	6.08	-27.35	14.67	20.12	-65.54	-294.87
	U_{55} - L_{51}	-287.74	-127.82	1.76	1.60	-28.28	-6.03	14.67	17.26	-304.91	-94.69
	L_{51} - U_{56}	-141.43	-113.94	1.15	2.11	-23.02	-3.12	12.35	22.70	-248.20	-33.65
	U_{56} - L_{52}	-184.14	-25.62	1.61	2.23	-16.34	-2.17	17.25	23.73	-183.14	-23.87
	L_{52} - U_{57}	-141.64	-96.96	1.88	2.81	-16.32	0.82	20.23	30.33	-175.99	6.84
	U_{57} - L_{53}	-136.67	-67.06	0.03	-0.11	8.68	-0.61	-0.33	5.13	-93.56	-0.13
	L_{53} - U_{58}	-497.26	-34.44	9.35	0.25	-0.03	-0.01	104.05	2.76	-0.29	-0.09
	U_{58} - L_{54}	-41.03	105.94	1.91	2.56	-0.02	-8.87	21.23	28.48	0.20	-88.77
	L_{54} - U_{59}	113.04	44.48	3.63	2.46	0.80	-11.28	40.36	27.40	8.92	-125.54
	U_{59} - L_{55}	59.35	15.11	3.51	2.21	-1.58	-15.99	39.02	24.56	-17.58	-178.01
	L_{55} - U_{60}	86.09	-19.75	3.51	1.94	-14.01	-6.29	39.07	21.64	-158.01	-70.05
	U_{60} - L_{56}	80.30	-119.58	3.49	0.74	-18.01	-5.33	38.85	8.24	-200.47	-69.31
	L_{56} - U_{61}	24.63	-27.07	2.17	0.20	-18.30	-4.66	24.16	2.26	-203.78	-61.85
	U_{61} - U_{62}	29.38	-160.68	1.52	-0.43	-13.68	-0.71	16.70	-4.83	-152.39	-7.85

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_{bb} (in^3)	Z_2 (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula I & Torsion ? F/"So	M_u k-in	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(a)}$	Equivalent Mom. Factor $C_{m(b)}$
Structure 1	U_0 - U_1	-72.74	19.39	-81.55	-203.46	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	0.401	0.76	0.76
	U_1 - U_2	-157.84	113.48	-412.93	82.93	96.6	96.61	83.55	139.29	2174	1387.9	1.40	4465	0.99873153	3184.1	-0.201	0.52	0.52
	U_2 - U_3	-169.14	73.32	-428.79	-1.30	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875285	4241.5	0.003	0.60	0.60
	U_3 - U_4	-169.14	73.32	-428.79	-1.30	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875285	4241.5	0.003	0.60	0.60
	U_4 - L_0	-157.84	113.48	-412.93	82.93	96.6	96.61	83.55	139.29	2174	1387.9	1.40	4465	0.99873153	3184.1	-0.201	0.52	0.52
	L_0 - U_5	-72.74	19.39	-81.55	-203.46	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	0.401	0.76	0.76
	U_5 - L_1	-0.11	13.76	-62.29	-265.73	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	0.463	0.78	0.78
	L_1 - U_6	-125.23	164.91	-180.42	-128.96	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	0.677	0.87	0.87
	U_6 - L_2	-12.78	47.70	-62.29	-445.85	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	0.101	0.56	0.56
	U_7 - L_3	-21.52	128.85	-249.57	25.23	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.99880004	2974.3	-0.101	0.56	0.56
	L_3 - U_8	72.83	157.68	-517.54	-161.66	130.3	130.26	105.11	180.77	2990	1799.3	1.39	5995	0.99880004	4250.8	-0.221	0.51	0.51
	U_8 - L_4	83.48	99.09	-68.29	-104.44	96.6	96.61	79.12	139.29	2174	1387.9	1.40	4465	0.99873153	3184.1	-0.604	0.34	0.34
	L_4 - U_9	123.10	134.21	11.45	-403.04	130.3	130.26	105.11	180.77	2990	1799.3	1.39	5995	0.99873153	3184.1	-0.277	0.49	0.49
	U_9 - L_5	78.80	-162.86	21.38	-389.58	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.99875285	4241.5	-0.055	0.58	0.58
	L_5 - U_{10}	-197.29	-190.31	-166.00	-476.48	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.99905082	5003.4	0.348	0.74	0.74
	U_{10} - L_6	-158.93	-381.96	-52.42	-376.84	151.8	151.76	130.54	219.77	4535	2932.6	1.45	7252	0.99905082	5003.4	0.463	0.79	0.79
	L_6 - U_{11}	-298.14	-222.19	-678.81	-380.40	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.560	0.82	0.82
	U_{11} - L_7	-134.79	-420.88	-534.13	-548.84	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.417	0.77	0.77
	L_7 - U_{12}	-340.54	-187.27	-691.95	-288.33	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899964	6214.6	0.417	0.77	0.77
	U_{12} - L_8	-229.26	85.52	-32.29	-449.85	23.18	127.13	170.41	110.40	199.23	3668	2589.5	1.44	6146	0.99907146	4197.7	0.163	0.67	0.67
	U_{13} - L_9	-170.82	-20.32	0.59	-0.05	-10.84	-2.22	6.33	-0.58	-116.82	-2.35	101.84	0.18	18.33	0.378	37.93	0.48	0.48
	L_9 - U_{14}	-186.22	23.42	0.65	-0.52	-9.45	3.77	6.95	-5.57	-101.84	40.63	101.84	0.18	18.33	0.378	37.93	0.48	0.48
	U_{14} - L_{10}	-233.05	23.20	374.48	83.26	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.6	-0.222	0.51	0.51
	U_{15} - L_{11}	-152.72	-246.66	102.45	-350.10	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.99880042	3452.6	-0.222	0.51	0.51
	U_{16} - L_{12}	-42.89	215.75	-424.92	223.29	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.525	0.39	0.39
	U_{17} - L_{13}	-40.75	-29.29	-212.03	-6.19	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.026	0.61	0.61
	U_{18} - L_{14}	-333.06	1896.93	-350.10	1624.31	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7310.6	-0.179	0.53	0.53
	U_{19} - L_{15}	-1192.78	-1192.78	3.39	3.39	-13.27	-13.27	139.42	139.42	-139.42	-139.42	139.42	0.00	18.57	0.133	139.42	1.00	1.00
	U_{20} - L_{16}	-18.04	28.09	-6.90	-0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{21} - L_{17}	-17.09	129.67	-41.84	91.90	185.0	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99880041	6212.1	-0.132	0.55	0.55
	U_{22} - L_{18}	-34.05	34.70	-9.92	-1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{23} - L_{19}	-246.04	84.83	-181.58	-172.32	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861337	4212.5	-0.340	0.74	0.74
	U_{24} - L_{20}	-249.61	46.85	-189.07	-262.61	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861337	4212.5	-0.720	0.31	0.31
	U_{25} - L_{21}	-249.61	46.85	-189.07	-262.61	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861337	4212.5	-0.720	0.31	0.31
	U_{26} - L_{22}	-246.04	84.83	-181.58	-172.32	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861337	4212.5	-0.340	0.74	0.74
	U_{27} - L_{23}	-6.68	34.70	-9.92	-1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{28} - L_{24}	-17.09	129.67	-41.84	91.90	185.0	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99880041	6212.1	-0.132	0.55	0.55
	U_{29} - L_{25}	-249.61	46.85	-189.07	-262.61	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861337	4212.5	-0.720	0.31	0.31
	U_{30} - L_{26}	-246.04	84.83	-181.58	-172.32	127.8	127.83	111.16	178.51	2762	1538.8	1.40	5891	0.99861337	4212.5	-0.340	0.74	0.74
	U_{31} - L_{27}	-6.68	34.70	-9.92	-1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{32} - L_{28}	-17.09	129.67	-41.84	91.90	185.0	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.99880041	6212.1	-0.132	0.55	0.55
	U_{33} - L_{29}	-333.06	1896.93	-350.10	1624.31	221.8	221.77	186.91	327.26	6244	3427.0	1.48	10799	0.99853092	7310.6	-0.179	0.53	0.53
	U_{34} - L_{30}	-42.89	215.75	-424.92	223.29	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.99854451	5168.9	-0.525	0.39	0.39
	U_{35} - L_{31}	-40.75	-29.29	-212.03	-6.19	156.8	156.80	128.72	214.81	3285	1852.

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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) 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

Maximum Axial with Moment Interaction Check

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 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_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_z (in^4) | $I_{t/n}$ (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_top | M_z (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mx} | Pass | 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 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_{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 1.8 Term * F_y/S_top | M_{ny} (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{mx} | Pass | Tension: Axial Force (kip) | Tension: Moment (k-in) | Tension: Total | Pass | Buckle: Axial Force (kip) | Buckle: Moment (k-in) | Buckle: Total | Pass | Fracture: Axial Force (kip) | Fracture: Moment (k-in) | Fracture: Total | Pass | Compression: Axial Force (kip) | Compression: Moment (k-in) | Compression: Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SCI
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) (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	U_1–L_1	-29.87	-49.03	0.85	-0.92	-1.71	4.50	0.00	0.00	0.00	0.00
	L_1–L_2	-9.08	-15.18	0.72	-0.78	-2.27	2.57	0.00	0.00	0.00	0.00
	L_2–U_2	10.20	9.70	0.00	-0.99	-1.39	2.06	0.00	0.00	0.00	0.00
	U_2–L_3	33.45	-34.40	1.52	-1.58	-0.92	1.42	0.00	0.00	0.00	0.00
	L_3–L_4	41.64	-42.40	-0.08	-0.08	0.22	0.26	-0.85	0.00	0.00	0.00
	L_4–U_4	45.56	-51.10	-0.22	0.12	0.92	-0.29	-2.40	1.32	0.00	0.00
	U_4–L_5	55.60	-55.88	0.01	0.01	0.01	-0.01	-4.08	2.14	0.00	0.00
	L_5–L_6	91.24	-101.87	-0.02	0.02	3.97	-4.46	-0.23	0.27	-44.22	-49.70
	L_6–U_6	-20.57	-21.23	0.28	-0.34	0.12	-0.08	3.12	-3.32	-1.26	-0.88
	U_6–L_7	-135.26	110.88	0.20	-0.26	-4.53	5.33	-2.10	2.76	-48.87	57.41
	L_7–L_8	-88.47	88.21	0.00	-0.10	-2.75	3.67	0.04	-1.09	-29.65	39.57
	U_8–L_8	-91.11	124.05	0.00	-0.00	-2.77	4.23	-1.10	1.28	-7.66	-14.51
	L_8–L_9	-79.57	78.39	0.70	-0.65	-3.15	3.36	7.59	-6.98	-33.92	36.21
	L_9–U_9	-49.26	60.16	1.06	-1.07	-2.03	2.46	11.44	-11.55	-21.83	26.51
	U_9–L_{10}	-29.77	34.66	1.04	-1.04	0.72	1.05	8.82	-8.82	5.20	0.00
	L_{10}–L_{11}	-1.50	-2.65	-2.02	1.92	3.16	-3.28	-21.75	20.68	34.08	-36.40
	L_{11}–U_{11}	34.13	-36.55	-1.30	1.06	3.42	-3.46	-24.08	22.36	36.88	-37.31
	U_{11}–L_{12}	46.23	-56.85	-0.47	0.31	3.36	-3.46	-5.09	3.37	36.23	-37.00
	L_{12}–U_{12}	110.44	-114.63	-0.42	0.43	3.89	-3.97	-4.52	4.52	43.37	-44.33
	U_{12}–L_{13}	121.36	-131.26	-0.37	0.38	6.04	-6.23	-4.00	4.04	65.07	-67.13
	L_{13}–L_{14}	-134.59	-173.50	-0.23	0.31	6.13	-7.13	-2.43	3.39	66.35	-77.04
	U_{14}–L_{14}	-114.23	168.97	-1.02	-0.17	7.67	-7.43	-0.03	1.62	0.00	79.05
	L_{14}–L_{15}	-123.79	131.39	0.98	-1.04	-4.83	5.51	10.44	-11.07	-51.43	58.69
	U_{15}–L_{15}	-113.46	113.46	-1.13	-1.15	-4.16	4.89	11.91	-11.91	-58.64	58.64
	L_{15}–L_{16}	-56.01	62.13	0.66	-0.70	-2.21	2.69	7.57	-7.44	-23.51	27.67
	U_{16}–L_{16}	-50.09	50.09	0.71	-0.71	-2.67	2.67	7.67	-7.67	-23.67	23.67
	L_{16}–L_{17}	-7.04	-12.29	1.61	-1.58	-1.86	2.22	17.15	-16.86	-19.85	23.67
	U_{17}–L_{17}	15.85	-15.59	1.95	-2.06	-1.41	1.66	20.79	-21.91	-15.01	17.71
	L_{17}–L_{18}	38.86	-44.94	0.16	-0.16	0.67	-0.15	0.00	0.00	0.00	0.00
	L_{18}–U_{18}	86.91	-96.07	-1.54	1.36	4.75	-4.70	-16.43	14.49	50.57	-50.05
	U_{18}–L_{19}	155.08	-159.47	-1.26	1.00	3.42	-3.46	-14.58	12.75	43.46	-44.39
	L_{19}–L_{20}	141.23	-149.41	-0.84	0.43	5.37	-5.56	-8.90	4.56	57.22	-59.17
	U_{20}–L_{20}	192.55	-192.83	-0.39	0.21	5.23	-5.39	-4.10	2.28	55.67	-57.05
	L_{20}–L_{21}	147.91	-148.81	-0.21	0.34	3.55	-3.70	-6.73	3.95	37.39	-40.94
	U_{21}–L_{21}	203.52	203.17	-0.49	0.52	6.79	-6.50	-5.25	5.54	72.25	-69.19
	L_{21}–L_{22}	60.09	59.91	-0.21	0.21	1.97	-1.98	-2.17	2.17	22.98	-23.00
	L_{22}–U_{22}	-109.89	162.81	0.82	-0.86	-5.69	5.78	8.66	-9.02	-59.83	60.63
	U_{22}–L_{23}	-120.09	120.09	0.82	-0.82	-5.69	5.69	8.66	-8.66	-59.83	59.83
	L_{23}–L_{24}	-130.37	-137.18	0.84	-0.82	-6.10	5.61	8.81	-8.60	-63.69	59.05
	L_{24}–U_{24}	-113.07	114.60	0.94	-0.96	-4.36	5.19	9.80	-10.10	-48.61	57.68
	U_{24}–L_{25}	-67.70	-67.44	-0.84	0.71	-3.26	3.16	-10.34	10.34	35.50	-33.89
	L_{25}–L_{26}	-44.77	-66.58	1.10	-1.04	-2.10	2.40	11.52	-10.93	-22.07	25.23
	U_{26}–L_{26}	-30.30	-34.39	1.24	-1.24	-0.98	1.14	14.16	-14.16	-10.09	25.27
	L_{26}–L_{27}	-3.69	4.33	-0.64	0.57	1.59	-1.75	-6.73	5.95	-6.21	7.79
	U_{27}–L_{27}	22.65	25.72	-1.94	1.94	1.15	-1.15	20.41	-20.41	36.60	0.00
	L_{27}–L_{28}	39.95	-42.14	-1.26	1.15	3.42	-3.50	-13.27	12.06	36.00	-36.00
	U_{28}–L_{28}	66.57	-67.50	-1.03	0.74	4.18	-4.12	-10.79	7.75	-44.00	-43.31
	L_{28}–L_{29}	-138.00	-142.64	-0.46	0.39	6.18	-6.17	-2.48	2.48	-77.94	-77.94
	U_{29}–L_{29}	-138.29	-139.04	-0.78	0.77	6.50	-7.00	-8.21	8.10	72.63	-73.09
	L_{29}–L_{30}	124.04	-124.04	-0.62	0.62	5.18	-5.18	-8.21	8.21	72.63	-72.63
	L_{30}–U_{30}	-179.34	-176.28	-0.44	0.39	6.18	-6.37	-4.63	4.05	65.01	-67.01
	U_{30}–L_{31}	-2.25	-2.82	-0.85	0.24	0.68	-0.27	-6.73	2.29	-19.82	7.56
	L_{31}–L_{32}	-167.25	167.49	0.77	-0.84	5.74	5.72	8.14	-8.95	-61.08	60.87
	U_{32}–L_{32}	-116.13	110.00	0.39	-0.67	4.20	4.70	4.17	-7.12	-44.71	50.08
	L_{32}–L_{33}	-34.99	12.79	0.00	-0.24	0.68	1.27	-0.51	4.27	-13.06	15.24
	U_{33}–L_{33}	-119.87	124.44	0.52	-0.41	4.15	4.60	5.53	-4.37	-44.17	49.01
	L_{33}–L_{34}	-79.40	79.40	0.41	-0.41	2.61	2.61	3.48	-3.48	-27.84	27.84
	U_{34}–L_{34}	-79.51	88.87	0.98	-0.95	2.65	3.01	10.48	-10.11	-28.17	32.72
	L_{34}–L_{35}	-43.86	51.94	-0.89	1.09	-0.22	0.20	-9.42	11.56	-2.38	2.16
	U_{35}–L_{35}	-43.86	43.86	-0.89	0.89	-0.22	0.22	-9.42	9.42	-2.38	2.38
	L_{35}–L_{36}	-5.58	1.82	-1.77	1.66	3.11	-3.30	-18.85	17.64	33.15	-35.15
	U_{36}–L_{36}	-5.58	5.58	-1.77	1.77	3.30	-3.30	-18.85	18.85	35.15	-35.15
	L_{36}–L_{37}	55.25	-61.09	-0.64	0.65	3.39	-3.47	-6.80	6.95	36.04	-36.52
	U_{37}–L_{37}	51.52	-51.52	-0.77	0.77	3.47	-3.47	-6.80	6.80	36.04	-36.04
	L_{37}–L_{38}	137.10	-150.77	-0.84	0.85	6.50	-6.57	-8.95	9.08	69.72	-69.92
	U_{38}–L_{38}	165.74	-206.85	-0.62	0.83	5.16	-6.54	-6.58	8.81	54.91	-69.59
	L_{38}–L_{39}	92.56	144.10	-0.49	0.49	-4.76	5.21	-109.90	113.02	-0.46	-0.49
	U_{39}–L_{39}	-109.90	113.02	0.46	-0.49	-4.76	5.21	4.99	-5.32	-51.27	56.20
	L_{39}–L_{40}	-38.43	90.29	0.53	-0.53	-4.45	4.45	-38.43	38.43	-0.34	0.00
	U_{40}–L_{40}	-38.43	48.15	0.34	-0.36	-1.98	2.45	3.64	-3.91	-21.38	26.39
	L_{40}–L_{41}	-2.76	8.37	1.62	-1.68	-2.14	2.42	17.45	-18.07	-23.12	26.05
	U_{41}–L_{41}	-2.76	2.76	1.62	-1.62	-2.14	2.14	17.45	-17.45	-23.12	23.12
	L_{41}–L_{42}	25.90	-28.71	-0.41	0.28	-0.50	0.59	-4.41	2.98	-5.35	6.35
	U_{42}–L_{42}	25.90	-25.90	-0.51	0.51	-0.59	0.59	-4.41	4.41	-5.35	5.35
	L_{42}–L_{43}	79.40	-77.51	-0.88	0.77	3.96	-4.02	-9.47	8.33	42.72	-43.39
	U_{43}–L_{43}	79.40	-79.40	-0.88	0.88	3.96	-3.96	-9.47	9.47	42.72	-42.72
	L_{43}–L_{44}	142.75	166.20	-0.06	0.08	5.70	-6.27	-0.67	0.84	61.50	-67.62
	U_{44}–L_{44}	142.75	166.20	-0.06	0.08	5.70	-6.27	-0.67	0.84	61.50	-67.62
	L_{44}–L_{45}	94.27	-125.94	-0.36	0.25	4.44	-5.41	-3.87	2.73	47.92	-58.31
	U_{45}–L_{45}	92.31	-95.87	0.00	0.03	4.31	-4.42	0.02	0.32	45.34	-49.77
	L_{45}–L_{46}	142.75	166.20	-0.06	0.08	5.70	-6.27	-0.67	0.84	61.50	-67.62
	U_{46}–L_{46}	37.93	-58.82	-0.10	0.12	0.69	-1.30	-1.10	1.28	-7.66	-14.51
	L_{46}–L_{47}	-87.20	89.91	0.01	-0.03	-4.66	4.57	0.07	-0.33	-40.14	50.91
	U_{46}–L_{46}	-48.49	45.44	0.02	-0.02	-2.11	2.68	0.20	-0.21	-23.49	29.78
	U_{47}–L_{47}	-38.99	42.97	0.11	-0.10	-1.00	2.20	1.22	-1.06	-16.70	24.49
	L_{47}–L_{48}	-38.99	40.31	-1.15	1.24	-0.58	0.71	-12.83	13.77	-6.45	7.84
	U_{48}–L_{48}	-37.48	38.74	-2.46	2.49	2.25	-2.47	-27.34	27.71	25.02	-27.52
	L_{48}–L_{49}	-10.30	11.14	-1.29	1.27	0.87	-1.48	-14.39	14.09	9.71	-16.45
	U_{49}–L_{49}	3.52	-11.96	-0.76	0.74	2.55	-3.04	-8.49	8.23	28.36	-33.84
	L_{49}–L_{50}	44.79	-53.88	-0.51	0.71	1.60	-3.71	-5.62	7.90	17.62	-41.29

M_2 Information

ZZ Axis Moment Properties

Location	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$_{top}$	M_n (k-in)	Equivalent Mom. Factor a	$C_{b(x)}$	$C_{b(m)}$
Structure 1	U_1–L_1	-26.50	50.37	83.54	128.80	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	L_1–L_2	-1.40	9.48	-44.65	56.92	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	L_2–U_2	25.75	-26.91	-42.82	16.89	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	U_2–L_3	69.40	-67.60	30.13	-24.19	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	L_3–L_4	53.01	-53.47	-67.62	-81.75	15.4	15.42	15.42	23.71	2	791.9	1.54	.782	1.5
	L_4–U_4	56.10	-64.70	152.59	-143.46	15.4	19.37	19.31	29.87	3	907.0	1.54	.986	1.5
	U_4–L_5	62.16	-62.16	-72.09	101.91	-13.36	23.8	20.80	29.87	3	1076.0	1.67	1016	1.5
	L_5–L_6	118.31	-132.99	176.10	-197.04	18.5	18.45	18.36	30.78	7	1020.9	1.67	1016	1.5
	L_6–U_6	22.69	32.63	25.07	26.45	107.1	107.13	107.11	162.71	26	2056.9	1.52	1.389	1.5
	U_6–L_7	-173.10	199.06	-239.37	277.28	33.1	33.05	32.91	54.51	14	1409.8	1.65	1799	1.5
	L_7–L_8	-114.96	113.25	-153.56	166.11	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5
	U_8–L_8	-117.27	160.57	-144.52	222.53	42.74	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_8–L_9	-83.58	92.83	-147.54	149.02	21.1	21.09	21.09	36.40	10	1137.6	1.68	1170	1.5
	L_9–U_9	-49.17	63.19	-82.42	112.67	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_9–L_{10}	-46.28	50.13	-78.05	87.62	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{10}–L_{11}	-30.23	23.44	42.35	-49.46	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{11}–U_{11}	26.09	-32.63	52.29	-56.02	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_4–U_4	53.48	-68.21	107.19	-121.08	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5
	U_{11}–L_{12}	-137.70	143.07	220.95	-232.67	19.3	30.09	30.09	53.51	4	1182.1	1.53	1766	1.5
	L_{12}–U_{12}	152.57	-165.38	242.36	-257.90	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{12}–L_{13}	-2.43	3.39	-66.35	-77.04	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{13}–L_{14}	171.82	-221.14	261.23	-329.69	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	U_{14}–L_{14}	-134.42	203.51	-184.84	312.43	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{14}–L_{15}	-147.35	156.41	-227.76	247.09	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	L_{15}–L_{16}	-107.75	107.75	-165.38	165.38	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5
	L_{16}–L_{17}	-63.62	71.09	-103.37	116.74	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5
	L_{17}–L_{18}	-38.53	38.53	-59.21	59.21	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5
	L_{18}–U_{18}	13.14	-5.94	34.56	46.75	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{18}–L_{19}	47.64	-48.75	1.09	2.75	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{19}–L_{20}	52.67	-52.69	76.18	-77.02	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{20}–L_{21}	51.63	-106.05	178.73	-189.95	20.8	20.80	20.67	34.64	5	1037.5	1.67	1143	1.5
	L_{21}–L_{22}	84.12	-164.61	81.50	-141.39	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{22}–U_{22}	172.03	-188.31	257.98	-271.15	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{22}–L_{23}	190.39	-193.14	268.09	-270.24	43.0	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5
	L_{23}–L_{24}	188.71	-186.19	264.73	-261.24	43.0	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5
	L_{24}–U_{24}	257.75	-258.92	358.50	-354.07	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	U_{24}–L_{25}	94.71	-97.12	112.72	-112.60	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	L_{25}–L_{26}	-196.57	199.93	-285.60	290.48	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	L_{26}–L_{27}	-177.62	177.62	-258.08	258.08	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	L_{27}–L_{28}	-158.03	154.16	-239.28	242.10	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{28}–L_{29}	-134.19	135.85	-206.62	219.93	39.8	39.83	39.83	59.23	6	1264.6	1.53	1903	1.5
	L_{29}–L_{30}	-134.19	134.61	-206.62	206.62	39.8	39.83	39.83	59.23	6	1264.6	1.53	1903	1.5
	L_{30}–U_{30}	-43.22	46.34	-66.89	93.35	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{30}–L_{31}	-43.22	43.22	-66.89	66.89	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	L_{31}–U_{31}	-13.55	13.37	-12.84	15.75	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	U_{31}–L_{32}	-13.55	13.55	-12.84	12.84	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5
	L_{32}–U_{32}	-34.56	39.11	-98.61	-102.68	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	U_{32}–L_{33}	-34.56	34.56	-98.61	-98.61	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5
	L_{33}–U_{33}	72.91	-77.67	143.74	-144.06	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5
	L_{34}–U_{34}	72.91	-72.91	143.74	-143.74	18.7	18.71	18.61	31.48	8	970.0	1.68	1039	1.5
	L_{35}–U_{35}	169.10	-170.22	214.19	-276.42	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{36}–U_{36}	169.10	-169.10	214.19	-214.19	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{37}–U_{37}	223.13	-223.90	310.66	-316.28	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	L_{38}–U_{38}	223.13	-223.90	310.66	-310.66	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	L_{39}–U_{39}	206.83	206.05	-296.82	296.86	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	L_{40}–U_{40}	-145.54	133.74	-209.09	208.10	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5
	L_{41}–U_{41}	-145.54	145.54	-209.09	209.09	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5
	L_{42}–U_{42}	-168.65	166.09	-213.26	225.48	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	L_{43}–U_{43}	-168.65	168.65	-213.26	213.26	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	L_{44}–U_{44}	-165.88	174.29	-237.24	237.24	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{45}–U_{45}	-206.83	206.05	-296.82	296.86	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5
	L_{46}–U_{46}	-145.54	133.74	-209.09	208.10	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5
	L_{46}–U_{46}	-145.54	145.54	-209.09	209.09	43.2	43.24	43.16	70.66	19	1515.6	1.63	2332	1.5
	L_{47}–U_{47}	-168.65	166.09	-213.26	225.48	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	U_{47}–L_{48}	-168.65	168.65	-213.26	213.26	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5
	L_{48}–L_{49}	-165.88	174.29	-237.24	237.24	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5
	L_{49}–L_{50}	-206.83	-206.05	-296.82	-296.86	39.2	39.17	39.11	63.33	14	1392.6	1.62	2090	1.5

M_3 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) (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	U_1–L_1	-105.39	-33.79	2.15	0.69	0.01	0.00	0.00	0.00	0.00	0.00
	L_1–L_2	15.72	7.79	-74.10	-17.89	0.00	0.00	4.12	-0.91	-112.65	-34.29
	L_2–U_2	-13.10	7.04	-0.40	0.22	4.05	4.07	2.02	0.00	-6.79	6.02
	U_2–L_3	-9.59	-4.12	56.23	28.99	0.00	0.00	0.00	0.00	-122.11	-8.03
	L_3–L_4	4.84	3.53	-17.48	7.30	0.00	0.00	0.00	0.00	-144.43	-10.62
	L_4–U_4	-153.93	-35.77	0.44	0.48	-0.44	0.00	-0.02	-0.13	-144.31	-39.53
	L_5–U_5	-104.29	-0.53	0.01	0.01	0.01	0.00	-0.01	-0.01	-134.56	-0.04
	L_6–U_6	-102.40	-33.61	0.04	-0.01	5.15	1.17	0.00	0.00	-129.93	-46.21
	L_7–U_7	-168.73	-52.55	0.26	-0.01	6.69	4.34	0.00	0.00	-215.52	-68.46
	L_8–U_8	-188.42	-131.91	0.41	0.28	-0.28	-17.05	-4.42	0.00	-239.23	-167.67
	L_9–U_9	-156.08	-112.09	-0.03	-0.01	-1.20	-0.66	0.00	0.00	-203.28	-148.49
	L_{10}–U_{10}	-67.02	-24.24	-0.77	-0.70	4.78	2.57	0.00	0.00	-100.79	-41.25
	L_{11}–U_{11}	-8.10	-3.06	0.31	0.83	0.00	0.00	0.00	0.00	-130.43	-1.33
	L_{12}–U_{12}	20.77	6.64	11.30	17.10	0.00	0.00	0.00	0.00	-103.54	54.77
	L_{13}–U_{13}	-46.28	-30.13	0.58	0.58	0.00	0.00	0.00	0.00	-138.05	34.66
	L_{14}–U_{14}	-127.88	-89.96	0.18	-0.30	2.33	-2.17	0.00	0.00	-163.67	-121.17
	L_{15}–U_{15}	-131.11	-101.42	1.08	0.79	0

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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_0-L_1	-12.57	3.38	0.18	0.15	0.42	-0.24				
	L_1-U_1	-1.68	-7.06	-1.19	0.03	0.28	-0.07				
	U_1-L_2	-8.78	-1.16	-0.10	0.03	-0.03	-0.50				
	L_2-U_2	9.78	-11.76	-0.70	-0.49	0.23	-0.69				
	U_2-L_3	-10.33	17.60	-0.97	-0.38	0.37	-0.71				
	L_3-U_3	-26.83	58.49	-2.01	2.03	-0.41	0.23				
	U_3-L_4	39.79	-36.91	2.27	2.06	-0.23	0.08				
	L_4-U_4	-6.35	88.86	-1.89	3.37	-0.01	-0.01				
	U_4-L_5	-9.60	109.55	-1.34	3.32	0.19	-0.09				
	L_5-U_5	-74.80	111.68	-3.21	3.11	0.23	0.08				
	U_5-L_6	-56.84	54.78	-2.40	1.30	0.04	0.14				
	L_6-U_6	-69.50	0.28	-2.46	-0.25	-0.36	0.36				
	U_6-L_7	-55.25	39.07	-2.24	1.32	0.23	-0.73				
	L_7-U_7	-20.99	7.38	-1.40	0.46	0.28	-0.76				
	U_7-L_8	1.18	-32.70	-0.29	-1.14	0.07	-0.85				
	L_8-U_8	-19.00	4.09	-1.42	1.22	-0.12	-0.49				
	U_8-L_9	-28.64	12.99	-1.50	1.61	-0.35	-0.26				
	L_9-U_9	-89.35	58.15	-3.48	3.10	-0.47	-0.12				
	U_9-L_{10}	-92.37	61.38	-3.57	3.10	-0.22	-0.40				
	L_{10}-U_{10}	-105.39	89.05	-4.30	3.76	0.19	-0.19				
	U_{10}-L_{11}	-82.31	86.26	-4.66	4.16	0.83	-0.76				
	L_{11}-U_{11}	-81.24	82.98	-4.03	3.71	0.83	-0.67				
	U_{11}-L_{12}	-81.24	62.98	-4.03	2.91	0.88	-0.72				
	L_{12}-U_{12}	-64.54	58.31	-3.60	2.72	0.64	-0.64				
	U_{12}-L_{13}	-17.36	7.00	-1.79	1.20	0.52	-0.78				
	L_{13}-U_{13}	-0.61	-11.46	-1.54	0.68	0.26	-0.80				
	U_{13}-L_{14}	7.43	-23.92	-1.13	0.41	0.03	-1.41				
	L_{14}-U_{14}	-44.32	36.88	-1.93	1.45	-0.17	-0.76				
	U_{14}-L_{15}	-66.39	68.66	-2.28	2.52	-0.19	-0.75				
	L_{15}-U_{15}	-88.55	73.83	-3.19	2.48	-0.42	-0.43				
	U_{15}-L_{16}	-83.40	84.53	-2.57	2.01	-0.23	-0.42				
	L_{16}-U_{16}	-108.38	116.68	-3.92	3.68	-0.16	0.19				
	U_{16}-L_{17}	-154.28	139.71	-5.22	4.56	0.52	-0.20				
	L_{17}-U_{17}	-85.83	147.78	-3.03	5.06	0.13	-0.13				
	U_{17}-L_{18}	-24.73	100.38	-3.26	4.24	0.73	-0.57				
	L_{18}-U_{18}	-98.38	9.24	-3.22	0.22	-0.54	-0.03				
	U_{18}-L_{19}	-74.14	95.51	-4.37	3.86	0.48	-0.55				
	L_{19}-U_{19}	-55.46	68.65	-3.37	2.71	0.23	-0.73				
	U_{19}-L_{20}	-32.97	39.97	-2.56	1.73	0.32	-0.81				
	L_{20}-U_{20}	-10.32	4.39	-1.32	0.60	0.63	-1.06				
Structure 2	U_{20}-L_{21}	-10.32	4.39	-1.32	0.60	0.63	-1.06				
	L_{21}-U_{21}	-13.86	6.26	-1.60	0.80	11.16	0.00				
	U_{21}-L_{22}	-6.27	2.67	-1.13	0.37	-7.66	0.00				
	L_{22}-U_{22}	-17.08	15.16	-1.63	1.43	0.02	-0.62				
	U_{22}-L_{23}	-25.42	23.61	-2.08	2.45	-0.68	0.00				
	L_{23}-U_{23}	-55.69	65.14	-3.42	3.01	-0.84	-0.23				
	U_{23}-L_{24}	-69.22	80.41	-3.72	3.43	0.46	-0.51				
	L_{24}-U_{24}	-59.18	68.87	-3.47	3.26	0.46	-0.24				
	U_{24}-L_{25}	-106.11	102.57	-4.88	4.55	0.35	-0.39				
	L_{25}-U_{25}	-50.61	52.28	-2.46	2.46	0.03	-0.36				
	U_{25}-L_{26}	-47.67	126.15	-3.63	4.66	0.80	-0.64				
	L_{26}-U_{26}	-38.69	73.34	-2.04	2.70	0.81	-0.74				
	U_{26}-L_{27}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	L_{27}-U_{27}	-86.54	82.57	-3.49	2.62	-0.08	-0.26				
	U_{27}-L_{28}	-38.75	27.84	-0.85	-0.27	0.00	0.00				
	L_{28}-U_{28}	-50.17	50.29	-1.78	0.14	-6.14	0.00				
	U_{28}-L_{29}	-90.17	69.64	-2.24	0.31	-0.93					
	L_{29}-U_{29}	-86.54	82.57	-3.49	2.62	-0.08	-0.26				
	U_{29}-L_{30}	-38.75	27.84	-0.85	-0.27	0.00	0.00				
	L_{30}-U_{30}	-50.17	50.29	-1.78	0.14	-6.14	0.00				
	U_{30}-L_{31}	-90.17	69.64	-2.24	0.31	-0.93					
	L_{31}-U_{31}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	U_{31}-L_{32}	-47.67	126.15	-3.63	4.66	0.80	-0.64				
	L_{32}-U_{32}	-38.69	73.34	-2.04	2.70	0.81	-0.74				
	U_{32}-L_{33}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	L_{33}-U_{33}	-86.54	82.57	-3.49	2.62	-0.08	-0.26				
	U_{33}-L_{34}	-38.75	27.84	-0.85	-0.27	0.00	0.00				
	L_{34}-U_{34}	-50.17	50.29	-1.78	0.14	-6.14	0.00				
	U_{34}-L_{35}	-90.17	69.64	-2.24	0.31	-0.93					
	L_{35}-U_{35}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	U_{35}-L_{36}	-47.67	126.15	-3.63	4.66	0.80	-0.64				
	L_{36}-U_{36}	-38.69	73.34	-2.04	2.70	0.81	-0.74				
Structure 3	U_{36}-L_{37}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	L_{37}-U_{37}	-86.54	82.57	-3.49	2.62	-0.08	-0.26				
	U_{37}-L_{38}	-38.75	27.84	-0.85	-0.27	0.00	0.00				
	L_{38}-U_{38}	-50.17	50.29	-1.78	0.14	-6.14	0.00				
	U_{38}-L_{39}	-90.17	69.64	-2.24	0.31	-0.93					
	L_{39}-U_{39}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	U_{39}-L_{40}	-47.67	126.15	-3.63	4.66	0.80	-0.64				
	L_{40}-U_{40}	-38.69	73.34	-2.04	2.70	0.81	-0.74				
	U_{40}-L_{41}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	L_{41}-U_{41}	-86.54	82.57	-3.49	2.62	-0.08	-0.26				
	U_{41}-L_{42}	-38.75	27.84	-0.85	-0.27	0.00	0.00				
	L_{42}-U_{42}	-50.17	50.29	-1.78	0.14	-6.14	0.00				
	U_{42}-L_{43}	-90.17	69.64	-2.24	0.31	-0.93					
	L_{43}-U_{43}	-89.53	99.33	-3.96	3.21	0.55	0.04				
	U_{43}-L_{44}	-47.67	126.15	-3.63	4.66	0.80	-0.64				
	L_{44}-U_{44}	-38.69	73.34	-2.04	2.70	0.81	-0.74				

M_1 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_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I (in^4)	I_{DL} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	U_0-L_1	-18.98	6.51	-10.33	0.95	15.6	15.63	15.58	25.56	5	804.0	1.66	857	1.5	773.7	-0.343	0.46	0.48
	L_1-U_1	-192.85	138.64	-19.32	1.93	-10.23	15.4	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.455	0.78	0.78
	U_1-L_2	-12.96	-12.35	-1.29	-18.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.037	0.50	0.50
	L_2-U_2	2.57	-22.41	16.09	-25.22	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.638	0.34	0.34
	U_2-L_3	-27.42	-28.31	-25.22	-29.14	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.646	0.46	0.46
	L_3-U_3	-63.90	105.40	-40.83	79.28	35.1	35.09	35.09	53.13	4	1183.7	1.51	1793	1.5	1737.0	-0.056	0.36	0.36
	U_3-L_4	-125.62	124.99	-72.50	77.58	35.1	35.09	35.09	53.13	4	1183.7	1.51	1793	1.5	1737.0	-0.997	0.20	0.20
	L_4-U_4	-35.55	164.27	-8.13	115.40	35.1	35.09	35.09	53.13	4	1183.7	1.51	1793	1.5	1737.0	-0.216	0.51	0.51
	U_4-L_5	-31.28	188.98	-8.82	141.18	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.166	0.53	0.53
	L_5-U_5	-142.80	114.79	-94.01	85.79	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2014.7	-0.815	0.27	0.27
	U_5-L_6	-157.52	89.37	-73.36	73.13	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6	-0.831	0.27	0.27
	L_6-U_6	-133.22	40.91	-91.88	31.28	42.74	42.74	42.74	63.30	8	1389.6	1.53	2155	1.5	2115.6	-0.409	0.46	0.44
	U_6-L_7	-103.25	69.32	-68.55	40.91	20.8	20.80	20.67	34.66	1	1029.6	-0.671	0.33	0.33	1016.2	-0.792	0.28	0.28
	U_7-L_8	-46.86	16.00	-23.35	-1.31	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.341	0.46	0.46
	U_8-L_9	-12.30	-19.84	5.29	-27.03	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.971	0.50	0.50
	U_9-L_{10}	-164.88	118.99	-122.79	73.87	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.722	0.31	0.31
	L_{10}-U_{10}	-176.52	124.46	-117.11	76.07	38.4	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.783	0.32	0.32
	U_{10}-L_{11}	-197.27	168.92	-134.33	113.10	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.804	0.26	0.26
	U_{11}-L_{12}	-87.30	164.27	-59.43	113.10	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.854	0.26	0.26
	U_{12}-L_{13}	-47.30	25.67	-19.29	11.74	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.543	0.38	0.38
	U_{13}-L_{14}	-22.08	-11.52	-1.29	-18.59	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.446	0.46	0.46
	U_{14}-L_{15}	-5.96	25.39	23.84	-50.97	17.2	17.24	17.24	26.54	1	853.4	-0.471	0.41	0.41	864.8	-0.191	0.49	0.49
	U_{15}-L_{16}	-84.27	68.73	-59.98	36.13	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.792	0.28	0.28
	U_{16}-L_{17}	-174.03	130.06	-133.84	77.07	38.5	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.783	0.32	0.32
	U_{17}-L_{18}	-199.30	130.27	-120.86	90.04	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.818	0.27	0.27
	U_{18}-L_{19}	-179.33	134.34	-140.15	77.07	38.5	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.804	0.26	0.26
	U_{19}-L_{20}	-119.33	104.34	-140.15	77.07	38.5	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.854	0.26	0.26
	U_{20}-L_{21}	-4.85	-8.81	15.44	-15.42	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.440	0.42	0.42
	U_{21}-L_{22}	-24.64	-40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{22}-L_{23}	-44.54	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{23}-L_{24}	-119.15	125.82	-83.89	81.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.947	0.22	0.22
	U_{24}-L_{25}	-198.07	181.19	-151.45	83.67	37.8	38.51	38.51	58.74	3	1274.2	1.53	1976	1.5	1922.1	-0.883	0.25	0.25
	U_{25}-L_{26}	-116.69	176.94	-89.78	116.60	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.883	0.25	0.25
	U_{26}-L_{27}	-58.34	116.60	-38.83	89.78	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.854	0.26	0.26
	U_{27}-L_{28}	-118.22	126.55	-68.99	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.924	0.23	0.23
	U_{28}-L_{29}	-77.83	75.67	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.972	0.21	0.21
	U_{29}-L_{30}	-52.19	34.19	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.792	0.28	0.28
	U_{30}-L_{31}	-31.43	13.84	-4.85	-8.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.440	0.42	0.42
	U_{31}-L_{32}	-24.64	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{32}-L_{33}	-44.54	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{33}-L_{34}	-119.15	125.82	-83.89	81.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.947	0.22	0.22
	U_{34}-L_{35}	-198.07	181.19	-151.45	83.67	37.8	38.51	38.51	58.74	3	1274.2	1.53	1976	1.5	1922.1	-0.883	0.25	0.25
	U_{35}-L_{36}	-116.69	176.94	-89.78	116.60	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.883	0.25	0.25
	U_{36}-L_{37}	-58.34	116.60	-38.83	89.78	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.854	0.26	0.26
	U_{37}-L_{38}	-118.22	126.55	-68.99	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.924	0.23	0.23
	U_{38}-L_{39}	-77.83	75.67	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.972	0.21	0.21
	U_{39}-L_{40}	-52.19	34.19	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.792	0.28	0.28
	U_{40}-L_{41}	-31.43	13.84	-4.85	-8.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.440	0.42	0.42
	U_{41}-L_{42}	-24.64	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{42}-L_{43}	-44.54	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{43}-L_{44}	-119.15	125.82	-83.89	81.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.947	0.22	0.22
	U_{44}-L_{45}	-198.07	181.19	-151.45	83.67	37.8	38.51	38.51	58.74	3	1274.2	1.53	1976	1.5	1922.1	-0.883	0.25	0.25
	U_{45}-L_{46}	-116.69	176.94	-89.78	116.60	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.883	0.25	0.25
	U_{46}-L_{47}	-58.34	116.60	-38.83	89.78	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.854	0.26	0.26
	U_{47}-L_{48}	-118.22	126.55	-68.99	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.924	0.23	0.23
	U_{48}-L_{49}	-77.83	75.67	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.972	0.21	0.21
	U_{49}-L_{50}	-52.19	34.19	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.792	0.28	0.28
	U_{50}-L_{51}	-31.43	13.84	-4.85	-8.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.440	0.42	0.42
	U_{51}-L_{52}	-24.64	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{52}-L_{53}	-44.54	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{53}-L_{54}	-119.15	125.82	-83.89	81.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.947	0.22	0.22
	U_{54}-L_{55}	-198.07	181.19	-151.45	83.67	37.8	38.51	38.51	58.74	3	1274.2	1.53	1976	1.5	1922.1	-0.883	0.25	0.25
	U_{55}-L_{56}	-116.69	176.94	-89.78	116.60	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.883	0.25	0.25
	U_{56}-L_{57}	-58.34	116.60	-38.83	89.78	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.854	0.26	0.26
	U_{57}-L_{58}	-118.22	126.55	-68.99	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.924	0.23	0.23
	U_{58}-L_{59}	-77.83	75.67	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.972	0.21	0.21
	U_{59}-L_{60}	-52.19	34.19	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.792	0.28	0.28
	U_{60}-L_{61}	-31.43	13.84	-4.85	-8.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.440	0.42	0.42
	U_{61}-L_{62}	-24.64	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{62}-L_{63}	-44.54	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{63}-L_{64}	-119.15	125.82	-83.89	81.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.947	0.22	0.22
	U_{64}-L_{65}	-198.07	181.19	-151.45	83.67	37.8	38.51	38.51	58.74	3	1274.2	1.53	1976	1.5	1922.1	-0.883	0.25	0.25
	U_{65}-L_{66}	-116.69	176.94	-89.78	116.60	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.883	0.25	0.25
	U_{66}-L_{67}	-58.34	116.60	-38.83	89.78	38.8	38.83	38.83	59.23	3	1284.6	1.53	1993	1.5	1922.1	-0.854	0.26	0.26
	U_{67}-L_{68}	-118.22	126.55	-68.99	79.99	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.924	0.23	0.23
	U_{68}-L_{69}	-77.83	75.67	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.972	0.21	0.21
	U_{69}-L_{70}	-52.19	34.19	-38.45	40.94	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1016.2	-0.792	0.28	0.28
	U_{70}-L_{71}	-31.43	13.84	-4.85	-8.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.440	0.42	0.42
	U_{71}-L_{72}	-24.64	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{72}-L_{73}	-44.54	40.53	-21.89	12.58	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.910	0.24	0.24
	U_{73}-L_{74}	-119.15	125.82	-83.89	81.49	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.947	0.22	0.22
	U_{74}-L_{75}	-198.07	181.19	-151.45	83.67	37.8	38.51	38.51	58.74	3	1274.2

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

| 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_{bb} (in^3) | S_b (in^3) | S_{tb} (in^3) | S_t (in^3) | J (in^4) | I_{xx} (in^4) | Shape Factor f | M_p (k-in) | Formula I.8 Term = F_y*S_bb | M_y (k-in) | Equivalent Mom. Factor: a | Equivalent Mom. Factor: $C_{m(a)}$ | $C_{m(b)}$ | 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. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{bb} (in^3) | S_b (in^3) | S_{tb} (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 I.8 Term = F_y*S_bb | M_y (k-in) | Equivalent Mom. Factor: a | Equivalent Mom. Factor: $C_{m(a)}$ | $C_{m(b)}$ | Yield: Axial Action | Yield: Moment Portion | Yield: Total | Yield: Pass | Tension: Axial Action | Tension: Moment Portion | Tension: Total | Tension: Pass | Fracture: Axial Action | Fracture: Moment Portion | Fracture: Total | Fracture: Pass | Buckle: Axial Action | Buckle: Moment Portion | Buckle: Total | Buckle: Pass | Compression: Axial Action | Compression: Moment Portion | Compression: Total | Compression: Pass |
|---|---|---|---

Axial - 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: SCI

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) (k-in) | Pedestrian Load (Min) (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) | Max. Neg. Mom. (k-in) | S_{top} (in^3) | S_b (in^3) | Z_z (in^3) | I (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 | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor $C_{b(x)}$ | 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) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | Max. Neg. Mom. (k-in) | S_{top} (in^3) | S_b (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_{top} | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor $C_{b(x)}$ | Pass | Axial Tension (kip) | Moment Tension (k-in) | Total | Pass | Axial Compression (kip) | Moment Compression (k-in) | Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss System
Loading: SC1
Condition: As-inspected

Vehicle Load Factors — Dx, Factor: 1.30 — Lx, Factor: 1.30
Pedestrian Load Factors — Dx, Factor: 1.30 — Lx, 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 — YY Axis Moments from STAAD — M_y Information

| Location | Member | ZZ 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_{tb} (in^3) | Z_z (in^3) | I_z (in^4) | $I_{t/t}$ (in^4) | Shape Factor f | M_z (k-in) | Formula 1.8 Term * F_y/S_bb | M_z (k-in) | YY 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. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{bb} (in^3) | S_{tb} (in^3) | Z_y (in^3) | $I_{t/t}$ (in^4) | Shape Factor f | M_y (k-in) | P_{allow} (k) | Formula 1.8 Term * F_y/S_bb | M_y (k-in) | Tension: Yield Axial Action | Yield Moment Action | Yield Total | Yield Pass | Fracture Axial Action | Fracture Moment Action | Fracture Total | Fracture Pass | Buckle Axial Action | Buckle Moment Action | Buckle Total | Buckle Pass | Compression: Yield Axial Action | Yield Moment Action | Yield Total | Yield Pass |
|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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

Axial - AI2

(+) 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)

Maximum Axial with Moment Interaction Check

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-ft) | Live Load (Max) End (k-ft) | Pedestrian Load (Max) Start (k-ft) | Pedestrian Load (Max) 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) | ZZ Axis Moments from STAAD: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_z (in^3) | I_{zz} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_x | M_z (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_b(1) | Equivalent Mom. Factor C_b(2) | YY Axis Moments from STAAD: 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 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) | 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_{yy} (in^4) | Shape Factor | M_p (k-in) | P_{cm} (kips) | Formula 1.8 Term * F_y/S_x | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_b(1) | Equivalent Mom. Factor C_b(2) | Axial Actual | Moment Actual | Total | Pass | Axial Allow. | Moment Allow. | Total | Pass | Axial Actual | Moment Actual | Total | Pass | Axial Allow. | Moment Allow. | Total | Pass |
|---|---|---

Axial AI Operating

Operating Loads - 5C1

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_0 - U_1			-----	-534.63	-178	91	-374	-744	9	-3	209	-3	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.270	1.00	Yes	0.721	0.177	0.90	Yes	1.00	**3.97**
		U_1 - U_2			-----	-573.71	-59	63	-142	-843	-7	-22	43	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.217	1.00	Yes	0.774	0.200	0.98	Yes	1.00	**2.44**
		U_2 - U_3			124.89	-562.37	-126	247	-393	-630	9	25	70	197	0.143	0.183	0.33	Yes	0.097	0.119	0.22	Yes	0.765	0.231	1.00	Yes	0.758	0.150	0.91	Yes	1.00	**2.42**
		U_3 - U_4			346.83	-541.99	77	310	-344	-679	1	33	187	28	0.398	0.193	0.60	Yes	0.273	0.132	0.41	Yes	0.737	0.255	1.00	Yes	0.731	0.161	0.90	Yes	1.00	**3.01**
		U_4 - U_5			372.20	-571.23	134	305	-941	-171	15	-33	44	-47	0.427	0.232	0.66	Yes	0.293	0.159	0.46	Yes	0.777	0.202	0.98	Yes	0.770	0.224	1.00	Yes	1.00	**3.20**
		U_5 - U_6			659.93	-----	250	464	-833	209	-142	-63	263	0	0.756	0.242	1.00	Yes	0.510	0.158	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.90**
		U_6 - U_7			846.12	-----	370	220	-602	-80	-290	-112	412	-138	0.809	0.185	1.00	Yes	0.565	0.127	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		U_7 - U_8			1095.53	-----	72	1205	-240	958	-491	26	-108	-340	0.759	0.232	1.00	Yes	0.529	0.159	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		U_8 - U_9			892.99	-----	1280	-142	691	-168	-405	-195	-243	-121	0.732	0.264	1.00	Yes	0.501	0.180	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		U_9 - U_{10}			712.09	-----	232	307	111	-516	-164	20	-44	645	0.772	0.219	1.00	Yes	0.523	0.147	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		U_{10} - U_{11}			282.33	-588.27	328	-68	282	-1100	29	99	325	209	0.306	0.299	0.61	Yes	0.204	0.192	0.40	Yes	0.757	0.215	0.98	Yes	0.751	0.246	1.00	Yes	1.00	**3.48**
		U_{11} - U_{12}			-----	-859.32	217	-113	70	-854	107	411	219	654	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.182	1.00	Yes	0.806	0.142	0.95	Yes	1.00	**2.43**
		U_{12} - U_{13}			-----	-1184.36	2	-237	-241	-995	347	210	519	373	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.191	1.00	Yes	0.791	0.137	0.93	Yes	1.00	**2.50**
		U_{13} - U_{14}			-----	-1396.91	-138	-376	-458	-1077	217	172	304	583	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.184	1.00	Yes	0.801	0.119	0.92	Yes	1.00	**2.58**
		U_{14} - U_{15}			-----	-1385.46	-262	-243	-967	-859	206	28	676	126	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.190	1.00	Yes	0.794	0.107	0.91	Yes	1.00	**2.53**
		U_{15} - U_{16}			-----	-1360.30	-156	-432	-1102	-797	85	36	428	176	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.206	1.00	Yes	0.780	0.122	0.91	Yes	1.00	**2.27**
		U_{16} - U_{17}			-----	-1358.26	-342	-209	-1419	-477	136	-52	611	63	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.208	1.00	Yes	0.779	0.157	0.94	Yes	1.00	**2.57**
		U_{17} - U_{18}			-----	-1060.61	-210	-72	-893	30	-4	-62	433	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.160	1.00	Yes	0.830	0.145	0.98	Yes	1.00	**2.53**
		U_{18} - U_{19}			-----	-729.69	-199	-69	-749	-53	23	-120	420	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.164	1.00	Yes	0.821	0.151	0.98	Yes	1.00	**2.66**
		U_{19} - U_{20}			-----	-544.83	-270	302	-1904	1378	-68	-129	465	-759	-----	-----	-----	-----	-----	-----	-----	-----	0.619	0.218	0.84	Yes	0.613	0.383	1.00	Yes	1.00	**5.99**
	Structure 2	U_0 - U_1			-----	-609.64	-91	-82	285	-1618	5	-67	136	122	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.242	0.97	Yes	0.720	0.275	1.00	Yes	1.00	**5.76**
		U_1 - U_2			-----	-841.14	-48	-179	35	-1130	-70	-220	2	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1.00	Yes	0.812	0.171	0.99	Yes	1.00	**3.35**
		U_2 - U_3			-----	-1148.49	-101	-266	-22	-1697	-26	376	53	309	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.178	1.00	Yes	0.815	0.173	0.99	Yes	1.00	**3.02**
		U_3 - U_4			-----	-1301.13	-422	-412	-784	-1671	532	913	294	364	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.251	1.00	Yes	0.741	0.149	0.89	Yes	1.00	**2.52**
		U_4 - U_5			-----	-1473.33	-458	-355	-1010	-1783	786	311	270	217	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.234	1.00	Yes	0.756	0.148	0.91	Yes	1.00	**2.71**
		U_5 - U_6			-----	-1681.60	-393	78	-1078	-902	180	-243	146	328	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.122	1.00	Yes	0.863	0.089	0.96	Yes	1.00	**3.13**
		U_6 - U_7			-----	-1358.02	-266	-87	-813	-1624	-145	-192	366	117	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1.00	Yes	0.773	0.145	0.92	Yes	1.00	**2.42**
		U_7 - U_8			-----	-1364.62	-183	-160	-1771	-853	-111	-189	182	36	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**2.45**
		U_8 - U_9			-----	-1169.47	-271	122	-1538	-381	-96	-200	347	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.192	1.00	Yes	0.793	0.163	0.96	Yes	1.00	**2.42**
		U_9 - U_{10}			-----	-953.32	-60	364	-1336	-132	-146	-155	258	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.167	1.00	Yes	0.823	0.163	0.99	Yes	1.00	**2.86**
		U_{10} - U_{11}			551.14	-764.44	210	404	-1475	-215	-192	-168	460	-61	0.466	0.264	0.73	Yes	0.317	0.172	0.49	Yes	0.764	0.232	1.00	Yes	0.760	0.208	0.97	Yes	1.00	**3.83**
		U_{11} - U_{12}			844.28	-----	251	547	-1550	257	-353	-129	527	23	0.713	0.283	1.00	Yes	0.479	0.189	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		U_{12} - U_{13}			1184.00	-----	496	146	-1104	-745	-450	-399	553	-326	0.800	0.192	1.00	Yes	0.570	0.131	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		U_{13} - U_{14}			1459.62	-----	130	2281	-339	1389	-949	-490	-414	-492	0.718	0.276	1.00	Yes	0.508	0.182	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		U_{14} - U_{15}			1361.53	-----	2778	113	1230	-27	-1029	-802	-555	-487	0.670	0.327	1.00	Yes	0.474	0.216	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		U_{15} - U_{16}			1443.87	-----	155	546	-34	191	-706	-501	-374	-88	0.873	0.122	1.00	Yes	0.621	0.084	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		U_{16} - U_{17}			1074.16	-----	672	333	527	-1235	-229	-33	420	358	0.792	0.199	1.00	Yes	0.527	0.131	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		U_{17} - U_{18}			764.24	-----	480	347	284	-772	-6	240	269	660	0.767	0.228	1.00	Yes	0.511	0.150	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.95**
		U_{18} - U_{19}			682.51	-651.35	613	303	241	-1341	68	108	555	410	0.685	0.309	1.00	Yes	0.449	0.197	0.65	Yes	0.774	0.183	0.96	Yes	0.769	0.228	1.00	Yes	1.00	**4.71**
		U_{19} - U_{20}			392.72	-747.74	377	268	-169	-840	1	-6	251	323	0.368	0.178	0.55	Yes	0.244	0.117	0.37	Yes	0.830	0.165	1.00	Yes	0.825	0.134	0.96	Yes	1.00	**3.62**
		U_{20} - U_{21}			246.94	-897.14	229	-17	-193	-917	-47	-70	384	242	0.192	0.175	0.37	Yes	0.134	0.114	0.25	Yes	0.825	0.174	1.00	Yes	0.819	0.133	0.96	Yes	1.00	**3.45**
		U_{21} - U_{22}			-----	-815.75	-24	19	-408	-1266	-13	62	256	341	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.247	1.00	Yes	0.744	0.183	0.93	Yes	1.00	**2.76**
		U_{22} - U_{23}			-----	-797.16	85	-27	-1269	-600	52	-2	385	88	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.258	1.00	Yes	0.728	0.184	0.92	Yes	1.00	**2.69**
		U_{23} - U_{24}			192.44	-844.98	-55	172	-1201	-340	-31	-60	356	65	0.149	0.213	0.37	Yes	0.105	0.138	0.25	Yes	0.777	0.214	1.00	Yes	0.771	0.174	0.95	Yes	1.00	**3.01**
		U_{24} - U_{25}			330.59	-751.54	211	309	-941	-317	-73	-87	393	-144	0.310	0.204	0.52	Yes	0.205	0.134	0.34	Yes	0.834	0.162	1.00	Yes	0.829	0.151	0.98	Yes	1.00	**3.21**
		U_{25} - U_{26}			564.38	-662.57	227	496	-1240	145	-171	-77	349	-77	0.567	0.262	0.83	Yes	0.372	0.167	0.54	Yes	0.787	0.165	0.96	Yes	0.782	0.210	1.00	Yes	1.00	**3.94**
		U_{26} - U_{27}			730.58	-----	351	403	-1171	238	-240	-69	415	-153	0.733	0.259	1.00	Yes	0.488	0.172	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.03**
		U_{27} - U_{28}			1069.21	-----	333	576	-1268	289	-373	-10	414	-84	0.788	0.203	1.00	Yes	0.524	0.134	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.49**
		U_{28} - U_{29}			1462.99	-----	594	213	48	-136	-458	-292	-117	-24	0.884	0.106	1.00	Yes	0.629	0.072	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.38**
		U_{29} - U_{30}			1510.00	-----	263	2118	-55	741	-859	-467	-269	-19	0.743	0.255	1.00	Yes	0.526	0.168	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.22**
		U_{30} - U_{31}			1447.81	-----	2508	27	902	-189	-717	-598	-204	-59	0.712	0.281	1.00	Yes	0.504	0.185	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.05**
		U_{31} - U_{32}			1314.11	-----	72	484	-91	9	-466	-297	3	299	0.887	0.105	1.00	Yes	0.633	0.073	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.94**
		U_{32} - U_{33}			928.25	-----	480	292	404	-1018	-106	-8	531	433	0.784	0.208	1.00	Yes	0.527	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		U_{33} - U_{34}			781.64	-604.47	422	305	-53	-1436	-5	237	491	1066	0.660	0.333	1.00	Yes	0.449	0.219	0.67	Yes	0.604	0.287	0.90	Yes	0.601	0.203	0.81	Yes	1.00	**4.77**
		U_{34} - U_{35}			459.21	-902.57	416	122	-129	-1413	166	147	567	550	0.337	0.233	0.58	Yes	0.228	0.158	0.39	Yes	0.783	0.210	1.00	Yes	0.779	0.172	0.96	Yes	1.00	**3.93**
		U_{35} - U_{36}			-----	-1114.40	191	-122	-160	-1752	96	88	410	550	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.233	1.00	Yes	0.756	0.186	0.95	Yes	1.00	**3.27**
		U_{36} - U_{37}			-----	-1392.11	-20	74	-660	-1356	73	-8	432	399	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.192	1.00	Yes	0.793	0.121	0.92	Yes	1.00	**3.36**
		U_{37} - U_{38}			-----	-1412.27	175	-104	-1316	-1363	38	20	443	128	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.187	1.00	Yes	0.804	0.121	0.93	Yes	1.00	**3.42**
		U_{38} - U_{39}			-----	-1550.33	156	-277	-1384	-1578	131	-30	538	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1.00	Yes	0.796	0.131	0.93	Yes	1.00	**3.33**
		U_{39} - U_{40}			-----	-1475.56	-188	-335	-1874	-1291	32	-23	443	152	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.230	1.00	Yes	0.758	0.155	0.92	Yes	1.00	**3.08**
		U_{40} - U_{41}			-----	-1323.99	-240	-336	-1940	-989	49	-112	520	1	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1.00	Yes	0.754	0.173	0.93	Yes	1.00	**2.87**
		U_{41} - U_{42}			-----	-1117.91	-143	-135	-1676	-206	-67	-98	401	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.197	1.00	Yes	0.793	0.171	0.97	Yes	1.00	**3.10**
		U_{42} - U_{43}			-----	-817.37	-126	-64	-1154	-246	-38	-90	380	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1.00	Yes	0.789	0.175	0.97	Yes	1.00	**3.36**
		U_{43} - U_{44}			-----	-581.95	11	-253	-1787	1767	-62	50	171	-643	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.222	0.92	Yes	0.687	0.303	1.00	Yes	1.00	**6.00**
	Structure 3	U_0 - U_1			-----	-630.46	-1	-163	557	-1422	8	-74	19	84	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.208	0.93	Yes	0.709	0.286	1.00	Yes	1.00	**6.52**
		U_1 - U_2			-----	-717.37	-31	-141	61	-847	-61	-227	-113	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.176	1.00	Yes	0.807	0.170	0.98	Yes	1.00	**2.90**
		U_2 - U_3			-----	-1059.05	-74	-162	-66	-853	-49	334	-130	304	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.158	1.00	Yes	0.829	0.139	0.97	Yes	1.00	**2.99**
		U_3 - U_4			-----	-1329.72	-189	-309	-318	-1374	489	820	340	423	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.224	1.00	Yes	0.762	0.152	0.92	Yes	1.00	**2.97**
		U_4 - U_5			-----	-1442.53	-398	-54	-596	-764	683	226	391	165	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.159	1.00	Yes	0.827	0.084	0.92	Yes	1.00	**2.86**
		U_5 - U_6			-----	-1388.26	-181	-273	-542	-1291	137	-152	370	381	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.195	1.00	Yes	0.796	0.142	0.94	Yes	1.00	**2.58**
		U_6 - U_7			-----	-1364.80	-377	-102	-1346	-591	-91	-188	423	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.199	1.00	Yes	0.782	0.148	0.94	Yes	1.00	**2.51**
		U_7 - U_8			-----	-1218.52	-167	-7	-938	-389	-59	-174	273	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.172	1.00	Yes	0.814	0.129	0.95	Yes	1.00	**2.48**
		U_8 - U_9			-----	-896.53	-107	172	-865	-44	-30	-158	282	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.150	1.00	Yes	0.841	0.144	0.99	Yes	1.00	**2.19**
		U_9 - U_{10}			-----	-617.78	-81	224	-925	114	-94	-111	239	-80	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.194	0.99	Yes	0.788	0.207	1.00	Yes	1.00	**2.63**
		U_{10} - U_{11}			674.54	-378.27	309	221	-828	123	-242	-152	488	-304	0.732	0.264	1.00	Yes	0.496	0.177	0.68	Yes	0.487	0.147	0.64	Yes	0.483	0.186	0.67	Yes	1.00	**5.19**
		U_{11} - U_{12}			912.13	-----	-50	1140	-155	559	-445	-145	-213	-186	0.747	0.246	1.00	Yes	0.511	0.167	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		U_{12} - U_{13}			1083.06	-----	1255	115	556	10	-561	-507	-272	-265	0.750	0.247	1.00	Yes	0.523	0.169	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		U_{13} - U_{14}			869.42	-----	224	441	60	-429	-343	-217	-53	493	0.831	0.162	1.00	Yes	0.581	0.111	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		U_{14} - U_{15}			705.04	-----	459	326	162	-666	-145	-41	188	88	0.808	0.190	1.00	Yes	0.545	0.124	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		U_{15} - U_{16}			500.63	-528.58	386	271	-56	-743	-82	125	179	407	0.574	0.245	0.82	Yes	0.394	0.168	0.57	Yes	0.719	0.278	1.00	Yes	0.713	0.177	0.89	Yes	1.00	**3.68**
		U_{16} - U_{17}			530.40	-583.93	482	182	-549	-586	51	71	390	196	0.608	0.205	0.82	Yes	0.417	0.140	0.56	Yes	0.795	0.196	1.00	Yes	0.787	0.139	0.93	Yes	1.00	**3.98**
		U_{17} - U_{18}			229.76	-547.96	337	-63	-645	-477	-59	71	266	207	0.263	0.198	0.47	Yes	0.178	0.130	0.31	Yes	0.746	0.244	1.00	Yes	0.739	0.153	0.90	Yes	1.00	**2.70**
		U_{18} - U_{19}			94.24	-525.19	167	-38	-798	-335	-37	31	462	2	0.108	0.268	0.38	Yes	0.074	0.183	0.26	Yes	0.715	0.282	1.00	Yes	0.708	0.190	0.90	Yes	1.00	**2.51**
		U_{19} - U_{20}			-----	-521.61	209	-352	-1221	625	-140	139	381	-389	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.213	0.93	Yes	0.703	0.290	1.00	Yes	1.00	**4.46**

Operating Loads - 5C1

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			388.93	-----	303	-750	-655	574	-225	-829	-115	-424	0.595	0.403	1.00	Yes	0.350	0.242	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**44.96**
		L_1 - L_2			488.65	-----	-57	-688	146	9	-207	-8	-24	-50	0.748	0.251	1.00	Yes	0.456	0.168	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		L_2 - L_3			700.86	-----	-749	-590	-3	57	-29	-21	-38	34	0.806	0.187	1.00	Yes	0.466	0.113	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		L_3 - L_4			684.69	-192.84	-714	-363	100	302	214	28	76	69	0.788	0.207	1.00	Yes	0.468	0.133	0.61	Yes	0.263	0.201	0.47	Yes	0.261	0.172	0.44	Yes	1.00	**3.14**
		L_4 - L_5			-----	-540.44	-643	218	118	612	-164	321	59	37	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.154	0.99	Yes	0.823	0.170	1.00	Yes	1.00	**2.99**
		L_5 - L_6			-----	-737.70	-264	85	166	604	78	138	72	121	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.137	1.00	Yes	0.851	0.134	0.99	Yes	1.00	**2.91**
		L_6 - L_7			-----	-1179.56	-229	288	246	127	-36	181	127	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.960	0.030	1.00	Yes	0.949	0.045	1.00	Yes	1.00	**4.58**
		L_7 - L_8			-----	-1286.50	10	600	63	1132	-73	-89	66	190	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.166	1.00	Yes	0.815	0.150	0.97	Yes	1.00	**4.35**
		L_8 - L_9			-----	-1302.15	578	-30	1141	-16	-143	-156	-4	-235	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.162	1.00	Yes	0.825	0.151	0.98	Yes	1.00	**4.11**
		L_9 - L_{10}			-----	-1175.94	335	-199	33	176	-73	135	74	178	-----	-----	-----	-----	-----	-----	-----	-----	0.957	0.035	1.00	Yes	0.947	0.053	1.00	Yes	1.00	**6.44**
		L_{10} - L_{11}			-----	-560.30	173	-480	533	-6	124	-153	141	44	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.096	0.96	Yes	0.854	0.141	1.00	Yes	1.00	**3.92**
		L_{11} - L_{12}			571.27	-----	231	-822	511	-150	234	11	107	-35	0.740	0.258	1.00	Yes	0.444	0.169	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		L_{12} - L_{13}			1092.47	-----	-434	-570	193	-60	266	156	15	28	0.862	0.132	1.00	Yes	0.551	0.080	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{13} - L_{14}			1352.42	-----	-123	-1279	373	-427	265	-61	10	-6	0.795	0.198	1.00	Yes	0.515	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		L_{14} - L_{15}			1649.44	-----	-1371	-1010	-346	-26	-214	273	-118	-67	0.806	0.184	1.00	Yes	0.524	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		L_{15} - L_{16}			1626.78	-----	-1022	-1485	-212	-366	-119	-350	-120	-54	0.795	0.204	1.00	Yes	0.510	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		L_{16} - L_{17}			1184.50	-----	-1439	-147	-428	94	-422	359	-101	-47	0.749	0.249	1.00	Yes	0.486	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		L_{17} - L_{18}			907.86	-----	-879	-177	-190	22	-49	-273	-81	-19	0.791	0.204	1.00	Yes	0.506	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		L_{18} - L_{19}			475.41	-----	-539	363	-601	657	-147	234	-344	-7	0.728	0.268	1.00	Yes	0.492	0.170	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_{19} - L_{20}			168.51	-479.33	-267	67	-450	249	145	32	-89	-20	0.258	0.165	0.43	Yes	0.157	0.110	0.27	Yes	0.871	0.106	0.98	Yes	0.863	0.135	1.00	Yes	1.00	**4.37**
	Structure 2	L_0 - L_1			356.36	-----	204	-869	1089	-2578	33	115	-69	-239	0.433	0.564	1.00	Yes	0.257	0.364	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**20.11**
		L_1 - L_2			549.94	-----	298	-1249	164	-212	-432	-151	-49	12	0.668	0.325	1.00	Yes	0.397	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		L_2 - L_3			1016.63	-----	-94	-1153	-43	-151	41	120	62	73	0.812	0.183	1.00	Yes	0.534	0.105	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_3 - L_4			1353.80	-----	-339	-1456	26	-414	275	162	166	79	0.803	0.195	1.00	Yes	0.542	0.126	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_4 - L_5			1804.83	-----	-1462	-1384	-389	-220	117	2	92	214	0.841	0.153	1.00	Yes	0.557	0.091	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.76**
		L_5 - L_6			1917.89	-----	-1388	-1812	-134	-319	106	-73	126	-17	0.823	0.169	1.00	Yes	0.552	0.102	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_6 - L_7			1910.91	-----	-1842	-1757	-388	-31	-436	-44	-175	43	0.809	0.189	1.00	Yes	0.538	0.112	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		L_7 - L_8			1455.74	-----	-1344	-975	-168	377	-6	-70	-129	11	0.835	0.159	1.00	Yes	0.548	0.093	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		L_8 - L_9			1143.90	-----	-1097	-149	-32	588	-202	465	-19	18	0.800	0.192	1.00	Yes	0.539	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		L_9 - L_{10}			832.07	-757.36	-1231	-313	-55	828	47	-152	33	112	0.743	0.215	0.96	Yes	0.432	0.134	0.57	Yes	0.801	0.133	0.94	Yes	0.795	0.197	1.00	Yes	1.00	**5.14**
		L_{10} - L_{11}			-----	-712.74	-875	289	109	538	-210	390	62	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.113	0.96	Yes	0.837	0.153	1.00	Yes	1.00	**3.45**
		L_{11} - L_{12}			-----	-1052.47	-236	405	106	1001	58	226	79	231	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.118	0.99	Yes	0.863	0.136	1.00	Yes	1.00	**4.36**
		L_{12} - L_{13}			-----	-1556.83	-376	-184	443	-435	119	-163	194	-136	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.060	1.00	Yes	0.931	0.044	0.98	Yes	1.00	**6.59**
		L_{13} - L_{14}			-----	-1513.23	-366	1230	-622	2668	-261	-452	-248	-535	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.196	0.97	Yes	0.761	0.233	1.00	Yes	1.00	**4.19**
		L_{14} - L_{15}			-----	-1641.97	1123	-472	1989	-364	-520	-321	-276	-402	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.150	0.99	Yes	0.826	0.174	1.00	Yes	1.00	**5.66**
		L_{15} - L_{16}			-----	-1484.49	-468	-14	-1055	341	-214	94	23	399	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.091	0.99	Yes	0.888	0.105	1.00	Yes	1.00	**5.28**
		L_{16} - L_{17}			-----	-1150.43	546	-38	1214	119	183	-18	398	185	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.148	1.00	Yes	0.838	0.150	0.99	Yes	1.00	**4.38**
		L_{17} - L_{18}			-----	-867.84	145	-494	482	256	145	47	112	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.918	0.081	1.00	Yes	0.911	0.079	1.00	Yes	1.00	**3.51**
		L_{18} - L_{19}			-----	-650.78	126	-447	674	119	116	123	-4	33	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.119	1.00	Yes	0.867	0.130	1.00	Yes	1.00	**3.24**
		L_{19} - L_{20}			470.68	-619.67	-107	-893	575	252	331	9	58	-46	0.533	0.223	0.76	Yes	0.315	0.141	0.46	Yes	0.831	0.168	1.00	Yes	0.826	0.172	1.00	Yes	1.00	**4.40**
		L_{20} - L_{21}			950.24	-578.71	-1049	-1238	664	93	173	359	-112	-121	0.768	0.223	1.00	Yes	0.505	0.130	0.64	Yes	0.554	0.212	0.77	Yes	0.550	0.184	0.74	Yes	1.00	**5.80**
		L_{21} - L_{22}			883.26	-285.82	-657	-1746	276	-42	170	21	-103	-38	0.714	0.278	1.00	Yes	0.479	0.168	0.65	Yes	0.274	0.244	0.52	Yes	0.272	0.260	0.54	Yes	1.00	**4.29**
		L_{22} - L_{23}			898.05	-----	-1466	-1130	-125	246	-122	452	-15	3	0.726	0.268	1.00	Yes	0.487	0.163	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{23} - L_{24}			985.27	-419.77	-993	-1193	57	517	0	-209	17	96	0.796	0.200	1.00	Yes	0.523	0.116	0.64	Yes	0.402	0.225	0.63	Yes	0.399	0.178	0.58	Yes	1.00	**6.20**
		L_{24} - L_{25}			587.17	-576.77	-1118	-565	347	456	-289	761	89	-1	0.665	0.332	1.00	Yes	0.393	0.208	0.61	Yes	0.773	0.217	1.00	Yes	0.769	0.216	0.99	Yes	1.00	**6.27**
		L_{25} - L_{26}			-----	-640.36	-722	-180	119	697	198	-88	41	128	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.116	0.98	Yes	0.853	0.139	1.00	Yes	1.00	**4.99**
		L_{26} - L_{27}			-----	-850.05	-315	225	-197	644	-70	291	-197	23	-----	-----	-----	-----	-----	-----	-----	-----	0.899	0.092	1.00	Yes	0.893	0.103	1.00	Yes	1.00	**4.65**
		L_{27} - L_{28}			-----	-1165.39	-67	216	-273	1179	88	196	-51	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.120	0.98	Yes	0.849	0.145	1.00	Yes	1.00	**4.37**
		L_{28} - L_{29}			-----	-1581.12	-112	-334	33	-11	170	-20	-66	9	-----	-----	-----	-----	-----	-----	-----	-----	0.954	0.038	1.00	Yes	0.946	0.033	0.98	Yes	1.00	**4.67**
		L_{29} - L_{30}			-----	-1618.42	-378	808	-498	2088	-66	-130	-4	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.131	0.96	Yes	0.814	0.182	1.00	Yes	1.00	**3.92**
		L_{30} - L_{31}			-----	-1573.07	826	-331	2298	-444	-134	-118	-599	-486	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.176	0.98	Yes	0.792	0.201	1.00	Yes	1.00	**6.06**
		L_{31} - L_{32}			-----	-1543.59	-146	-258	328	-156	-60	74	-367	153	-----	-----	-----	-----	-----	-----	-----	-----	0.939	0.055	1.00	Yes	0.931	0.033	0.97	Yes	1.00	**8.00**
		L_{32} - L_{33}			-----	-1048.31	357	-369	999	159	173	41	-141	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.106	0.98	Yes	0.860	0.136	1.00	Yes	1.00	**6.24**
		L_{33} - L_{34}			-----	-768.62	290	-548	432	233	89	-180	3	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.909	0.040	0.95	Yes	0.903	0.096	1.00	Yes	1.00	**5.38**
		L_{34} - L_{35}			721.42	-756.27	-66	-1228	743	97	-236	-114	-50	56	0.644	0.225	0.87	Yes	0.375	0.140	0.52	Yes	0.799	0.157	0.96	Yes	0.794	0.196	1.00	Yes	1.00	**6.51**
		L_{35} - L_{36}			1136.06	-----	-185	-1121	473	81	566	43	101	-67	0.795	0.204	1.00	Yes	0.535	0.129	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		L_{36} - L_{37}			1447.42	-----	-858	-1250	374	96	139	301	-113	-6	0.830	0.163	1.00	Yes	0.545	0.096	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_{37} - L_{38}			1808.90	-----	-1054	-2295	3	-317	-348	-516	-35	-5	0.766	0.234	1.00	Yes	0.509	0.138	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		L_{38} - L_{39}			1921.40	-----	-1781	-1708	-238	-162	-152	271	-12	-23	0.824	0.175	1.00	Yes	0.553	0.107	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_{39} - L_{40}			1716.87	-----	-1274	-1833	-180	-302	-69	-325	-48	-32	0.800	0.195	1.00	Yes	0.530	0.116	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{40} - L_{41}			1324.39	-----	-1565	-598	-290	-54	-293	479	-53	-12	0.778	0.221	1.00	Yes	0.524	0.138	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		L_{41} - L_{42}			1032.70	-----	-1195	-279	-149	-65	107	-98	-26	12	0.814	0.184	1.00	Yes	0.534	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		L_{42} - L_{43}			466.55	-----	-1485	252	-203	38	-374	427	1	-8	0.597	0.398	1.00	Yes	0.356	0.230	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.66**
		L_{43} - L_{44}			284.26	-507.86	-673	272	-1327	570	424	124	179	52	0.345	0.340	0.69	Yes	0.205	0.217	0.43	Yes	0.730	0.208	0.94	Yes	0.726	0.270	1.00	Yes	1.00	**11.54**
	Structure 3	L_0 - L_1			388.29	-402.99	91	-332	542	-796	-30	-136	19	88	0.618	0.271	0.89	Yes	0.378	0.181	0.56	Yes	0.760	0.143	0.91	Yes	0.754	0.240	1.00	Yes	1.00	**7.59**
		L_1 - L_2			539.91	-----	246	-480	373	-446	-79	28	35	119	0.826	0.169	1.00	Yes	0.559	0.106	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_2 - L_3			936.17	-----	-125	-866	3	-171	140	80	11	-1	0.815	0.185	1.00	Yes	0.522	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		L_3 - L_4			1284.03	-----	-231	-1113	59	-354	227	137	33	53	0.812	0.184	1.00	Yes	0.527	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_4 - L_5			1672.46	-----	-1315	-1106	-377	-171	174	62	114	224	0.817	0.174	1.00	Yes	0.524	0.102	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_5 - L_6			1533.19	-----	-524	-1702	-83	-345	-614	-247	141	77	0.749	0.248	1.00	Yes	0.487	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		L_6 - L_7			1366.63	-----	-1188	-415	-393	254	-174	367	-184	18	0.804	0.194	1.00	Yes	0.521	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		L_7 - L_8			1118.93	-----	-569	-576	-78	128	41	5	-27	41	0.883	0.107	1.00	Yes	0.565	0.063	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**
		L_8 - L_9			556.94	-----	-708	56	-168	342	-160	509	-14	43	0.721	0.277	1.00	Yes	0.433	0.178	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		L_9 - L_{10}			-----	-544.99	-640	-24	7	512	143	103	78	129	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.115	0.96	Yes	0.830	0.169	1.00	Yes	1.00	**4.84**
		L_{10} - L_{11}			-----	-1075.05	-296	313	-508	799	-11	85	-101	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.064	0.94	Yes	0.865	0.126	1.00	Yes	1.00	**6.40**
		L_{11} - L_{12}			-----	-1252.59	-40	472	-63	1176	-171	-211	-380	-560	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.190	1.00	Yes	0.793	0.156	0.95	Yes	1.00	**3.66**
		L_{12} - L_{13}			-----	-1251.62	468	-23	1144	-12	-243	-216	-578	-314	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.192	1.00	Yes	0.793	0.152	0.95	Yes	1.00	**3.96**
		L_{13} - L_{14}			-----	-1146.09	146	-36	-49	297	-260	-35	-240	138	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.060	1.00	Yes	0.923	0.047	0.97	Yes	1.00	**3.96**
		L_{14} - L_{15}			-----	-748.60	155	-201	568	167	175	-129	159	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.122	1.00	Yes	0.864	0.126	0.99	Yes	1.00	**2.74**
		L_{15} - L_{16}			-----	-569.29	106	-272	434	206	-9	-93	19	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.121	1.00	Yes	0.867	0.115	0.99	Yes	1.00	**2.62**
		L_{16} - L_{17}			639.17	-302.46	-196	-871	389	48	88	319	96	-45	0.735	0.262	1.00	Yes	0.437	0.168	0.61	Yes	0.413	0.220	0.64	Yes	0.409	0.210	0.62	Yes	1.00	**3.19**
		L_{17} - L_{18}			672.21	-168.91	-546	-854	128	13	86	11	0	14	0.773	0.220	1.00	Yes	0.447	0.133	0.58	Yes	0.231	0.236	0.47	Yes	0.229	0.206	0.44	Yes	1.00	**3.29**
		L_{18} - L_{19}			433.98	-----	-727	-190	93	-14	-141	521	40	-130	0.664	0.330	1.00	Yes	0.405	0.217	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		L_{19} - L_{20}			135.24	-293.12	-418	366	-1261	912	1290	351	476	130	0.207	0.655	0.87	Yes	0.122	0.393	0.52	Yes	0.532	0.467	1.00	Yes	0.528	0.378	0.91	Yes	1.00	**15.14**

Axial AI Operating

Operating Loads - 5C1

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			-----	-289.88	-55	84	-158	213	-36	-11	-176	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.717	0.185	0.91	Yes	0.677	0.317	1.00	Yes	1.00	**1.46**
		U_1 - L_1			-----	-346.42	35	-24	-182	208	-1	-10	308	160	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.180	0.94	Yes	0.733	0.266	1.00	Yes	1.00	**3.40**
		U_2 - L_2			113.95	-322.78	97	-108	-129	186	94	36	663	245	0.205	0.429	0.64	Yes	0.113	0.236	0.35	Yes	0.705	0.290	1.00	Yes	0.683	0.237	0.93	Yes	1.00	**4.69**
		U_3 - L_3			209.30	-----	166	-191	-46	107	241	79	1303	363	0.376	0.622	1.00	Yes	0.207	0.342	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.10**
		U_4 - L_4			-----	-353.66	119	-127	134	-136	-472	-111	706	189	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.215	1.00	Yes	0.748	0.174	0.93	Yes	1.00	**4.45**
		U_5 - L_5			-----	-437.50	75	-91	184	-235	-16	-35	312	12	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.117	0.91	Yes	0.755	0.238	1.00	Yes	1.00	**3.11**
		U_6 - L_6			-----	-495.29	85	-80	234	-256	-212	-63	598	145	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.207	1.00	Yes	0.748	0.248	1.00	Yes	1.00	**2.46**
		U_7 - L_7			-----	-410.99	129	-143	272	-290	-164	18	184	32	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.144	0.88	Yes	0.670	0.321	1.00	Yes	1.00	**1.61**
		U_8 - L_8			-----	-1220.92	-13	9	33	-44	-103	4	1193	303	-----	-----	-----	-----	-----	-----	-----	-----	0.882	0.118	1.00	Yes	0.846	0.008	0.86	Yes	1.00	**3.75**
		U_9 - L_9			-----	-652.65	-173	202	-357	413	-336	-125	-39	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.141	0.94	Yes	0.755	0.241	1.00	Yes	1.00	**2.65**
		U_{10} - L_{10}			-----	-718.45	-123	106	-303	328	-833	-452	-520	-509	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.221	1.00	Yes	0.738	0.183	0.93	Yes	1.00	**3.15**
		U_{11} - L_{11}			-----	-671.12	-145	197	-306	450	-522	-361	-74	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.167	0.98	Yes	0.781	0.209	1.00	Yes	1.00	**3.14**
		U_{12} - L_{12}			-----	-547.59	-116	114	-261	281	-287	-174	353	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.151	0.95	Yes	0.751	0.240	1.00	Yes	1.00	**3.22**
		U_{13} - L_{13}			-----	-383.51	-50	71	-196	231	-172	0	257	24	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.140	0.92	Yes	0.735	0.263	1.00	Yes	1.00	**2.57**
		U_{14} - L_{14}			-----	-314.39	8	-9	-142	159	-203	-72	972	87	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.292	1.00	Yes	0.665	0.204	0.87	Yes	1.00	**4.38**
		U_{15} - L_{15}			113.55	-309.00	-84	72	242	-265	29	69	247	-107	0.204	0.410	0.62	Yes	0.112	0.225	0.34	Yes	0.693	0.160	0.86	Yes	0.654	0.339	1.00	Yes	1.00	**4.36**
		U_{16} - L_{16}			-----	-322.57	26	-41	238	-247	35	-37	317	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.135	0.87	Yes	0.683	0.316	1.00	Yes	1.00	**3.02**
		U_{17} - L_{17}			-----	-435.51	60	-75	222	-242	-122	-113	138	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.116	0.94	Yes	0.751	0.246	1.00	Yes	1.00	**2.22**
		U_{18} - L_{18}			-----	-533.83	144	-151	424	-438	-134	-122	206	-209	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.092	0.88	Yes	0.743	0.248	1.00	Yes	1.00	**2.31**
		U_{19} - L_{19}			-----	-641.41	172	-171	537	-527	-117	-46	246	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.111	0.92	Yes	0.747	0.249	1.00	Yes	1.00	**2.63**
		U_{20} - L_{20}			-----	-564.65	162	-262	318	-481	29	4	494	65	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.212	1.00	Yes	0.691	0.231	0.93	Yes	1.00	**1.72**
	Structure 2	U_0 - L_0			-----	-662.55	-156	203	-431	553	-51	-9	-306	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.743	0.249	1.00	Yes	1.00	**2.82**
		U_1 - L_1			-----	-733.66	-112	121	-459	497	-111	-12	-549	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.132	0.98	Yes	0.786	0.211	1.00	Yes	1.00	**3.57**
		U_2 - L_2			-----	-601.79	-101	112	-410	439	-104	-40	279	34	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.107	0.92	Yes	0.767	0.225	1.00	Yes	1.00	**3.09**
		U_3 - L_3			-----	-507.89	-52	60	-195	220	84	-45	338	0	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.126	1.00	Yes	0.796	0.201	1.00	Yes	1.00	**2.72**
		U_4 - L_4			-----	-347.14	-9	17	-197	203	259	78	62	0	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.153	0.95	Yes	0.735	0.259	1.00	Yes	1.00	**2.91**
		U_5 - L_5			83.47	-345.93	65	-53	-172	200	-50	106	404	-2	0.150	0.373	0.53	Yes	0.083	0.205	0.29	Yes	0.781	0.216	1.00	Yes	0.732	0.256	0.99	Yes	1.00	**3.84**
		U_6 - L_6			278.04	-262.70	151	-158	-113	137	-25	114	1025	116	0.500	0.499	1.00	Yes	0.275	0.274	0.55	Yes	0.591	0.357	0.95	Yes	0.556	0.202	0.76	Yes	1.00	**5.46**
		U_7 - L_7			-----	-324.63	133	-156	104	-121	-28	-24	807	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.262	1.00	Yes	0.687	0.200	0.89	Yes	1.00	**4.28**
		U_8 - L_8			-----	-471.47	67	-90	341	-364	0	-29	87	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.110	0.80	Yes	0.679	0.318	1.00	Yes	1.00	**3.23**
		U_9 - L_9			-----	-687.81	173	-187	590	-599	-15	-22	273	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.088	0.86	Yes	0.737	0.254	1.00	Yes	1.00	**3.63**
		U_{10} - L_{10}			-----	-792.04	180	-191	542	-569	-87	-129	352	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.106	0.89	Yes	0.741	0.251	1.00	Yes	1.00	**3.64**
		U_{11} - L_{11}			-----	-816.73	186	-185	514	-533	-182	-63	242	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.110	0.94	Yes	0.764	0.235	1.00	Yes	1.00	**3.30**
		U_{12} - L_{12}			-----	-887.22	161	-148	525	-534	-215	-27	303	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.120	0.98	Yes	0.769	0.229	1.00	Yes	1.00	**3.30**
		U_{13} - L_{13}			-----	-731.18	213	-212	564	-544	-166	24	353	43	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.177	1.00	Yes	0.705	0.270	0.98	Yes	1.00	**2.69**
		U_{14} - L_{14}			-----	-1103.71	120	-116	246	-239	-30	199	1205	330	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1.00	Yes	0.732	0.043	0.78	Yes	1.00	**3.72**
		U_{15} - L_{15}			-----	-748.10	-110	119	-551	543	-379	1	236	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.164	1.00	Yes	0.721	0.264	0.99	Yes	1.00	**4.61**
		U_{16} - L_{16}			-----	-707.23	-85	57	-425	435	-849	-267	-330	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.179	1.00	Yes	0.758	0.185	0.95	Yes	1.00	**3.91**
		U_{17} - L_{17}			-----	-654.45	-121	119	-490	500	-275	-183	-113	-394	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.134	0.95	Yes	0.762	0.232	1.00	Yes	1.00	**3.45**
		U_{18} - L_{18}			-----	-598.52	-90	90	-410	451	-114	-126	291	-233	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.096	0.90	Yes	0.763	0.231	1.00	Yes	1.00	**3.22**
		U_{19} - L_{19}			-----	-496.72	-49	53	-241	259	-66	-30	295	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.128	0.88	Yes	0.742	0.250	1.00	Yes	1.00	**3.08**
		U_{20} - L_{20}			-----	-396.52	-21	26	-194	206	-168	-31	312	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.149	0.97	Yes	0.760	0.235	1.00	Yes	1.00	**2.96**
	Structure 3	U_0 - L_0			-----	-579.23	-145	193	-418	480	-56	-7	-614	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1.00	Yes	0.696	0.230	0.93	Yes	1.00	**2.34**
		U_1 - L_1			-----	-669.42	-114	126	-438	462	-121	-4	-619	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.148	0.99	Yes	0.779	0.214	1.00	Yes	1.00	**3.39**
		U_2 - L_2			-----	-547.90	-110	116	-394	412	-146	-45	88	32	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.087	0.89	Yes	0.762	0.233	1.00	Yes	1.00	**3.00**
		U_3 - L_3			-----	-459.82	-46	59	-174	202	44	-63	265	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.114	0.98	Yes	0.793	0.204	1.00	Yes	1.00	**2.54**
		U_4 - L_4			-----	-349.98	-23	31	-179	197	-4	39	395	33	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.180	0.97	Yes	0.741	0.252	1.00	Yes	1.00	**3.14**
		U_5 - L_5			89.23	-330.28	65	-59	-210	234	-51	110	295	17	0.160	0.384	0.55	Yes	0.088	0.211	0.30	Yes	0.740	0.193	0.94	Yes	0.699	0.299	1.00	Yes	1.00	**4.29**
		U_6 - L_6			-----	-330.75	131	-145	89	-96	-133	-26	788	47	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.261	1.00	Yes	0.700	0.185	0.89	Yes	1.00	**4.55**
		U_7 - L_7			-----	-364.78	32	-46	240	-261	10	-34	70	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.114	0.86	Yes	0.699	0.298	1.00	Yes	1.00	**2.89**
		U_8 - L_8			-----	-514.85	88	-92	332	-336	6	-69	203	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.104	0.85	Yes	0.706	0.287	1.00	Yes	1.00	**3.24**
		U_9 - L_9			-----	-650.92	131	-169	398	-508	-163	-130	138	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.100	0.89	Yes	0.758	0.236	1.00	Yes	1.00	**3.36**
		U_{10} - L_{10}			-----	-782.06	119	-117	397	-435	-203	-97	330	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.128	0.94	Yes	0.772	0.225	1.00	Yes	1.00	**3.47**
		U_{11} - L_{11}			-----	-650.16	169	-194	425	-470	-115	-16	375	76	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.138	0.92	Yes	0.734	0.262	1.00	Yes	1.00	**2.41**
		U_{12} - L_{12}			-----	-1142.09	71	-99	173	-249	-35	64	1580	456	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.174	1.00	Yes	0.792	0.046	0.84	Yes	1.00	**3.73**
		U_{13} - L_{13}			-----	-474.15	-65	75	-250	271	-312	-22	45	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.156	0.95	Yes	0.731	0.267	1.00	Yes	1.00	**2.80**
		U_{14} - L_{14}			-----	-506.57	-44	28	-181	211	-784	-367	-294	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.224	1.00	Yes	0.726	0.184	0.92	Yes	1.00	**3.34**
		U_{15} - L_{15}			-----	-441.76	-48	47	-161	198	-488	-318	-15	-199	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1.00	Yes	0.762	0.200	0.97	Yes	1.00	**3.34**
		U_{16} - L_{16}			-----	-336.20	-126	141	-133	139	-537	-229	677	81	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1.00	Yes	0.711	0.180	0.90	Yes	1.00	**4.28**
		U_{17} - L_{17}			286.71	-----	-308	315	201	-231	-277	58	-79	-161	0.516	0.483	1.00	Yes	0.284	0.265	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.21**
		U_{18} - L_{18}			147.11	-326.52	-136	153	98	-160	-136	25	1031	164	0.265	0.503	0.77	Yes	0.146	0.277	0.43	Yes	0.714	0.278	1.00	Yes	0.691	0.204	0.90	Yes	1.00	**5.18**
		U_{19} - L_{19}			62.13	-339.35	-69	55	210	-218	-100	0	432	107	0.112	0.404	0.52	Yes	0.061	0.222	0.29	Yes	0.741	0.189	0.94	Yes	0.718	0.279	1.00	Yes	1.00	**3.18**
		U_{20} - L_{20}			-----	-365.85	19	-30	47	-146	-43	-14	-230	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.173	1.00	Yes	0.774	0.187	0.97	Yes	1.00	**1.38**

Operating Loads - 5C1

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 - Diagonals	Structure 1	$U_0 - L_1$			642.88	-----	-91	51	-12	-5	-166	-101	-4	19	0.843	0.148	1.00	Yes	0.509	0.082	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_1 - L_2$			462.95	-106.94	-85	-10	20	-21	-178	-55	5	-6	0.833	0.160	1.00	Yes	0.458	0.088	0.55	Yes	0.245	0.147	0.40	Yes	0.226	0.109	0.34	Yes	1.00	**3.87**
		$U_2 - L_3$			412.15	-272.60	-117	-30	53	-30	-361	58	42	29	0.741	0.255	1.00	Yes	0.408	0.140	0.55	Yes	0.627	0.266	0.90	Yes	0.577	0.150	0.73	Yes	1.00	**6.49**
		$U_3 - L_4$			-----	-381.67	-27	-50	15	-64	-178	-119	-36	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.123	1.00	Yes	0.808	0.082	0.89	Yes	1.00	**3.69**
		$U_4 - L_4$			519.57	-----	-87	34	-64	12	-205	-215	-580	-235	0.769	0.223	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_5 - L_5$			682.40	-----	-199	230	-49	100	-286	-303	28	-34	0.807	0.186	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		$U_5 - L_6$			627.99	-----	-287	243	-85	105	-486	-331	310	140	0.742	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.53**
		$U_6 - L_7$			641.53	-----	-101	311	3	138	-189	-137	326	201	0.758	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.61**
		$U_8 - L_8$			975.17	-----	-97	351	23	141	431	462	401	97	0.780	0.215	1.00	Yes	0.483	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_9 - L_{10}$			1005.12	-----	-296	252	-75	88	198	500	117	114	0.804	0.196	1.00	Yes	0.498	0.110	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_{10} - L_{11}$			980.89	-----	-239	180	-62	101	-21	399	21	177	0.829	0.163	1.00	Yes	0.513	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{11} - L_{12}$			826.24	-----	-262	82	-94	34	84	345	76	97	0.817	0.173	1.00	Yes	0.450	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_{12} - L_{13}$			653.04	-----	-204	147	-85	37	-37	121	47	-89	0.796	0.202	1.00	Yes	0.501	0.113	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{13} - L_{14}$			456.17	-----	-98	28	-23	-18	-59	30	-59	-173	0.820	0.176	1.00	Yes	0.451	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		$U_{15} - L_{14}$			268.73	-300.49	-76	-9	27	-99	-302	-290	-496	-134	0.483	0.270	0.76	Yes	0.266	0.149	0.42	Yes	0.704	0.289	1.00	Yes	0.636	0.127	0.77	Yes	1.00	**4.52**
		$U_{16} - L_{15}$			373.70	-----	-119	84	-38	-10	-332	-294	-584	-110	0.672	0.321	1.00	Yes	0.370	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_{17} - L_{16}$			501.20	-----	-139	96	-34	13	-494	-370	-108	-129	0.735	0.256	1.00	Yes	0.404	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{18} - L_{17}$			607.70	-----	-307	253	-112	76	-560	-476	-111	-118	0.718	0.275	1.00	Yes	0.395	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{19} - L_{18}$			682.17	-----	-342	257	-132	87	-488	-480	-65	-106	0.739	0.255	1.00	Yes	0.406	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		$U_{20} - L_{19}$			706.91	-----	-229	256	-95	93	-584	-343	-100	-39	0.766	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.57**
	Structure 2	$U_0 - L_1$			803.09	-----	-386	367	-110	95	-163	-110	-60	-45	0.794	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		$U_1 - L_2$			793.67	-----	-394	308	-89	66	-172	34	-95	-23	0.785	0.208	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.65**
		$U_2 - L_3$			647.53	-----	-338	255	-79	60	-186	113	-18	94	0.766	0.225	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_3 - L_4$			597.86	-----	-182	135	-33	11	-165	-21	116	66	0.797	0.200	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_4 - L_5$			421.67	-----	-133	92	-10	-19	-217	70	17	-146	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.43**
		$U_5 - L_6$			429.96	-221.66	-132	54	46	-86	-176	171	-86	-187	0.773	0.223	1.00	Yes	0.425	0.123	0.55	Yes	0.523	0.167	0.70	Yes	0.469	0.169	0.64	Yes	1.00	**4.92**
		$U_6 - L_7$			-----	-380.21	-46	-12	49	-101	-149	-94	-23	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.177	1.00	Yes	0.728	0.115	0.85	Yes	1.00	**3.26**
		$U_8 - L_7$			562.30	-----	-173	125	-67	1	-219	-432	-615	-171	0.717	0.280	1.00	Yes	0.451	0.161	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_8 - L_8$			686.63	-----	-324	232	-150	58	-501	-414	33	-202	0.744	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_{10} - L_9$			791.62	-----	-304	227	-139	74	-472	-464	-484	-208	0.783	0.213	1.00	Yes	0.431	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{11} - L_{10}$			865.97	-----	-333	283	-107	132	-441	-483	140	2	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		$U_{12} - L_{11}$			856.01	-----	-363	351	-117	154	-445	-390	226	82	0.780	0.215	1.00	Yes	0.429	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.90**
		$U_{13} - L_{12}$			757.55	-----	-428	382	-149	152	-222	-191	344	133	0.749	0.250	1.00	Yes	0.412	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.49**
		$U_{14} - L_{13}$			750.11	-----	-271	423	-9	162	-277	-165	389	189	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.02**
		$U_{14} - L_{15}$			642.12	-----	-221	347	32	65	132	221	201	-43	0.759	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{15} - L_{16}$			619.27	-----	-381	342	-55	64	-60	288	-48	11	0.732	0.268	1.00	Yes	0.403	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**
		$U_{16} - L_{17}$			713.91	-----	-320	339	-66	92	-270	320	-156	57	0.773	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{17} - L_{18}$			645.39	-----	-290	272	-64	77	-31	385	-29	100	0.763	0.234	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		$U_{18} - L_{19}$			671.32	-----	-272	269	-45	63	117	253	25	15	0.794	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.52**
		$U_{19} - L_{20}$			604.85	-----	-192	162	-14	21	67	251	-38	-35	0.771	0.223	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{20} - L_{21}$			437.65	-----	-127	100	-12	-4	-2	149	-5	-89	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{21} - L_{22}$			442.82	-216.06	-113	52	17	-76	-11	112	52	-179	0.796	0.196	1.00	Yes	0.438	0.108	0.55	Yes	0.510	0.139	0.65	Yes	0.457	0.144	0.61	Yes	1.00	**4.82**
		$U_{23} - L_{22}$			389.86	-256.32	-101	46	1	-62	-222	-285	-569	-21	0.701	0.293	1.00	Yes	0.386	0.161	0.55	Yes	0.610	0.264	0.88	Yes	0.542	0.128	0.68	Yes	1.00	**4.36**
		$U_{24} - L_{23}$			392.37	-----	-109	98	-31	0	-254	-219	-510	-31	0.706	0.287	1.00	Yes	0.388	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.05**
		$U_{25} - L_{24}$			578.41	-----	-189	178	-10	24	-424	-347	84	16	0.738	0.256	1.00	Yes	0.406	0.145	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{26} - L_{25}$			653.02	-----	-269	262	-24	36	-349	-375	126	51	0.772	0.220	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{27} - L_{26}$			642.84	-----	-288	285	-42	54	-384	-307	186	75	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{28} - L_{27}$			706.33	-----	-331	358	-45	64	-292	-288	208	116	0.765	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		$U_{29} - L_{28}$			636.18	-----	-360	346	-71	70	-174	-195	217	105	0.752	0.243	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_{30} - L_{29}$			610.79	-----	-212	346	38	102	-252	-149	421	160	0.722	0.272	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{30} - L_{31}$			759.83	-----	-286	434	23	65	157	131	263	-3	0.752	0.241	1.00	Yes	0.413	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{31} - L_{32}$			726.32	-----	-408	368	-66	72	-194	232	-16	39	0.754	0.239	1.00	Yes	0.415	0.123	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		$U_{32} - L_{33}$			873.40	-----	-359	332	-57	94	-308	374	-146	139	0.796	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{33} - L_{34}$			876.20	-----	-337	292	-62	91	-8	358	24	217	0.798	0.192	1.00	Yes	0.439	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_{34} - L_{35}$			820.69	-----	-304	229	-99	56	52	265	218	1	0.812	0.180	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{35} - L_{36}$			729.28	-----	-340	223	-104	39	19	196	38	-95	0.790	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{36} - L_{37}$			612.60	-----	-188	150	-45	-8	-103	68	20	-224	0.781	0.214	1.00	Yes	0.492	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{38} - L_{37}$			-----	-364.17	-30	-11	33	-78	-155	-237	-437	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1.00	Yes	0.698	0.089	0.79	Yes	1.00	**2.68**
		$U_{39} - L_{38}$			314.97	-268.71	-92	52	19	-80	-282	-266	-765	-89	0.566	0.339	0.91	Yes	0.312	0.186	0.50	Yes	0.640	0.352	1.00	Yes	0.569	0.117	0.69	Yes	1.00	**4.42**
		$U_{40} - L_{39}$			389.58	-----	-128	94	-8	-22	-347	-304	-453	-108	0.701	0.294	1.00	Yes	0.385	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		$U_{41} - L_{40}$			568.37	-----	-172	129	-14	-1	-404	-383	-87	-72	0.758	0.242	1.00	Yes	0.417	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{42} - L_{41}$			608.00	-----	-320	262	-44	28	-525	-440	-62	-59	0.719	0.276	1.00	Yes	0.395	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.07**
		$U_{43} - L_{42}$			750.59	-----	-386	309	-61	41	-510	-469	0	-42	0.743	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_{44} - L_{43}$			776.20	-----	-255	314	-92	77	-550	-334	62	-21	0.768	0.228	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
	Structure 3	$U_0 - L_1$			714.97	-----	-361	308	-112	94	-61	-210	-62	-51	0.774	0.219	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_1 - L_2$			721.47	-----	-340	260	-98	66	-235	-72	-123	-44	0.781	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_2 - L_3$			646.53	-----	-330	244	-96	62	-243	87	-48	78	0.764	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_3 - L_4$			548.31	-----	-154	96	-28	10	-130	61	74	48	0.804	0.186	1.00	Yes	0.442	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		$U_4 - L_5$			428.19	-----	-132	93	-15	-27	-202	21	-11	-166	0.770	0.227	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_5 - L_6$			418.79	-329.72	-114	-4	30	-109	-220	42	-74	-326	0.753	0.240	1.00	Yes	0.414	0.132	0.55	Yes	0.772	0.225	1.00	Yes	0.698	0.146	0.85	Yes	1.00	**5.65**
		$U_7 - L_6$			398.55	-----	-83	25	-40	-22	-268	-310	-582	-194	0.717	0.275	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		$U_8 - L_7$			587.94	-----	-190	143	-82	25	-412	-395	-571	-229	0.717	0.277	1.00	Yes	0.451	0.158	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
		$U_8 - L_8$			774.31	-----	-237	104	-135	10	-504	-532	-794	-398	0.766	0.228	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_{10} - L_9$			941.67	-----	-249	176	-64	76	-633	-622	21	-68	0.795	0.199	1.00	Yes	0.492	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{11} - L_{10}$			993.03	-----	-302	257	-84	89	-512	-449	213	77	0.794	0.200	1.00	Yes	0.492	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{12} - L_{11}$			979.60	-----	-103	359	1	133	-376	-311	287	165	0.783	0.208	1.00	Yes	0.485	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{12} - L_{13}$			662.56	-----	-107	282	30	73	167	238	275	-19	0.783	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{13} - L_{14}$			641.10	-----	-302	233	-18	57	61	348	-52	31	0.758	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		$U_{14} - L_{15}$			706.26	-----	-195	188	4	81	-198	271	-90	122	0.835	0.160	1.00	Yes	0.459	0.088	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{15} - L_{16}$			566.98	-----	-100	15	-18	21	-40	270	28	84	0.831	0.164	1.00	Yes	0.457	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{17} - L_{16}$			-----	-377.13	-18	-31	-25	-56	29	19	-385	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.129	1.00	Yes	0.798	0.072	0.87	Yes	1.00	**3.88**
		$U_{18} - L_{17}$			304.82	-325.91	-79	6	-31	-61	-195	-221	-667	-15	0.548	0.294	0.85	Yes	0.302	0.162	0.47	Yes	0.750	0.248	1.00	Yes	0.690	0.100	0.80	Yes	1.00	**5.76**
		$U_{19} - L_{18}$			389.77	-154.66	-108	1	31	-22	-534	-458	197	153	0.701	0.292	1.00	Yes	0.386	0.161	0.55	Yes	0.355	0.297	0.66	Yes	0.327	0.137	0.47	Yes	1.00	**3.59**
		$U_{20} - L_{19}$			631.16	-----	4	32	-15	-8	-517	-413	136	151	0.828	0.167	1.00	Yes	0.500	0.092	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**

Operating Loads - 5C1

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	$U_0 - U_1$	-----	-522.75	3	102	-42	-1029	10	-44	-59	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.282	1	Yes	0.705	0.245	0.95	Yes	1.00	**5.08**
		$U_1 - U_2$	-----	-554.40	-48	123	-172	-887	-24	39	-98	28	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.242	1	Yes	0.748	0.211	0.96	Yes	1.00	**3.54**
		$U_2 - U_3$	181.14	-559.33	-72	299	-304	-744	-26	-89	202	-145	0.208	0.211	0.42	Yes	0.140	0.138	0.28	Yes	0.761	0.233	1	Yes	0.754	0.177	0.94	Yes	1.00	**3.55**
		$U_3 - U_4$	396.04	-566.96	131	310	-244	-909	-119	-93	20	-220	0.454	0.253	0.71	Yes	0.312	0.174	0.49	Yes	0.771	0.225	1	Yes	0.765	0.216	0.99	Yes	1.00	**4.57**
		$U_4 - U_5$	392.33	-549.03	138	298	-1073	-165	-205	-13	-125	-128	0.450	0.290	0.74	Yes	0.309	0.199	0.51	Yes	0.747	0.239	0.99	Yes	0.740	0.255	1.00	Yes	1.00	**4.47**
		$U_5 - U_6$	630.49	-----	245	426	-926	204	-284	7	-39	-302	0.723	0.271	1.00	Yes	0.487	0.177	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_6 - U_7$	824.45	-----	309	200	-646	-105	-352	100	-490	-218	0.788	0.205	1.00	Yes	0.551	0.141	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_7 - U_8$	1087.97	-----	-25	1346	-62	684	-263	412	-243	174	0.754	0.246	1.00	Yes	0.526	0.168	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_8 - U_9$	907.33	-----	1348	-162	618	-162	-132	238	32	185	0.743	0.255	1.00	Yes	0.509	0.174	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.34**
		$U_9 - U_{10}$	666.81	-----	221	256	113	-903	123	434	180	329	0.723	0.272	1.00	Yes	0.490	0.182	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		$U_{10} - U_{11}$	-----	-574.22	259	-63	207	-1171	222	101	390	86	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.235	0.98	Yes	0.733	0.262	1.00	Yes	1.00	**4.47**
		$U_{11} - U_{12}$	-----	-879.58	197	-108	-20	-954	159	103	292	63	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.164	1	Yes	0.825	0.158	0.99	Yes	1.00	**3.78**
		$U_{12} - U_{13}$	-----	-1165.29	-22	-159	-244	-1243	222	-30	294	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1	Yes	0.778	0.171	0.95	Yes	1.00	**3.79**
		$U_{13} - U_{14}$	-----	-1350.60	-102	-346	-267	-1743	151	72	199	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.215	1	Yes	0.774	0.192	0.97	Yes	1.00	**3.76**
		$U_{14} - U_{15}$	-----	-1313.45	-243	-181	-1605	-748	186	-48	256	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.230	1	Yes	0.753	0.177	0.94	Yes	1.00	**3.58**
		$U_{15} - U_{16}$	-----	-1344.50	-73	-411	-1327	-845	24	-61	164	-222	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.220	1	Yes	0.771	0.146	0.92	Yes	1.00	**3.40**
		$U_{16} - U_{17}$	-----	-1339.19	-313	-183	-1584	-549	54	-172	-46	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.215	1	Yes	0.768	0.175	0.95	Yes	1.00	**3.62**
		$U_{17} - U_{18}$	-----	-1020.45	-167	-102	-989	-48	-157	-232	-79	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.190	1	Yes	0.798	0.161	0.96	Yes	1.00	**3.16**
		$U_{18} - U_{19}$	-----	-729.42	-195	-29	-719	-36	-191	-171	-82	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.168	1	Yes	0.821	0.145	0.97	Yes	1.00	**3.27**
		$U_{19} - U_{20}$	-----	-651.92	-171	-26	-1280	445	-121	7	173	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.216	0.96	Yes	0.733	0.258	1.00	Yes	1.00	**7.84**
	Structure 2	$U_0 - U_1$	-----	-600.02	169	-129	225	-1683	95	182	-20	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.218	0.94	Yes	0.709	0.286	1.00	Yes	1.00	**5.78**
		$U_1 - U_2$	-----	-774.48	-105	-137	-133	-1140	337	646	203	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.246	1	Yes	0.747	0.173	0.93	Yes	1.00	**3.30**
		$U_2 - U_3$	-----	-1124.09	-81	-198	-359	-1466	612	-3	168	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.188	1	Yes	0.798	0.149	0.95	Yes	1.00	**3.77**
		$U_3 - U_4$	-----	-1367.42	-350	-261	-1054	-1563	108	-320	482	221	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1	Yes	0.779	0.139	0.92	Yes	1.00	**3.82**
		$U_4 - U_5$	-----	-1464.03	-347	-290	-885	-2069	-86	-372	463	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.235	1	Yes	0.752	0.171	0.93	Yes	1.00	**3.69**
		$U_5 - U_6$	-----	-1529.00	-357	49	-924	-1564	-130	-311	38	-329	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.785	0.130	0.92	Yes	1.00	**3.78**
		$U_6 - U_7$	-----	-1303.06	-239	-52	-711	-1972	-102	-271	31	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.246	1	Yes	0.742	0.176	0.92	Yes	1.00	**3.33**
		$U_7 - U_8$	-----	-1300.29	-142	-179	-2122	-754	-196	-224	-113	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.252	1	Yes	0.740	0.189	0.93	Yes	1.00	**3.33**
		$U_8 - U_9$	-----	-1157.06	-265	129	-1745	-421	-246	-188	-51	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1	Yes	0.785	0.186	0.98	Yes	1.00	**3.57**
		$U_9 - U_{10}$	-----	-908.64	-49	330	-1715	-182	-305	-133	-131	-161	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.210	1	Yes	0.784	0.209	1.00	Yes	1.00	**3.96**
		$U_{10} - U_{11}$	603.90	-759.43	163	430	-1691	-309	-191	-59	-137	-243	0.510	0.268	0.78	Yes	0.347	0.173	0.52	Yes	0.759	0.232	1	Yes	0.755	0.239	1.00	Yes	1.00	**5.63**
		$U_{11} - U_{12}$	823.78	-----	189	518	-1697	229	-377	-167	-203	-481	0.696	0.298	1.00	Yes	0.467	0.199	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{12} - U_{13}$	1325.30	-----	396	77	-134	-166	-514	-38	-483	-393	0.895	0.099	1.00	Yes	0.638	0.068	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		$U_{13} - U_{14}$	1364.21	-----	-299	3018	-409	1506	-657	310	-538	-176	0.671	0.324	1.00	Yes	0.475	0.213	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.50**
		$U_{14} - U_{15}$	1399.96	-----	2923	-1	1299	-97	-586	238	-251	144	0.688	0.311	1.00	Yes	0.487	0.204	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.57**
		$U_{15} - U_{16}$	1450.99	-----	117	439	-118	81	-18	790	85	459	0.877	0.117	1.00	Yes	0.624	0.081	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.47**
		$U_{16} - U_{17}$	1015.43	-----	638	278	488	-1523	315	346	498	266	0.748	0.244	1.00	Yes	0.498	0.160	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.86**
		$U_{17} - U_{18}$	740.87	-----	490	288	113	-1218	49	202	313	228	0.744	0.253	1.00	Yes	0.495	0.167	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		$U_{18} - U_{19}$	544.87	-622.40	522	240	178	-1521	-4	64	195	-29	0.547	0.287	0.84	Yes	0.359	0.182	0.55	Yes	0.740	0.129	0.87	Yes	0.735	0.258	1.00	Yes	1.00	**5.69**
		$U_{19} - U_{20}$	317.75	-715.78	345	196	-206	-1303	-4	174	127	40	0.298	0.232	0.54	Yes	0.198	0.153	0.36	Yes	0.795	0.195	1	Yes	0.790	0.209	1.00	Yes	1.00	**4.79**
		$U_{20} - U_{21}$	-----	-850.72	176	-2	-75	-1447	101	9	206	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.211	1	Yes	0.776	0.210	0.99	Yes	1.00	**4.54**
		$U_{21} - U_{22}$	-----	-817.67	10	41	-321	-1506	-30	-58	34	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.246	1	Yes	0.746	0.218	0.97	Yes	1.00	**4.10**
		$U_{22} - U_{23}$	-----	-788.64	-3	-8	-1496	-652	-89	-103	14	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.273	1	Yes	0.720	0.217	0.94	Yes	1.00	**3.94**
		$U_{23} - U_{24}$	-----	-792.23	28	118	-1479	-354	-227	-107	-12	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.264	1	Yes	0.723	0.214	0.94	Yes	1.00	**4.05**
		$U_{24} - U_{25}$	254.98	-697.77	141	275	-1285	-330	-258	-26	-122	-150	0.239	0.240	0.48	Yes	0.158	0.158	0.32	Yes	0.775	0.225	1	Yes	0.770	0.206	0.98	Yes	1.00	**4.24**
		$U_{25} - U_{26}$	463.88	-621.14	194	455	-1561	60	-229	61	-77	-118	0.466	0.298	0.77	Yes	0.305	0.190	0.50	Yes	0.738	0.187	0.93	Yes	0.734	0.265	1.00	Yes	1.00	**5.17**
		$U_{26} - U_{27}$	696.96	-----	244	452	-1541	125	-209	30	-142	-160	0.700	0.292	1.00	Yes	0.466	0.194	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		$U_{27} - U_{28}$	947.92	-----	227	574	-1961	417	-346	-40	-322	-457	0.698	0.294	1.00	Yes	0.465	0.194	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		$U_{28} - U_{29}$	1500.63	-----	417	126	-14	-139	-454	192	-189	58	0.907	0.086	1.00	Yes	0.645	0.059	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.56**
		$U_{29} - U_{30}$	1353.37	-----	-124	3126	-145	1303	-578	595	-128	336	0.665	0.330	1.00	Yes	0.471	0.216	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.53**
		$U_{30} - U_{31}$	1457.98	-----	2736	-102	1380	-347	-269	373	291	409	0.717	0.281	1.00	Yes	0.508	0.184	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.29**
		$U_{31} - U_{32}$	1295.24	-----	52	424	-156	-34	132	666	393	480	0.875	0.117	1.00	Yes	0.623	0.081	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.31**
		$U_{32} - U_{33}$	849.90	-----	521	234	401	-1459	316	278	594	175	0.718	0.278	1.00	Yes	0.482	0.186	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{33} - U_{34}$	802.02	-796.01	519	311	-137	-1425	102	229	373	258	0.677	0.247	0.93	Yes	0.461	0.160	0.63	Yes	0.796	0.194	1	Yes	0.791	0.201	1.00	Yes	1.00	**6.80**
		$U_{34} - U_{35}$	-----	-936.26	431	41	-143	-1569	103	19	277	8	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.167	0.98	Yes	0.808	0.191	1.00	Yes	1.00	**4.73**
		$U_{35} - U_{36}$	-----	-1196.96	212	-208	-239	-1604	92	117	210	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.180	1	Yes	0.812	0.171	0.99	Yes	1.00	**4.30**
		$U_{36} - U_{37}$	-----	-1310.30	-97	-16	-548	-2203	163	-35	279	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.245	1	Yes	0.746	0.196	0.95	Yes	1.00	**3.78**
		$U_{37} - U_{38}$	-----	-1279.63	84	-207	-2074	-971	19	26	203	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.729	0.185	0.92	Yes	1.00	**3.64**
		$U_{38} - U_{39}$	-----	-1496.66	82	-379	-1854	-1455	84	-94	233	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.219	1	Yes	0.768	0.154	0.93	Yes	1.00	**3.95**
		$U_{39} - U_{40}$	-----	-1403.01	-307	-461	-2365	-1069	-115	-131	-79	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.265	1	Yes	0.720	0.196	0.92	Yes	1.00	**3.41**
		$U_{40} - U_{41}$	-----	-1290.71	-389	-426	-1975	-1064	-89	-126	-146	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.250	1	Yes	0.735	0.176	0.92	Yes	1.00	**3.23**
		$U_{41} - U_{42}$	-----	-1121.56	-260	-180	-1859	-309	-91	50	-81	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.199	1	Yes	0.796	0.189	0.99	Yes	1.00	**3.49**
		$U_{42} - U_{43}$	-----	-831.66	-261	-56	-1186	-198	124	-49	135	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.189	1	Yes	0.803	0.180	0.99	Yes	1.00	**3.68**
		$U_{43} - U_{44}$	-----	-627.82	-95	-179	-1490	758	-49	10	76	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.214	0.96	Yes	0.741	0.253	1.00	Yes	1.00	**6.70**
	Structure 3	$U_0 - U_1$	-----	-612.36	171	-167	506	-1500	61	128	-35	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.695	0.201	0.9	Yes	0.689	0.302	1.00	Yes	1.00	**6.84**
		$U_1 - U_2$	-----	-679.59	-67	-114	2	-792	250	505	201	11	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.222	1	Yes	0.765	0.159	0.93	Yes	1.00	**3.16**
		$U_2 - U_3$	-----	-1003.92	-78	-116	-38	-1004	513	4	210	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1	Yes	0.786	0.163	0.95	Yes	1.00	**3.66**
		$U_3 - U_4$	-----	-1348.49	-140	-197	-531	-1539	125	-241	411	237	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.213	1	Yes	0.773	0.170	0.95	Yes	1.00	**4.26**
		$U_4 - U_5$	-----	-1348.39	-321	-43	-616	-1219	-17	-313	191	-346	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.216	1	Yes	0.773	0.135	0.91	Yes	1.00	**3.68**
		$U_5 - U_6$	-----	-1317.30	-148	-222	-526	-1707	-53	-210	-15	-263	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.232	1	Yes	0.755	0.188	0.95	Yes	1.00	**3.63**
		$U_6 - U_7$	-----	-1319.59	-304	-84	-1822	-475	-92	-232	1	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.233	1	Yes	0.756	0.201	0.96	Yes	1.00	**3.65**
		$U_7 - U_8$	-----	-1145.24	-129	-47	-1286	-298	-205	-202	-101	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.220	1	Yes	0.765	0.177	0.95	Yes	1.00	**3.42**
		$U_8 - U_9$	-----	-873.46	-122	177	-995	-74	-100	-107	-94	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.171	1	Yes	0.819	0.165	0.99	Yes	1.00	**3.36**
		$U_9 - U_{10}$	-----	-590.72	-81	228	-1077	109	-209	-125	-136	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.223	0.99	Yes	0.754	0.241	1.00	Yes	1.00	**3.90**
		$U_{10} - U_{11}$	633.58	-----	231	201	-1035	-13	-355	-90	-470	-251	0.687	0.307	1.00	Yes	0.465	0.206	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.95**
		$U_{11} - U_{12}$	879.12	-----	-187	1379	-179	610	-360	180	-298	4	0.720	0.275	1.00	Yes	0.493	0.187	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.30**
		$U_{12} - U_{13}$	1076.61	-----	1374	-25	644	-45	-421	97	-153	52	0.746	0.251	1.00	Yes	0.520	0.171	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		$U_{13} - U_{14}$	857.03	-----	199	333	52	-540	-109	399	138	460	0.820	0.178	1.00	Yes	0.573	0.123	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		$U_{14} - U_{15}$	656.11	-----	431	251	210	-827	50	164	264	-18	0.752	0.241	1.00	Yes	0.507	0.157	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_{15} - U_{16}$	378.65	-559.51	304	162	-25	-1014	-24	158	132	116	0.434	0.268	0.71	Yes	0.298	0.184	0.49	Yes	0.761	0.198	0.96	Yes	0.754	0.241	1.00	Yes	1.00	**4.47**
		$U_{16} - U_{17}$	386.39	-586.86	347	105	-827	-447	22	92	209	1	0.443	0.232	0.68	Yes	0.304	0.159	0.47	Yes	0.799	0.198	1	Yes	0.791	0.197	0.99	Yes	1.00	**4.63**
		$U_{17} - U_{18}$	149.98	-559.70	272	-120	-759	-411	-73	179	0	-147	0.172	0.211	0.39	Yes	0.116	0.137	0.26	Yes	0.762	0.238	1	Yes	0.755	0.180	0.94	Yes	1.00	**3.31**
		$U_{18} - U_{19}$	-----	-551.49	69	-26	-880	-251	180	37	59	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.244	1	Yes	0.744	0.209	0.96	Yes	1.00	**3.20**
		$U_{19} - U_{20}$	-----	-498.97	139	-238	-897	-257	-51	25	311	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.313	1	Yes	0.673	0.213	0.89	Yes	1.00	**4.72**

Axial AI Operating

Operating Loads - 5C1

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																		
Center Truss - Lower Chord	Structure 1	L_0 - L_1	206.48	-----	671	-1266	548	-602	-381	-1400	61	224	0.316	0.680	1.00	Yes	0.186	0.408	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.59**
		L_1 - L_2	437.12	-----	-346	-592	44	26	-708	154	34	12	0.669	0.330	1.00	Yes	0.408	0.214	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_2 - L_3	656.93	-----	-832	-550	-7	106	19	-211	3	-13	0.756	0.235	1.00	Yes	0.437	0.141	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.59**
		L_3 - L_4	642.27	-238.30	-946	-441	67	274	-126	173	-22	19	0.739	0.256	1.00	Yes	0.439	0.166	0.61	Yes	0.326	0.229	0.56	Yes	0.323	0.228	0.56	Yes	1.00	**4.46**
		L_4 - L_5	-----	-550.64	-584	-79	105	505	-135	72	180	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.123	0.97	Yes	0.839	0.155	1.00	Yes	1.00	**4.44**
		L_5 - L_6	-----	-747.92	-269	-43	142	580	-35	76	9	64	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.117	0.99	Yes	0.863	0.128	1.00	Yes	1.00	**4.37**
		L_6 - L_7	-----	-1189.67	-52	103	195	-18	113	-43	205	83	-----	-----	-----	-----	-----	-----	-----	-----	0.968	0.029	1	Yes	0.958	0.031	0.99	Yes	1.00	**6.41**
		L_7 - L_8	-----	-1249.05	-32	582	-26	1309	41	73	257	368	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.193	1	Yes	0.791	0.173	0.97	Yes	1.00	**5.51**
		L_8 - L_9	-----	-1265.02	554	-47	1418	-71	38	-13	170	86	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.185	1	Yes	0.801	0.188	0.99	Yes	1.00	**5.58**
		L_9 - L_{10}	-----	-1195.70	196	-164	-40	142	25	10	29	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.973	0.013	0.99	Yes	0.962	0.031	1.00	Yes	1.00	**10.09**
		L_{10} - L_{11}	-----	-545.86	-23	-600	494	-14	-135	-353	84	15	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.126	0.97	Yes	0.832	0.159	1.00	Yes	1.00	**6.17**
		L_{11} - L_{12}	583.96	-----	-6	-625	353	-185	-399	135	-11	12	0.756	0.235	1.00	Yes	0.454	0.152	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		L_{12} - L_{13}	1076.38	-----	-421	-670	86	-90	-55	-226	-25	-39	0.849	0.145	1.00	Yes	0.543	0.087	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		L_{13} - L_{14}	1324.68	-----	-361	-1258	233	-382	-524	139	-104	60	0.779	0.217	1.00	Yes	0.505	0.134	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.62**
		L_{14} - L_{15}	1676.62	-----	-1024	-1335	-333	-80	-225	125	-63	-51	0.819	0.177	1.00	Yes	0.532	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_{15} - L_{16}	1641.51	-----	-945	-1530	-190	-385	-105	-34	-76	15	0.802	0.192	1.00	Yes	0.515	0.112	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		L_{16} - L_{17}	1261.88	-----	-1252	-352	-394	37	-98	109	-33	-64	0.798	0.194	1.00	Yes	0.518	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		L_{17} - L_{18}	957.99	-----	-682	-296	-183	-57	-84	-212	-28	9	0.834	0.159	1.00	Yes	0.534	0.095	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_{18} - L_{19}	450.56	-----	-738	148	-258	186	-153	394	5	-9	0.690	0.303	1.00	Yes	0.466	0.192	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.08**
		L_{19} - L_{20}	400.51	-----	-372	51	-1161	739	-13	-3	-152	-34	0.613	0.380	1.00	Yes	0.374	0.257	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.29**
	Structure 2	L_0 - L_1	165.99	-----	576	-1743	714	-1529	-442	-1535	47	162	0.250	0.746	1.00	Yes	0.152	0.364	0.52	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.27**
		L_1 - L_2	547.86	-----	231	-1099	157	-187	-663	126	79	97	0.665	0.332	1.00	Yes	0.396	0.210	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_2 - L_3	1065.56	-----	-377	-906	-23	-122	-11	-236	118	165	0.840	0.156	1.00	Yes	0.551	0.093	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_3 - L_4	1382.75	-----	-395	-1281	52	-288	-439	85	45	126	0.812	0.185	1.00	Yes	0.547	0.115	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		L_4 - L_5	1793.12	-----	-1406	-1551	-215	-182	99	-195	16	-11	0.836	0.160	1.00	Yes	0.553	0.095	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		L_5 - L_6	1854.64	-----	-1327	-1940	-17	-289	-414	100	-91	57	0.796	0.198	1.00	Yes	0.534	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		L_6 - L_7	1861.56	-----	-2317	-1229	-330	-38	25	-79	54	-25	0.788	0.209	1.00	Yes	0.524	0.121	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		L_7 - L_8	1463.56	-----	-1270	-1097	-124	339	-195	48	-58	79	0.839	0.156	1.00	Yes	0.551	0.092	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		L_8 - L_9	1190.71	-----	-1076	-535	-42	558	-59	53	54	-148	0.833	0.159	1.00	Yes	0.561	0.099	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		L_9 - L_{10}	876.08	-773.62	-1153	-510	-16	723	-40	-16	-36	23	0.782	0.189	0.98	Yes	0.455	0.119	0.58	Yes	0.818	0.125	0.95	Yes	0.812	0.184	1.00	Yes	1.00	**7.26**
		L_{10} - L_{11}	-----	-720.68	-854	127	26	571	-23	57	127	-58	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.083	0.94	Yes	0.847	0.149	1.00	Yes	1.00	**4.74**
		L_{11} - L_{12}	-----	-1053.70	-275	383	9	993	-53	17	34	91	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.096	0.97	Yes	0.864	0.135	1.00	Yes	1.00	**5.67**
		L_{12} - L_{13}	-----	-1445.45	-385	-239	-39	-898	-24	-182	432	209	-----	-----	-----	-----	-----	-----	-----	-----	0.872	0.124	1	Yes	0.865	0.089	0.96	Yes	1.00	**6.93**
		L_{13} - L_{14}	-----	-1504.85	-477	1319	-980	2680	-194	-261	214	219	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.171	0.94	Yes	0.757	0.234	1.00	Yes	1.00	**6.11**
		L_{14} - L_{15}	-----	-1488.79	1251	-546	2806	-835	-244	-169	48	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.176	0.94	Yes	0.749	0.245	1.00	Yes	1.00	**5.59**
		L_{15} - L_{16}	-----	-1485.91	-513	-93	-1054	231	-114	7	-199	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.103	1	Yes	0.889	0.105	1.00	Yes	1.00	**7.80**
		L_{16} - L_{17}	-----	-1172.60	468	-40	1157	85	71	42	18	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.120	0.99	Yes	0.854	0.143	1.00	Yes	1.00	**6.42**
		L_{17} - L_{18}	-----	-839.05	171	-720	498	193	-304	94	18	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.887	0.104	1	Yes	0.881	0.115	1.00	Yes	1.00	**4.80**
		L_{18} - L_{19}	-----	-654.41	-185	-554	631	86	63	-165	-12	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.878	0.098	0.98	Yes	0.872	0.122	1.00	Yes	1.00	**4.74**
		L_{19} - L_{20}	629.86	-596.08	-71	-1035	535	194	-287	206	-28	-38	0.714	0.244	0.96	Yes	0.422	0.155	0.58	Yes	0.799	0.158	0.96	Yes	0.794	0.200	1.00	Yes	1.00	**6.14**
		L_{20} - L_{21}	994.16	-456.54	-1005	-1146	455	40	-113	-287	-4	-45	0.793	0.198	1.00	Yes	0.520	0.119	0.64	Yes	0.431	0.184	0.62	Yes	0.428	0.167	0.60	Yes	1.00	**6.57**
		L_{21} - L_{22}	938.10	-----	-1107	-1529	248	-120	-104	218	-53	9	0.748	0.247	1.00	Yes	0.500	0.154	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_{22} - L_{23}	962.93	-----	-1096	-1438	-108	232	-129	137	34	-42	0.768	0.225	1.00	Yes	0.514	0.140	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.43**
		L_{23} - L_{24}	1017.74	-469.48	-975	-1233	51	429	-74	51	4	74	0.812	0.188	1.00	Yes	0.532	0.111	0.65	Yes	0.444	0.207	0.66	Yes	0.440	0.180	0.63	Yes	1.00	**6.97**
		L_{24} - L_{25}	709.37	-610.88	-846	-647	191	529	-50	173	117	-106	0.804	0.190	1.00	Yes	0.475	0.121	0.60	Yes	0.819	0.111	0.94	Yes	0.814	0.163	0.98	Yes	1.00	**6.75**
		L_{25} - L_{26}	-----	-643.69	-723	-235	79	599	20	20	13	80	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.102	0.97	Yes	0.858	0.139	1.00	Yes	1.00	**5.22**
		L_{26} - L_{27}	-----	-842.26	-683	-89	168	499	18	-22	150	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.085	0.98	Yes	0.884	0.109	1.00	Yes	1.00	**5.54**
		L_{27} - L_{28}	-----	-1169.68	-77	382	60	1134	24	112	93	201	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.122	0.99	Yes	0.852	0.140	1.00	Yes	1.00	**7.18**
		L_{28} - L_{29}	-----	-1546.36	-179	-454	-153	-117	142	105	269	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.061	1	Yes	0.925	0.045	0.98	Yes	1.00	**8.81**
		L_{29} - L_{30}	-----	-1501.12	-499	1190	-721	2710	95	125	-8	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.166	0.93	Yes	0.755	0.237	1.00	Yes	1.00	**5.69**
		L_{30} - L_{31}	-----	-1450.38	1243	-471	3035	-906	128	73	190	93	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.184	0.93	Yes	0.730	0.265	1.00	Yes	1.00	**6.31**
		L_{31} - L_{32}	-----	-1495.76	-279	-308	-751	224	87	57	-166	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.902	0.088	1	Yes	0.895	0.075	0.97	Yes	1.00	**7.90**
		L_{32} - L_{33}	-----	-1047.89	412	-213	1004	55	52	43	-21	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.104	0.98	Yes	0.859	0.137	1.00	Yes	1.00	**5.65**
		L_{33} - L_{34}	-----	-735.27	178	-753	541	109	-262	172	19	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.099	0.97	Yes	0.864	0.132	1.00	Yes	1.00	**4.74**
		L_{34} - L_{35}	806.55	-773.23	-193	-1142	757	24	35	-334	-13	-75	0.720	0.223	0.95	Yes	0.419	0.138	0.56	Yes	0.817	0.113	0.94	Yes	0.812	0.183	1.00	Yes	1.00	**6.97**
		L_{35} - L_{36}	1104.33	-----	-221	-1208	559	-16	-626	166	-77	3	0.772	0.222	1.00	Yes	0.520	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_{36} - L_{37}	1430.62	-----	-1002	-1509	425	-11	57	-97	34	-25	0.820	0.175	1.00	Yes	0.539	0.102	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		L_{37} - L_{38}	1794.91	-----	-1078	-2555	79	-391	-177	94	-56	48	0.760	0.236	1.00	Yes	0.505	0.137	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		L_{38} - L_{39}	1869.53	-----	-1666	-2076	-316	-67	-16	96	11	-71	0.802	0.190	1.00	Yes	0.538	0.115	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.73**
		L_{39} - L_{40}	1743.52	-----	-1260	-1897	-233	-382	-56	-43	-59	1	0.813	0.183	1.00	Yes	0.538	0.108	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		L_{40} - L_{41}	1383.41	-----	-1484	-718	-391	18	-75	157	-5	-8	0.813	0.186	1.00	Yes	0.547	0.115	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{41} - L_{42}	1042.40	-----	-1120	-372	-184	-105	29	-62	38	135	0.822	0.176	1.00	Yes	0.539	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		L_{42} - L_{43}	554.36	-----	-1400	447	-305	168	-66	225	174	78	0.673	0.322	1.00	Yes	0.400	0.207	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		L_{43} - L_{44}	237.05	-----	-613	74	-3008	1113	-587	-171	167	49	0.288	0.709	1.00	Yes	0.171	0.455	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.75**
	Structure 3	L_0 - L_1	240.23	-----	398	-910	815	-1542	-175	-792	-5	-21	0.368	0.627	1.00	Yes	0.224	0.416	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**14.98**
		L_1 - L_2	448.14	-----	302	-763	154	-181	-380	196	35	60	0.686	0.308	1.00	Yes	0.464	0.195	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		L_2 - L_3	959.37	-----	-183	-689	-18	-143	3	-238	101	145	0.835	0.163	1.00	Yes	0.535	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.39**
		L_3 - L_4	1296.73	-----	-208	-1011	43	-296	-5	287	29	118	0.820	0.174	1.00	Yes	0.532	0.107	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		L_4 - L_5	1659.37	-----	-1456	-983	-273	-133	5	-182	26	11	0.811	0.188	1.00	Yes	0.520	0.110	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.67**
		L_5 - L_6	1616.64	-----	-695	-1532	-32	-301	-315	293	-64	130	0.790	0.207	1.00	Yes	0.513	0.125	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_6 - L_7	1432.52	-----	-1031	-749	-328	220	-120	71	5	-32	0.842	0.152	1.00	Yes	0.546	0.093	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_7 - L_8	1106.41	-----	-526	-620	-80	70	-21	112	-19	72	0.873	0.123	1.00	Yes	0.558	0.073	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		L_8 - L_9	619.39	-----	-658	-65	-192	349	-17	95	65	-96	0.802	0.191	1.00	Yes	0.481	0.126	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.31**
		L_9 - L_{10}	-----	-543.38	-624	-144	-24	497	-13	87	-32	5	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.101	0.94	Yes	0.828	0.165	1.00	Yes	1.00	**6.43**
		L_{10} - L_{11}	-----	-1186.61	-195	191	117	-97	73	-133	95	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.971	0.014	0.99	Yes	0.961	0.031	1.00	Yes	1.00	**10.48**
		L_{11} - L_{12}	-----	-1247.67	-56	533	-137	1427	-89	-105	-189	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.790	0.189	0.98	Yes	1.00	**5.60**
		L_{12} - L_{13}	-----	-1238.12	555	-35	1355	-52	-137	-142	-309	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.197	1	Yes	0.784	0.179	0.97	Yes	1.00	**5.33**
		L_{13} - L_{14}	-----	-1172.21	90	-39	-70	187	-90	-74	-152	-191	-----	-----	-----	-----	-----	-----	-----	-----	0.954	0.039	1	Yes	0.944	0.029	0.98	Yes	1.00	**6.19**
		L_{14} - L_{15}	-----	-736.43	95	-367	566	137	-82	-222	1	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.133	1	Yes	0.850	0.125	0.98	Yes	1.00	**4.31**
		L_{15} - L_{16}	-----	-551.62	-24	-585	476	155	-402	312	13	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.139	0.99	Yes	0.840	0.155	1.00	Yes	1.00	**4.44**
		L_{16} - L_{17}	632.30	-190.21	-200	-1029	292	17	-98	-29	38	-80	0.727	0.264	1.00	Yes	0.432	0.172	0.61	Yes	0.260	0.206	0.47	Yes	0.257	0.249	0.51	Yes	1.00	**4.22**
		L_{17} - L_{18}	650.95	-----	-508	-928	70	-60	-25	98	26	107	0.749	0.241	1.00	Yes	0.433	0.145	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		L_{18} - L_{19}	471.18	-----	-674	-371	8	25	-7	313	54	-76	0.721	0.269	1.00	Yes	0.440	0.179	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		L_{19} - L_{20}	151.81	-----	-1584	1194	-1571	1112	1338	364	-18	-5	0.232	0.763	1.00	Yes	0.137	0.459	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**23.19**

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-377.31	-22	45	-73	155	-93	-30	-137	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.138	0.99	Yes	0.798	0.198	1.00	Yes	1.00	**1.40**
		$U_1 - L_1$			-----	-358.93	33	-29	-154	180	72	33	-432	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.189	0.98	Yes	0.759	0.231	1.00	Yes	1.00	**4.32**
		$U_2 - L_2$			105.19	-365.71	92	-103	-114	174	54	5	365	195	0.189	0.329	0.52	Yes	0.104	0.181	0.29	Yes	0.799	0.183	0.99	Yes	0.774	0.223	1.00	Yes	1.00	**6.34**
		$U_3 - L_3$			282.03	-----	246	-256	-80	145	-225	-52	565	345	0.507	0.491	1.00	Yes	0.279	0.270	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.23**
		$U_4 - L_4$			-----	-426.37	48	-70	56	-61	-126	-49	-78	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.937	0.062	1	Yes	0.902	0.089	1.00	Yes	1.00	**5.52**
		$U_5 - L_5$			-----	-429.57	47	-60	231	-253	-125	-19	-126	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.104	0.89	Yes	0.741	0.257	1.00	Yes	1.00	**3.97**
		$U_6 - L_6$			-----	-545.25	72	-72	195	-242	-134	1	13	31	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.090	0.92	Yes	0.782	0.212	1.00	Yes	1.00	**4.14**
		$U_7 - L_7$			-----	-454.87	118	-132	263	-294	-129	46	56	89	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.119	0.88	Yes	0.702	0.290	1.00	Yes	1.00	**2.51**
		$U_8 - L_8$			-----	-1348.96	-8	5	-19	22	-202	-69	-181	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.974	0.021	1	Yes	0.935	0.004	0.94	Yes	1.00	**4.51**
		$U_9 - L_9$			-----	-640.21	-168	193	-352	409	-229	-161	-906	-420	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.233	1	Yes	0.723	0.227	0.96	Yes	1.00	**2.76**
		$U_{10} - L_{10}$			-----	-826.89	-115	108	-293	352	-205	-147	-280	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.110	0.97	Yes	0.816	0.182	1.00	Yes	1.00	**4.61**
		$U_{11} - L_{11}$			-----	-689.89	-113	158	-272	413	-186	-73	145	122	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.095	0.93	Yes	0.803	0.192	1.00	Yes	1.00	**4.26**
		$U_{12} - L_{12}$			-----	-541.21	-63	65	-283	294	-168	-11	-81	95	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.094	0.88	Yes	0.743	0.251	1.00	Yes	1.00	**4.08**
		$U_{13} - L_{13}$			-----	-405.27	-15	29	-157	191	-97	77	-58	118	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.089	0.91	Yes	0.776	0.218	1.00	Yes	1.00	**3.27**
		$U_{14} - L_{14}$			-----	-386.97	-81	101	-121	139	-86	-21	-105	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.086	0.95	Yes	0.819	0.178	1.00	Yes	1.00	**5.60**
		$U_{15} - L_{15}$			187.63	-317.61	-156	143	240	-255	-152	-140	12	-176	0.337	0.377	0.72	Yes	0.186	0.207	0.40	Yes	0.712	0.163	0.88	Yes	0.672	0.326	1.00	Yes	1.00	**5.46**
		$U_{16} - L_{16}$			-----	-320.51	-32	15	244	-250	-107	-86	-125	-204	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.164	0.89	Yes	0.678	0.319	1.00	Yes	1.00	**4.17**
		$U_{17} - L_{17}$			-----	-438.91	39	-58	214	-231	-119	-65	-163	-157	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.130	0.96	Yes	0.757	0.234	1.00	Yes	1.00	**3.26**
		$U_{18} - L_{18}$			-----	-535.34	123	-128	437	-447	-163	-62	95	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.094	0.88	Yes	0.745	0.253	1.00	Yes	1.00	**3.57**
		$U_{19} - L_{19}$			-----	-651.09	137	-150	488	-511	-66	10	407	60	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.148	0.97	Yes	0.758	0.237	1.00	Yes	1.00	**3.90**
		$U_{20} - L_{20}$			-----	-596.21	167	-214	404	-492	31	4	608	80	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1	Yes	0.694	0.228	0.93	Yes	1.00	**2.66**
	Structure 2	$U_0 - L_0$			-----	-614.58	-110	176	-415	499	-260	-44	-1133	-192	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.255	1	Yes	0.659	0.212	0.88	Yes	1.00	**2.72**
		$U_1 - L_1$			-----	-665.50	-113	120	-397	440	35	-67	-1298	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.234	1	Yes	0.713	0.187	0.90	Yes	1.00	**3.53**
		$U_2 - L_2$			-----	-618.66	-76	85	-363	408	102	45	-162	40	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.090	0.92	Yes	0.788	0.209	1.00	Yes	1.00	**3.93**
		$U_3 - L_3$			-----	-513.20	-40	46	-183	210	22	131	156	183	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.109	0.99	Yes	0.805	0.192	1.00	Yes	1.00	**3.60**
		$U_4 - L_4$			-----	-356.18	8	7	-175	186	-98	64	-67	133	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.090	0.9	Yes	0.754	0.238	1.00	Yes	1.00	**3.74**
		$U_5 - L_5$			145.67	-369.34	101	-92	-137	168	-106	91	-101	130	0.262	0.253	0.52	Yes	0.144	0.139	0.29	Yes	0.834	0.101	0.94	Yes	0.781	0.215	1.00	Yes	1.00	**4.95**
		$U_6 - L_6$			359.42	-----	201	-210	-109	133	-127	53	272	192	0.646	0.347	1.00	Yes	0.356	0.191	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		$U_7 - L_7$			-----	-392.15	62	-81	111	-129	-136	-32	-120	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.095	0.99	Yes	0.830	0.165	1.00	Yes	1.00	**5.33**
		$U_8 - L_8$			-----	-466.71	32	-53	362	-372	-140	-111	-198	-187	-----	-----	-----	-----	-----	-----	-----	-----	0.677	0.126	0.81	Yes	0.672	0.325	1.00	Yes	1.00	**3.79**
		$U_9 - L_9$			-----	-691.63	122	-150	577	-588	-162	-108	-225	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.093	0.87	Yes	0.741	0.249	1.00	Yes	1.00	**4.55**
		$U_{10} - L_{10}$			-----	-794.99	128	-166	541	-564	-96	-41	-4	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.084	0.87	Yes	0.743	0.249	1.00	Yes	1.00	**4.80**
		$U_{11} - L_{11}$			-----	-818.01	173	-183	510	-518	-53	-66	-111	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.079	0.91	Yes	0.765	0.229	1.00	Yes	1.00	**4.34**
		$U_{12} - L_{12}$			-----	-885.91	179	-171	527	-535	-67	42	144	113	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.089	0.94	Yes	0.768	0.229	1.00	Yes	1.00	**4.34**
		$U_{13} - L_{13}$			-----	-744.74	242	-240	573	-559	-90	42	66	91	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.113	0.95	Yes	0.718	0.274	1.00	Yes	1.00	**3.28**
		$U_{14} - L_{14}$			-----	-1341.19	154	-149	167	-167	-59	124	170	105	-----	-----	-----	-----	-----	-----	-----	-----	0.981	0.017	1	Yes	0.889	0.030	0.92	Yes	1.00	**4.53**
		$U_{15} - L_{15}$			-----	-749.98	-158	160	-551	560	-68	-37	-171	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.142	0.98	Yes	0.723	0.268	1.00	Yes	1.00	**4.41**
		$U_{16} - L_{16}$			-----	-739.00	-107	97	-481	479	-151	-86	-295	-150	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.110	0.97	Yes	0.792	0.204	1.00	Yes	1.00	**4.32**
		$U_{17} - L_{17}$			-----	-670.96	-124	121	-447	470	-96	-32	-166	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.083	0.92	Yes	0.781	0.218	1.00	Yes	1.00	**3.97**
		$U_{18} - L_{18}$			-----	-606.82	-95	96	-387	435	-80	-11	97	60	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.074	0.89	Yes	0.773	0.223	1.00	Yes	1.00	**4.03**
		$U_{19} - L_{19}$			-----	-499.35	-45	51	-251	259	-152	-15	-129	34	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.084	0.84	Yes	0.746	0.249	1.00	Yes	1.00	**3.72**
		$U_{20} - L_{20}$			-----	-410.49	-3	9	-163	181	-150	9	-138	35	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.097	0.94	Yes	0.786	0.206	1.00	Yes	1.00	**3.66**
	Structure 3	$U_{21} - L_{21}$			-----	-359.91	36	-33	-152	180	-140	34	98	93	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.108	0.93	Yes	0.762	0.230	1.00	Yes	1.00	**4.11**
		$U_{22} - L_{22}$			-----	-396.98	-55	50	-51	64	-127	-29	226	15	-----	-----	-----	-----	-----	-----	-----	-----	0.893	0.098	1	Yes	0.840	0.082	0.93	Yes	1.00	**5.78**
		$U_{23} - L_{23}$			-----	-321.27	-91	79	238	-249	-98	-51	-128	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.132	0.86	Yes	0.680	0.318	1.00	Yes	1.00	**4.52**
		$U_{24} - L_{24}$			-----	-377.67	-14	5	230	-237	-90	-62	-117	-102	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.110	0.89	Yes	0.724	0.271	1.00	Yes	1.00	**3.81**
		$U_{25} - L_{25}$			-----	-473.86	35	-51	296	-294	-98	-31	-13	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.084	0.8	Yes	0.708	0.285	1.00	Yes	1.00	**3.66**
		$U_{26} - L_{26}$			-----	-569.49	102	-109	507	-532	-163	-31	-125	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.094	0.86	Yes	0.726	0.272	1.00	Yes	1.00	**3.98**
		$U_{27} - L_{27}$			-----	-635.76	138	-140	546	-552	-151	-1	-108	4	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.083	0.87	Yes	0.740	0.256	1.00	Yes	1.00	**3.88**
		$U_{28} - L_{28}$			-----	-711.73	135	-132	551	-546	-119	22	108	100	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.075	0.9	Yes	0.763	0.234	1.00	Yes	1.00	**3.89**
		$U_{29} - L_{29}$			-----	-738.64	201	-207	583	-597	-119	23	171	86	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.127	0.96	Yes	0.712	0.286	1.00	Yes	1.00	**4.22**
		$U_{30} - L_{30}$			-----	-1335.97	53	-65	27	-51	-90	122	-115	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.977	0.021	1	Yes	0.886	0.011	0.90	Yes	1.00	**4.77**
		$U_{31} - L_{31}$			-----	-683.54	-183	180	-472	472	-118	-60	-752	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.232	1	Yes	0.659	0.226	0.89	Yes	1.00	**3.21**
		$U_{32} - L_{32}$			-----	-916.19	-126	100	-423	448	-186	-97	-292	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.118	1	Yes	0.794	0.192	0.99	Yes	1.00	**4.68**
		$U_{33} - L_{33}$			-----	-855.73	-162	142	-402	437	-140	-67	140	63	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.077	0.94	Yes	0.800	0.193	1.00	Yes	1.00	**4.72**
		$U_{34} - L_{34}$			-----	-826.56	-118	132	-455	493	-173	-30	-119	80	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.081	0.9	Yes	0.773	0.218	1.00	Yes	1.00	**5.20**
		$U_{35} - L_{35}$			-----	-734.35	-113	133	-439	495	-168	44	-131	105	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.069	0.89	Yes	0.787	0.210	1.00	Yes	1.00	**4.76**
		$U_{36} - L_{36}$			-----	-517.23	-49	63	-249	284	-134	72	139	173	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.086	0.84	Yes	0.745	0.249	1.00	Yes	1.00	**3.97**
		$U_{37} - L_{37}$			-----	-384.07	-120	145	-73	82	-88	51	-180	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.111	0.98	Yes	0.813	0.186	1.00	Yes	1.00	**5.18**
		$U_{38} - L_{38}$			352.95	-----	-242	243	169	-168	-101	-105	-153	-185	0.635	0.364	1.00	Yes	0.349	0.200	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.54**
		$U_{39} - L_{39}$			166.95	-328.50	-133	120	214	-232	-135	-106	-132	-170	0.300	0.346	0.65	Yes	0.165	0.190	0.36	Yes	0.742	0.157	0.9	Yes	0.695	0.297	1.00	Yes	1.00	**5.13**
		$U_{40} - L_{40}$			-----	-338.50	-31	8	218	-219	-107	-78	-36	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.120	0.89	Yes	0.716	0.280	1.00	Yes	1.00	**3.94**
		$U_{41} - L_{41}$			-----	-483.38	39	-46	245	-257	-105	-42	-114	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.104	0.93	Yes	0.758	0.234	1.00	Yes	1.00	**3.70**
		$U_{42} - L_{42}$			-----	-581.50	96	-106	487	-493	-85	-50	-2	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.079	0.86	Yes	0.741	0.252	1.00	Yes	1.00	**3.89**
		$U_{43} - L_{43}$			-----	-708.82	132	-149	537	-555	-42	-20	433	57	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.127	0.94	Yes	0.760	0.236	1.00	Yes	1.00	**3.95**
		$U_{44} - L_{44}$			-----	-657.54	191	-236	418	-526	-36	-6	750	127	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1	Yes	0.705	0.223	0.93	Yes	1.00	**2.84**
	Structure 4	$U_0 - L_0$			-----	-584.88	-105	170	-300	404	-247	-32	-751	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.226	1	Yes	0.681	0.188	0.87	Yes	1.00	**2.52**
		$U_1 - L_1$			-----	-615.39	-114	122	-379	412	-3	-77	-1048	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.225	1	Yes	0.716	0.191	0.91	Yes	1.00	**3.62**
		$U_2 - L_2$			-----	-561.50	-91	96	-351	382	84	32	-106	50	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.079	0.91	Yes	0.781	0.216	1.00	Yes	1.00	**3.90**
		$U_3 - L_3$			-----	-470.92	-34	45	-146	182	1	120	-51	150	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.100	0.99	Yes	0.812	0.184	1.00	Yes	1.00	**3.47**
		$U_4 - L_4$			-----	-362.71	20	-11	-161	180	-158	81	96	216	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.110	0.93	Yes	0.767	0.230	1.00	Yes	1.00	**4.27**
		$U_5 - L_5$			177.52	-352.30	119	-116	-166	194	-143	69	-117	140	0.319	0.289	0.61	Yes	0.176	0.159	0.34	Yes	0.790	0.114	0.91	Yes	0.745	0.248	1.00	Yes	1.00	**5.40**
		$U_6 - L_6$			72.62	-423.46	-2	-13	-9	14	-171	8	-114	-32	0.131	0.067	0.20	Yes	0.072	0.037	0.11	Yes	0.945	0.054	1	Yes	0.896	0.018	0.92	Yes	1.00	**6.18**
		$U_7 - L_7$			-----	-368.01	-3	-11	231	-252	-176	-132	-215	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.155	0.9	Yes	0.705	0.288	1.00	Yes	1.00	**3.39**
		$U_8 - L_8$			-----	-517.57	52	-55	336	-336	-161	-102	-102	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.113	0.87	Yes	0.710	0.287	1.00	Yes	1.00	**4.19**
		$U_9 - L_9$			-----	-658.26	100	-148	398	-499	-69	-77	-196	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.106	0.9	Yes	0.766	0.232	1.00	Yes	1.00	**4.43**
		$U_{10} - L_{10}$			-----	-785.38	120	-123	395	-426	-88	12	103	124	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.078	0.9	Yes	0.775	0.221	1.00	Yes	1.00	**4.66**
		$U_{11} - L_{11}$			-----	-647.19	183	-213	416	-469	-45	65	81	137	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.103	0.88	Yes	0.731	0.261	1.00	Yes	1.00	**2.88**
		$U_{12} - L_{12}$			-----	-1332.52	43	-69	93	-158	-108	10	246	105	-----	-----	-----	-----	-----	-----	-----	-----	0.962	0.030	1	Yes	0.924	0.029	0.96	Yes	1.00	**4.34**
		$U_{13} - L_{13}$			-----	-464.38	-105	116	-257	288	-109	-93	-173	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.147	0.93	Yes	0.716	0.283	1.00	Yes	1.00	**2.58**
		$U_{14} - L_{14}$			-----	-559.24	-62	58	-188	218	-162	-134	-46	-112	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.098	0.95	Yes	0.802	0.191	1.00	Yes	1.00	**4.10**
		$U_{15} - L_{15}$			-----	-466.89	-44	50	-139	185	-173	-90	-161	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.106	0.96	Yes	0.805	0.188	1.00	Yes	1.00	**4.07**
		$U_{16} - L_{16}$			-----	-384.88	-135	141	-94	104	-180	-70	-196	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.103	0.95	Yes	0.814	0.181	1.00	Yes	1.00	**4.98**
		$U_{17} - L_{17}$			291.83	-----	-311	316	191	-213	-219	-94	-101	-189	0.525	0.467	1.00	Yes	0.289	0.257	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.37**
		$U_{18} - L_{18}$			122.78	-375.22	-155	153	82	-147	-6	16	419	49	0.221	0.319	0.54	Yes	0.121	0.176	0.30	Yes	0.820	0.167	0.99	Yes	0.794	0.198	1.00	Yes	1.00	**7.55**
		$U_{19} - L_{19}$			-----	-349.12	-43	30	162	-204	-172	-94	220	77	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.158	0.93	Yes	0.739	0.260	1.00	Yes	1.00	**4.28**
		$U_{20} - L_{20}$			-----	-378.72	47	-54	94	-153	-182	-58	14	5	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.134	0.99	Yes	0.801	0.195	1.00	Yes	1.00	**1.54**

Axial AI Operating

Operating Loads - 5C1

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	$U_0 - L_1$			680.90	-----	-31	16	16	-14	-184	-264	-36	-15	0.893	0.102	1.00	Yes	0.539	0.056	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_1 - L_2$			464.38	-112.49	-92	-7	19	-15	132	-122	36	29	0.835	0.156	1.00	Yes	0.459	0.086	0.55	Yes	0.258	0.134	0.4	Yes	0.238	0.118	0.36	Yes	1.00	**5.27**
		$U_2 - L_3$			423.72	-343.90	-94	-22	3	-68	-224	-266	-281	-148	0.762	0.201	0.97	Yes	0.419	0.111	0.53	Yes	0.792	0.208	1	Yes	0.728	0.120	0.85	Yes	1.00	**7.25**
		$U_3 - L_4$			-----	-382.01	-28	-44	26	-55	-237	-179	-134	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.120	1	Yes	0.808	0.071	0.88	Yes	1.00	**4.04**
		$U_4 - L_4$			589.33	-----	-87	51	-67	9	-76	-192	-125	-71	0.864	0.133	1.00	Yes	0.475	0.073	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_5 - L_5$			704.26	-----	-181	224	-65	93	32	-95	217	138	0.833	0.167	1.00	Yes	0.458	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_7 - L_6$			659.26	-----	-274	249	-77	85	338	138	297	171	0.779	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.15**
		$U_8 - L_7$			655.73	-----	-110	298	-8	115	281	157	241	173	0.775	0.221	1.00	Yes	0.426	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_9 - L_9$			967.46	-----	-98	354	0	137	481	193	95	110	0.773	0.219	1.00	Yes	0.479	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		$U_9 - L_{10}$			1035.32	-----	-313	233	-81	90	218	164	85	104	0.828	0.167	1.00	Yes	0.513	0.094	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.94**
		$U_{10} - L_{11}$			1016.77	-----	-248	165	-71	81	-157	-146	102	29	0.859	0.135	1.00	Yes	0.532	0.076	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_{11} - L_{12}$			844.11	-----	-245	110	-94	-9	-318	-336	-229	-180	0.835	0.164	1.00	Yes	0.459	0.090	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		$U_{12} - L_{13}$			620.38	-----	-190	121	-59	12	-357	-328	-241	-246	0.756	0.236	1.00	Yes	0.476	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{13} - L_{14}$			440.48	-----	-93	31	-14	-27	-305	-298	-278	-303	0.792	0.207	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_{15} - L_{14}$			268.33	-333.18	-62	4	19	-81	-241	-343	-197	-297	0.483	0.203	0.69	Yes	0.265	0.111	0.38	Yes	0.781	0.211	1	Yes	0.705	0.103	0.81	Yes	1.00	**4.59**
		$U_{16} - L_{15}$			416.89	-202.13	-123	90	-33	-28	-224	-293	-187	-181	0.750	0.242	1.00	Yes	0.412	0.133	0.55	Yes	0.479	0.187	0.67	Yes	0.428	0.157	0.59	Yes	1.00	**4.93**
		$U_{17} - L_{16}$			538.12	-----	-147	109	-57	2	-161	-257	-262	-138	0.789	0.210	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		$U_{18} - L_{17}$			655.15	-----	-323	259	-144	68	-98	-172	-185	-78	0.775	0.216	1.00	Yes	0.426	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		$U_{19} - L_{18}$			728.73	-----	-355	267	-104	67	-24	-124	45	5	0.789	0.202	1.00	Yes	0.434	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		$U_{20} - L_{19}$			701.53	-----	-368	318	-127	106	-260	-137	1	34	0.760	0.231	1.00	Yes	0.418	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
	Structure 2	$U_0 - L_1$			784.52	-----	-370	346	-60	69	-203	-317	-119	52	0.776	0.219	1.00	Yes	0.427	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_1 - L_2$			795.20	-----	-415	301	-77	51	-42	-134	54	15	0.787	0.213	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_2 - L_3$			649.24	-----	-328	243	-57	42	-191	-218	-72	-180	0.768	0.225	1.00	Yes	0.422	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_3 - L_4$			576.54	-----	-177	125	-45	2	-334	-315	-305	-215	0.769	0.231	1.00	Yes	0.423	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_4 - L_5$			411.54	-----	-125	77	7	-35	-320	-278	-216	-209	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_5 - L_6$			393.93	-299.26	-118	51	66	-107	-470	-271	-372	-255	0.708	0.287	1.00	Yes	0.390	0.158	0.55	Yes	0.707	0.284	1	Yes	0.633	0.151	0.79	Yes	1.00	**5.53**
		$U_6 - L_7$			-----	-372.38	-41	-13	55	-94	-319	-270	-297	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1	Yes	0.713	0.107	0.83	Yes	1.00	**3.22**
		$U_8 - L_7$			607.86	-----	-175	135	-68	0	-111	-291	-152	-225	0.775	0.216	1.00	Yes	0.488	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_9 - L_8$			724.06	-----	-327	258	-161	43	-147	-216	-268	-164	0.784	0.211	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{10} - L_9$			839.66	-----	-306	244	-140	70	-89	-176	-3	-54	0.831	0.168	1.00	Yes	0.457	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{11} - L_{10}$			911.49	-----	-349	305	-194	128	98	-50	132	46	0.830	0.166	1.00	Yes	0.457	0.091	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{12} - L_{11}$			819.74	-----	-334	326	-149	159	158	64	749	218	0.747	0.244	1.00	Yes	0.411	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.56**
		$U_{13} - L_{12}$			760.69	-----	-432	384	-178	173	291	148	272	154	0.753	0.244	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{14} - L_{13}$			724.85	-----	-257	417	-28	210	296	155	549	149	0.717	0.276	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.42**
		$U_{14} - L_{15}$			623.65	-----	-209	361	8	100	311	34	40	31	0.737	0.261	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{15} - L_{16}$			625.96	-----	-368	325	-95	102	245	63	46	65	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{16} - L_{17}$			753.83	-----	-350	348	-68	92	6	-10	4	1	0.816	0.181	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{17} - L_{18}$			677.63	-----	-301	279	-59	75	-132	-70	-62	-36	0.801	0.195	1.00	Yes	0.441	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{18} - L_{19}$			685.17	-----	-278	255	-58	45	-169	-165	-131	-91	0.810	0.188	1.00	Yes	0.446	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		$U_{19} - L_{20}$			606.10	-----	-196	155	-24	4	-227	-196	-133	-128	0.773	0.221	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		$U_{20} - L_{21}$			428.75	-----	-119	91	-2	-16	-237	-146	-217	-155	0.771	0.221	1.00	Yes	0.424	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{21} - L_{22}$			426.52	-282.00	-110	49	33	-72	-276	-259	-292	-264	0.767	0.225	1.00	Yes	0.422	0.124	0.55	Yes	0.666	0.202	0.87	Yes	0.597	0.141	0.74	Yes	1.00	**5.36**
		$U_{23} - L_{22}$			422.84	-350.15	-101	55	-10	-56	-80	-245	-132	-209	0.761	0.200	0.97	Yes	0.418	0.110	0.53	Yes	0.834	0.159	1	Yes	0.741	0.130	0.88	Yes	1.00	**5.65**
		$U_{24} - L_{23}$			439.09	-----	-119	106	-21	-16	-70	-132	-192	-80	0.790	0.208	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		$U_{25} - L_{24}$			623.73	-----	-195	183	-44	4	-4	-114	-3	-51	0.795	0.198	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		$U_{26} - L_{25}$			693.32	-----	-283	270	-124	70	109	-25	61	20	0.820	0.180	1.00	Yes	0.451	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{27} - L_{26}$			675.60	-----	-298	296	-64	76	142	26	173	74	0.799	0.200	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{28} - L_{27}$			720.11	-----	-328	351	-81	101	186	98	184	108	0.780	0.210	1.00	Yes	0.429	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{29} - L_{28}$			630.32	-----	-354	335	-122	116	282	134	215	108	0.745	0.251	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		$U_{30} - L_{29}$			590.79	-----	-198	343	-7	160	223	123	546	93	0.698	0.293	1.00	Yes	0.384	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{30} - L_{31}$			756.04	-----	-278	444	-15	129	260	-43	60	37	0.748	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{31} - L_{32}$			785.79	-----	-453	385	-122	126	64	50	37	48	0.777	0.220	1.00	Yes	0.428	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		$U_{32} - L_{33}$			897.61	-----	-365	330	-82	132	-175	-71	-20	7	0.818	0.179	1.00	Yes	0.450	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		$U_{33} - L_{34}$			888.97	-----	-341	278	-118	90	-270	-244	-177	-109	0.810	0.182	1.00	Yes	0.445	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		$U_{34} - L_{35}$			817.15	-----	-299	211	-97	56	-301	-303	-171	-202	0.808	0.184	1.00	Yes	0.445	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{35} - L_{36}$			704.53	-----	-324	214	-100	36	-421	-297	-290	-243	0.763	0.235	1.00	Yes	0.420	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{36} - L_{37}$			596.30	-----	-183	133	-30	-11	-325	-353	-337	-322	0.760	0.236	1.00	Yes	0.479	0.134	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{38} - L_{37}$			-----	-392.18	-26	-14	30	-77	-127	-248	-131	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.151	1	Yes	0.751	0.088	0.84	Yes	1.00	**3.06**
		$U_{39} - L_{38}$			301.29	-334.31	-89	49	29	-86	-199	-246	-302	-180	0.542	0.201	0.75	Yes	0.298	0.111	0.41	Yes	0.796	0.197	1	Yes	0.707	0.114	0.83	Yes	1.00	**4.84**
		$U_{40} - L_{39}$			429.04	-154.38	-125	93	-4	-35	-143	-205	-84	-109	0.772	0.219	1.00	Yes	0.424	0.121	0.55	Yes	0.370	0.140	0.51	Yes	0.327	0.160	0.49	Yes	1.00	**4.63**
		$U_{41} - L_{40}$			599.08	-----	-180	137	-75	13	-71	-165	-84	-72	0.799	0.198	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{42} - L_{41}$			664.27	-----	-337	276	-66	43	-71	-106	-1	-1	0.785	0.210	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{43} - L_{42}$			802.61	-----	-398	321	-88	58	-69	-111	-7	-32	0.794	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		$U_{44} - L_{43}$			813.59	-----	-352	362	-133	117	-36	-119	37	3	0.805	0.186	1.00	Yes	0.443	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
	Structure 3	$U_0 - L_1$			706.49	-----	-348	295	-68	71	-155	-301	-131	44	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_1 - L_2$			699.20	-----	-352	232	-90	56	-306	-347	36	12	0.757	0.237	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_2 - L_3$			642.71	-----	-330	225	-76	47	-211	-285	-73	-167	0.760	0.239	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_3 - L_4$			523.49	-----	-145	86	-24	-8	-352	-320	-249	-217	0.768	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_4 - L_5$			404.13	-167.33	-119	76	6	-45	-404	-322	-335	-233	0.727	0.270	1.00	Yes	0.400	0.148	0.55	Yes	0.397	0.222	0.62	Yes	0.354	0.153	0.51	Yes	1.00	**4.59**
		$U_5 - L_6$			283.69	-311.19	-74	-4	37	-90	-439	-334	-297	-321	0.510	0.243	0.76	Yes	0.281	0.134	0.42	Yes	0.729	0.269	1	Yes	0.658	0.116	0.78	Yes	1.00	**4.67**
		$U_7 - L_6$			446.25	-----	-83	39	-34	-20	-117	-281	-227	-245	0.803	0.188	1.00	Yes	0.441	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_8 - L_7$			638.14	-----	-189	154	-74	9	-173	-241	-116	-145	0.778	0.212	1.00	Yes	0.489	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_8 - L_9$			852.38	-----	-253	136	-153	-4	-28	-198	14	-70	0.843	0.147	1.00	Yes	0.464	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.98**
		$U_{10} - L_9$			931.23	-----	-226	181	-86	80	92	-34	768	234	0.787	0.205	1.00	Yes	0.487	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_{11} - L_{10}$			1002.91	-----	-308	265	-96	89	443	279	306	198	0.802	0.194	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		$U_{12} - L_{11}$			973.66	-----	-96	364	-14	141	451	308	281	211	0.778	0.220	1.00	Yes	0.482	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		$U_{12} - L_{13}$			656.36	-----	-88	306	14	117	228	154	92	98	0.776	0.216	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{13} - L_{14}$			662.45	-----	-294	213	-70	76	221	196	91	115	0.783	0.208	1.00	Yes	0.431	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{14} - L_{15}$			713.78	-----	-203	166	-25	74	-119	-157	168	83	0.844	0.146	1.00	Yes	0.464	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		$U_{15} - L_{16}$			574.44	-----	-96	10	-23	-6	-234	-152	-119	-89	0.842	0.152	1.00	Yes	0.463	0.084	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		$U_{17} - L_{16}$			-----	-406.70	-15	-24	-1	-43	-54	-158	-24	-103	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.062	1	Yes	0.861	0.055	0.92	Yes	1.00	**4.11**
		$U_{18} - L_{17}$			305.42	-373.83	-63	12	-39	-59	-53	-236	-141	-69	0.549	0.149	0.70	Yes	0.302	0.082	0.39	Yes	0.860	0.134	1	Yes	0.791	0.080	0.88	Yes	1.00	**5.95**
		$U_{19} - L_{18}$			465.91	-116.16	-95	36	26	-21	53	-123	42	-2	0.838	0.157	1.00	Yes	0.461	0.086	0.55	Yes	0.266	0.103	0.37	Yes	0.246	0.121	0.37	Yes	1.00	**5.74**
		$U_{20} - L_{19}$			592.55	-----	-111	57	-19	0	-347	-194	34	-12	0.777	0.217	1.00	Yes	0.469	0.119	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**

Operating Loads - 5C1

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	-----	-534.77	-170	124	373	-1163	-97	160	30	-869	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.212	0.94	Yes	0.721	0.277	1.00	Yes	1.00	**6.73**
		U_1 - U_2	-----	-538.02	-90	146	-370	-688	-172	163	163	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.266	1	Yes	0.726	0.164	0.89	Yes	1.00	**4.05**
		U_2 - U_3	243.24	-563.56	-66	368	-534	-472	-126	162	-122	-576	0.279	0.224	0.51	Yes	0.188	0.148	0.34	Yes	0.767	0.229	1	Yes	0.760	0.127	0.89	Yes	1.00	**4.48**
		U_3 - U_4	587.88	-594.93	196	481	-398	-648	-242	-1	-359	-328	0.674	0.215	0.89	Yes	0.462	0.147	0.61	Yes	0.810	0.183	1	Yes	0.802	0.154	0.96	Yes	1.00	**6.17**
		U_4 - U_5	581.46	-575.19	249	458	-905	-197	-99	-5	-293	-31	0.666	0.265	0.94	Yes	0.457	0.181	0.64	Yes	0.783	0.204	0.99	Yes	0.776	0.215	1.00	Yes	1.00	**6.05**
		U_5 - U_6	707.25	-----	289	507	-577	302	99	143	-276	-292	0.811	0.186	1.00	Yes	0.547	0.122	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		U_6 - U_7	901.22	-----	421	226	-190	65	327	290	-283	37	0.862	0.134	1.00	Yes	0.602	0.092	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		U_7 - U_8	1050.70	-----	14	1287	-170	965	503	687	154	355	0.728	0.265	1.00	Yes	0.508	0.181	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		U_8 - U_9	865.29	-----	1340	-282	775	-245	371	534	323	349	0.709	0.290	1.00	Yes	0.485	0.198	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.79**
		U_9 - U_{10}	653.97	-----	242	266	185	-789	0	314	479	-707	0.709	0.290	1.00	Yes	0.480	0.195	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.72**
		U_{10} - U_{11}	-----	-625.53	261	-164	140	-878	48	110	299	-515	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.166	0.98	Yes	0.798	0.197	1.00	Yes	1.00	**4.10**
		U_{11} - U_{12}	-----	-909.79	160	-204	-58	-721	13	105	408	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.134	1	Yes	0.854	0.120	0.98	Yes	1.00	**2.97**
		U_{12} - U_{13}	-----	-1247.95	-50	-269	-301	-794	83	7	-37	-473	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.151	1	Yes	0.834	0.109	0.95	Yes	1.00	**3.26**
		U_{13} - U_{14}	-----	-1388.48	-196	-506	-482	-1391	-42	-7	-189	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.191	1	Yes	0.796	0.153	0.95	Yes	1.00	**3.02**
		U_{14} - U_{15}	-----	-1378.07	-409	-293	-1328	-669	43	-277	-79	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.197	1	Yes	0.790	0.146	0.94	Yes	1.00	**2.98**
		U_{15} - U_{16}	-----	-1429.31	-205	-468	-918	-781	-115	-435	-345	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1	Yes	0.819	0.101	0.93	Yes	1.00	**3.26**
		U_{16} - U_{17}	-----	-1400.21	-416	-226	-1207	-497	-295	-378	-212	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.187	1	Yes	0.803	0.133	0.94	Yes	1.00	**3.78**
		U_{17} - U_{18}	-----	-1081.98	-256	-59	-841	3	-119	73	-162	-134	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.140	1	Yes	0.847	0.137	0.99	Yes	1.00	**3.82**
		U_{18} - U_{19}	-----	-753.49	-243	14	-686	100	367	-141	43	-267	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.141	1	Yes	0.848	0.138	0.99	Yes	1.00	**4.22**
		U_{19} - U_{20}	-----	-662.34	-205	-110	-1229	334	-30	-123	27	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.225	0.98	Yes	0.745	0.247	1.00	Yes	1.00	**11.97**
	Structure 2	U_0 - U_1	-----	-571.90	688	-444	1376	-1902	341	-77	323	-709	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.176	0.86	Yes	0.675	0.323	1.00	Yes	1.00	**6.96**
		U_1 - U_2	-----	-813.27	-150	-313	-211	-1097	-23	26	42	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.785	0.166	0.96	Yes	1.00	**3.51**
		U_2 - U_3	-----	-1155.66	-137	-414	-198	-1346	-36	-54	50	-642	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.172	1	Yes	0.820	0.137	0.96	Yes	1.00	**3.46**
		U_3 - U_4	-----	-1400.94	-525	-522	-1071	-1377	-122	-33	167	-369	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.190	1	Yes	0.798	0.123	0.93	Yes	1.00	**3.21**
		U_4 - U_5	-----	-1557.27	-571	-521	-1030	-1274	-130	-75	-193	-688	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.186	1	Yes	0.800	0.106	0.91	Yes	1.00	**3.44**
		U_5 - U_6	-----	-1585.86	-555	31	-1307	-1172	-199	-43	-474	-580	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.177	1	Yes	0.814	0.108	0.93	Yes	1.00	**3.47**
		U_6 - U_7	-----	-1415.96	-288	-182	-1006	-1144	-170	-86	-319	-446	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.182	1	Yes	0.806	0.102	0.91	Yes	1.00	**3.51**
		U_7 - U_8	-----	-1411.91	-325	-172	-1335	-1001	-76	-169	-347	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.186	1	Yes	0.804	0.119	0.93	Yes	1.00	**3.51**
		U_8 - U_9	-----	-1153.61	-350	218	-1601	-350	-15	-193	-479	-311	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.207	1	Yes	0.782	0.170	0.96	Yes	1.00	**3.60**
		U_9 - U_{10}	-----	-910.35	-52	573	-1512	-31	-118	-222	-628	-532	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.205	1	Yes	0.786	0.184	0.97	Yes	1.00	**4.88**
		U_{10} - U_{11}	832.60	-544.92	344	614	-1289	-11	-183	-97	-896	-430	0.703	0.291	1.00	Yes	0.479	0.191	0.67	Yes	0.545	0.237	0.79	Yes	0.542	0.182	0.73	Yes	1.00	**6.47**
		U_{11} - U_{12}	937.71	-----	203	653	-977	454	33	37	-526	-444	0.792	0.202	1.00	Yes	0.532	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		U_{12} - U_{13}	1314.78	-----	483	71	-24	-126	339	449	-91	20	0.888	0.104	1.00	Yes	0.633	0.071	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		U_{13} - U_{14}	1356.13	-----	-170	2785	-445	2020	634	998	288	582	0.667	0.326	1.00	Yes	0.472	0.215	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		U_{14} - U_{15}	1437.81	-----	2602	-1	1927	-243	549	730	516	409	0.707	0.291	1.00	Yes	0.501	0.191	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.27**
		U_{15} - U_{16}	1491.92	-----	177	497	-93	17	190	471	114	221	0.902	0.096	1.00	Yes	0.642	0.066	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.12**
		U_{16} - U_{17}	1080.63	-----	679	225	518	-993	-30	324	-136	-662	0.796	0.194	1.00	Yes	0.530	0.128	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		U_{17} - U_{18}	778.90	-----	501	274	206	-941	-60	294	-99	-349	0.782	0.211	1.00	Yes	0.521	0.140	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.14**
		U_{18} - U_{19}	638.96	-670.45	633	192	111	-967	3	172	-31	-641	0.641	0.258	0.90	Yes	0.421	0.165	0.59	Yes	0.797	0.198	1	Yes	0.792	0.164	0.96	Yes	1.00	**6.04**
		U_{19} - U_{20}	274.41	-731.36	297	128	-220	-997	-54	143	-182	-323	0.257	0.203	0.47	Yes	0.171	0.133	0.31	Yes	0.812	0.183	1	Yes	0.807	0.160	0.97	Yes	1.00	**4.20**
		U_{20} - U_{21}	-----	-862.38	139	-126	-488	-837	-5	22	-129	-588	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.207	1	Yes	0.787	0.121	0.91	Yes	1.00	**4.15**
		U_{21} - U_{22}	-----	-845.09	-94	-51	-523	-982	-199	-113	-304	-257	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.219	1	Yes	0.771	0.142	0.92	Yes	1.00	**3.82**
		U_{22} - U_{23}	-----	-839.76	-115	-118	-1029	-739	-127	-167	-178	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.223	1	Yes	0.766	0.149	0.92	Yes	1.00	**3.79**
		U_{23} - U_{24}	-----	-833.63	-133	190	-1110	-380	0	-80	-489	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.232	1	Yes	0.761	0.161	0.93	Yes	1.00	**4.31**
		U_{24} - U_{25}	359.14	-721.87	215	360	-1021	-185	-10	-69	-463	-146	0.337	0.226	0.57	Yes	0.223	0.148	0.38	Yes	0.801	0.195	1	Yes	0.796	0.163	0.96	Yes	1.00	**5.00**
		U_{25} - U_{26}	696.57	-----	221	665	-1147	289	20	-37	-659	-284	0.699	0.291	1.00	Yes	0.459	0.186	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.70**
		U_{26} - U_{27}	753.31	-----	281	468	-786	271	-42	12	-720	-150	0.756	0.239	1.00	Yes	0.503	0.158	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.97**
		U_{27} - U_{28}	1103.64	-----	221	705	-1036	708	250	273	-535	-385	0.813	0.186	1.00	Yes	0.541	0.123	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		U_{28} - U_{29}	1460.92	-----	480	76	65	-129	647	721	261	294	0.883	0.116	1.00	Yes	0.628	0.080	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.50**
		U_{29} - U_{30}	1320.69	-----	-163	2919	-203	1906	798	1073	505	704	0.649	0.343	1.00	Yes	0.460	0.226	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		U_{30} - U_{31}	1431.22	-----	2579	-165	2040	-524	639	707	672	371	0.704	0.287	1.00	Yes	0.498	0.189	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.10**
		U_{31} - U_{32}	1333.95	-----	116	424	-152	-132	209	426	210	126	0.901	0.094	1.00	Yes	0.642	0.065	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.91**
		U_{32} - U_{33}	902.21	-----	613	173	347	-1004	6	237	387	-737	0.762	0.232	1.00	Yes	0.512	0.154	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		U_{33} - U_{34}	758.50	-813.83	555	249	-154	-1213	-34	249	682	-400	0.641	0.254	0.90	Yes	0.436	0.167	0.61	Yes	0.814	0.182	1	Yes	0.809	0.171	0.98	Yes	1.00	**6.62**
		U_{34} - U_{35}	-----	-967.58	421	-164	-77	-1305	43	53	-42	-475	-----	-----	-----	-----	-----	-----	-----	-----	0.840	0.157	1	Yes	0.835	0.159	1.00	Yes	1.00	**4.05**
		U_{35} - U_{36}	-----	-1249.59	130	-444	-265	-1131	-18	101	-71	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.139	1	Yes	0.848	0.120	0.97	Yes	1.00	**3.43**
		U_{36} - U_{37}	-----	-1444.48	-270	-294	-826	-1187	-20	-115	-88	-387	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1	Yes	0.823	0.106	0.93	Yes	1.00	**3.20**
		U_{37} - U_{38}	-----	-1439.78	-177	-405	-1109	-1264	-93	-192	-264	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.170	1	Yes	0.820	0.113	0.94	Yes	1.00	**3.17**
		U_{38} - U_{39}	-----	-1579.18	-146	-626	-1377	-1349	11	-207	-422	-340	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.178	1	Yes	0.811	0.114	0.93	Yes	1.00	**3.16**
		U_{39} - U_{40}	-----	-1539.32	-597	-564	-1694	-981	18	-75	-268	-162	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.199	1	Yes	0.790	0.140	0.94	Yes	1.00	**3.22**
		U_{40} - U_{41}	-----	-1427.23	-525	-518	-1443	-873	177	-148	46	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.180	1	Yes	0.813	0.129	0.95	Yes	1.00	**3.39**
		U_{41} - U_{42}	-----	-1207.19	-416	-129	-1257	-55	61	-26	-54	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.134	1	Yes	0.857	0.128	0.99	Yes	1.00	**4.09**
		U_{42} - U_{43}	-----	-879.60	-307	-44	-918	8	169	-212	-148	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.855	0.141	1	Yes	0.849	0.139	0.99	Yes	1.00	**4.82**
		U_{43} - U_{44}	-----	-637.35	-163	-229	-1409	537	-122	-128	-203	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.225	0.99	Yes	0.753	0.239	1.00	Yes	1.00	**9.89**
	Structure 3	U_0 - U_1	-----	-597.70	626	-346	1237	-1615	271	-48	662	-1039	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.212	0.9	Yes	0.672	0.325	1.00	Yes	1.00	**9.32**
		U_1 - U_2	-----	-714.38	-81	-226	-44	-777	-22	6	122	-381	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.185	1	Yes	0.804	0.156	0.97	Yes	1.00	**3.48**
		U_2 - U_3	-----	-1049.85	-55	-238	-6	-789	-34	-56	186	-648	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.161	1	Yes	0.821	0.128	0.95	Yes	1.00	**3.52**
		U_3 - U_4	-----	-1415.90	-220	-362	-408	-1092	-110	-31	-234	-421	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.812	0.120	0.94	Yes	1.00	**4.03**
		U_4 - U_5	-----	-1447.26	-440	-129	-771	-702	-92	-52	-205	-697	-----	-----	-----	-----	-----	-----	-----	-----	0.839	0.155	1	Yes	0.830	0.085	0.92	Yes	1.00	**3.54**
		U_5 - U_6	-----	-1350.91	-260	-383	-568	-1341	-185	-152	-357	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.210	1	Yes	0.774	0.148	0.93	Yes	1.00	**3.13**
		U_6 - U_7	-----	-1354.99	-502	-160	-1488	-506	-120	-303	-184	-321	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.207	1	Yes	0.777	0.164	0.95	Yes	1.00	**3.17**
		U_7 - U_8	-----	-1207.07	-241	21	-919	-227	-115	-327	-523	-480	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.181	1	Yes	0.806	0.127	0.94	Yes	1.00	**3.53**
		U_8 - U_9	-----	-884.19	-137	246	-794	80	-225	-197	-460	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.161	1	Yes	0.830	0.132	0.97	Yes	1.00	**3.69**
		U_9 - U_{10}	-----	-596.53	-68	367	-1048	234	-13	-25	-369	-362	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.200	0.97	Yes	0.761	0.235	1.00	Yes	1.00	**5.84**
		U_{10} - U_{11}	682.55	-----	318	228	-519	152	46	139	-843	-65	0.740	0.252	1.00	Yes	0.501	0.169	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		U_{11} - U_{12}	830.88	-----	-308	1392	-242	823	138	636	117	267	0.681	0.312	1.00	Yes	0.466	0.212	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		U_{12} - U_{13}	1079.37	-----	1217	31	847	-145	29	516	563	647	0.748	0.250	1.00	Yes	0.522	0.171	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.56**
		U_{13} - U_{14}	876.06	-----	232	379	44	-446	-110	390	102	-442	0.838	0.156	1.00	Yes	0.586	0.107	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		U_{14} - U_{15}	626.97	-----	453	221	237	-673	-58	258	-136	-705	0.719	0.279	1.00	Yes	0.485	0.184	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.26**
		U_{15} - U_{16}	370.39	-594.75	313	159	-171	-818	-74	226	12	102	0.425	0.233	0.66	Yes	0.291	0.159	0.46	Yes	0.809	0.177	0.99	Yes	0.802	0.195	1.00	Yes	1.00	**4.81**
		U_{16} - U_{17}	368.97	-605.28	374	65	-623	-472	198	-54	166	23	0.423	0.182	0.61	Yes	0.290	0.124	0.42	Yes	0.824	0.173	1	Yes	0.816	0.148	0.97	Yes	1.00	**4.86**
		U_{17} - U_{18}	-----	-610.97	248	-167	-492	-473	75	37	-23	-201	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1	Yes	0.824	0.117	0.95	Yes	1.00	**3.92**
		U_{18} - U_{19}	-----	-590.75	31	-69	-686	-173	206	-196	-25	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.190	1	Yes	0.797	0.163	0.96	Yes	1.00	**4.10**
		U_{19} - U_{20}	-----	-599.72	131	-315	-637	-79	-148	-112	-2	-51	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.177	1	Yes	0.809	0.151	0.97	Yes	1.00	**8.47**

Operating Loads - 5C1

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			242.47	-186.71	252	-270	575	-835	106	390	-476	-1750	0.371	0.626	1.00	Yes	0.218	0.372	0.60	Yes	0.339	0.475	0.82	Yes	0.336	0.251	0.59	Yes	1.00	**18.10**
		L_1 - L_2			365.28	-----	-152	-547	-8	20	-1283	197	357	-162	0.559	0.440	1.00	Yes	0.341	0.281	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**
		L_2 - L_3			661.00	-----	-716	-473	-7	120	401	-26	-192	139	0.760	0.237	1.00	Yes	0.440	0.141	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_3 - L_4			583.52	-297.72	-624	-355	19	349	-1070	-69	313	-250	0.671	0.323	1.00	Yes	0.399	0.201	0.60	Yes	0.407	0.180	0.59	Yes	0.403	0.151	0.56	Yes	1.00	**4.48**
		L_4 - L_5			-----	-570.67	-408	230	111	469	60	-293	-80	209	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.118	1	Yes	0.869	0.124	1.00	Yes	1.00	**3.20**
		L_5 - L_6			-----	-749.82	-180	309	125	591	-36	-180	162	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.123	1	Yes	0.865	0.131	1.00	Yes	1.00	**3.00**
		L_6 - L_7			-----	-1170.24	-89	109	238	-45	-115	290	-204	362	-----	-----	-----	-----	-----	-----	-----	-----	0.953	0.044	1	Yes	0.942	0.037	0.98	Yes	1.00	**4.66**
		L_7 - L_8			-----	-1244.22	-35	693	-62	1246	374	228	410	470	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.195	1	Yes	0.788	0.165	0.96	Yes	1.00	**3.01**
		L_8 - L_9			-----	-1147.30	677	-37	1115	-70	203	321	438	448	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.259	1	Yes	0.727	0.148	0.88	Yes	1.00	**2.18**
		L_9 - L_{10}			-----	-1067.33	344	-228	584	-425	362	-231	357	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.125	1	Yes	0.859	0.092	0.96	Yes	1.00	**5.49**
		L_{10} - L_{11}			-----	-525.89	123	-583	492	-61	-282	-881	-274	44	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.189	1	Yes	0.801	0.154	0.96	Yes	1.00	**6.24**
		L_{11} - L_{12}			507.57	-----	191	-708	353	-236	-875	305	128	-88	0.657	0.341	1.00	Yes	0.394	0.217	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_{12} - L_{13}			1048.18	-----	-379	-609	69	-150	5	-508	-159	121	0.827	0.167	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		L_{13} - L_{14}			1266.58	-----	-148	-1311	185	-527	-852	53	147	23	0.745	0.252	1.00	Yes	0.483	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_{14} - L_{15}			1567.85	-----	-1470	-654	-504	-170	-102	-757	-179	94	0.766	0.230	1.00	Yes	0.498	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_{15} - L_{16}			1697.88	-----	-908	-1265	-305	-373	-207	86	112	-139	0.830	0.167	1.00	Yes	0.532	0.098	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		L_{16} - L_{17}			1250.60	-----	-1286	90	-425	54	128	-213	-129	171	0.791	0.208	1.00	Yes	0.513	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.63**
		L_{17} - L_{18}			1013.03	-----	-392	-34	-230	31	-106	-295	110	-98	0.882	0.113	1.00	Yes	0.565	0.069	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.68**
		L_{18} - L_{19}			513.85	-----	-484	238	-274	230	-138	303	-167	126	0.786	0.208	1.00	Yes	0.532	0.132	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.15**
		L_{19} - L_{20}			385.34	-222.85	-367	102	-811	481	351	78	144	32	0.651	0.346	1.00	Yes	0.402	0.204	0.61	Yes	0.447	0.346	0.8	Yes	0.443	0.265	0.71	Yes	1.00	**6.94**
	Structure 2	L_0 - L_1			-----	-493.67	149	-464	518	-1402	148	512	-110	-383	-----	-----	-----	-----	-----	-----	-----	-----	0.710	0.258	0.97	Yes	0.705	0.285	1.00	Yes	1.00	**17.99**
		L_1 - L_2			444.82	-----	364	-1215	239	-386	-1253	300	116	53	0.540	0.453	1.00	Yes	0.321	0.283	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		L_2 - L_3			1021.06	-----	-151	-964	-57	-251	-199	-487	-75	153	0.805	0.191	1.00	Yes	0.528	0.116	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		L_3 - L_4			1324.71	-----	-212	-1358	-18	-484	-718	403	187	-17	0.778	0.216	1.00	Yes	0.524	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.77**
		L_4 - L_5			1772.38	-----	-1318	-1159	-428	-368	682	243	-91	162	0.826	0.171	1.00	Yes	0.547	0.103	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.09**
		L_5 - L_6			1815.21	-----	-1055	-1876	-211	-457	-773	19	196	-96	0.779	0.215	1.00	Yes	0.523	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_6 - L_7			1823.68	-----	-2125	-1148	-549	-189	-20	-564	-163	221	0.772	0.222	1.00	Yes	0.513	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		L_7 - L_8			1447.24	-----	-1200	-670	-258	467	-385	130	236	-138	0.830	0.164	1.00	Yes	0.545	0.098	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_8 - L_9			1064.91	-----	-1196	206	-69	615	33	-954	-82	184	0.745	0.251	1.00	Yes	0.502	0.160	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.30**
		L_9 - L_{10}			565.91	-781.58	-1083	160	-121	849	-677	-204	145	-145	0.505	0.255	0.76	Yes	0.294	0.156	0.46	Yes	0.826	0.146	0.98	Yes	0.821	0.173	1.00	Yes	1.00	**5.68**
		L_{10} - L_{11}			-----	-753.25	-604	464	20	568	-69	-304	-80	78	-----	-----	-----	-----	-----	-----	-----	-----	0.891	0.073	0.97	Yes	0.885	0.106	1.00	Yes	1.00	**3.46**
		L_{11} - L_{12}			-----	-1031.92	-295	681	-74	1102	157	-219	58	-374	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.123	0.98	Yes	0.846	0.150	1.00	Yes	1.00	**3.63**
		L_{12} - L_{13}			-----	-1518.93	-292	-351	191	-686	-112	113	-332	182	-----	-----	-----	-----	-----	-----	-----	-----	0.924	0.074	1	Yes	0.916	0.069	0.99	Yes	1.00	**5.51**
		L_{13} - L_{14}			-----	-1555.01	-621	1736	-860	2449	172	125	349	503	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.174	0.97	Yes	0.782	0.214	1.00	Yes	1.00	**3.48**
		L_{14} - L_{15}			-----	-1554.94	1711	-661	2427	-692	99	142	517	313	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.175	0.97	Yes	0.782	0.212	1.00	Yes	1.00	**3.93**
		L_{15} - L_{16}			-----	-1531.00	-530	-129	-381	-116	108	-136	247	-237	-----	-----	-----	-----	-----	-----	-----	-----	0.923	0.068	1	Yes	0.916	0.053	0.97	Yes	1.00	**4.38**
		L_{16} - L_{17}			-----	-1055.44	670	-134	1124	-51	-209	64	-383	66	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.221	1	Yes	0.769	0.139	0.91	Yes	1.00	**3.45**
		L_{17} - L_{18}			-----	-845.62	361	-654	528	197	-729	140	127	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.894	0.099	1	Yes	0.888	0.105	1.00	Yes	1.00	**4.63**
		L_{18} - L_{19}			-----	-642.86	-2	-554	720	35	40	-461	-211	60	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.117	0.98	Yes	0.857	0.139	1.00	Yes	1.00	**4.67**
		L_{19} - L_{20}			592.96	-528.86	59	-1057	544	168	-779	391	151	-185	0.672	0.323	1.00	Yes	0.397	0.202	0.60	Yes	0.709	0.157	0.87	Yes	0.705	0.204	0.91	Yes	1.00	**6.03**
		L_{20} - L_{21}			949.78	-----	-852	-1040	439	-65	-159	-792	-188	68	0.757	0.237	1.00	Yes	0.497	0.145	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_{21} - L_{22}			879.61	-----	-707	-1346	127	-275	-876	19	137	-105	0.701	0.291	1.00	Yes	0.469	0.185	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**
		L_{22} - L_{23}			904.70	-----	-1328	-768	-339	99	105	-762	-51	211	0.721	0.276	1.00	Yes	0.483	0.175	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_{23} - L_{24}			986.00	-452.47	-1116	-794	-5	574	-443	-21	179	-145	0.786	0.211	1.00	Yes	0.516	0.127	0.65	Yes	0.427	0.150	0.58	Yes	0.424	0.163	0.59	Yes	1.00	**7.50**
		L_{24} - L_{25}			519.57	-602.06	-989	77	234	550	155	-1102	-105	151	0.589	0.359	0.95	Yes	0.348	0.222	0.58	Yes	0.807	0.176	0.99	Yes	0.802	0.191	1.00	Yes	1.00	**6.77**
		L_{25} - L_{26}			-----	-639.58	-267	188	28	726	-33	-76	101	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.104	0.97	Yes	0.852	0.140	1.00	Yes	1.00	**4.58**
		L_{26} - L_{27}			-----	-871.97	-365	437	221	502	-49	17	-48	231	-----	-----	-----	-----	-----	-----	-----	-----	0.922	0.075	1	Yes	0.916	0.080	1.00	Yes	1.00	**5.03**
		L_{27} - L_{28}			-----	-1146.65	-238	731	-33	1309	25	-208	282	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.842	0.145	0.99	Yes	0.835	0.161	1.00	Yes	1.00	**4.33**
		L_{28} - L_{29}			-----	-1549.21	-308	-528	82	-411	-170	-44	-120	363	-----	-----	-----	-----	-----	-----	-----	-----	0.934	0.059	1	Yes	0.927	0.052	0.98	Yes	1.00	**5.55**
		L_{29} - L_{30}			-----	-1542.62	-744	1953	-809	2476	62	42	409	374	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.165	0.95	Yes	0.776	0.216	1.00	Yes	1.00	**3.84**
		L_{30} - L_{31}			-----	-1563.05	1689	-510	2414	-697	617	489	289	224	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.185	0.98	Yes	0.787	0.211	1.00	Yes	1.00	**2.83**
		L_{31} - L_{32}			-----	-1550.45	-107	-347	-169	-370	393	-400	123	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.059	1	Yes	0.927	0.037	0.97	Yes	1.00	**5.00**
		L_{32} - L_{33}			-----	-1050.49	575	-332	1015	-69	-548	-28	-325	27	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.123	1	Yes	0.861	0.138	1.00	Yes	1.00	**4.20**
		L_{33} - L_{34}			-----	-761.86	428	-397	590	9	79	-79	100	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.901	0.066	0.97	Yes	0.895	0.103	1.00	Yes	1.00	**4.03**
		L_{34} - L_{35}			574.61	-772.94	28	-1166	850	-93	241	-932	-219	93	0.513	0.299	0.82	Yes	0.299	0.182	0.49	Yes	0.817	0.130	0.95	Yes	0.812	0.187	1.00	Yes	1.00	**6.96**
		L_{35} - L_{36}			973.34	-----	24	-1259	602	-130	-1541	179	168	-132	0.681	0.315	1.00	Yes	0.459	0.202	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.82**
		L_{36} - L_{37}			1367.91	-----	-839	-1459	350	-226	82	-593	-211	146	0.784	0.210	1.00	Yes	0.515	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_{37} - L_{38}			1790.07	-----	-1183	-2334	-305	-624	-562	95	113	-179	0.758	0.240	1.00	Yes	0.504	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{38} - L_{39}			1808.66	-----	-2030	-1088	-587	-217	149	-549	-104	172	0.776	0.214	1.00	Yes	0.521	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		L_{39} - L_{40}			1771.70	-----	-1565	-1280	-425	-312	-373	213	129	-121	0.826	0.173	1.00	Yes	0.547	0.103	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_{40} - L_{41}			1321.59	-----	-1544	-66	-452	31	158	-308	-42	276	0.784	0.208	1.00	Yes	0.529	0.134	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		L_{41} - L_{42}			977.37	-----	-1128	88	-256	52	-483	11	271	89	0.780	0.218	1.00	Yes	0.513	0.128	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.19**
		L_{42} - L_{43}			540.39	-----	-1274	574	-261	211	478	316	146	356	0.656	0.338	1.00	Yes	0.390	0.215	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.81**
		L_{43} - L_{44}			-----	-465.44	-888	230	-501	158	-253	-74	1232	359	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.330	1	Yes	0.665	0.181	0.85	Yes	1.00	**23.37**
	Structure 3	L_0 - L_1			-----	-469.88	87	-306	280	-505	33	150	16	71	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.107	0.97	Yes	0.846	0.152	1.00	Yes	1.00	**6.44**
		L_1 - L_2			523.55	-----	214	-456	421	-502	153	-210	61	170	0.801	0.194	1.00	Yes	0.542	0.123	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		L_2 - L_3			1014.38	-----	-177	-362	49	-224	-312	145	-15	161	0.883	0.110	1.00	Yes	0.565	0.067	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.20**
		L_3 - L_4			1171.15	-----	-90	-1191	46	-427	-948	451	140	58	0.741	0.259	1.00	Yes	0.480	0.161	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_4 - L_5			1669.03	-----	-1141	-1067	-373	-248	429	-546	-37	223	0.815	0.176	1.00	Yes	0.523	0.104	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		L_5 - L_6			1560.96	-----	-568	-1616	-142	-455	-577	224	246	-36	0.763	0.235	1.00	Yes	0.496	0.143	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		L_6 - L_7			1275.19	-----	-1383	-37	-500	237	0	-656	-55	252	0.750	0.245	1.00	Yes	0.486	0.151	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		L_7 - L_8			1044.41	-----	-623	-295	-104	159	-517	-109	137	-173	0.824	0.171	1.00	Yes	0.527	0.104	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_8 - L_9			535.20	-----	-733	203	-175	419	65	-628	-110	161	0.693	0.304	1.00	Yes	0.416	0.195	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		L_9 - L_{10}			-----	-564.21	-304	219	-63	526	-97	-339	144	-154	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.090	0.96	Yes	0.860	0.139	1.00	Yes	1.00	**5.28**
		L_{10} - L_{11}			-----	-1173.31	-304	315	19	20	-291	77	-323	146	-----	-----	-----	-----	-----	-----	-----	-----	0.955	0.029	0.99	Yes	0.944	0.049	1.00	Yes	1.00	**6.67**
		L_{11} - L_{12}			-----	-1265.16	-48	720	-66	1271	264	65	307	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.181	1	Yes	0.801	0.168	0.97	Yes	1.00	**3.93**
		L_{12} - L_{13}			-----	-1162.47	717	-15	1178	-26	18	261	-230	64	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.252	1	Yes	0.736	0.156	0.90	Yes	1.00	**3.12**
		L_{13} - L_{14}			-----	-1155.54	195	-113	73	154	341	3	332	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.941	0.051	1	Yes	0.930	0.031	0.97	Yes	1.00	**4.67**
		L_{14} - L_{15}			-----	-720.31	231	-295	564	105	-121	-565	-256	85	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.141	1	Yes	0.845	0.127	0.98	Yes	1.00	**3.80**
		L_{15} - L_{16}			-----	-532.14	137	-611	469	124	-1109	233	259	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.177	1	Yes	0.811	0.162	0.98	Yes	1.00	**4.16**
		L_{16} - L_{17}			677.49	-----	-517	-611	303	-58	68	-425	-174	189	0.779	0.216	1.00	Yes	0.463	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		L_{17} - L_{18}			670.12	-----	-690	-586	32	-101	-374	117	110	-112	0.771	0.227	1.00	Yes	0.446	0.135	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_{18} - L_{19}			460.69	-----	-756	76	-16	-24	285	268	-105	204	0.705	0.288	1.00	Yes	0.430	0.192	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.64**
		L_{19} - L_{20}			324.18	-158.02	-686	454	-107	-89	966	262	1360	369	0.496	0.498	1.00	Yes	0.292	0.296	0.59	Yes	0.287	0.428	0.72	Yes	0.285	0.206	0.50	Yes	1.00	**36.02**

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-307.14	-12	50	-77	136	203	65	-801	-257	-----	-----	-----	-----	-----	-----	-----	-----	0.686	0.309	1	Yes	0.650	0.174	0.83	Yes	1.00	**1.63**
		$U_1 - L_1$			-----	-267.83	23	-16	-139	153	585	216	-1334	-467	-----	-----	-----	-----	-----	-----	-----	-----	0.585	0.414	1	Yes	0.567	0.195	0.77	Yes	1.00	**3.44**
		$U_2 - L_2$			87.63	-159.71	82	-89	-41	76	793	246	-2407	-733	0.158	0.811	0.97	Yes	0.087	0.446	0.54	Yes	0.349	0.649	1	Yes	0.338	0.114	0.46	Yes	1.00	**4.49**
		$U_3 - L_3$			148.79	-----	124	-142	31	-11	646	190	-1883	-452	0.268	0.727	1.00	Yes	0.147	0.400	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.68**
		$U_4 - L_4$			-----	-207.11	82	-83	107	-109	1025	471	-1796	-404	-----	-----	-----	-----	-----	-----	-----	-----	0.455	0.535	1	Yes	0.438	0.139	0.58	Yes	1.00	**4.96**
		$U_5 - L_5$			-----	-355.10	80	-86	174	-198	1153	624	-11	172	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.351	1	Yes	0.613	0.201	0.82	Yes	1.00	**3.42**
		$U_6 - L_6$			-----	-400.82	75	-64	180	-194	1642	769	78	180	-----	-----	-----	-----	-----	-----	-----	-----	0.607	0.388	1	Yes	0.575	0.170	0.75	Yes	1.00	**3.23**
		$U_7 - L_7$			-----	-387.08	98	-112	261	-280	1198	295	472	183	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.347	1	Yes	0.597	0.276	0.88	Yes	1.00	**3.11**
		$U_8 - L_8$			-----	-1145.51	-98	112	-158	187	972	192	-1640	-445	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.166	1	Yes	0.797	0.035	0.84	Yes	1.00	**3.56**
		$U_9 - L_9$			-----	-630.13	-230	261	-372	419	583	227	-1017	-212	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.240	1	Yes	0.712	0.233	0.95	Yes	1.00	**2.41**
		$U_{10} - L_{10}$			-----	-670.06	-159	158	-275	311	624	302	-1483	-436	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.304	1	Yes	0.661	0.161	0.83	Yes	1.00	**3.13**
		$U_{11} - L_{11}$			-----	-629.89	-166	217	-328	442	635	368	-1062	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.244	1	Yes	0.733	0.205	0.94	Yes	1.00	**3.86**
		$U_{12} - L_{12}$			-----	-446.37	-137	138	-230	245	672	370	-1355	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.645	0.345	1	Yes	0.612	0.210	0.83	Yes	1.00	**3.08**
		$U_{13} - L_{13}$			-----	-319.81	-77	96	-146	176	338	190	-1007	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.350	1	Yes	0.613	0.201	0.82	Yes	1.00	**3.04**
		$U_{14} - L_{14}$			-----	-193.48	-51	59	-44	50	572	81	-2123	-307	-----	-----	-----	-----	-----	-----	-----	-----	0.432	0.565	1	Yes	0.409	0.076	0.49	Yes	1.00	**4.27**
		$U_{15} - L_{15}$			-----	-275.71	-21	15	205	-225	338	-82	-1144	-234	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.375	1	Yes	0.583	0.287	0.88	Yes	1.00	**5.94**
		$U_{16} - L_{16}$			-----	-322.06	46	-51	240	-249	474	107	-562	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.244	0.97	Yes	0.681	0.318	1.00	Yes	1.00	**4.48**
		$U_{17} - L_{17}$			-----	-419.42	80	-94	198	-219	506	201	-169	32	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.724	0.222	0.95	Yes	1.00	**3.06**
		$U_{18} - L_{18}$			-----	-533.77	175	-182	434	-448	683	174	-71	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.184	0.97	Yes	0.742	0.254	1.00	Yes	1.00	**4.04**
		$U_{19} - L_{19}$			-----	-652.73	180	-194	492	-513	589	117	-168	-5	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.159	0.98	Yes	0.760	0.238	1.00	Yes	1.00	**5.04**
		$U_{20} - L_{20}$			-----	-540.69	232	-278	386	-464	434	57	259	34	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.201	1	Yes	0.692	0.246	0.94	Yes	1.00	**3.09**
	Structure 2	$U_0 - L_0$			-----	-625.16	-160	266	-310	460	43	7	-1039	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1	Yes	0.670	0.195	0.87	Yes	1.00	**2.08**
		$U_1 - L_1$			-----	-668.14	-214	220	-467	484	630	164	-1309	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.232	1	Yes	0.716	0.205	0.93	Yes	1.00	**3.06**
		$U_2 - L_2$			-----	-548.56	-159	175	-363	396	624	290	-1146	42	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.262	1	Yes	0.699	0.203	0.91	Yes	1.00	**2.85**
		$U_3 - L_3$			-----	-454.67	-74	85	-197	218	548	265	-580	139	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.219	1	Yes	0.713	0.198	0.92	Yes	1.00	**2.78**
		$U_4 - L_4$			-----	-278.78	-26	37	-139	154	554	238	-967	4	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.365	1	Yes	0.590	0.197	0.79	Yes	1.00	**2.91**
		$U_5 - L_5$			-----	-208.38	50	-42	-81	108	548	184	-1646	-83	-----	-----	-----	-----	-----	-----	-----	-----	0.471	0.527	1	Yes	0.441	0.138	0.58	Yes	1.00	**4.30**
		$U_6 - L_6$			233.73	-----	128	-132	-30	39	-3	-65	-1389	-102	0.420	0.571	1.00	Yes	0.231	0.314	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		$U_7 - L_7$			-----	-210.16	76	-88	78	-90	578	87	-1875	27	-----	-----	-----	-----	-----	-----	-----	-----	0.475	0.519	1	Yes	0.445	0.115	0.56	Yes	1.00	**4.97**
		$U_8 - L_8$			-----	-473.49	155	-174	331	-355	539	56	-486	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.173	0.86	Yes	0.682	0.310	1.00	Yes	1.00	**3.54**
		$U_9 - L_9$			-----	-691.55	278	-278	576	-589	1170	634	-550	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.221	1	Yes	0.741	0.250	1.00	Yes	1.00	**4.49**
		$U_{10} - L_{10}$			-----	-746.46	234	-234	503	-527	1185	705	-213	169	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.256	1	Yes	0.698	0.233	0.94	Yes	1.00	**4.37**
		$U_{11} - L_{11}$			-----	-730.67	227	-220	453	-457	1193	676	399	474	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.683	0.202	0.89	Yes	1.00	**3.54**
		$U_{12} - L_{12}$			-----	-695.12	194	-176	398	-390	1681	643	933	486	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.328	1	Yes	0.603	0.171	0.78	Yes	1.00	**3.18**
		$U_{13} - L_{13}$			-----	-608.63	224	-222	481	-469	1283	294	409	180	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.314	1	Yes	0.587	0.230	0.82	Yes	1.00	**3.47**
		$U_{14} - L_{14}$			-----	-1082.70	-58	49	-219	198	966	-108	-2250	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.205	1	Yes	0.718	0.039	0.76	Yes	1.00	**4.73**
		$U_{15} - L_{15}$			-----	-643.77	-272	275	-544	529	647	64	-1041	13	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.274	1	Yes	0.621	0.260	0.89	Yes	1.00	**3.62**
		$U_{16} - L_{16}$			-----	-654.39	-192	180	-428	424	673	192	-1341	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.239	1	Yes	0.701	0.182	0.89	Yes	1.00	**3.13**
		$U_{17} - L_{17}$			-----	-598.53	-200	200	-448	462	595	195	-1300	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.697	0.215	0.92	Yes	1.00	**3.28**
		$U_{18} - L_{18}$			-----	-562.92	-159	165	-424	455	622	215	-1104	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.242	1	Yes	0.717	0.233	0.96	Yes	1.00	**3.50**
		$U_{19} - L_{19}$			-----	-459.66	-89	90	-241	249	520	196	-1219	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.692	0.301	1	Yes	0.686	0.240	0.93	Yes	1.00	**3.24**
		$U_{20} - L_{20}$			-----	-313.74	-46	51	-143	158	522	186	-1088	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.643	0.349	1	Yes	0.601	0.180	0.79	Yes	1.00	**2.99**
		$U_{21} - L_{21}$			-----	-270.79	5	4	-156	176	73	-63	-1113	-29	-----	-----	-----	-----	-----	-----	-----	-----	0.612	0.385	1	Yes	0.573	0.225	0.80	Yes	1.00	**4.43**
		$U_{22} - L_{22}$			-----	-209.34	-5	7	-27	30	631	159	-1890	-168	-----	-----	-----	-----	-----	-----	-----	-----	0.471	0.521	1	Yes	0.443	0.039	0.49	Yes	1.00	**4.63**
		$U_{23} - L_{23}$			-----	-321.38	8	-11	224	-242	524	165	-603	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.268	1	Yes	0.680	0.309	0.99	Yes	1.00	**4.46**
		$U_{24} - L_{24}$			-----	-371.09	49	-54	222	-231	584	203	-214	20	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.236	1	Yes	0.711	0.264	0.98	Yes	1.00	**3.59**
		$U_{25} - L_{25}$			-----	-475.40	96	-98	298	-297	588	223	-78	120	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.183	0.9	Yes	0.710	0.287	1.00	Yes	1.00	**3.54**
		$U_{26} - L_{26}$			-----	-573.44	166	-173	490	-516	708	300	-285	170	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.189	0.96	Yes	0.731	0.264	1.00	Yes	1.00	**3.91**
		$U_{27} - L_{27}$			-----	-636.94	197	-201	546	-555	770	313	-49	322	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.193	0.98	Yes	0.741	0.257	1.00	Yes	1.00	**4.41**
		$U_{28} - L_{28}$			-----	-592.42	160	-134	441	-425	1849	578	736	369	-----	-----	-----	-----	-----	-----	-----	-----	0.684	0.311	1	Yes	0.635	0.187	0.83	Yes	1.00	**3.69**
		$U_{29} - L_{29}$			-----	-590.60	151	-156	546	-533	1444	195	302	151	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.336	1	Yes	0.569	0.261	0.84	Yes	1.00	**5.02**
		$U_{30} - L_{30}$			-----	-1092.77	-181	155	-258	217	784	-307	-1762	-235	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.165	1	Yes	0.752	0.048	0.80	Yes	1.00	**4.51**
		$U_{31} - L_{31}$			-----	-665.99	-310	304	-487	474	501	97	-890	20	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.253	1	Yes	0.642	0.233	0.88	Yes	1.00	**2.50**
		$U_{32} - L_{32}$			-----	-773.13	-226	207	-391	395	469	170	-1163	-85	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.250	1	Yes	0.670	0.170	0.84	Yes	1.00	**2.92**
		$U_{33} - L_{33}$			-----	-763.61	-247	236	-439	445	449	211	-1013	31	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.227	1	Yes	0.714	0.197	0.92	Yes	1.00	**3.35**
		$U_{34} - L_{34}$			-----	-689.21	-238	250	-403	433	552	331	-1590	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.310	1	Yes	0.644	0.191	0.84	Yes	1.00	**3.22**
		$U_{35} - L_{35}$			-----	-612.79	-256	270	-439	476	631	374	-1844	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.313	1	Yes	0.657	0.202	0.86	Yes	1.00	**3.52**
		$U_{36} - L_{36}$			-----	-470.70	-137	159	-283	314	262	172	-1219	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.313	1	Yes	0.678	0.275	0.96	Yes	1.00	**3.83**
		$U_{37} - L_{37}$			-----	-198.01	-79	93	-127	149	525	117	-1829	38	-----	-----	-----	-----	-----	-----	-----	-----	0.447	0.544	1	Yes	0.419	0.191	0.61	Yes	1.00	**4.25**
		$U_{38} - L_{38}$			195.08	-----	-118	120	127	-135	98	-275	-1642	-386	0.351	0.648	1.00	Yes	0.193	0.357	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.79**
		$U_{39} - L_{39}$			-----	-295.05	-49	43	194	-216	527	154	-831	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.667	0.326	1	Yes	0.624	0.277	0.91	Yes	1.00	**5.50**
		$U_{40} - L_{40}$			-----	-325.68	32	-40	213	-218	599	172	-171	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.689	0.278	0.97	Yes	1.00	**3.80**
		$U_{41} - L_{41}$			-----	-461.06	85	-94	233	-246	579	192	97	104	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.224	0.95	Yes	1.00	**3.15**
		$U_{42} - L_{42}$			-----	-577.40	166	-176	492	-499	669	171	219	118	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.172	0.95	Yes	0.736	0.255	1.00	Yes	1.00	**4.10**
		$U_{43} - L_{43}$			-----	-706.63	185	-203	534	-554	621	187	414	216	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.153	0.97	Yes	0.757	0.235	1.00	Yes	1.00	**4.93**
		$U_{44} - L_{44}$			-----	-676.41	247	-304	470	-599	540	92	472	80	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.189	1	Yes	0.725	0.254	0.98	Yes	1.00	**4.25**
	Structure 3	$U_0 - L_0$			-----	-530.05	-152	244	-254	367	256	34	-687	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.241	1	Yes	0.664	0.188	0.86	Yes	1.00	**1.71**
		$U_1 - L_1$			-----	-628.13	-212	212	-464	465	621	147	-995	56	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.214	1	Yes	0.731	0.216	0.95	Yes	1.00	**3.28**
		$U_2 - L_2$			-----	-500.07	-165	176	-326	354	654	312	-1055	82	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.262	1	Yes	0.696	0.200	0.90	Yes	1.00	**2.66**
		$U_3 - L_3$			-----	-387.99	-71	86	-151	178	560	272	-739	106	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.271	1	Yes	0.669	0.180	0.85	Yes	1.00	**2.39**
		$U_4 - L_4$			-----	-268.00	-40	47	-157	171	591	227	-1096	63	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.390	1	Yes	0.567	0.219	0.79	Yes	1.00	**3.38**
		$U_5 - L_5$			-----	-200.44	29	-19	-94	118	96	1	-1763	-94	-----	-----	-----	-----	-----	-----	-----	-----	0.449	0.546	1	Yes	0.424	0.151	0.58	Yes	1.00	**4.48**
		$U_6 - L_6$			-----	-189.44	62	-69	87	-97	814	247	-2064	-296	-----	-----	-----	-----	-----	-----	-----	-----	0.423	0.575	1	Yes	0.401	0.124	0.53	Yes	1.00	**4.27**
		$U_7 - L_7$			-----	-369.38	82	-101	228	-253	529	14	-410	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.219	0.97	Yes	0.708	0.289	1.00	Yes	1.00	**3.59**
		$U_8 - L_8$			-----	-502.16	148	-146	324	-326	943	436	-292	-36	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.269	1	Yes	0.689	0.278	0.97	Yes	1.00	**4.07**
		$U_9 - L_9$			-----	-582.26	184	-229	351	-443	1423	795	342	376	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.293	1	Yes	0.678	0.206	0.89	Yes	1.00	**3.67**
		$U_{10} - L_{10}$			-----	-607.16	153	-141	305	-317	1867	959	977	628	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.367	1	Yes	0.599	0.164	0.77	Yes	1.00	**3.45**
		$U_{11} - L_{11}$			-----	-582.23	192	-224	380	-428	1366	590	582	392	-----	-----	-----	-----	-----	-----	-----	-----	0.694	0.302	1	Yes	0.658	0.238	0.90	Yes	1.00	**3.25**
		$U_{12} - L_{12}$			-----	-1126.73	-8	-13	-101	76	1006	256	-1873	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.184	1	Yes	0.783	0.019	0.81	Yes	1.00	**3.63**
		$U_{13} - L_{13}$			-----	-442.70	-154	168	-268	287	669	113	-757	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.256	1	Yes	0.683	0.283	0.97	Yes	1.00	**2.45**
		$U_{14} - L_{14}$			-----	-460.46	-99	97	-185	206	618	251	-1195	-370	-----	-----	-----	-----	-----	-----	-----	-----	0.697	0.299	1	Yes	0.660	0.180	0.85	Yes	1.00	**3.14**
		$U_{15} - L_{15}$			-----	-349.53	-80	90	-136	166	521	250	-1271	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.364	1	Yes	0.603	0.168	0.78	Yes	1.00	**2.98**
		$U_{16} - L_{16}$			-----	-198.18	-88	89	-105	110	1006	372	-1932	-619	-----	-----	-----	-----	-----	-----	-----	-----	0.436	0.555	1	Yes	0.419	0.140	0.56	Yes	1.00	**3.81**
		$U_{17} - L_{17}$			173.22	-----	-172	192	114	-133	452	163	-1524	-561	0.312	0.687	1.00	Yes	0.171	0.378	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.39**
		$U_{18} - L_{18}$			108.63	-274.48	-115	124	219	-259	465	148	-1122	-510	0.195	0.656	0.86	Yes	0.107	0.361	0.47	Yes	0.600	0.395	1	Yes	0.581	0.331	0.92	Yes	1.00	**7.41**
		$U_{19} - L_{19}$			-----	-328.77	-38	21	227	-236	418	216	132	86	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.209	0.93	Yes	0.696	0.301	1.00	Yes	1.00	**5.56**
		$U_{20} - L_{20}$			-----	-327.70	76	-86	169	-213	602	193	220	70	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.262	1	Yes	0.693	0.272	0.97	Yes	1.00	**3.12**

Axial AI Operating

Operating Loads - 5C1

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	1.300	1.300	611.16	-----	-36	29	2	-14	-472	-612	115	190	0.802	0.196	1.00	Yes	0.484	0.108	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.41**
		U_1 - L_2			379.96	-162.18	-92	-5	25	-20	-677	-615	483	283	0.683	0.314	1.00	Yes	0.376	0.173	0.55	Yes	0.372	0.279	0.66	Yes	0.343	0.118	0.47	Yes	1.00	**5.79**
		U_2 - L_3			-----	-318.98	-76	-29	68	-35	67	-630	629	349	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.260	1	Yes	0.675	0.097	0.78	Yes	1.00	**9.24**
		U_3 - L_4			-----	-323.55	-13	-46	11	-66	56	-280	-724	-206	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.253	1	Yes	0.685	0.084	0.77	Yes	1.00	**4.98**
		U_4 - L_4			538.28	-----	-84	47	-33	37	-156	-35	536	226	0.789	0.210	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		U_4 - L_5			672.74	-----	-191	219	-13	107	-268	302	-401	85	0.795	0.197	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		U_5 - L_6			599.17	-----	-277	238	-28	82	-70	278	-709	-51	0.708	0.286	1.00	Yes	0.390	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.06**
		U_6 - L_7			646.92	-----	-92	311	33	76	-144	96	-288	-223	0.765	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		U_8 - L_9			952.01	-----	-87	355	10	186	-90	-552	563	267	0.761	0.230	1.00	Yes	0.471	0.130	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		U_9 - L_{10}			957.49	-----	-298	235	-115	127	-574	-768	560	238	0.765	0.231	1.00	Yes	0.474	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		U_{10} - L_{11}			930.48	-----	-233	174	-83	96	-389	-771	180	-16	0.786	0.209	1.00	Yes	0.487	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		U_{11} - L_{12}			768.85	-----	-245	77	-95	48	-471	-810	167	-25	0.761	0.235	1.00	Yes	0.418	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		U_{12} - L_{13}			552.44	-----	-196	117	-102	51	-401	-769	-556	-269	0.673	0.321	1.00	Yes	0.424	0.184	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		U_{13} - L_{14}			384.56	-----	-87	19	-34	-24	-379	-561	-676	-306	0.692	0.307	1.00	Yes	0.380	0.169	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		U_{15} - L_{14}			268.56	-191.50	-79	-12	-20	-67	-261	-207	1263	-307	0.483	0.467	0.95	Yes	0.266	0.257	0.53	Yes	0.449	0.544	1	Yes	0.405	0.101	0.51	Yes	1.00	**6.79**
		U_{16} - L_{15}			408.37	-----	-146	93	-35	-6	-181	83	260	-184	0.734	0.262	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		U_{17} - L_{16}			528.61	-----	-144	98	-47	23	-337	-60	-304	-104	0.775	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		U_{18} - L_{17}			621.74	-----	-333	254	-132	90	-346	36	-402	-110	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		U_{19} - L_{18}			691.66	-----	-335	253	-133	97	-360	-92	-460	-204	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		U_{20} - L_{19}			695.90	-----	-384	326	-179	143	-181	-3	-274	-140	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
	Structure 2	U_0 - L_1			766.93	-----	-247	305	-99	126	-608	-608	-150	9	0.759	0.232	1.00	Yes	0.417	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		U_1 - L_2			710.63	-----	-384	282	-162	115	-537	-736	147	-28	0.703	0.288	1.00	Yes	0.387	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**
		U_2 - L_3			599.36	-----	-315	250	-112	83	-307	-622	139	-16	0.709	0.291	1.00	Yes	0.390	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		U_3 - L_4			530.71	-----	-170	109	-49	23	-312	-613	179	16	0.707	0.283	1.00	Yes	0.389	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		U_4 - L_5			378.79	-----	-132	87	11	-24	-295	-519	269	57	0.681	0.319	1.00	Yes	0.375	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		U_5 - L_6			268.47	-214.41	-85	19	42	-99	-299	-625	-1322	-198	0.483	0.510	1.00	Yes	0.266	0.280	0.55	Yes	0.506	0.238	0.75	Yes	0.454	0.127	0.59	Yes	1.00	**6.80**
		U_6 - L_7			-----	-380.60	-6	-42	45	-101	86	-195	-515	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.183	1	Yes	0.729	0.115	0.85	Yes	1.00	**3.67**
		U_8 - L_7			594.61	-----	-192	142	-90	48	-190	133	319	-198	0.758	0.237	1.00	Yes	0.477	0.134	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		U_8 - L_9			737.51	-----	-339	252	-172	120	-166	49	-139	-54	0.799	0.201	1.00	Yes	0.439	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		U_{10} - L_9			829.08	-----	-310	253	-128	142	-120	197	-179	119	0.820	0.173	1.00	Yes	0.451	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		U_{11} - L_{10}			875.92	-----	-338	305	-136	165	-201	224	-403	140	0.798	0.199	1.00	Yes	0.439	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		U_{12} - L_{11}			847.37	-----	-331	346	-131	175	-525	216	-560	59	0.772	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		U_{13} - L_{12}			731.22	-----	-409	380	-157	161	-490	74	-520	-5	0.723	0.268	1.00	Yes	0.398	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		U_{14} - L_{13}			766.07	-----	-263	443	-9	113	-17	141	-228	-233	0.758	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		U_{14} - L_{15}			595.73	-----	-191	343	-15	166	106	-286	541	246	0.704	0.292	1.00	Yes	0.387	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		U_{15} - L_{16}			586.21	-----	-345	316	-170	167	198	-296	598	184	0.693	0.304	1.00	Yes	0.381	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**
		U_{16} - L_{17}			682.65	-----	-331	344	-126	152	-79	-499	374	111	0.739	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**
		U_{17} - L_{18}			645.23	-----	-284	281	-108	124	-32	-396	360	91	0.763	0.232	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		U_{18} - L_{19}			617.35	-----	-272	243	-79	93	-60	-605	294	81	0.730	0.263	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.89**
		U_{19} - L_{20}			543.26	-----	-186	143	-38	43	-413	-657	300	88	0.693	0.301	1.00	Yes	0.381	0.172	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		U_{20} - L_{21}			361.60	-----	-111	88	-33	5	-49	-418	-700	-89	0.650	0.345	1.00	Yes	0.358	0.190	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		U_{21} - L_{22}			320.89	-----	-103	20	8	-74	-161	-739	-983	-121	0.577	0.416	1.00	Yes	0.317	0.229	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		U_{23} - L_{22}			419.01	-----	-120	49	14	-19	8	90	-293	-105	0.754	0.239	1.00	Yes	0.414	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.46**
		U_{24} - L_{23}			426.52	-----	-123	106	-17	16	-173	134	-257	-64	0.767	0.232	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		U_{25} - L_{24}			600.51	-----	-191	176	-39	47	-140	114	-302	-83	0.766	0.233	1.00	Yes	0.421	0.131	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		U_{26} - L_{25}			669.42	-----	-282	278	-77	95	-54	214	-256	-59	0.791	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		U_{27} - L_{26}			649.36	-----	-280	292	-105	124	-274	236	-343	-9	0.768	0.227	1.00	Yes	0.422	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		U_{28} - L_{27}			672.29	-----	-296	341	-93	147	-485	184	-559	45	0.728	0.267	1.00	Yes	0.400	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_{29} - L_{28}			592.55	-----	-342	333	-88	102	-354	94	-578	-52	0.701	0.299	1.00	Yes	0.385	0.164	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		U_{30} - L_{29}			622.30	-----	-192	359	39	63	-133	77	-268	-303	0.736	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		U_{30} - L_{31}			730.20	-----	-258	431	-56	227	25	-490	505	219	0.722	0.275	1.00	Yes	0.397	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		U_{31} - L_{32}			733.05	-----	-426	372	-230	215	-140	-410	462	124	0.725	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.82**
		U_{32} - L_{33}			848.46	-----	-341	339	-158	192	-194	-579	290	67	0.773	0.224	1.00	Yes	0.425	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.50**
		U_{33} - L_{34}			834.49	-----	-319	267	-144	164	-400	-748	247	46	0.760	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		U_{34} - L_{35}			757.83	-----	-294	218	-154	122	-475	-733	6	-140	0.750	0.246	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		U_{35} - L_{36}			679.14	-----	-313	218	-167	113	-347	-581	21	-98	0.736	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		U_{36} - L_{37}			524.42	-----	-184	119	-82	27	-146	-798	-654	-243	0.669	0.328	1.00	Yes	0.421	0.188	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		U_{38} - L_{37}			-----	-314.78	-19	-31	14	-75	-332	-171	694	-334	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.312	1	Yes	0.603	0.085	0.69	Yes	1.00	**3.60**
		U_{39} - L_{38}			405.40	-180.70	-123	53	50	-59	-109	95	-376	-89	0.729	0.267	1.00	Yes	0.401	0.147	0.55	Yes	0.431	0.228	0.66	Yes	0.382	0.158	0.55	Yes	1.00	**7.69**
		U_{40} - L_{39}			398.97	-----	-132	91	-3	-11	-277	108	-383	-103	0.718	0.279	1.00	Yes	0.395	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		U_{41} - L_{40}			561.18	-----	-176	126	-54	28	-292	-48	-416	-182	0.748	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		U_{42} - L_{41}			627.66	-----	-323	264	-118	88	-402	-19	-405	-173	0.742	0.256	1.00	Yes	0.408	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		U_{43} - L_{42}			769.89	-----	-378	309	-133	100	-372	-58	-375	-195	0.762	0.232	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		U_{44} - L_{43}			803.43	-----	-373	372	-173	153	-106	62	-211	-87	0.795	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
	Structure 3	U_0 - L_1			706.56	-----	-230	259	-79	103	-538	-576	-144	5	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		U_1 - L_2			653.98	-----	-341	240	-159	109	-396	-704	161	-43	0.708	0.290	1.00	Yes	0.390	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		U_2 - L_3			570.65	-----	-311	229	-124	85	-556	-794	132	-28	0.675	0.320	1.00	Yes	0.371	0.176	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**
		U_3 - L_4			495.23	-----	-138	88	-40	18	-340	-563	164	-19	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		U_4 - L_5			323.66	-----	-120	66	-36	-12	-264	-704	-893	-185	0.582	0.412	1.00	Yes	0.320	0.227	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		U_5 - L_6			-----	-298.51	-64	-22	20	-127	-219	-478	-1629	-439	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.297	1	Yes	0.632	0.162	0.80	Yes	1.00	**8.01**
		U_7 - L_6			420.48	-----	-87	32	-44	-2	-205	-81	429	-161	0.756	0.236	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		U_8 - L_7			572.43	-----	-187	144	-111	63	-181	65	660	-84	0.698	0.292	1.00	Yes	0.439	0.167	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		U_8 - L_9			831.07	-----	-258	122	-105	53	-77	136	374	155	0.822	0.176	1.00	Yes	0.452	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		U_{10} - L_9			980.80	-----	-231	200	-60	102	-253	320	-437	53	0.828	0.164	1.00	Yes	0.513	0.093	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.61**
		U_{11} - L_{10}			979.75	-----	-283	279	-66	100	-258	194	-643	-188	0.783	0.208	1.00	Yes	0.485	0.118	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		U_{12} - L_{11}			981.20	-----	-85	375	27	117	86	364	-377	-193	0.784	0.215	1.00	Yes	0.486	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.04**
		U_{13} - L_{12}			607.10	-----	-87	290	10	159	-118	-369	628	336	0.718	0.279	1.00	Yes	0.395	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		U_{13} - L_{14}			593.93	-----	-273	222	-96	128	-462	-388	735	311	0.702	0.289	1.00	Yes	0.386	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		U_{14} - L_{15}			629.14	-----	-199	176	-53	98	-355	-760	317	93	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		U_{15} - L_{16}			493.11	-----	-99	3	-23	27	-727	-745	238	31	0.723	0.274	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		U_{17} - L_{16}			-----	-303.17	-19	-41	-13	-46	-350	-325	762	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.298	1	Yes	0.641	0.058	0.70	Yes	1.00	**5.10**
		U_{18} - L_{17}			-----	-308.99	-115	0	59	-39	-554	-174	-189	-70	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.284	1	Yes	0.654	0.147	0.81	Yes	1.00	**9.91**
		U_{19} - L_{18}			435.25	-----	-84	13	22	-22	-378	-268	-202	-115	0.783	0.217	1.00	Yes	0.431	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.32**
		U_{20} - L_{19}			656.35	-----	-105	71	-26	0	-64	21	-61	14	0.861	0.138	1.00	Yes	0.520	0.076	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**

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: 5C1 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 - Upper Chord	Structure 1																																												
	U$_1$ - U$_1$	-71.60	-75.05	-33.32			0.90	1.24	-37.10	-83.55	0.00	0.00	Vehicle	Vehicle	-----	-201.70	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	-----	-----	5.91	5.91
	U$_1$ - U$_2$	-90.76	-2.54	-70.84			0.90	1.24	-2.83	-78.87	0.00	0.00	Vehicle	Vehicle	-----	-220.51	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	-----	-----	6.02	6.02
	U$_1$ - U$_3$	-61.05	57.36	-128.31			0.90	1.24	63.86	-142.84	0.00	0.00	Vehicle	Vehicle	3.66	-265.06	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	11.46	11.46	3.53	3.53
	U$_1$ - U$_4$	10.82	76.42	-111.84			0.90	1.24	85.08	-124.51	0.00	0.00	Vehicle	Vehicle	124.67	-147.80	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	7.76	7.76	4.63	4.63
	U$_1$ - U$_5$	12.98	76.83	-127.17			0.90	1.24	85.54	-141.58	0.00	0.00	Vehicle	Vehicle	128.08	-167.18	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	7.69	7.69	4.08	4.08
	U$_1$ - U$_6$	121.44	88.84	-96.65			0.90	1.24	98.91	-107.60	0.00	0.00	Vehicle	Vehicle	286.46	-----	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	-----	-----	5.56	5.56	-----	-----
	U$_1$ - U$_7$	249.52	98.23	-50.22			0.90	1.24	109.36	-55.91	0.00	0.00	Vehicle	Vehicle	466.54	-----	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	-----	-----	5.07	5.07	-----	-----
	U$_1$ - U$_8$	376.85	95.37	11.43			0.90	1.24	106.18	12.73	0.00	0.00	Vehicle	Vehicle	627.93	-----	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	-----	-----	6.91	6.91	-----	-----
	U$_1$ - U$_9$	319.70	30.86	6.95			0.90	1.20	33.28	7.49	0.00	0.00	Vehicle	Vehicle	458.87	-----	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	-----	-----	18.61	18.61	-----	-----
	U$_{10}$ - U$_{10}$	128.80	-18.99	-1.29			0.90	1.20	-1.39	-20.47	0.00	0.00	Vehicle	Vehicle	165.63	-----	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	-----	-----	42.67	-----	-----	10.67	-----	-----	-----	-----	-----	-----
	U$_{10}$ - U$_{11}$	-70.81	-81.03	-40.63			0.90	1.20	-43.81	-87.37	0.00	0.00	Vehicle	Vehicle	-----	-205.63	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	-----	-----	6.03	6.03
	U$_{11}$ - U$_{12}$	-252.85	68.51	-79.93			0.90	1.20	73.87	-86.18	0.00	0.00	Vehicle	Vehicle	-----	-440.74	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	-----	-----	6.50	6.50
	U$_{12}$ - U$_{13}$	-391.81	59.19	-145.41			0.90	1.20	63.81	-156.78	0.00	0.00	Vehicle	Vehicle	-----	-713.16	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	-----	-----	4.76	4.76
	U$_{13}$ - U$_{14}$	-482.83	49.75	-168.59			0.90	1.20	53.64	-181.77	0.00	0.00	Vehicle	Vehicle	-----	-863.99	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	-----	-----	4.65	4.65
	U$_{14}$ - U$_{15}$	-484.28	49.57	-200.62			0.90	1.20	53.44	-216.31	0.00	0.00	Vehicle	Vehicle	-----	-910.77	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	-----	-----	3.90	3.90
	U$_{15}$ - U$_{16}$	-501.86	38.10	-222.54			0.90	1.20	41.08	-239.94	0.00	0.00	Vehicle	Vehicle	-----	-964.34	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	-----	-----	3.44	3.44
	U$_{16}$ - U$_{17}$	-467.82	18.48	-208.33			0.90	1.20	19.92	-224.62	0.00	0.00	Vehicle	Vehicle	-----	-900.17	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	-----	-----	3.83	3.83
	U$_{17}$ - U$_{18}$	-368.70	17.11	-101.28			0.90	1.20	18.44	-109.20	0.00	0.00	Vehicle	Vehicle	-----	-621.27	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	-----	-----	5.51	5.51
	U$_{18}$ - U$_{19}$	-251.42	8.48	-107.21			0.90	1.20	9.15	-115.59	0.00	0.00	Vehicle	Vehicle	-----	-477.12	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	-----	-----	3.69	3.69
	U$_{19}$ - U$_{20}$	-117.77	1.71	-46.64			0.90	1.20	1.84	-50.29	0.00	0.00	Vehicle	Vehicle	-----	-218.47	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	-----	-----	11.13	11.13
	Structure 2																																												
	U$_1$ - U$_1$	-118.16	-54.09	-33.72			0.90	1.18	-35.90	-57.59	0.00	0.00	Vehicle	Vehicle	-----	-228.47	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	-----	-----	9.19	9.19
	U$_1$ - U$_2$	-239.45	-101.27	-55.40			0.90	1.18	-58.99	-107.82	0.00	0.00	Vehicle	Vehicle	-----	-451.45	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	-----	-----	5.12	5.12
	U$_1$ - U$_3$	-350.29	-146.67	-92.88			0.90	1.18	-98.89	-156.16	0.00	0.00	Vehicle	Vehicle	-----	-658.39	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	-----	-----	4.66	4.66
	U$_1$ - U$_4$	-448.96	27.88	-198.96			0.90	1.18	29.68	-211.83	0.00	0.00	Vehicle	Vehicle	-----	-859.03	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	-----	-----	4.21	4.21
	U$_1$ - U$_5$	-483.05	34.06	-174.42			0.90	1.18	36.29	-185.71	0.00	0.00	Vehicle	Vehicle	-----	-869.38	12.50	62.19	49.6875	2052.19	131.71	10.6354	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	-----	-----	5.41	5.41
	U$_1$ - U$_6$	-485.65	75.04	-195.39			0.90	1.18	79.89	-208.03	0.00	0.00	Vehicle	Vehicle	-----	-901.77	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	-----	-----	4.81	4.81
	U$_1$ - U$_7$	-428.66	88.81	-217.67			0.90	1.18	94.55	-231.75	0.00	0.00	Vehicle	Vehicle	-----	-858.53	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	-----	-----	3.94	3.94
	U$_1$ - U$_8$	-428.18	89.02	-238.63			0.90	1.18	94.78	-254.07	0.00	0.00	Vehicle	Vehicle	-----	-886.92	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	-----	-----	3.59	3.59
	U$_1$ - U$_9$	-335.25	101.97	-219.25			0.90	1.18	108.57	-233.44	0.00	0.00	Vehicle	Vehicle	-----	-739.30	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	-----	-----	3.39	3.39
	U$_9$ - U$_{10}$	-200.15	110.18	-175.37			0.90	1.18	117.31	-186.72	0.00	0.00	Vehicle	Vehicle	-----	-502.93	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	-----	-----	3.67	3.67
	U$_{10}$ - U$_{11}$	-52.03	116.82	-131.61			0.90	1.18	124.38	-140.13	0.00	0.00	Vehicle	Vehicle	94.05	-249.81	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	7.74	7.74	5.12	5.12
	U$_{11}$ - U$_{12}$	107.09	116.39	-77.14			0.90	1.18	123.92	-82.13	0.00	0.00	Vehicle	Vehicle	300.31	-----	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	-----	-----	6.48	6.48	-----	-----
	U$_{12}$ - U$_{13}$	259.37	115.13	-24.05			0.90	1.18	122.57	-25.81	0.00	0.00	Vehicle	Vehicle	496.53	-----	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	-----	-----	7.18	7.18	-----	-----
	U$_{13}$ - U$_{14}$	391.99	102.09	17.67			0.90	1.18	108.69	18.81	0.00	0.00	Vehicle	Vehicle	650.88	-----	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	-----	-----	10.79	10.79	-----	-----
	U$_{14}$ - U$_{15}$	439.60	24.76	-19.35			0.90	1.17	26.05	-20.36	0.00	0.00	Vehicle	Vehicle	605.09	-----	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	-----	-----	43.18	43.18	-----	-----
	U$_{15}$ - U$_{16}$	369.68	55.55	5.04			0.90	1.17	58.44	5.30	0.00	0.00	Vehicle	Vehicle	556.56	-----	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	-----	-----	15.45	15.45	-----	-----
	U$_{16}$ - U$_{17}$	271.42	-5.25	-24.28			0.90	1.17	-5.52	-25.54	0.00	0.00	Vehicle	Vehicle	345.67	-----	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	-----	-----	-----	-----	-----	-----
	U$_{17}$ - U$_{18}$	171.80	-36.44	-53.44			0.90	1.17	-38.33	-56.22	0.00	0.00	Vehicle	Vehicle	173.50	-----	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$_{19}$	72.84	91.29	-80.23			0.90	1.17	96.05	-84.41	0.00	0.00	Vehicle	Vehicle	219.55	-15.04	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	7.22	7.22	8.53	8.53
	U$_{19}$ - U$_{20}$	-8.04	81.38	-124.92			0.90	1.17	85.62	-131.43	0.00	0.00	Vehicle	Vehicle	100.85	-181.32	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	9.67	9.67	5.21	5.21
	U$_{20}$ - U$_{21}$	-60.07	68.79	-142.50			0.90	1.17	72.38	-149.92	0.00	0.00	Vehicle	Vehicle	16.00	-272.99	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	14.53	14.53	5.18	5.18
	U$_{21}$ - U$_{22}$	-82.15	54.51	-174.38			0.90	1.17	57.35	-183.46	0.00	0.00	Vehicle	Vehicle	-----	-345.30	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	-----	-----	4.11	4.11
	U$_{22}$ - U$_{23}$	-82.37	54.52	-187.84			0.90	1.17	57.36	-197.62	0.00	0.00	Vehicle	Vehicle	-----	-363.99	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	-----	-----	3.82	3.82
	U$_{23}$ - U$_{24}$	-65.94	38.74	-184.33			0.90	1.17	40.76	-193.93	0.00	0.00	Vehicle	Vehicle	-----	-337.83	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	-----	-----	3.97	3.97
	U$_{24}$ - U$_{25}$	-11.98	80.53	-143.14			0.90	1.17	84.72	-150.80	0.00	0.00	Vehicle	Vehicle	86.76	-219.15	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	9.89	9.89	4.48	4.48
	U$_{25}$ - U$_{26}$	54.95	91.46	-136.19			0.90	1.17	96.23	-143.28	0.00	0.00	Vehicle	Vehicle	196.53	-114.83	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	7.39	7.39	4.90	4.90
	U$_{26}$ - U$_{27}$	135.89	100.54	-96.28			0.90	1.17	105.77	-101.29	0.00	0.00	Vehicle	Vehicle	314.16	-----	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	-----	-----	5.96	5.96	-----	-----
	U$_{27}$ - U$_{28}$	216.69	104.79	-37.36			0.90	1.17	110.25	-39.30	0.00	0.00	Vehicle	Vehicle	425.02	-----	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	-----	-----	7.50	7.50	-----	-----
	U$_{28}$ - U$_{29}$	293.53	107.20	-13.12			0.90	1.17	112.78	-13.80	0.00	0.00	Vehicle	Vehicle	528.21	-----	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	-----	-----	8.68	8.68	-----	-----
	U$_{29}$ - U$_{30}$	357.86	101.08	25.30			0.90	1.17	106.34	26.62	0.00	0.00	Vehicle	Vehicle	603.46	-----	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	-----	-----	11.35	11.35	-----	-----
	U$_{30}$ - U$_{31}$	339.12	28.68	-30.46			0.90	1.18	30.54	-32.43	0.00	0.00	Vehicle	Vehicle	480.56	-----	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	-----	-----	40.12	40.12	-----	-----
	U$_{31}$ - U$_{32}$	251.34	48.71	9.54			0.90	1.18	51.86	10.15	0.00	0.00	Vehicle	Vehicle	394.16	-----	10.25	44.88	34.6250	1480.88	131.71	10.6276	6.0391	15.84	32.76

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: 5C1 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
Structure 1	L_0- L_1	4.73	-1.16	-2.71			0.90	1.24	-1.29	-3.02	0.00	0.00	Vehicle	Vehicle	4.46	-----	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	-----	-----	-----	-----	-----	-----
	L_1 - L_2	74.19	63.91	58.39			0.90	1.24	71.15	65.01	0.00	0.00	Vehicle	Vehicle	188.95	-----	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	-----	-----	6.02	6.02	-----	-----
	L_2 - L_3	97.64	-42.76	121.84			0.90	1.24	135.64	-47.60	0.00	0.00	Vehicle	Vehicle	303.26	-----	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	-----	-----	4.21	4.21	-----	-----
	L_3 - L_4	66.79	-61.37	131.55			0.90	1.24	146.45	-68.33	0.00	0.00	Vehicle	Vehicle	277.21	-2.00	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	4.11	4.11	9.22	9.22
	L_4 - L_5	-108.59	-92.41	73.74			0.90	1.24	82.09	-102.88	0.00	0.00	Vehicle	Vehicle	-----	-274.91	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	-----	-----	3.81	3.81
	L_5 - L_6	-237.42	-101.99	28.87			0.90	1.24	32.14	-113.55	0.00	0.00	Vehicle	Vehicle	-----	-456.26	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	-----	-----	3.72	3.72
	L_6 - L_7	-362.38	-105.81	-25.62			0.90	1.24	-28.53	-117.80	0.00	0.00	Vehicle	Vehicle	-----	-624.23	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	-478.62	-96.24	-82.48			0.90	1.24	-91.82	-107.15	0.00	0.00	Vehicle	Vehicle	-----	-761.50	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	-----	-----	6.73	6.73
	L_8 - L_9	-476.97	-85.72	-0.20			0.90	1.20	-0.21	-92.43	0.00	0.00	Vehicle	Vehicle	-----	-740.22	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	-----	-----	7.82	7.82
	L_9 - L_{10}	-301.47	-56.63	-50.71			0.90	1.20	-54.68	-61.06	0.00	0.00	Vehicle	Vehicle	-----	-471.28	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	-----	-----	10.54	10.54
	L_{10} - L_{11}	-104.56	-76.88	15.14			0.90	1.20	16.32	-82.89	0.00	0.00	Vehicle	Vehicle	-----	-243.68	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	-----	-----	4.78	4.78
	L_{11} - L_{12}	96.98	36.50	58.07			0.90	1.20	62.61	39.36	0.00	0.00	Vehicle	Vehicle	207.47	-----	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	-----	-----	7.94	7.94	-----	-----
	L_{12} - L_{13}	268.60	-60.06	113.51			0.90	1.20	122.39	-64.76	0.00	0.00	Vehicle	Vehicle	508.29	-----	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	-----	-----	5.77	5.77	-----	-----
	L_{13} - L_{14}	405.49	115.67	148.76			0.90	1.20	160.39	124.72	0.00	0.00	Vehicle	Vehicle	735.65	-----	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	-----	-----	5.63	5.63	-----	-----
	L_{14} - L_{15}	502.59	-28.70	138.18			0.90	1.20	148.98	-30.95	0.00	0.00	Vehicle	Vehicle	847.05	-----	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	-----	-----	7.19	7.19	-----	-----
	L_{15} - L_{16}	469.06	-18.25	145.38			0.90	1.20	156.75	-19.67	0.00	0.00	Vehicle	Vehicle	813.56	-----	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	-----	-----	7.05	7.05	-----	-----
	L_{16} - L_{17}	365.26	-13.71	97.93			0.90	1.20	105.58	-14.79	0.00	0.00	Vehicle	Vehicle	612.10	-----	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	-----	-----	8.06	8.06	-----	-----
	L_{17} - L_{18}	248.52	2.46	61.36			0.90	1.20	66.16	2.65	0.00	0.00	Vehicle	Vehicle	409.08	-----	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	-----	-----	9.60	9.60	-----	-----
	L_{18} - L_{19}	112.87	-1.94	0.56			0.90	1.20	0.60	-2.09	0.00	0.00	Vehicle	Vehicle	147.51	-----	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	-----	-----	650.14	650.14	-----	-----
	L_{19} - L_{20}	-14.36	15.32	-50.57			0.90	1.20	16.51	-54.52	0.00	0.00	Vehicle	Vehicle	2.80	-89.54	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	31.31	31.31	7.50	7.50
Structure 2	L_0- L_1	15.25	-10.41	0.40			0.90	1.18	0.42	-11.09	0.00	0.00	Vehicle	Vehicle	20.37	-----	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	-----	-----	1454.98	1454.98	-----	-----
	L_1 - L_2	136.09	39.79	18.73			0.90	1.18	42.36	19.94	0.00	0.00	Vehicle	Vehicle	231.98	-----	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	-----	-----	11.74	11.74	-----	-----
	L_2 - L_3	262.77	67.52	72.33			0.90	1.18	77.01	71.89	0.00	0.00	Vehicle	Vehicle	441.71	-----	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	-----	-----	9.10	9.10	-----	-----
	L_3 - L_4	373.14	106.89	82.66			0.90	1.18	113.81	88.01	0.00	0.00	Vehicle	Vehicle	633.04	-----	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	-----	-----	8.11	8.11	-----	-----
	L_4 - L_5	456.57	123.69	132.74			0.90	1.18	141.33	131.70	0.00	0.00	Vehicle	Vehicle	777.27	-----	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	-----	-----	8.44	8.44	-----	-----
	L_5 - L_6	489.37	-57.39	189.50			0.90	1.18	201.76	-60.96	0.00	0.00	Vehicle	Vehicle	898.47	-----	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	-----	-----	6.46	6.46	-----	-----
	L_6 - L_7	479.01	-72.55	206.50			0.90	1.18	219.86	-77.24	0.00	0.00	Vehicle	Vehicle	908.52	-----	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	-----	-----	6.09	6.09	-----	-----
	L_7 - L_8	330.07	-98.92	177.25			0.90	1.18	188.72	-105.32	0.00	0.00	Vehicle	Vehicle	674.43	-----	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	-----	-----	5.36	5.36	-----	-----
	L_8 - L_9	188.98	-106.94	134.32			0.90	1.18	143.01	-113.86	0.00	0.00	Vehicle	Vehicle	431.58	-----	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	-----	-----	6.37	6.37	-----	-----
	L_9 - L_{10}	39.77	-113.72	84.80			0.90	1.18	90.29	-121.07	0.00	0.00	Vehicle	Vehicle	169.08	-105.69	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	9.10	9.10	6.34	6.34
	L_{10} - L_{11}	-127.39	-114.64	40.03			0.90	1.18	42.62	-122.06	0.00	0.00	Vehicle	Vehicle	-----	-324.28	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	-----	-----	4.29	4.29
	L_{11} - L_{12}	-282.64	-113.51	-11.97			0.90	1.18	-12.74	-120.86	0.00	0.00	Vehicle	Vehicle	-----	-524.55	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	-----	-----	5.36	5.36
	L_{12} - L_{13}	-426.73	-109.16	-45.60			0.90	1.18	-48.55	-116.22	0.00	0.00	Vehicle	Vehicle	-----	-705.83	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	-----	-----	7.30	7.30
	L_{13} - L_{14}	-536.42	-68.66	-80.35			0.90	1.18	-73.10	-85.55	0.00	0.00	Vehicle	Vehicle	-----	-808.56	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	-----	-----	11.44	11.44
	L_{14} - L_{15}	-537.75	-66.16	12.25			0.90	1.17	12.89	-69.61	0.00	0.00	Vehicle	Vehicle	-----	-789.57	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	-----	-----	14.04	14.04
	L_{15} - L_{16}	-475.65	-101.96	-49.03			0.90	1.17	-51.59	-107.28	0.00	0.00	Vehicle	Vehicle	-----	-757.80	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	-----	-----	7.46	7.46
	L_{16} - L_{17}	-384.35	-56.66	27.95			0.90	1.17	29.41	-59.61	0.00	0.00	Vehicle	Vehicle	-----	-577.15	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	-----	-----	11.12	11.12
	L_{17} - L_{18}	-281.86	-17.25	15.29			0.90	1.17	16.09	-18.15	0.00	0.00	Vehicle	Vehicle	-----	-390.01	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	-----	-----	24.55	24.55
	L_{18} - L_{19}	-175.17	-95.35	57.61			0.90	1.17	60.61	-100.32	0.00	0.00	Vehicle	Vehicle	-----	-358.12	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	-----	-----	3.97	3.97
	L_{19} - L_{20}	-76.53	40.24	81.98			0.90	1.17	86.25	42.34	0.00	0.00	Vehicle	Vehicle	12.63	-44.46	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	8.76	8.76	-----	-----
	L_{20} - L_{21}	4.38	-73.65	119.07			0.90	1.17	125.27	-77.49	0.00	0.00	Vehicle	Vehicle	168.55	-95.04	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	7.56	7.56	10.43	10.43
	L_{21} - L_{22}	55.94	-60.98	134.31			0.90	1.17	141.30	-64.15	0.00	0.00	Vehicle	Vehicle	256.42	-10.68	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	6.34	6.34	13.40	13.40
	L_{22} - L_{23}	62.99	-28.77	118.16			0.90	1.17	124.34	-30.26	0.00	0.00	Vehicle	Vehicle	243.52	-----	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	-----	-----	7.15	7.15	-----	-----
	L_{23} - L_{24}	15.54	-51.90	95.04			0.90	1.17	99.99	-54.60	0.00	0.00	Vehicle	Vehicle	150.19	-50.78	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	9.36	9.36	15.00	15.00
	L_{24} - L_{25}	-56.00	-58.74	63.88			0.90	1.17	67.21	-61.80	0.00	0.00	Vehicle	Vehicle	14.57	-153.14	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	10.94	10.94	8.38	8.38
	L_{25} - L_{26}	-136.37	-67.80	20.64			0.90	1.17	21.71	-71.33	0.00	0.00	Vehicle	Vehicle	-----	-270.01	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	-----	-----	6.13	6.13
	L_{26} - L_{27}	-217.73	-68.91	-32.55			0.90	1.17	-34.24	-72.50	0.00	0.00	Vehicle	Vehicle	-----	-377.29	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	-----	-----	7.03	7.03
	L_{27} - L_{28}	-296.25	-71.42	-53.58			0.90	1.17	-56.37	-75.14	0.00	0.00	Vehicle	Vehicle	-----	-482.81	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	-----	-----	10.00	10.00
	L_{28} - L_{29}	-364.18	-65.84	-94.48			0.90	1.17	-69.27	-99.40	0.00	0.00	Vehicle	Vehicle	-----	-602.66	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	-----	-----	9.17	9.17
	L_{29} - L_{30}	-418.23	-24.77	-43.01			0.90	1.17	-26.06	-45.26	0.00	0.00	Vehicle	Vehicle	-----	-602.53	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	-----	-----	24.24	24.24
	L_{30} - L_{31}	-350.38	-70.58	25.15			0.90	1.18	26.78	-75.15	0.00	0.00	Vehicle	Vehicle	-----	-553.18	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	-----	-----	15.49	15.49
	L_{31} - L_{32}	-275.46	-106.04	-43.89			0.90	1.18	-46.73	-112.90	0.00	0.00	Vehicle	Vehicle	-----	-504.86	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	-----	-----	8.76	8.76
	$L_{32

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: 5C1 **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

Vehicle Load Factors | Pedestrian Load Factors

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	17.42	-76.81			0.90	1.24	19.39	-85.51	0.00	0.00	Vehicle	Vehicle	------	-211.51	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	------	------	------	------	------	2.73	2.73
	U_1 - L_1	-33.88	15.74	-51.96			0.90	1.24	17.52	-57.85	0.00	0.00	Vehicle	Vehicle	------	-119.24	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	14.78	-37.88			0.90	1.24	16.46	-42.17	0.00	0.00	Vehicle	Vehicle	34.96	-41.26	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	------	------	------	------	------	25.35	25.35	8.59	8.59
	U_3 - L_3	44.39	9.06	-18.10			0.90	1.24	10.08	-20.15	0.00	0.00	Vehicle	Vehicle	70.81	------	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	------	------	------	------	------	------	38.02	38.02	------	------
	U_4 - L_4	-16.67	-16.31	-2.13			0.90	1.24	-2.37	-18.15	0.00	0.00	Vehicle	Vehicle	------	-45.27	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	------	------	------	------	------	------	------	18.35	18.35
	U_5 - L_5	-109.51	-64.85	0.16			0.90	1.24	0.18	-72.20	0.00	0.00	Vehicle	Vehicle	------	-236.21	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	------	------	------	------	------	------	------	4.37	4.37
	U_6 - L_6	-143.60	-85.38	-0.26			0.90	1.24	-0.29	-95.05	0.00	0.00	Vehicle	Vehicle	------	-310.25	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	------	------	------	------	------	------	------	3.55	3.55
	U_7 - L_7	-142.61	-97.07	2.64			0.90	1.24	2.94	-108.06	0.00	0.00	Vehicle	Vehicle	------	-325.88	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	------	------	------	------	------	------	------	2.68	2.68
	U_8 - L_8	-391.97	-119.89	-97.82			0.90	1.24	-108.90	-133.47	0.00	0.00	Vehicle	Vehicle	------	-683.07	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	------	------	------	------	------	------	------	5.05	5.05
	U_9 - L_9	-223.13	9.58	-93.99			0.90	1.20	10.33	-101.34	0.00	0.00	Vehicle	Vehicle	------	-421.81	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	------	------	------	------	------	------	------	4.00	4.00
	U_{10} - L_{10}	-225.77	7.01	-85.14			0.90	1.20	7.56	-91.80	0.00	0.00	Vehicle	Vehicle	------	-412.84	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	------	------	------	------	------	------	------	5.29	5.29
	U_{11} - L_{11}	-198.79	0.18	-83.17			0.90	1.20	0.19	-89.67	0.00	0.00	Vehicle	Vehicle	------	-375.00	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	------	------	------	------	------	------	------	4.94	4.94
	U_{12} - L_{12}	-154.77	3.60	-64.12			0.90	1.20	3.88	-69.14	0.00	0.00	Vehicle	Vehicle	------	-291.08	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	------	------	------	------	------	------	------	5.46	5.46
	U_{13} - L_{13}	-109.04	13.30	-55.20			0.90	1.20	14.34	-59.51	0.00	0.00	Vehicle	Vehicle	------	-219.12	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	------	------	------	------	------	4.56	4.56
	U_{14} - L_{14}	-12.30	-9.75	9.46			0.90	1.20	-10.20	-10.51	0.00	0.00	Vehicle	Vehicle	------	-29.65	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	------	------	------	------	------	31.64	31.64	------	------
	U_{15} - L_{15}	-5.62	-49.41	19.79			0.90	1.20	21.34	-53.27	0.00	0.00	Vehicle	Vehicle	20.44	-76.56	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	------	------	------	------	------	20.30	20.30	6.34	6.34
	U_{16} - L_{16}	-51.74	-60.34	11.62			0.90	1.20	12.52	-65.05	0.00	0.00	Vehicle	Vehicle	------	-151.82	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	------	------	------	------	------	------	------	4.45	4.45
	U_{17} - L_{17}	-127.31	-86.82	11.45			0.90	1.20	12.35	-93.61	0.00	0.00	Vehicle	Vehicle	------	-287.19	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	------	------	------	------	------	------	------	3.03	3.03
	U_{18} - L_{18}	-159.89	-100.78	10.57			0.90	1.20	11.40	-108.67	0.00	0.00	Vehicle	Vehicle	------	-349.12	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	------	------	------	------	------	------	------	3.36	3.36
	U_{19} - L_{19}	-191.17	-106.46	8.98			0.90	1.20	9.69	-114.79	0.00	0.00	Vehicle	Vehicle	------	-397.74	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	------	------	------	------	------	------	------	3.70	3.70
	U_{20} - L_{20}	-211.94	-113.77	-23.46			0.90	1.20	-25.30	-122.67	0.00	0.00	Vehicle	Vehicle	------	-435.00	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	------	------	------	------	------	------	------	2.80	2.80
	Structure 2																																													
	U_0 - L_0	-206.53	13.35	-100.93			0.90	1.18	14.21	-107.46	0.00	0.00	Vehicle	Vehicle	------	-408.19	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	------	------	------	------	------	------	------	3.78	3.78
	U_1 - L_1	-188.72	13.71	-87.26			0.90	1.18	14.59	-92.91	0.00	0.00	Vehicle	Vehicle	------	-366.12	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	------	------	------	------	------	------	------	5.21	5.21
	U_2 - L_2	-155.84	14.42	-82.18			0.90	1.18	15.35	-87.50	0.00	0.00	Vehicle	Vehicle	------	-316.34	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	------	------	------	------	------	------	------	4.78	4.78
	U_3 - L_3	-134.53	16.32	-79.60			0.90	1.18	17.37	-84.75	0.00	0.00	Vehicle	Vehicle	------	-285.06	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	------	------	------	------	------	------	------	3.74	3.74
	U_4 - L_4	-64.47	15.53	-56.68			0.90	1.18	16.53	-60.26	0.00	0.00	Vehicle	Vehicle	------	-162.14	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	------	------	------	------	------	4.56	4.56	------	------
	U_5 - L_5	-19.94	20.56	-51.15			0.90	1.18	21.89	-54.46	0.00	0.00	Vehicle	Vehicle	2.54	-96.72	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	------	------	------	------	------	20.45	20.45	5.89	5.89
	U_6 - L_6	40.07	28.49	-36.52			0.90	1.18	30.34	-38.88	0.00	0.00	Vehicle	Vehicle	91.53	------	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	------	------	------	------	------	------	12.78	12.78	------	------
	U_7 - L_7	-26.03	-22.00	-1.63			0.90	1.18	-1.74	-23.42	0.00	0.00	Vehicle	Vehicle	------	-64.29	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	------	------	------	------	------	------	------	13.43	13.43
	U_8 - L_8	-125.22	-69.08	14.24			0.90	1.18	15.17	-73.55	0.00	0.00	Vehicle	Vehicle	------	-258.40	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	------	------	------	------	------	------	------	5.51	5.51
	U_9 - L_9	-174.50	-91.78	4.60			0.90	1.18	4.89	-97.72	0.00	0.00	Vehicle	Vehicle	------	-353.88	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	------	------	------	------	------	------	------	5.29	5.29
	U_{10} - L_{10}	-202.62	-104.86	0.20			0.90	1.18	0.22	-111.64	0.00	0.00	Vehicle	Vehicle	------	-408.54	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	------	------	------	------	------	------	------	5.16	5.16
	U_{11} - L_{11}	-229.48	-113.05	2.73			0.90	1.18	2.91	-120.36	0.00	0.00	Vehicle	Vehicle	------	-454.80	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	------	------	------	------	------	------	------	4.45	4.45
	U_{12} - L_{12}	-250.80	-122.78	2.71			0.90	1.18	2.88	-130.72	0.00	0.00	Vehicle	Vehicle	------	-495.98	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	------	------	------	------	------	------	------	4.21	4.21
	U_{13} - L_{13}	-223.27	-118.45	13.32			0.90	1.18	14.18	-126.11	0.00	0.00	Vehicle	Vehicle	------	-454.19	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	------	------	------	------	------	------	------	3.70	3.70
	U_{14} - L_{14}	-343.24	-104.86	-73.52			0.90	1.18	-78.27	-111.65	0.00	0.00	Vehicle	Vehicle	------	-591.36	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	------	------	------	------	------	------	------	6.35	6.35
	U_{15} - L_{15}	-123.12	13.57	-82.03			0.90	1.17	14.28	-86.30	0.00	0.00	Vehicle	Vehicle	------	-272.24	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	------	------	------	------	------	------	------	6.57	6.57
	U_{16} - L_{16}	-156.68	9.72	-82.30			0.90	1.17	10.23	-86.59	0.00	0.00	Vehicle	Vehicle	------	-316.24	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}	-147.89	10.04	-85.71			0.90	1.17	10.56	-90.17	0.00	0.00	Vehicle	Vehicle	------	-309.48	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	------	------	------	------	------	------	------	5.27	5.27
	U_{18} - L_{18}	-142.21	12.59	-85.51			0.90	1.17	13.24	-89.97	0.00	0.00	Vehicle	Vehicle	------	-301.83	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	------	------	------	------	------	------	------	4.84	4.84
	U_{19} - L_{19}	-111.47	14.07	-72.38			0.90	1.17	14.80	-76.15	0.00	0.00	Vehicle	Vehicle	------	-243.91	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	------	------	------	------	------	------	------	5.25	5.25
	U_{20} - L_{20}	-76.56	14.94	-63.02			0.90	1.17	15.72	-66.30	0.00	0.00	Vehicle	Vehicle	------	-185.73	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	------	------	------	------	------	------	------	4.50	4.50
	U_{21} - L_{21}	-44.33	20.32	-54.68			0.90	1.17	21.38	-57.52	0.00	0.00	Vehicle	Vehicle	------	-132.41	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	------	------	------	------	------	------	------	5.15	5.15
	U_{22} - L_{22}	-21.25	-21.07	-0.42			0.90	1.17	-0.44	-22.17	0.00	0.00	Vehicle	Vehicle	------	-56.45	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	------	------	------	------	------	------	------	14.46	14.46
	U_{23} - L_{23}	-39.04	-52.53	24.14			0.90	1.17	25.39	-55.26	0.00	0.00	Vehicle	Vehicle	------	-122.59	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	------	------	------	------	------	------	------	5.46	5.46
	U_{24} - L_{24}	-74.80	-69.45	17.32			0.90	1.17	18.22	-73.07	0.00	0.00	Vehicle	Vehicle	------	-192.23	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	------	------	------	------	------	------	------	4.11	4.11
	U_{25} - L_{25}	-103.21	-87.86	17.24			0.90	1.17	18.13	-92.44	0.00	0.00	Vehicle	Vehicle	------	-254.35	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	------	------	------	------	------	------	------	4.41	4.41
	U_{26} - L_{26}	-120.15	-95.14	16.26			0.90	1.17	17.11	-100.10	0.00	0.00	Vehicle	Vehicle	------	-286.32	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	------	------	------	------	------	------	------	4.57	4.57
	U_{27} - L_{27}	-123.87	-105.63	13.45			0.90	1.17	14.15	-111.14	0.00	0.00	Vehicle	Vehicle	------	-305.50	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	6.06	12.00	Pass	------	------	------	------	------	------	------	4.49	4.49
	U_{28} - L_{28}	-135.49	-114.85	12.23			0.90	1.17	12.87	-120.83	0.00	0.00	Vehicle	Vehicle	------	-333.21	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	------	------	------	------	------	------	------	4.39	4.39
	U_{29} - L_{29}	-116.90	-105.40	7.19			0.90	1.17	7.57	-110.89	0.00	0.00	Vehicle	Vehicle	------	-296.12	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	------	------	------	------	------	------	------	5.17	5.17
	U_{30} - L_{30}	-261.40	-100.08	-89.05			0.90	1.18	-94.81	-106.55	0.00	0.00	Vehicle	Vehicle	------	-478.34	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	------	------	------	------	------	------	------	7.24	7.24
	U_{31} - L_{31}	-156.06	16.71	-92.56			0.90	1.18	17.79	-98.55	0.00	0.00	Veh

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: 5C1 — 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 - Diagonals																																														
Structure 1	U$_1$ - L$_1$	87.39	-23.73	55.07			0.90	1.24	61.31	-26.42	0.00	0.00	Vehicle	Vehicle	193.30	-----	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	-----	-----	-----	-----	-----	**8.14**	**8.14**	-----	-----
	U$_1$ - L$_2$	23.29	-24.48	57.82			0.90	1.24	64.37	-27.26	0.00	0.00	Vehicle	Vehicle	113.96	-5.15	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	-----	-----	-----	**6.28**	**6.28**	**13.16**	**13.16**
	U$_3$ - L$_3$	-37.87	-23.79	-2.03			0.90	1.24	-2.26	-26.49	0.00	0.00	Vehicle	-----	-----	-83.66	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	-----	-----	-----	-----	-----	**11.19**	**11.19**
	U$_3$ - L$_4$	-92.23	-23.04	-31.71			0.90	1.24	-25.65	-35.30	0.00	0.00	Vehicle	Vehicle	-----	-165.78	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	-----	-----	-----	-----	-----	**6.92**	**6.92**
	U$_5$ - L$_4$	143.29	15.38	64.20			0.90	1.24	71.47	17.12	0.00	0.00	Vehicle	Vehicle	279.19	-----	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	-----	-----	-----	-----	-----	**5.27**	**5.27**	-----	-----
	U$_5$ - L$_5$	177.89	12.74	85.95			0.90	1.24	95.69	14.18	0.00	0.00	Vehicle	Vehicle	355.65	-----	0.00	25.63	25.6315	845.84	131.71	13.1016	2.8057	40.54	31.44	-684.91	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	**4.94**	**4.94**	-----	-----
	U$_6$ - L$_5$	184.40	1.64	101.93			0.90	1.24	113.48	1.82	0.00	0.00	Vehicle	Vehicle	387.25	-----	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	-----	-----	-----	-----	-----	**4.11**	**4.11**	-----	-----
	U$_6$ - L$_7$	179.98	-3.38	107.90			0.90	1.24	120.13	-3.77	0.00	0.00	Vehicle	Vehicle	390.14	-----	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	-----	-----	-----	-----	-----	**3.92**	**3.92**	-----	-----
	U$_8$ - L$_9$	268.90	6.10	105.75			0.90	1.20	114.02	6.58	0.00	0.00	Vehicle	Vehicle	497.79	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
	U$_{10}$ - L$_{10}$	278.76	-11.16	95.86			0.90	1.20	103.35	-12.03	0.00	0.00	Vehicle	Vehicle	496.74	-----	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	-----	-----	-----	-----	-----	**6.61**	**6.61**	-----	-----
	U$_{10}$ - L$_{11}$	284.98	11.20	117.35			0.90	1.20	126.53	12.07	0.00	0.00	Vehicle	Vehicle	534.96	-----	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	-----	-----	-----	-----	-----	**4.95**	**4.95**	-----	-----
	U$_{11}$ - L$_{12}$	250.55	-2.27	102.44			0.90	1.20	110.45	-2.44	0.00	0.00	Vehicle	Vehicle	469.30	-----	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	-----	-----	-----	-----	-----	**4.77**	**4.77**	-----	-----
	U$_{12}$ - L$_{13}$	189.62	-3.70	73.76			0.90	1.20	79.53	-3.98	0.00	0.00	Vehicle	Vehicle	349.89	-----	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	-----	-----	-----	-----	-----	**5.55**	**5.55**	-----	-----
	U$_{13}$ - L$_{14}$	123.30	-18.27	71.82			0.90	1.20	77.43	-19.69	0.00	0.00	Vehicle	Vehicle	260.95	-----	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	-----	-----	-----	-----	-----	**3.93**	**3.93**	-----	-----
	U$_{13}$ - L$_{14}$	-24.40	-32.22	35.92			0.90	1.20	38.73	-34.73	0.00	0.00	Vehicle	Vehicle	18.62	-76.88	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	12.00	Pass	38.97	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	**11.67**	**11.67**	**8.75**	**8.75**
	U$_{15}$ - L$_{15}$	48.54	-20.46	58.94			0.90	1.20	63.55	-22.06	0.00	0.00	Vehicle	Vehicle	145.72	-----	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	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
	U$_{15}$ - L$_{16}$	146.57	-15.66	86.11			0.90	1.20	92.84	-16.88	0.00	0.00	Vehicle	Vehicle	311.24	-----	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	-----	-----	-----	-----	-----	**4.07**	**4.07**	-----	-----
	U$_{16}$ - L$_{17}$	182.43	-13.49	97.77			0.90	1.20	105.41	-14.55	0.00	0.00	Vehicle	Vehicle	374.20	-----	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	-----	-----	-----	-----	-----	**4.44**	**4.44**	-----	-----
	U$_{18}$ - L$_{18}$	223.79	-11.36	109.41			0.90	1.20	117.96	-12.25	0.00	0.00	Vehicle	Vehicle	444.28	-----	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	-----	-----	-----	-----	-----	**4.12**	**4.12**	-----	-----
	U$_{20}$ - L$_{19}$	232.63	-0.15	86.86			0.90	1.20	93.65	-0.16	0.00	0.00	Vehicle	Vehicle	424.17	-----	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	-----	-----	-----	-----	-----	**5.10**	**5.10**	-----	-----
Structure 2	U$_0$ - L$_1$	213.47	-14.16	102.20			0.90	1.18	108.81	-15.08	0.00	0.00	Vehicle	Vehicle	418.96	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
	U$_1$ - L$_2$	200.39	-16.71	105.49			0.90	1.18	112.31	-17.79	0.00	0.00	Vehicle	Vehicle	406.52	-----	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	-----	-----	-----	-----	-----	**5.14**	**5.14**	-----	-----
	U$_3$ - L$_3$	172.76	-18.65	99.97			0.90	1.18	106.44	-19.85	0.00	0.00	Vehicle	Vehicle	362.96	-----	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	-----	-----	-----	-----	-----	**4.49**	**4.49**	-----	-----
	U$_3$ - L$_4$	147.11	-21.92	88.16			0.90	1.18	93.86	-23.34	0.00	0.00	Vehicle	Vehicle	313.27	-----	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	-----	-----	-----	-----	-----	**4.58**	**4.58**	-----	-----
	U$_5$ - L$_5$	49.07	-21.75	75.32			0.90	1.18	80.20	-23.10	0.00	0.00	Vehicle	Vehicle	168.05	-----	0.00	16.85	16.8486	556.00	131.71	15.3992	1.9682	70.41	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	**4.72**	**4.72**	-----	-----
	U$_5$ - L$_6$	2.97	-26.68	62.52			0.90	1.18	66.57	-28.41	0.00	0.00	Vehicle	Vehicle	90.39	-33.07	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	-----	-----	-----	**6.38**	**6.38**	**11.57**	**11.57**
	U$_7$ - L$_7$	-85.72	-59.65	30.33			0.90	1.18	32.29	-63.51	0.00	0.00	Vehicle	-----	-----	-194.00	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	-----	-----	-----	-----	-----	**4.31**	**4.31**
	U$_7$ - L$_7$	140.27	-25.66	57.26			0.90	1.18	60.97	-27.32	0.00	0.00	Vehicle	Vehicle	261.60	-----	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	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
	U$_8$ - L$_8$	204.17	2.52	90.77			0.90	1.18	96.64	2.68	0.00	0.00	Vehicle	Vehicle	391.05	-----	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	-----	-----	-----	-----	-----	**5.24**	**5.24**	-----	-----
	U$_{10}$ - L$_9$	234.82	10.44	103.67			0.90	1.18	110.38	11.11	0.00	0.00	Vehicle	Vehicle	448.76	-----	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	-----	-----	-----	-----	-----	**4.92**	**4.92**	-----	-----
	U$_{11}$ - L$_{10}$	263.04	-0.99	120.38			0.90	1.18	128.17	-1.06	0.00	0.00	Vehicle	Vehicle	508.57	-----	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	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U$_{11}$ - L$_{11}$	273.97	-2.31	117.65			0.90	1.18	125.26	-2.46	0.00	0.00	Vehicle	Vehicle	518.99	-----	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	-----	-----	-----	-----	-----	**4.55**	**4.55**	-----	-----
	U$_{13}$ - L$_{12}$	254.88	-14.32	116.87			0.90	1.18	124.44	-15.25	0.00	0.00	Vehicle	Vehicle	493.11	-----	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	-----	-----	-----	-----	-----	**4.20**	**4.20**	-----	-----
	U$_{13}$ - L$_{13}$	217.66	-15.49	111.83			0.90	1.18	119.07	-16.49	0.00	0.00	Vehicle	Vehicle	437.74	-----	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	-----	-----	-----	-----	-----	**4.70**	**4.70**	-----	-----
	U$_{15}$ - L$_{15}$	110.03	-9.00	84.13			0.90	1.17	88.52	-9.47	0.00	0.00	Vehicle	Vehicle	258.11	-----	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	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
	U$_{15}$ - L$_{16}$	132.26	-14.54	85.30			0.90	1.17	89.74	-15.30	0.00	0.00	Vehicle	Vehicle	288.61	-----	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	-----	-----	-----	-----	-----	**5.78**	**5.78**	-----	-----
	U$_{17}$ - L$_{17}$	172.87	-8.25	102.99			0.90	1.17	108.36	-8.68	0.00	0.00	Vehicle	Vehicle	365.60	-----	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	-----	-----	-----	-----	-----	**4.96**	**4.96**	-----	-----
	U$_{17}$ - L$_{18}$	160.16	-12.54	102.77			0.90	1.17	108.12	-13.19	0.00	0.00	Vehicle	Vehicle	348.77	-----	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	-----	-----	-----	-----	-----	**4.54**	**4.54**	-----	-----
	U$_{19}$ - L$_{19}$	152.33	-16.39	96.63			0.90	1.17	101.66	-17.24	0.00	0.00	Vehicle	Vehicle	330.19	-----	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	-----	-----	-----	-----	-----	**4.90**	**4.90**	-----	-----
	U$_{20}$ - L$_{20}$	120.67	-18.75	94.26			0.90	1.17	99.17	-19.73	0.00	0.00	Vehicle	Vehicle	285.79	-----	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	-----	-----	-----	-----	-----	**4.87**	**4.87**	-----	-----
	U$_{20}$ - L$_{21}$	76.10	-19.84	77.42			0.90	1.17	81.45	-20.88	0.00	0.00	Vehicle	Vehicle	204.81	-----	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	-----	-----	-----	-----	-----	**4.32**	**4.32**	-----	-----
	U$_{21}$ - L$_{22}$	31.50	-27.74	55.39			0.90	1.17	58.27	-29.19	0.00	0.00	Vehicle	Vehicle	116.70	-----	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	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
	U$_{23}$ - L$_{22}$	24.27	-40.79	36.20			0.90	1.17	38.09	-42.92	0.00	0.00	Vehicle	Vehicle	81.06	-24.25	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	-----	-----	-----	**10.59**	**10.59**	**8.09**	**8.09**
	U$_{23}$ - L$_{23}$	72.21	-22.55	61.33			0.90	1.17	64.52	-23.73	0.00	0.00	Vehicle	Vehicle	177.75	-----	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	-----	-----	-----	-----	-----	**5.51**	**5.51**	-----	-----
	U$_{24}$ - L$_{24}$	112.05	-22.96	85.22			0.90	1.17	89.66	-24.16	0.00	0.00	Vehicle	Vehicle	262.23	-----	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	-----	-----	-----	-----	-----	**5.48**	**5.48**	-----	-----
	U$_{25}$ - L$_{25}$	127.76	-20.73	99.92			0.90	1.17	105.13	-21.81	0.00	0.00	Vehicle	Vehicle	302.76	-----	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	-----	-----	-----	-----	-----	**4.97**	**4.97**	-----	-----
	U$_{26}$ - L$_{26}$	132.58	-16.84	103.57			0.90	1.17	108.96	-17.72	0.00	0.00	Vehicle	Vehicle	314.01	-----	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	-----	-----	-----	-----	-----	**4.75**	**4.75**	-----	-----
	U$_{27}$ - L$_{27}$	137.86	-14.51	108.10			0.90	1.17	113.74	-15.26	0.00	0.00	Vehicle	Vehicle	327.07	-----	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	-----	-----	-----	-----	-----	**5.03**	**5.03**	-----	-----
	U$_{29}$ - L$_{28}$	122.74	-6.53	106.07			0.90	1.17	111.60	-6.87	0.00	0.00	Vehicle	Vehicle	304.64	-----	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	-----	-----	-----	-----	-----	**4.73**	**4.73**	-----	-----
	U$_{29}$ - L$_{29}$	102.60	-10.52	98.32			0.90	1.17	103.44	-11.07	0.00	0.00	Vehicle	Vehicle	267.84	-----	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	-----	-----	-----	-----	-----	**5.30**	**5.30**	-----	-----
	U$_{30}$ - L$_{31}$	139.84	-10.90	84.70			0.90	1.18	90.18	-11.61	0.00	0.00	Vehicle	Vehicle	299.02	-----	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	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
	U$_{31}$ - L$_{32}$	166.63	-18.78	80.95			0.90	1.18	86.19	-20.00	0.00	0.00	Vehicle	Vehicle	328.67	-----	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	-----	-----	-----	-----	-----	**6.66**	**6.66**	-----	-----
	U$_{32}$ - L$_{33}$	202.12	-10.63	114.09			0.90	1.18	121.47	-11.32	0.00	0.00	Vehicle	Vehicle	420.67	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
	U$_{33}$ - L$_{34}$	201.72	-10.67	110.36			0.90	1.18	117.49	-11.36	0.00	0.00	Vehicle	Vehicle	414.97	-----	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	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
	U$_{35}$ - L$_{35}$	180.72	-2.24	113.23			0.90	1.18	120.55	-2.39	0.00	0.00	Vehicle	Vehicle	391.65	-----	0.00	30.63	30.6305	1010.81	131.71	13.7604	2.8427	43.57	31.19

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: 5C1 Fy = 33.0 ksi Vehicle Load Factors Pedestrian Load Factors
Condition: As-Inspected Fu = 60.0 ksi DL Factor: 1.30 DL Factor: 1.30
E = 29000.0 ksi 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

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	-46.05	-52.48			0.75	1.24	-42.72	-48.69	0.00	0.00	Vehicle	Vehicle	-----	-131.81	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	-----	-----	10.53	10.53
		U$_1$ - U$_2$	-61.66	-79.01	-85.19			0.75	1.24	-73.30	-79.03	0.00	0.00	Vehicle	Vehicle	-----	-182.89	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	-----	-----	6.37	6.37
		U$_2$ - U$_3$	-27.05	50.46	-102.72			0.75	1.24	46.82	-95.30	0.00	0.00	Vehicle	Vehicle	25.69	-159.05	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	14.91	14.91	5.65	5.65
		U$_3$ - U$_4$	32.90	64.10	-83.99			0.75	1.24	59.47	-77.92	0.00	0.00	Vehicle	Vehicle	120.08	-58.52	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	10.73	10.73	7.68	7.68
		U$_4$ - U$_5$	34.76	64.38	-110.31			0.75	1.24	59.72	-102.34	0.00	0.00	Vehicle	Vehicle	122.83	-87.86	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	10.65	10.65	5.86	5.86
		U$_5$ - U$_6$	124.19	75.20	-87.39			0.75	1.24	69.76	-81.07	0.00	0.00	Vehicle	Vehicle	252.14	-----	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	-----	-----	7.84	7.84	-----	-----
		U$_6$ - U$_7$	223.31	32.44	-19.17			0.75	1.24	30.09	-17.78	0.00	0.00	Vehicle	Vehicle	329.42	-----	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	-----	-----	19.31	19.31	-----	-----
		U$_7$ - U$_8$	331.92	72.05	4.11			0.75	1.24	66.85	3.81	0.00	0.00	Vehicle	Vehicle	518.39	-----	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	-----	-----	11.64	11.64	-----	-----
		U$_8$ - U$_9$	267.71	28.58	4.73			0.75	1.20	25.68	4.25	0.00	0.00	Vehicle	Vehicle	381.40	-----	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	-----	-----	26.14	26.14	-----	-----
		U$_9$ - U$_{10}$	89.12	-3.86	-10.46			0.75	1.20	-3.46	-9.40	0.00	0.00	Vehicle	Vehicle	111.35	-----	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	-----	-----	-----	-----	-----	-----
		U$_{10}$ - U$_{11}$	-76.89	-59.03	-49.40			0.75	1.20	-44.39	-53.04	0.00	0.00	Vehicle	Vehicle	-----	-168.90	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	-----	-----	9.81	9.81
		U$_{11}$ - U$_{12}$	-230.86	-90.11	-104.03			0.75	1.20	-80.96	-93.47	0.00	0.00	Vehicle	Vehicle	-----	-421.64	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	-----	-----	6.22	6.22
		U$_{12}$ - U$_{13}$	-342.15	-113.02	-127.53			0.75	1.20	-101.55	-114.58	0.00	0.00	Vehicle	Vehicle	-----	-593.75	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	-----	-----	6.94	6.94
		U$_{13}$ - U$_{14}$	-421.98	34.63	-170.60			0.75	1.20	31.12	-153.28	0.00	0.00	Vehicle	Vehicle	-----	-747.84	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	-----	-----	5.91	5.91
		U$_{14}$ - U$_{15}$	-422.87	-104.18	-172.66			0.75	1.20	-93.61	-155.14	0.00	0.00	Vehicle	Vehicle	-----	-751.41	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	-----	-----	5.83	5.83
		U$_{15}$ - U$_{16}$	-440.39	-104.30	-192.96			0.75	1.20	-93.71	-173.38	0.00	0.00	Vehicle	Vehicle	-----	-797.90	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	-----	-----	5.12	5.12
		U$_{16}$ - U$_{17}$	-422.93	5.12	-131.59			0.75	1.20	4.60	-118.23	0.00	0.00	Vehicle	Vehicle	-----	-703.52	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	-----	-----	7.65	7.65
		U$_{17}$ - U$_{18}$	-341.45	13.77	-149.90			0.75	1.20	12.38	-134.68	0.00	0.00	Vehicle	Vehicle	-----	-618.96	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	10.67	12.00	Pass	-----	-----	4.67	4.67
		U$_{18}$ - U$_{19}$	-247.63	-24.81	-104.90			0.75	1.20	-22.29	-94.25	0.00	0.00	Vehicle	Vehicle	-----	-444.44	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	-----	-----	4.56	4.56
		U$_{19}$ - U$_{20}$	-132.06	-4.09	-50.49			0.75	1.20	-3.67	-45.37	0.00	0.00	Vehicle	Vehicle	-----	-230.65	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	-----	-----	12.02	12.02
	Structure 2	U$_0$ - U$_1$	-131.63	-41.09	-25.77			0.75	1.18	-22.87	-36.45	0.00	0.00	Vehicle	Vehicle	-----	-218.51	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	-----	-----	14.15	14.15
		U$_1$ - U$_2$	-247.12	-76.77	-59.38			0.75	1.18	-52.68	-68.12	0.00	0.00	Vehicle	Vehicle	-----	-409.80	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	-----	-----	7.99	7.99
		U$_2$ - U$_3$	-347.28	-118.98	-92.66			0.75	1.18	-82.21	-105.56	0.00	0.00	Vehicle	Vehicle	-----	-588.69	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	-----	-----	6.92	6.92
		U$_3$ - U$_4$	-437.20	50.19	-139.82			0.75	1.18	44.53	-124.06	0.00	0.00	Vehicle	Vehicle	-----	-729.63	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	-----	-----	7.29	7.29
		U$_4$ - U$_5$	-468.83	-136.87	-157.33			0.75	1.18	-121.43	-139.59	0.00	0.00	Vehicle	Vehicle	-----	-790.95	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	-----	-----	7.29	7.29
		U$_5$ - U$_6$	-471.14	73.66	-184.28			0.75	1.18	65.36	-163.51	0.00	0.00	Vehicle	Vehicle	-----	-825.04	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	-----	-----	6.21	6.21
		U$_6$ - U$_7$	-414.50	82.08	-170.20			0.75	1.18	72.82	-151.01	0.00	0.00	Vehicle	Vehicle	-----	-735.17	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	-----	-----	6.14	6.14
		U$_7$ - U$_8$	-413.54	82.19	-197.62			0.75	1.18	72.92	-175.33	0.00	0.00	Vehicle	Vehicle	-----	-765.54	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	-----	-----	5.29	5.29
		U$_8$ - U$_9$	-322.06	89.81	-179.18			0.75	1.18	79.68	-158.98	0.00	0.00	Vehicle	Vehicle	-----	-625.35	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	-----	-----	5.06	5.06
		U$_9$ - U$_{10}$	-182.16	94.10	-146.95			0.75	1.18	83.49	-130.38	0.00	0.00	Vehicle	Vehicle	-----	-406.30	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	-----	-----	5.40	5.40
		U$_{10}$ - U$_{11}$	-32.61	98.70	-110.36			0.75	1.18	87.57	-97.92	0.00	0.00	Vehicle	Vehicle	71.44	-169.69	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	10.77	10.77	7.52	7.52
		U$_{11}$ - U$_{12}$	133.57	101.29	-70.50			0.75	1.18	89.87	-62.55	0.00	0.00	Vehicle	Vehicle	290.47	-----	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	-----	-----	8.65	8.65	-----	-----
		U$_{12}$ - U$_{13}$	289.98	103.32	-27.75			0.75	1.18	91.67	-24.62	0.00	0.00	Vehicle	Vehicle	496.14	-----	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	-----	-----	9.26	9.26	-----	-----
		U$_{13}$ - U$_{14}$	434.77	84.90	11.89			0.75	1.18	75.33	10.55	0.00	0.00	Vehicle	Vehicle	663.13	-----	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	-----	-----	15.00	15.00	-----	-----
		U$_{14}$ - U$_{15}$	474.48	26.38	-23.58			0.75	1.17	23.13	-20.68	0.00	0.00	Vehicle	Vehicle	646.88	-----	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	-----	-----	47.13	47.13	-----	-----
		U$_{15}$ - U$_{16}$	383.31	59.77	-4.19			0.75	1.17	52.40	-3.67	0.00	0.00	Vehicle	Vehicle	566.43	-----	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	-----	-----	16.97	16.97	-----	-----
		U$_{16}$ - U$_{17}$	279.61	-32.67	-31.41			0.75	1.17	-27.53	-28.64	0.00	0.00	Vehicle	Vehicle	327.70	-----	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	-31.06	-56.26			0.75	1.17	-27.24	-49.32	0.00	0.00	Vehicle	Vehicle	189.06	-----	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	-54.54	-92.39			0.75	1.17	-47.81	-81.00	0.00	0.00	Vehicle	Vehicle	34.56	-8.58	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	-----	-----	8.91	8.91
		U$_{19}$ - U$_{20}$	-9.98	59.96	-105.88			0.75	1.17	52.57	-92.83	0.00	0.00	Vehicle	Vehicle	55.37	-133.66	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	15.79	15.79	7.36	7.36
		U$_{20}$ - U$_{21}$	-62.02	45.54	-118.08			0.75	1.17	39.93	-103.53	0.00	0.00	Vehicle	Vehicle	-----	-215.21	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	-----	-----	7.48	7.48
		U$_{21}$ - U$_{22}$	-88.69	43.82	-129.65			0.75	1.17	38.42	-113.67	0.00	0.00	Vehicle	Vehicle	-----	-263.06	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	-----	-----	6.58	6.58
		U$_{22}$ - U$_{23}$	-88.87	-93.04	-149.62			0.75	1.17	-81.57	-131.18	0.00	0.00	Vehicle	Vehicle	-----	-286.06	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	-----	-----	5.70	5.70
		U$_{23}$ - U$_{24}$	-76.60	28.22	-150.24			0.75	1.17	24.74	-131.72	0.00	0.00	Vehicle	Vehicle	-----	-270.81	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	-----	-----	5.77	5.77
		U$_{24}$ - U$_{25}$	-37.55	62.67	-119.25			0.75	1.17	54.95	-104.55	0.00	0.00	Vehicle	Vehicle	22.61	-184.73	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	15.61	15.61	6.27	6.27
		U$_{25}$ - U$_{26}$	37.36	69.94	-113.75			0.75	1.17	61.32	-99.73	0.00	0.00	Vehicle	Vehicle	128.28	-81.08	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	11.89	11.89	6.87	6.87
		U$_{26}$ - U$_{27}$	128.18	77.43	-82.12			0.75	1.17	67.88	-72.00	0.00	0.00	Vehicle	Vehicle	254.88	-----	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	-----	-----	9.40	9.40	-----	-----
		U$_{27}$ - U$_{28}$	233.91	81.90	-49.13			0.75	1.17	71.80	-43.07	0.00	0.00	Vehicle	Vehicle	397.43	-----	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	-----	-----	11.28	11.28	-----	-----
		U$_{28}$ - U$_{29}$	337.95	28.57	-13.23			0.75	1.17	25.05	-11.60	0.00	0.00	Vehicle	Vehicle	471.89	-----	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	-----	-----	37.31	37.31	-----	-----
		U$_{29}$ - U$_{30}$	437.48	69.78	22.68			0.75	1.17	61.18	19.89	0.00	0.00	Vehicle	Vehicle	648.25	-----	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	-----	-----	18.42	18.42	-----	-----
		U$_{30}$ - U$_{31}$	420.86	25.01	-23.92			0.75	1.18	22.19	-21.22	0.00	0.00	Vehicle	Vehicle	575.97	-----	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	-----	-----	51.53	51.53	-----	-----
		U$_{31}$ - U$_{32}$	300.88	81.17	2.07			0.75	1.18	72.02	1.84	0.00	0.00	Vehicle	Vehicle	484.76	-----	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: 5C1 **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 - Lower Chord	Structure 1	L$_0$ - L$_1$	8.48	7.21	-3.99			0.75	1.24	6.69	-3.70	0.00	0.00	Vehicle	Vehicle	19.72	-----	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	-----	-----	**73.84**	**73.84**	-----	-----
		L$_1$ - L$_2$	50.83	46.45	62.49			0.75	1.24	57.97	43.10	0.00	0.00	Vehicle	Vehicle	141.45	-----	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	-----	-----	**7.79**	**7.79**	-----	-----
		L$_2$ - L$_3$	61.27	-36.65	96.24			0.75	1.24	89.29	-34.00	0.00	0.00	Vehicle	Vehicle	195.72	-----	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	-----	-----	**6.80**	**6.80**	-----	-----
		L$_3$ - L$_4$	25.72	52.76	113.13			0.75	1.24	104.96	48.94	0.00	0.00	Vehicle	Vehicle	169.88	-----	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	-----	-----	**6.13**	**6.13**	-----	-----
		L$_4$ - L$_5$	-118.55	-72.81	58.78			0.75	1.24	54.53	-67.54	0.00	0.00	Vehicle	Vehicle	-----	-241.93	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	-----	-----	**5.65**	**5.65**
		L$_5$ - L$_6$	-217.97	-87.35	22.09			0.75	1.24	20.49	-81.04	0.00	0.00	Vehicle	Vehicle	-----	-388.71	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	-----	-----	**5.45**	**5.45**
		L$_6$ - L$_7$	-320.57	-96.53	-16.02			0.75	1.24	-14.87	-89.55	0.00	0.00	Vehicle	Vehicle	-----	-533.16	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	-----	-----	**6.97**	**6.97**
		L$_7$ - L$_8$	-417.42	-77.14	-87.00			0.75	1.24	-71.57	-80.72	0.00	0.00	Vehicle	Vehicle	-----	-647.57	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	-----	-----	**9.69**	**9.69**
		L$_8$ - L$_9$	-411.08	-94.85	-4.52			0.75	1.20	-4.06	-85.22	0.00	0.00	Vehicle	Vehicle	-----	-645.19	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	-----	-----	**9.25**	**9.25**
		L$_9$ - L$_{10}$	-247.97	-47.35	-39.11			0.75	1.20	-35.14	-42.54	0.00	0.00	Vehicle	Vehicle	-----	-377.67	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	-----	-----	**16.39**	**16.39**
		L$_{10}$ - L$_{11}$	-65.37	-21.73	44.79			0.75	1.20	40.24	-19.53	0.00	0.00	Vehicle	Vehicle	-----	-110.36	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	-----	-----	**22.28**	**22.28**
		L$_{11}$ - L$_{12}$	101.81	36.13	68.98			0.75	1.20	61.98	32.46	0.00	0.00	Vehicle	Vehicle	212.93	-----	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	-----	-----	**7.94**	**7.94**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	49.41	120.00			0.75	1.20	107.82	44.39	0.00	0.00	Vehicle	Vehicle	483.45	-----	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	-----	-----	**6.59**	**6.59**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	100.50	145.92			0.75	1.20	131.11	90.30	0.00	0.00	Vehicle	Vehicle	656.37	-----	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	-----	-----	**7.13**	**7.13**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	-26.42	151.43			0.75	1.20	136.06	-23.73	0.00	0.00	Vehicle	Vehicle	796.39	-----	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	-----	-----	**8.07**	**8.07**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	-19.97	137.85			0.75	1.20	123.86	-17.95	0.00	0.00	Vehicle	Vehicle	759.32	-----	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	-----	-----	**9.00**	**9.00**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	-13.37	116.84			0.75	1.20	104.98	-12.02	0.00	0.00	Vehicle	Vehicle	632.57	-----	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	-----	-----	**7.95**	**7.95**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	-7.96	79.43			0.75	1.20	71.37	-7.15	0.00	0.00	Vehicle	Vehicle	468.72	-----	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	-----	-----	**8.33**	**8.33**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	-4.39	36.00			0.75	1.20	32.35	-3.94	0.00	0.00	Vehicle	Vehicle	271.25	-----	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	-----	-----	**10.09**	**10.09**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-1.19	-15.31			0.75	1.20	-1.07	-13.75	0.00	0.00	Vehicle	Vehicle	89.24	-----	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	-----	-----	-----	-----	-----	-----
		L$_0$ - L$_1$	24.42	2.15	-1.51			0.75	1.18	1.91	-1.34	0.00	0.00	Vehicle	Vehicle	34.22	-----	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	-----	-----	**254.41**	**254.41**	-----	-----
		L$_1$ - L$_2$	138.42	42.31	27.19			0.75	1.18	37.54	24.13	0.00	0.00	Vehicle	Vehicle	228.75	-----	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	-----	-----	**13.19**	**13.19**	-----	-----
		L$_2$ - L$_3$	252.76	69.75	85.40			0.75	1.18	75.77	61.89	0.00	0.00	Vehicle	Vehicle	427.09	-----	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	-----	-----	**9.55**	**9.55**	-----	-----
		L$_3$ - L$_4$	352.26	94.95	84.78			0.75	1.18	84.24	75.22	0.00	0.00	Vehicle	Vehicle	567.46	-----	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	-----	-----	**11.36**	**11.36**	-----	-----
		L$_4$ - L$_5$	447.15	108.25	171.17			0.75	1.18	151.87	96.05	0.00	0.00	Vehicle	Vehicle	778.74	-----	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	-----	-----	**7.92**	**7.92**	-----	-----
		L$_5$ - L$_6$	477.91	-64.19	174.26			0.75	1.18	154.61	-56.95	0.00	0.00	Vehicle	Vehicle	822.28	-----	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	-----	-----	**8.50**	**8.50**	-----	-----
		L$_6$ - L$_7$	482.67	-75.55	196.64			0.75	1.18	174.47	-67.03	0.00	0.00	Vehicle	Vehicle	854.28	-----	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	-----	-----	**7.65**	**7.65**	-----	-----
		L$_7$ - L$_8$	336.57	-91.39	141.71			0.75	1.18	125.73	-81.09	0.00	0.00	Vehicle	Vehicle	600.99	-----	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	-----	-----	**7.99**	**7.99**	-----	-----
		L$_8$ - L$_9$	196.00	-95.16	115.15			0.75	1.18	102.17	-84.43	0.00	0.00	Vehicle	Vehicle	387.62	-----	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	-----	-----	**8.85**	**8.85**	-----	-----
		L$_9$ - L$_{10}$	45.53	-99.43	79.54			0.75	1.18	70.57	-88.22	0.00	0.00	Vehicle	Vehicle	150.94	-55.50	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	**11.57**	**11.57**	**8.76**	**8.76**
		L$_{10}$ - L$_{11}$	-126.32	-101.10	44.22			0.75	1.17	39.24	-89.70	0.00	0.00	Vehicle	Vehicle	-----	-280.83	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	-----	-----	**5.84**	**5.84**
		L$_{11}$ - L$_{12}$	-284.95	-103.37	-0.31			0.75	1.18	-0.27	-91.71	0.00	0.00	Vehicle	Vehicle	-----	-489.66	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	-----	-----	**7.04**	**7.04**
		L$_{12}$ - L$_{13}$	-433.89	-93.80	-29.62			0.75	1.18	-26.28	-83.22	0.00	0.00	Vehicle	Vehicle	-----	-672.25	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	-----	-----	**10.11**	**10.11**
		L$_{13}$ - L$_{14}$	-552.76	-41.83	-66.34			0.75	1.18	-37.11	-58.86	0.00	0.00	Vehicle	Vehicle	-----	-795.11	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	-----	-----	**16.35**	**16.35**
		L$_{14}$ - L$_{15}$	-573.53	-72.04	28.97			0.75	1.17	25.40	-63.16	0.00	0.00	Vehicle	Vehicle	-----	-827.70	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	-----	-----	**14.91**	**14.91**
		L$_{15}$ - L$_{16}$	-493.00	-78.46	-41.68			0.75	1.17	-36.54	-68.79	0.00	0.00	Vehicle	Vehicle	-----	-730.32	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	-----	-----	**11.37**	**11.37**
		L$_{16}$ - L$_{17}$	-395.34	-40.78	7.36			0.75	1.17	6.45	-35.75	0.00	0.00	Vehicle	Vehicle	-----	-560.41	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	-----	-----	**18.24**	**18.24**
		L$_{17}$ - L$_{18}$	-288.08	-8.03	23.33			0.75	1.17	20.46	-7.04	0.00	0.00	Vehicle	Vehicle	-----	-383.65	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	-----	-----	**62.44**	**62.44**
		L$_{18}$ - L$_{19}$	-175.85	12.35	83.78			0.75	1.17	73.45	10.83	0.00	0.00	Vehicle	Vehicle	-----	-214.52	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	49.16	99.91			0.75	1.17	87.60	43.10	0.00	0.00	Vehicle	Vehicle	12.38	-45.46	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	**8.64**	**8.64**	-----	-----
	Structure 2	L$_{20}$ - L$_{21}$	7.59	-60.19	119.85			0.75	1.17	105.08	-52.77	0.00	0.00	Vehicle	Vehicle	146.48	-58.73	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	**9.11**	**9.11**	**15.57**	**15.57**
		L$_{21}$ - L$_{22}$	59.10	72.04	124.90			0.75	1.17	109.51	63.16	0.00	0.00	Vehicle	Vehicle	219.19	-----	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	-----	-----	**8.27**	**8.27**	-----	-----
		L$_{22}$ - L$_{23}$	72.03	-30.34	117.21			0.75	1.17	102.76	-26.60	0.00	0.00	Vehicle	Vehicle	227.22	-----	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	-----	-----	**8.69**	**8.69**	-----	-----
		L$_{23}$ - L$_{24}$	33.57	-64.60	102.41			0.75	1.17	89.79	-56.64	0.00	0.00	Vehicle	Vehicle	160.36	-29.99	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	**10.37**	**10.37**	**14.97**	**14.97**
		L$_{24}$ - L$_{25}$	-45.06	-71.77	82.30			0.75	1.17	72.16	-62.93	0.00	0.00	Vehicle	Vehicle	35.23	-140.38	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	**10.03**	**10.03**	**8.40**	**8.40**
		L$_{25}$ - L$_{26}$	-134.95	-78.65	49.93			0.75	1.17	43.78	-68.96	0.00	0.00	Vehicle	Vehicle	-----	-265.08	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	-----	-----	**6.36**	**6.36**
		L$_{26}$ - L$_{27}$	-245.92	-80.65	11.08			0.75	1.17	9.72	-70.71	0.00	0.00	Vehicle	Vehicle	-----	-411.63	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	-----	-----	**6.81**	**6.81**
		L$_{27}$ - L$_{28}$	-351.86	-84.24	-21.18			0.75	1.17	-18.57	-73.85	0.00	0.00	Vehicle	Vehicle	-----	-553.43	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	-----	-----	**9.42**	**9.42**
		L$_{28}$ - L$_{29}$	-458.41	-79.74	-53.46			0.75	1.17	-46.87	-69.91	0.00	0.00	Vehicle	Vehicle	-----	-686.82	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	-----	-----	**11.69**	**11.69**
		L$_{29}$ - L$_{30}$	-542.36	-35.92	-60.25			0.75	1.17	-31.49	-52.83	0.00	0.00	Vehicle	Vehicle	-----	-773.75	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	-----	-----	**18.42**	**18.42**
		L$_{30}$ - L$_{31}$	-514.21	-73.25	-60.95			0.75	1.18	-54.08	-64.99	0.00	0.00	Vehicle	Vehicle	-----	-752.96	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	-----	-----	**15.39**	**15.39**
		L$_{31}$ - L$_{32}$	-411.27	-64.29	-46.28			0.75	1.18	-41.06	-57.04	0.00	0.00	Vehicle	Vehicle	-----	-608.81	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

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: 5C1 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	13.93	-78.90			0.75	1.24	12.92	-73.19	0.00	0.00	Vehicle	Vehicle	-----	-183.14	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	-----	-----	-----	-----	-----	3.78	3.78
	U_1 - L_1	-24.09	13.91	-45.86			0.75	1.24	12.90	-42.54	0.00	0.00	Vehicle	Vehicle	-----	-86.62	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	-----	-----	-----	-----	-----	7.71	7.71
	U_2 - L_2	12.87	-3.41	-34.30			0.75	1.24	-3.16	-31.83	0.00	0.00	Vehicle	Vehicle	12.63	-24.64	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	-----	-----	-----	-----	-----	11.46	11.46
	U_3 - L_3	37.37	14.54	-20.92			0.75	1.24	13.49	-19.41	0.00	0.00	Vehicle	Vehicle	66.12	-----	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	-----	-----	-----	-----	-----	28.93	28.93	-----	-----
	U_4 - L_4	-15.55	-19.82	4.18			0.75	1.24	3.88	-18.39	0.00	0.00	Vehicle	Vehicle	-----	-44.12	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	-----	-----	-----	-----	-----	18.18	18.18
	U_5 - L_5	-92.59	-64.60	-2.06			0.75	1.24	-1.91	-59.93	0.00	0.00	Vehicle	Vehicle	-----	-198.28	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	-----	-----	-----	-----	-----	5.55	5.55
	U_6 - L_6	-117.07	-78.20	-5.60			0.75	1.24	-5.19	-72.55	0.00	0.00	Vehicle	Vehicle	-----	-246.49	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	-----	-----	-----	-----	-----	5.39	5.39
	U_7 - L_7	-127.52	-91.73	0.25			0.75	1.24	0.23	-85.10	0.00	0.00	Vehicle	Vehicle	-----	-276.40	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	-368.71	-126.30	-121.28			0.75	1.24	-112.52	-117.18	0.00	0.00	Vehicle	Vehicle	-----	-631.66	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	-----	-----	-----	-----	-----	5.95	5.95
	U_9 - L_9	-214.56	4.44	-97.06			0.75	1.20	3.99	-87.20	0.00	0.00	Vehicle	Vehicle	-----	-392.29	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	-----	-----	-----	-----	-----	4.94	4.94
	U_{10} - L_{10}	-198.68	0.98	-87.42			0.75	1.20	0.88	-78.55	0.00	0.00	Vehicle	Vehicle	-----	-360.39	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	-----	-----	-----	-----	-----	6.93	6.93
	U_{11} - L_{11}	-171.40	-14.45	-77.63			0.75	1.20	-12.98	-69.75	0.00	0.00	Vehicle	Vehicle	-----	-313.49	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	-----	-----	-----	-----	-----	6.74	6.74
	U_{12} - L_{12}	-128.37	-2.15	-63.18			0.75	1.20	-1.93	-56.77	0.00	0.00	Vehicle	Vehicle	-----	-240.67	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	-----	-----	-----	-----	-----	7.12	7.12
	U_{13} - L_{13}	-96.65	12.45	-53.13			0.75	1.20	11.18	-47.73	0.00	0.00	Vehicle	Vehicle	-----	-187.69	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	-----	-----	-----	-----	-----	5.95	5.95
	U_{14} - L_{14}	-11.04	-18.86	-4.86			0.75	1.20	-4.37	-16.94	0.00	0.00	Vehicle	Vehicle	-----	-36.38	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	-----	-----	-----	-----	-----	19.69	19.69
	U_{15} - L_{15}	-2.47	-49.27	29.91			0.75	1.20	26.87	-44.27	0.00	0.00	Vehicle	Vehicle	31.72	-60.77	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	-----	-----	-----	-----	-----	16.01	16.01	7.70	7.70
	U_{16} - L_{16}	-31.27	-57.42	22.86			0.75	1.20	20.54	-51.59	0.00	0.00	Vehicle	Vehicle	-----	-107.72	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	-----	-----	-----	-----	-----	6.01	6.01
	U_{17} - L_{17}	-105.05	-79.30	10.42			0.75	1.20	9.37	-71.25	0.00	0.00	Vehicle	Vehicle	-----	-229.19	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	-----	-----	-----	-----	-----	4.30	4.30
	U_{18} - L_{18}	-126.74	-88.92	4.44			0.75	1.20	3.99	-79.90	0.00	0.00	Vehicle	Vehicle	-----	-268.63	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	-----	-----	-----	-----	-----	4.99	4.99
	U_{19} - L_{19}	-166.77	-92.62	-4.77			0.75	1.20	-4.29	-83.22	0.00	0.00	Vehicle	Vehicle	-----	-324.99	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	-----	-----	-----	-----	-----	5.40	5.40
	U_{20} - L_{20}	-184.59	-104.24	-10.37			0.75	1.20	-9.32	-93.66	0.00	0.00	Vehicle	Vehicle	-----	-361.71	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	-203.59	16.08	-105.73			0.75	1.18	14.27	-93.81	0.00	0.00	Vehicle	Vehicle	-----	-386.62	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	-----	-----	-----	-----	-----	4.68	4.68
	U_1 - L_1	-176.11	17.57	-86.18			0.75	1.18	15.59	-76.46	0.00	0.00	Vehicle	Vehicle	-----	-328.34	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	-----	-----	-----	-----	-----	6.49	6.49
	U_2 - L_2	-137.55	16.69	-80.86			0.75	1.18	14.81	-71.74	0.00	0.00	Vehicle	Vehicle	-----	-272.08	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	-----	-----	-----	-----	-----	6.09	6.09
	U_3 - L_3	-117.62	17.37	-72.67			0.75	1.18	15.41	-64.48	0.00	0.00	Vehicle	Vehicle	-----	-236.72	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	-----	-----	-----	-----	-----	5.18	5.18
	U_4 - L_4	-50.97	22.22	-54.16			0.75	1.18	19.72	-48.05	0.00	0.00	Vehicle	Vehicle	-----	-128.73	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	-----	-----	-----	-----	-----	6.00	6.00
	U_5 - L_5	-13.78	28.66	-46.36			0.75	1.18	25.43	-41.13	0.00	0.00	Vehicle	Vehicle	15.15	-71.38	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	-----	-----	-----	-----	-----	17.36	17.36	7.94	7.94
	U_6 - L_6	45.47	29.06	-38.07			0.75	1.18	25.78	-33.78	0.00	0.00	Vehicle	Vehicle	92.63	-----	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	-----	-----	-----	-----	-----	14.83	14.83	-----	-----
	U_7 - L_7	-22.33	-17.10	0.76			0.75	1.18	0.68	-15.17	0.00	0.00	Vehicle	Vehicle	-----	-48.76	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	-----	-----	-----	-----	-----	20.97	20.97
	U_8 - L_8	-120.08	-71.04	25.26			0.75	1.18	22.41	-63.03	0.00	0.00	Vehicle	Vehicle	-----	-238.04	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	-----	-----	-----	-----	-----	6.51	6.51
	U_9 - L_9	-177.03	-88.00	16.14			0.75	1.18	14.32	-78.08	0.00	0.00	Vehicle	Vehicle	-----	-331.64	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	-----	-----	-----	-----	-----	6.59	6.59
	U_{10} - L_{10}	-205.88	-95.22	10.64			0.75	1.18	9.44	-84.49	0.00	0.00	Vehicle	Vehicle	-----	-377.47	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	-----	-----	-----	-----	-----	6.78	6.78
	U_{11} - L_{11}	-239.23	-101.32	6.82			0.75	1.18	6.05	-89.90	0.00	0.00	Vehicle	Vehicle	-----	-427.87	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	-----	-----	-----	-----	-----	5.85	5.85
	U_{12} - L_{12}	-257.95	-109.92	-1.90			0.75	1.18	-1.69	-97.53	0.00	0.00	Vehicle	Vehicle	-----	-462.13	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	-----	-----	-----	-----	-----	5.58	5.58
	U_{13} - L_{13}	-243.82	-112.98	7.93			0.75	1.18	7.04	-100.24	0.00	0.00	Vehicle	Vehicle	-----	-447.29	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	-----	-----	-----	-----	-----	4.45	4.45
	U_{14} - L_{14}	-420.85	-123.44	-107.95			0.75	1.18	-95.78	-109.52	0.00	0.00	Vehicle	Vehicle	-----	-689.49	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	-----	-----	-----	-----	-----	5.76	5.76
	U_{15} - L_{15}	-158.83	13.17	-93.12			0.75	1.17	11.55	-81.65	0.00	0.00	Vehicle	Vehicle	-----	-312.62	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	-----	-----	-----	-----	-----	6.51	6.51
	U_{16} - L_{16}	-174.02	10.75	-86.53			0.75	1.17	9.42	-75.87	0.00	0.00	Vehicle	Vehicle	-----	-324.85	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	-----	-----	-----	-----	-----	6.49	6.49
	U_{17} - L_{17}	-156.46	12.34	-85.89			0.75	1.17	10.82	-75.30	0.00	0.00	Vehicle	Vehicle	-----	-301.29	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	-----	-----	-----	-----	-----	6.20	6.20
	U_{18} - L_{18}	-142.21	13.05	-78.06			0.75	1.17	11.44	-68.44	0.00	0.00	Vehicle	Vehicle	-----	-273.83	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	-----	-----	-----	-----	-----	6.36	6.36
	U_{19} - L_{19}	-113.66	17.27	-67.23			0.75	1.17	15.14	-58.95	0.00	0.00	Vehicle	Vehicle	-----	-224.39	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	-----	-----	-----	-----	-----	6.75	6.75
	U_{20} - L_{20}	-76.51	24.37	-56.83			0.75	1.17	21.37	-49.83	0.00	0.00	Vehicle	Vehicle	-----	-164.24	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	-----	-----	-----	-----	-----	5.99	5.99
	U_{21} - L_{21}	-45.77	26.59	-51.29			0.75	1.17	23.31	-44.97	0.00	0.00	Vehicle	Vehicle	-----	-117.96	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	-----	-----	-----	-----	-----	6.55	6.55
	U_{22} - L_{22}	-17.72	-20.35	3.73			0.75	1.17	3.27	-17.84	0.00	0.00	Vehicle	Vehicle	-----	-46.23	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	-----	-----	-----	-----	-----	18.16	18.16
	U_{23} - L_{23}	-30.69	-54.60	31.01			0.75	1.17	27.18	-47.87	0.00	0.00	Vehicle	Vehicle	-----	-102.12	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	-----	-----	-----	-----	-----	6.47	6.47
	U_{24} - L_{24}	-62.06	-68.37	16.74			0.75	1.17	14.68	-59.95	0.00	0.00	Vehicle	Vehicle	-----	-158.61	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	-----	-----	-----	-----	-----	5.22	5.22
	U_{25} - L_{25}	-103.15	-81.46	16.69			0.75	1.17	14.63	-71.42	0.00	0.00	Vehicle	Vehicle	-----	-226.93	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	-----	-----	-----	-----	-----	5.72	5.72
	U_{26} - L_{26}	-134.38	-86.93	8.47			0.75	1.17	7.43	-76.22	0.00	0.00	Vehicle	Vehicle	-----	-273.78	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	-----	-----	-----	-----	-----	5.81	5.81
	U_{27} - L_{27}	-156.03	-97.61	10.72			0.75	1.17	9.40	-85.58	0.00	0.00	Vehicle	Vehicle	-----	-314.09	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	-----	-----	-----	-----	-----	5.46	5.46
	U_{28} - L_{28}	-179.40	-107.83	-4.24			0.75	1.17	-3.72	-94.54	0.00	0.00	Vehicle	Vehicle	-----	-356.13	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	-----	-----	-----	-----	-----	5.15	5.15
	U_{29} - L_{29}	-171.60	-106.36	6.51			0.75	1.17	5.71	-93.25	0.00	0.00	Vehicle	Vehicle	-----	-344.31	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	-----	-----	-----	-----	-----	5.56	5.56
	U_{30} - L_{30}	-393.29	-122.64	-100.57			0.75	1.18	-89.23	-108.81	0.00	0.00	Vehicle	Vehicle	-----	-652.73	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	-----	-----	-----	-----	-----	6.05	6.05
	U_{31} - L_{31}	-203.49	13.49	-102.29			0.75	1.18	11.97	-90.76	0.00	0.00	Vehicle	Vehicle	-----	-382.52	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	-----	-----	-----	-----	-----	5.36	5.36
	U_{32} - L_{32}	-222.61	5.01	-99.41			0.75	1.18	4.44	-88.20	0.00	0.00	Vehicle	Vehicle	-----	-404.05	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	-----	-----	-----	-----	-----	6.57	6.57

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: 5C1 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-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	-21.12	52.40			0.75	1.24	48.61	-19.59	0.00	0.00	Vehicle	Vehicle	132.47	-----	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	-----	-----	-----	-----	-----	**10.97**	**10.97**	-----	-----
		U_1 - L_2	10.80	-19.92	13.79			0.75	1.24	12.79	-18.48	0.00	0.00	Vehicle	Vehicle	30.67	-9.99	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	-----	-----	-----	**32.60**	**32.60**	**18.73**	**18.73**
		U_2 - L_3	-44.05	-17.48	49.29			0.75	1.24	45.73	-16.22	0.00	0.00	Vehicle	Vehicle	2.18	-78.35	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	-----	-----	-----	**10.32**	**10.32**	**17.89**	**17.89**
		U_3 - L_4	-76.77	-20.66	-34.76			0.75	1.24	-19.17	-32.25	0.00	0.00	Vehicle	Vehicle	-----	-141.73	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	-----	-----	-----	-----	-----	**8.05**	**8.05**
		U_4 - L_5	118.48	-6.40	62.00			0.75	1.24	57.52	-5.93	0.00	0.00	Vehicle	Vehicle	228.80	-----	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	-----	-----	-----	-----	-----	**7.06**	**7.06**	-----	-----
		U_5 - L_6	137.62	3.89	80.92			0.75	1.24	75.08	3.61	0.00	0.00	Vehicle	Vehicle	276.50	-----	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	-----	-----	-----	-----	-----	**6.83**	**6.83**	-----	-----
		U_6 - L_7	157.39	4.06	89.71			0.75	1.24	83.22	3.77	0.00	0.00	Vehicle	Vehicle	312.79	-----	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	-----	-----	-----	-----	-----	**5.93**	**5.93**	-----	-----
		U_7 - L_8	149.33	9.11	101.88			0.75	1.24	94.52	8.45	0.00	0.00	Vehicle	Vehicle	317.00	-----	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	7.21	117.54			0.75	1.20	105.61	6.48	0.00	0.00	Vehicle	Vehicle	461.26	-----	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	-----	-----	-----	-----	-----	**6.75**	**6.75**	-----	-----
		U_9 - L_{10}	260.39	-1.97	83.09			0.75	1.20	74.66	-1.77	0.00	0.00	Vehicle	Vehicle	435.56	-----	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	-----	-----	-----	-----	-----	**9.40**	**9.40**	-----	-----
		U_{10} - L_{11}	236.43	8.20	112.15			0.75	1.20	100.77	7.37	0.00	0.00	Vehicle	Vehicle	438.35	-----	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	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
		U_{11} - L_{12}	212.05	8.76	84.29			0.75	1.20	75.73	7.87	0.00	0.00	Vehicle	Vehicle	374.12	-----	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	-----	-----	-----	-----	-----	**7.47**	**7.47**	-----	-----
		U_{12} - L_{13}	151.78	-15.48	96.07			0.75	1.20	86.32	-13.91	0.00	0.00	Vehicle	Vehicle	309.54	-----	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	-----	-----	-----	-----	-----	**5.55**	**5.55**	-----	-----
		U_{13} - L_{14}	108.73	-25.67	76.85			0.75	1.20	69.05	-23.06	0.00	0.00	Vehicle	Vehicle	231.10	-----	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	-----	-----	-----	-----	-----	**4.62**	**4.62**	-----	-----
		U_{14} - L_{15}	-24.56	-42.25	35.10			0.75	1.20	31.53	-37.96	0.00	0.00	Vehicle	Vehicle	9.06	-81.27	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	-----	-----	-----	**14.34**	**14.34**	**8.00**	**8.00**
		U_{15} - L_{15}	23.90	-28.28	51.42			0.75	1.20	46.20	-25.41	0.00	0.00	Vehicle	Vehicle	91.13	-1.95	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	-----	-----	-----	**8.74**	**8.74**	**13.71**	**13.71**
		U_{17} - L_{16}	120.04	-17.45	74.76			0.75	1.20	67.17	-15.68	0.00	0.00	Vehicle	Vehicle	243.37	-----	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	-----	-----	-----	-----	-----	**6.02**	**6.02**	-----	-----
		U_{18} - L_{17}	144.84	-8.42	88.19			0.75	1.20	79.24	-7.57	0.00	0.00	Vehicle	Vehicle	291.30	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U_{19} - L_{18}	193.27	1.71	93.57			0.75	1.20	84.07	1.54	0.00	0.00	Vehicle	Vehicle	360.54	-----	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	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_{20} - L_{19}	193.75	9.56	59.80			0.75	1.20	53.73	8.59	0.00	0.00	Vehicle	Vehicle	321.73	-----	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	-----	-----	-----	-----	-----	**9.61**	**9.61**	-----	-----
		U_0 - L_1	202.60	-18.22	92.96			0.75	1.18	82.48	-16.17	0.00	0.00	Vehicle	Vehicle	370.60	-----	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	-----	-----	-----	-----	-----	**6.97**	**6.97**	-----	-----
		U_1 - L_2	190.84	-20.53	104.32			0.75	1.18	92.55	-18.22	0.00	0.00	Vehicle	Vehicle	368.41	-----	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	-----	-----	-----	-----	-----	**6.34**	**6.34**	-----	-----
		U_2 - L_3	155.90	-20.06	93.15			0.75	1.18	82.65	-17.80	0.00	0.00	Vehicle	Vehicle	310.11	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
		U_3 - L_4	134.06	-21.79	81.25			0.75	1.18	72.09	-19.33	0.00	0.00	Vehicle	Vehicle	267.99	-----	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	-----	-----	-----	-----	-----	**6.15**	**6.15**	-----	-----
		U_4 - L_5	46.01	-23.49	73.94			0.75	1.18	65.60	-20.84	0.00	0.00	Vehicle	Vehicle	145.08	-----	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	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
		U_5 - L_6	3.43	-47.65	61.11			0.75	1.18	54.22	-42.28	0.00	0.00	Vehicle	Vehicle	74.94	-50.51	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	-----	-----	-----	**7.83**	**7.83**	**7.79**	**7.79**
		U_6 - L_7	-84.31	-70.69	37.86			0.75	1.18	33.59	-62.72	0.00	0.00	Vehicle	Vehicle	-----	-191.14	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	-----	-----	-----	-----	-----	**4.38**	**4.38**
		U_7 - L_8	137.33	-31.90	65.82			0.75	1.18	58.39	-28.31	0.00	0.00	Vehicle	Vehicle	254.44	-----	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	-----	-----	-----	-----	-----	**7.98**	**7.98**	-----	-----
		U_8 - L_9	210.92	-18.97	81.60			0.75	1.18	72.40	-16.83	0.00	0.00	Vehicle	Vehicle	368.31	-----	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	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
		U_{10} - L_9	236.39	-12.81	93.11			0.75	1.18	82.61	-11.36	0.00	0.00	Vehicle	Vehicle	414.70	-----	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	-----	-----	-----	-----	-----	**6.55**	**6.55**	-----	-----
		U_{11} - L_{10}	274.65	-8.78	96.31			0.75	1.18	85.45	-7.79	0.00	0.00	Vehicle	Vehicle	468.13	-----	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	-----	-----	-----	-----	-----	**6.67**	**6.67**	-----	-----
		U_{12} - L_{11}	281.09	-4.81	104.78			0.75	1.18	92.97	-4.26	0.00	0.00	Vehicle	Vehicle	486.27	-----	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	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U_{13} - L_{12}	278.14	-8.45	102.90			0.75	1.18	91.29	-7.50	0.00	0.00	Vehicle	Vehicle	480.27	-----	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	-----	-----	-----	-----	-----	**5.47**	**5.47**	-----	-----
		U_{14} - L_{13}	235.47	-8.30	101.19			0.75	1.18	89.78	-7.36	0.00	0.00	Vehicle	Vehicle	422.83	-----	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	-----	-----	-----	-----	-----	**6.04**	**6.04**	-----	-----
		U_{14} - L_{15}	143.01	-4.86	95.31			0.75	1.17	83.56	-4.26	0.00	0.00	Vehicle	Vehicle	294.55	-----	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	-----	-----	-----	-----	-----	**6.07**	**6.07**	-----	-----
		U_{15} - L_{16}	171.90	-13.12	103.45			0.75	1.17	90.70	-11.50	0.00	0.00	Vehicle	Vehicle	341.38	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
		U_{16} - L_{17}	181.04	-13.06	107.15			0.75	1.17	93.94	-11.45	0.00	0.00	Vehicle	Vehicle	357.47	-----	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	-----	-----	-----	-----	-----	**5.63**	**5.63**	-----	-----
		U_{17} - L_{18}	171.16	-14.74	92.99			0.75	1.17	81.53	-12.93	0.00	0.00	Vehicle	Vehicle	328.49	-----	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	-----	-----	-----	-----	-----	**5.88**	**5.88**	-----	-----
		U_{18} - L_{19}	150.64	-16.63	91.13			0.75	1.17	79.90	-14.58	0.00	0.00	Vehicle	Vehicle	299.71	-----	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	-----	-----	-----	-----	-----	**6.26**	**6.26**	-----	-----
	Structure 2	U_{19} - L_{20}	125.86	-17.83	88.88			0.75	1.17	77.92	-15.63	0.00	0.00	Vehicle	Vehicle	264.92	-----	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}	76.04	-23.64	77.41			0.75	1.17	67.87	-20.73	0.00	0.00	Vehicle	Vehicle	187.08	-----	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	-----	-----	-----	-----	-----	**5.18**	**5.18**	-----	-----
		U_{21} - L_{22}	38.33	-41.10	54.15			0.75	1.17	47.47	-36.03	0.00	0.00	Vehicle	Vehicle	111.54	-----	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	-----	-----	-----	-----	-----	**8.20**	**8.20**	-----	-----
		U_{23} - L_{22}	18.05	-43.98	40.82			0.75	1.17	35.79	-38.56	0.00	0.00	Vehicle	Vehicle	69.99	-26.66	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	-----	-----	-----	**11.45**	**11.45**	**8.84**	**8.84**
		U_{24} - L_{23}	58.57	-33.33	61.06			0.75	1.17	53.53	-29.22	0.00	0.00	Vehicle	Vehicle	145.74	-----	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	-----	-----	-----	-----	-----	**6.90**	**6.90**	-----	-----
		U_{25} - L_{24}	114.98	-22.25	72.89			0.75	1.17	63.90	-19.51	0.00	0.00	Vehicle	Vehicle	232.54	-----	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	-----	-----	-----	-----	-----	**7.64**	**7.64**	-----	-----
		U_{26} - L_{25}	143.00	-12.03	85.91			0.75	1.17	75.33	-10.55	0.00	0.00	Vehicle	Vehicle	283.82	-----	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	-----	-----	-----	-----	-----	**6.74**	**6.74**	-----	-----
		U_{27} - L_{26}	173.82	-6.57	88.91			0.75	1.17	77.96	-5.76	0.00	0.00	Vehicle	Vehicle	327.30	-----	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	-----	-----	-----	-----	-----	**6.12**	**6.12**	-----	-----
		U_{28} - L_{27}	186.60	-0.49	100.17			0.75	1.17	87.83	-0.43	0.00	0.00	Vehicle	Vehicle	356.75	-----	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	-----	-----	-----	-----	-----	**5.96**	**5.96**	-----	-----
		U_{29} - L_{28}	190.75	-7.89	99.25			0.75	1.17	87.01	-6.92	0.00	0.00	Vehicle	Vehicle	361.09	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
		U_{30} - L_{29}	161.86	-6.03	98.42			0.75	1.17	86.29	-5.28	0.00	0.00	Vehicle	Vehicle	322.60	-----	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	-----	-----	-----	-----	-----	**5.66**	**5.66**	-----	-----
		U_{30} - L_{31}	191.72	-6.67	102.18			0.75	1.18	90.66	-5.92	0.00	0.00	Vehicle	Vehicle	367.09	-----	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	-----	-----	-----	-----	-----	**6.46**	**6.46**	-----	-----
		U_{31} - L_{32}	226.45	-14.82	106.51			0.75	1.18	94.50	-13.15	0.00	0.00	Vehicle	Vehicle	417.23	-----	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	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_{32} - L_{33}	243.42	-3.74	108.91			0.75	1.18	96.63	-3.32	0.00	0.00	Vehicle	Vehicle	442.07	-----	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	-----	-----	-----	-----	-----	**6.22**	**6.22**	-----	-----
		U_{33} - L_{34}	239.13	-3.33	99.88			0.75	1.18	88.62	-2.96	0.00	0.00	Vehicle	Vehicle	426.07	-----	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	-----	-----	-----	-----	-----	**6.83**	**6.83**	-----	-----
		U_{34} - L_{35}	222.16	5.61	107.36			0.75	1.18	95.26	4.98	0.00	0.00	Vehicle	Vehicle	412.64	-----	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: 5C1
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} (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
South Truss - Upper Chord	Structure 1	U_0 - U_1	-66.70	-37.04	-8.30	-8.83	2.21	0.90	1.24	-9.24	-41.24	2.21	-8.83	Vehicle	Vehicle	-----	-140.32	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	-----	-----	12.09	12.09
		U_1 - U_2	-86.55	-11.67	-65.07	6.01	-16.34	0.90	1.24	-12.99	-72.44	6.01	-16.34	Vehicle	Vehicle	-----	-206.69	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	-----	-----	6.61	6.61
		U_2 - U_3	-48.14	47.13	-66.48	9.46	-19.05	0.90	1.24	52.47	-74.01	9.46	-19.05	Vehicle	Vehicle	5.62	-158.80	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	13.71	13.71	6.99	6.99
		U_3 - U_4	36.58	60.46	-60.06	12.74	-17.47	0.90	1.24	67.31	-66.86	12.74	-17.47	Vehicle	Vehicle	135.06	-39.37	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	9.43	9.43	9.00	9.00
		U_4 - U_5	38.93	60.64	-71.49	12.80	-17.38	0.90	1.24	67.51	-79.59	12.80	-17.38	Vehicle	Vehicle	138.38	-52.86	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	9.36	9.36	7.59	7.59
		U_5 - U_6	154.60	67.51	-46.76	15.16	-12.03	0.90	1.24	75.16	-52.06	15.16	-12.03	Vehicle	Vehicle	298.69	-----	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	-----	-----	6.87	6.87	-----	-----
		U_6 - U_7	288.38	72.83	-16.50	17.14	-4.31	0.90	1.24	81.08	-18.37	17.14	-4.31	Vehicle	Vehicle	480.30	-----	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	-----	-----	6.36	6.36	-----	-----
		U_7 - U_8	410.94	16.99	14.71	18.28	4.35	0.90	1.24	18.92	16.38	18.28	4.35	Pedestrian	Vehicle	582.58	-----	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	-----	-----	18.80	18.80	-----	-----
		U_8 - U_9	311.57	14.55	2.18	19.08	0.00	0.90	1.20	15.69	2.35	19.08	0.00	Pedestrian	Vehicle	450.25	-----	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	-----	-----	18.04	18.04	-----	-----
		U_9 - U_{10}	78.52	-16.66	-5.17	5.48	0.00	0.90	1.20	-5.58	-17.96	5.48	0.00	Vehicle	Vehicle	94.83	-----	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	48.01	-50.64	-7.31	0.00	0.90	1.20	51.76	-54.60	0.00	-7.31	Vehicle	Vehicle	-----	-254.84	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	-----	-----	8.35	8.35
		U_{11} - U_{12}	-338.03	44.13	-83.46	9.77	-27.93	0.90	1.20	47.59	-89.98	9.77	-27.93	Vehicle	Vehicle	-----	-556.42	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	-----	-----	5.27	5.27
		U_{12} - U_{13}	-480.08	38.60	-107.87	8.23	-34.32	0.90	1.20	41.62	-116.30	8.23	-34.32	Vehicle	Vehicle	-----	-775.30	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	-----	-----	5.65	5.65
		U_{13} - U_{14}	-570.65	32.76	-139.86	6.68	-37.21	0.90	1.20	35.32	-150.80	6.68	-37.21	Vehicle	Vehicle	-----	-937.88	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	-----	-----	5.02	5.02
		U_{14} - U_{15}	-571.07	32.60	-152.43	6.65	-37.22	0.90	1.20	35.15	-164.35	6.65	-37.22	Vehicle	Vehicle	-----	-956.05	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	-----	-----	4.60	4.60
		U_{15} - U_{16}	-581.88	25.45	-147.40	4.98	-36.12	0.90	1.20	27.44	-158.93	4.98	-36.12	Vehicle	Vehicle	-----	-963.05	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	-----	-----	4.69	4.69
		U_{16} - U_{17}	-539.46	11.16	-127.45	3.52	-31.85	0.90	1.20	12.03	-137.42	3.52	-31.85	Vehicle	Vehicle	-----	-879.94	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	-----	-----	5.73	5.73
		U_{17} - U_{18}	-422.33	12.30	-94.42	2.26	-25.05	0.90	1.20	13.26	-101.80	2.26	-25.05	Vehicle	Vehicle	-----	-681.37	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	-----	-----	5.39	5.39
		U_{18} - U_{19}	-286.19	6.95	-59.07	1.28	-16.96	0.90	1.20	7.49	-63.69	1.28	-16.96	Vehicle	Vehicle	-----	-454.84	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	-----	-----	6.14	6.14
		U_{19} - U_{20}	-140.84	1.85	-28.37	0.55	-8.68	0.90	1.20	2.00	-30.59	0.55	-8.68	Vehicle	Vehicle	-----	-222.86	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	-----	-----	17.54	17.54
	Structure 2	U_0 - U_1	-147.44	-30.25	-12.01	-4.88	0.36	0.90	1.18	-12.79	-32.21	0.36	-4.88	Vehicle	Vehicle	-----	-233.55	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	-----	-----	15.52	15.52
		U_1 - U_2	-319.06	-12.76	-75.52	1.96	-13.36	0.90	1.18	-13.58	-80.41	1.96	-13.36	Vehicle	Vehicle	-----	-519.30	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	-----	-----	5.87	5.87
		U_2 - U_3	-460.91	-97.50	-78.65	-20.95	3.77	0.90	1.18	-83.73	-103.81	3.77	-20.95	Vehicle	Vehicle	-----	-734.14	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	-----	-----	5.94	5.94
		U_3 - U_4	-580.03	40.62	-106.40	5.92	-27.68	0.90	1.18	43.24	-113.29	5.92	-27.68	Vehicle	Vehicle	-----	-901.31	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	-----	-----	6.72	6.72
		U_4 - U_5	-616.49	52.67	-125.52	7.86	-31.35	0.90	1.18	56.08	-133.64	7.86	-31.35	Vehicle	Vehicle	-----	-975.17	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	-----	-----	6.51	6.51
		U_5 - U_6	-604.71	64.81	-153.44	9.87	-32.88	0.90	1.18	69.00	-163.36	9.87	-32.88	Vehicle	Vehicle	-----	-998.50	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	-----	-----	5.40	5.40
		U_6 - U_7	-514.78	73.95	-142.40	11.56	-31.23	0.90	1.18	78.73	-151.61	11.56	-31.23	Vehicle	Vehicle	-----	-866.31	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	-----	-----	5.45	5.45
		U_7 - U_8	-512.83	74.02	-114.62	11.57	-31.18	0.90	1.18	78.80	-122.04	11.57	-31.18	Vehicle	Vehicle	-----	-825.32	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	-----	-----	6.79	6.79
		U_8 - U_9	-373.51	82.05	-134.21	13.16	-27.41	0.90	1.18	87.35	-142.89	13.16	-27.41	Vehicle	Vehicle	-----	-671.32	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	-----	-----	5.27	5.27
		U_9 - U_{10}	-181.05	85.46	-99.99	14.25	-21.42	0.90	1.18	90.98	-106.46	14.25	-21.42	Vehicle	Vehicle	-----	-373.77	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	-----	-----	6.62	6.62
		U_{10} - U_{11}	26.18	87.91	-64.46	15.21	-14.40	0.90	1.18	93.60	-68.63	15.21	-14.40	Vehicle	Vehicle	155.71	-55.18	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	9.45	9.45	11.59	11.59
		U_{11} - U_{12}	237.39	86.94	-28.68	15.56	-6.85	0.90	1.18	92.57	-30.53	15.56	-6.85	Vehicle	Vehicle	428.94	-----	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	-----	-----	7.27	7.27	-----	-----
		U_{12} - U_{13}	435.89	82.81	-2.33	15.82	0.56	0.90	1.18	88.17	-2.48	15.82	0.56	Vehicle	Vehicle	681.28	-----	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	-----	-----	7.98	7.98	-----	-----
		U_{13} - U_{14}	595.84	9.28	19.84	15.74	6.91	0.90	1.18	21.13	9.88	15.74	6.91	Pedestrian	Pedestrian	822.51	-----	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	-----	-----	26.27	26.27	-----	-----
		U_{14} - U_{15}	615.53	30.41	-1.25	24.37	0.00	0.90	1.17	31.99	-1.32	24.37	0.00	Pedestrian	Vehicle	873.47	-----	13.75	61.63	47.8750	2033.63	131.71	10.6276	5.9779	16.00	32.76	-1715.83	17.00	1.06	16.00	0.63	4.00	0.50	16.00	67.50	272.00	12.95	-----	-----	25.60	-----	-----	8.00	-----	-----	16.83	16.83	-----	-----
		U_{15} - U_{16}	486.15	35.54	-0.57	14.17	3.08	0.90	1.17	37.39	-0.60	14.17	3.08	Pedestrian	Pedestrian	699.03	-----	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	-----	-----	15.25	15.25	-----	-----
		U_{16} - U_{17}	339.27	-7.15	-21.12	11.57	0.00	0.90	1.17	-7.52	-22.22	11.57	0.00	Vehicle	Vehicle	431.27	-----	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}	192.13	75.24	-54.45	4.46	0.00	0.90	1.17	79.16	-57.28	4.46	0.00	Vehicle	Vehicle	352.69	-----	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	-----	-----	7.25	7.25	-----	-----
		U_{18} - U_{19}	53.83	68.93	-74.24	-2.79	-12.78	0.90	1.17	72.52	-78.11	-2.79	-12.78	Vehicle	Vehicle	164.26	-31.56	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	9.82	9.82	8.98	8.98
		U_{19} - U_{20}	-58.94	61.12	-92.27	15.07	-15.67	0.90	1.17	64.30	-97.08	15.07	-15.67	Vehicle	Vehicle	6.97	-202.82	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	13.67	13.67	6.53	6.53
	Structure 3	U_0 - U_{21}	-125.32	50.98	-113.05	14.77	-16.52	0.90	1.17	53.63	-118.94	14.77	-16.52	Vehicle	Vehicle	-----	-317.53	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_{21} - U_{22}	-146.72	41.93	-112.69	14.37	-22.74	0.90	1.17	44.11	-118.56	14.37	-22.74	Vehicle	Vehicle	-----	-344.86	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	-----	-----	5.82	5.82
		U_{22} - U_{23}	-146.49	39.34	-123.83	14.36	-22.72	0.90	1.17	41.39	-130.28	14.36	-22.72	Pedestrian	Vehicle	-----	-359.80	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	-----	-----	5.30	5.30
		U_{23} - U_{24}	-112.53	27.23	-116.50	13.88	-21.04	0.90	1.17	28.65	-122.57	13.88	-21.04	Pedestrian	Vehicle	-----	-305.63	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	-----	-----	5.91	5.91
		U_{24} - U_{25}	-36.03	58.69	-98.66	13.40	-15.01	0.90	1.17	61.75	-103.79	13.40	-15.01	Vehicle	Vehicle	33.44	-181.77	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	13.87	13.87	6.33	6.33
		U_{25} - U_{26}	80.94	63.49	-69.91	12.93	-12.15	0.90	1.17	66.80	-73.55	12.93	-12.15	Vehicle	Vehicle	192.06	-----	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	-----	-----	10.26	10.26	-----	-----
		U_{26} - U_{27}	220.82	67.16	-43.54	12.57	-5.86	0.90	1.17	70.66	-45.81	12.57	-5.86	Vehicle	Vehicle	378.91	-----	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	-----	-----	7.72	7.72	-----	-----
		U_{27} - U_{28}	363.48	67.25	-16.04	12.37	0.18	0.90	1.17	70.75	-16.88	12.37	0.18	Vehicle	Vehicle	564.51	-----	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	-----	-----	9.62	9.62	-----	-----
		U_{28} - U_{29}	503.92	7.99	10.34	12.24	3.11	0.90	1.17	10.88	8.40	12.24	3.11	Pedestrian	Pedestrian	685.14	-----	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	-----	-----	33.25	33.25	-----	-----
		U_{29} - U_{30}	616.62	-3.26	18.16	0.00	7.42	0.90	1.17	19.11	-3.43	7.42	0.00	Pedestrian	Vehicle	836.10	-----	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

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: 5C1 — 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
South Truss - Lower Chord	Structure 1	L$_0$- L$_1$	-1.94	-2.76	1.27	-2.06	0.37	0.90	1.24	1.42	-3.07	0.37	-2.06	Vehicle	Pedestrian	-----	-9.19	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	-----	-----	**82.20**	**82.20**
		L$_1$ - L$_2$	67.93	27.58	29.78	0.00	5.88	0.90	1.24	33.15	30.71	5.88	0.00	Vehicle	Vehicle	131.41	-----	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	-----	-----	**13.11**	**13.11**	-----	-----
		L$_2$ - L$_3$	78.83	-38.62	75.64	-7.39	15.48	0.90	1.24	84.21	-43.00	15.48	-7.39	Vehicle	Vehicle	211.95	-----	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	-----	-----	**7.00**	**7.00**	-----	-----
		L$_3$ - L$_4$	39.11	-53.72	82.10	-10.83	18.09	0.90	1.24	91.40	-59.81	18.09	-10.83	Vehicle	Vehicle	169.66	-26.91	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	**6.89**	**6.89**	**10.07**	**10.07**
		L$_4$ - L$_5$	-166.44	-76.62	53.04	-16.91	10.96	0.90	1.24	59.05	-85.30	10.96	-16.91	Vehicle	Vehicle	-----	-327.26	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	-----	-----	**3.91**	**3.91**
		L$_5$ - L$_6$	-301.30	-82.17	20.02	-18.94	3.24	0.90	1.24	22.29	-91.48	3.24	-18.94	Vehicle	Vehicle	-----	-510.62	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	44.34	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.92**	**3.92**
		L$_6$ - L$_7$	-439.01	-87.92	-7.82	-21.52	-4.99	0.90	1.24	-8.70	-97.88	-4.99	-21.52	Pedestrian	Vehicle	-----	-697.96	6.81	44.29	37.4804	1461.58	131.71	10.8594	4.9526	19.73	32.63	-1228.40	15.00	1.02	3.52	0.65	3.52	0.65	15.50	47.56	232.50	12.34	45.00	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**5.17**	**5.17**
		L$_7$ - L$_8$	-551.71	-3.03	-59.85	0.00	-35.56	0.90	1.24	-3.37	-66.63	0.00	-35.56	Vehicle	Pedestrian	-----	-850.07	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	-----	-----	**6.34**	**6.34**
		L$_8$ - L$_9$	-570.55	-94.44	10.69	-37.48	0.00	0.90	1.20	11.53	-101.82	0.00	-37.48	Vehicle	Pedestrian	-----	-922.80	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	44.52	Pass	5.72	12.00	Pass	5.72	12.00	Pass	-----	-----	**4.51**	**4.51**
		L$_9$ - L$_{10}$	-355.55	-51.83	-28.42	-13.03	-11.67	0.90	1.20	-30.64	-55.88	-11.67	-13.03	Pedestrian	Vehicle	-----	-534.86	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	-----	-----	**10.55**	**10.55**
		L$_{10}$ - L$_{11}$	-118.56	-42.50	19.42	-12.42	0.00	0.90	1.20	20.94	-45.83	0.00	-12.42	Vehicle	Vehicle	-----	-213.70	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	-----	-----	**8.33**	**8.33**
		L$_{11}$ - L$_{12}$	103.33	40.13	53.67	0.50	0.00	0.90	1.20	57.87	43.26	0.50	0.00	Vehicle	Vehicle	209.56	-----	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	-----	-----	**8.48**	**8.48**	-----	-----
		L$_{12}$ - L$_{13}$	300.47	-36.48	100.26	-8.15	17.86	0.90	1.20	108.10	-39.34	17.86	-8.15	Vehicle	Vehicle	531.13	-----	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	-----	-----	**6.24**	**6.24**	-----	-----
		L$_{13}$ - L$_{14}$	441.01	67.16	104.32	-6.62	24.18	0.90	1.20	112.48	72.42	24.18	-6.62	Vehicle	Vehicle	719.54	-----	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	-----	-----	**7.71**	**7.71**	-----	-----
		L$_{14}$ - L$_{15}$	546.80	-19.50	132.42	-3.50	24.61	0.90	1.20	142.78	-21.02	24.61	-3.50	Vehicle	Vehicle	896.45	-----	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	-----	-----	**7.20**	**7.20**	-----	-----
		L$_{15}$ - L$_{16}$	505.90	-13.05	116.53	-2.04	20.37	0.90	1.20	125.64	-14.07	20.37	-2.04	Vehicle	Vehicle	821.00	-----	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	-----	-----	**8.51**	**8.51**	-----	-----
		L$_{16}$ - L$_{17}$	398.64	-16.04	87.95	-0.84	12.78	0.90	1.20	94.83	-17.29	12.78	-0.84	Vehicle	Vehicle	641.52	-----	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	-----	-----	**8.62**	**8.62**	-----	-----
		L$_{17}$ - L$_{18}$	263.76	-2.44	51.73	0.15	4.73	0.90	1.20	55.78	-2.63	4.73	0.15	Vehicle	Vehicle	415.39	-----	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	-----	-----	**11.11**	**11.11**	-----	-----
		L$_{18}$ - L$_{19}$	118.86	-9.99	24.35	0.70	-3.28	0.90	1.20	26.25	-10.78	0.70	-3.28	Vehicle	Vehicle	188.64	-----	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	-----	-----	**14.62**	**14.62**	-----	-----
		L$_{19}$ - L$_{20}$	-23.25	3.76	-5.14	1.27	-12.00	0.90	1.20	4.06	-5.54	1.27	-12.00	Vehicle	Pedestrian	-----	-53.02	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	-----	-----	**20.54**	**20.54**
		L$_0$- L$_1$	-35.95	-7.65	5.05	-5.13	1.19	0.90	1.18	5.38	-8.15	1.19	-5.13	Vehicle	Pedestrian	-----	-64.00	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	-----	-----	**37.57**	**37.57**
		L$_1$ - L$_2$	132.83	27.88	11.70	2.94	-0.07	0.90	1.18	29.69	12.46	2.94	-0.07	Vehicle	Vehicle	211.26	-----	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	-----	-----	**16.86**	**16.86**	-----	-----
		L$_2$ - L$_3$	304.11	51.88	42.94	10.53	-1.80	0.90	1.18	55.24	45.72	10.53	-1.80	Vehicle	Vehicle	467.14	-----	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	-----	-----	**12.16**	**12.16**	-----	-----
		L$_3$ - L$_4$	445.92	91.70	80.40	0.00	13.17	0.90	1.18	97.64	85.60	13.17	0.00	Vehicle	Vehicle	706.62	-----	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	-----	-----	**8.84**	**8.84**	-----	-----
		L$_4$ - L$_5$	567.84	-36.73	130.44	-6.10	24.82	0.90	1.18	138.87	-39.10	24.82	-6.10	Vehicle	Vehicle	918.72	-----	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	-----	-----	**7.79**	**7.79**	-----	-----
		L$_5$ - L$_6$	603.64	-55.56	160.54	-8.06	28.47	0.90	1.18	170.93	-59.16	28.47	-8.06	Vehicle	Vehicle	1006.93	-----	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	-----	-----	**6.96**	**6.96**	-----	-----
		L$_6$ - L$_7$	599.48	-70.30	172.81	-10.41	30.26	0.90	1.18	183.99	-74.85	30.26	-10.41	Vehicle	Vehicle	1018.51	-----	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	-----	-----	**6.62**	**6.62**	-----	-----
		L$_7$ - L$_8$	373.94	-87.40	129.56	-13.66	24.93	0.90	1.18	137.94	-93.06	24.93	-13.66	Vehicle	Vehicle	665.44	-----	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	-----	-----	**7.02**	**7.02**	-----	-----
		L$_8$ - L$_9$	195.71	-93.66	106.89	-15.12	19.52	0.90	1.18	113.81	-99.72	19.52	-15.12	Vehicle	Vehicle	402.38	-----	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	-----	-----	**7.94**	**7.94**	-----	-----
		L$_9$ - L$_{10}$	-13.21	-96.30	69.23	-16.11	12.45	0.90	1.18	73.71	-102.53	12.45	-16.11	Vehicle	Vehicle	78.65	-150.46	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	**11.87**	**11.87**	**6.97**	**6.97**
		L$_{10}$ - L$_{11}$	-217.32	-96.90	33.61	-17.02	5.50	0.90	1.18	35.78	-103.17	5.50	-17.02	Vehicle	Vehicle	-----	-416.63	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	-----	-----	**4.20**	**4.20**
		L$_{11}$ - L$_{12}$	-419.93	-96.10	4.14	-17.31	-2.04	0.90	1.18	4.40	-102.32	-2.04	-17.31	Vehicle	Vehicle	-----	-678.92	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	-----	-----	**4.99**	**4.99**
		L$_{12}$ - L$_{13}$	-591.41	-97.49	-17.04	-18.75	-7.09	0.90	1.18	-18.14	-103.80	-7.09	-18.75	Pedestrian	Vehicle	-----	-903.76	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	-----	-----	**6.49**	**6.49**
		L$_{13}$ - L$_{14}$	-724.23	-0.29	-47.77	0.00	-35.12	0.90	1.18	-0.30	-50.86	0.00	-35.12	Vehicle	Pedestrian	-----	-1053.27	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	-----	-----	**9.20**	**9.20**
		L$_{14}$ - L$_{15}$	-747.05	-48.79	17.21	-36.29	0.00	0.90	1.17	18.10	-51.33	0.00	-36.29	Vehicle	Pedestrian	-----	-1085.06	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	-----	-----	**8.77**	**8.77**
		L$_{15}$ - L$_{16}$	-632.15	13.70	-22.29	0.00	-31.21	0.90	1.17	14.41	-23.45	0.00	-31.21	Vehicle	Pedestrian	-----	-892.86	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	-----	-----	**11.77**	**11.77**
		L$_{16}$ - L$_{17}$	-488.62	-44.43	22.34	-25.39	0.00	0.90	1.17	23.51	-46.74	0.00	-25.39	Vehicle	Pedestrian	-----	-728.98	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	-----	-----	**7.75**	**7.75**
		L$_{17}$ - L$_{18}$	-336.98	-16.04	21.05	-18.12	0.00	0.90	1.17	22.15	-16.88	0.00	-18.12	Vehicle	Pedestrian	-----	-483.58	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	-----	-----	**11.16**	**11.16**
		L$_{18}$ - L$_{19}$	-183.61	-63.26	59.60	-11.34	4.48	0.90	1.17	62.70	-66.55	4.48	-11.34	Vehicle	Vehicle	-----	-325.21	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	-----	-----	**5.86**	**5.86**
		L$_{19}$ - L$_{20}$	-45.77	-56.88	73.64	-9.58	8.92	0.90	1.17	77.48	-59.84	8.92	-9.58	Vehicle	Vehicle	41.22	-137.29	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	**9.36**	**9.36**	**8.82**	**8.82**
		L$_{20}$ - L$_{21}$	68.00	-50.54	99.51	-9.12	11.57	0.90	1.17	104.69	-53.17	11.57	-9.12	Vehicle	Vehicle	224.50	-----	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	-----	-----	6.40	-----	-----	6.40	-----	-----	**8.56**	**8.56**	-----	-----
		L$_{21}$ - L$_{22}$	133.90	-40.40	114.07	-8.82	13.61	0.90	1.17	120.02	-42.51	13.61	-8.82	Vehicle	Vehicle	330.10	-----	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	-----	-----	**6.92**	**6.92**	-----	-----
		L$_{22}$ - L$_{23}$	122.50	-19.09	96.88	-7.58	11.79	0.90	1.17	101.92	-20.08	11.79	-7.58	Vehicle	Pedestrian	291.75	-----	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	-----	-----	**8.26**	**8.26**	-----	-----
		L$_{23}$ - L$_{24}$	46.70	-50.01	84.88	-7.09	8.09	0.90	1.17	89.31	-52.61	8.09	-7.09	Vehicle	Vehicle	176.80	-7.69	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	**10.28**	**10.28**	**16.36**	**16.36**
		L$_{24}$ - L$_{25}$	-66.76	-55.63	59.34	-6.24	2.64	0.90	1.17	62.43	-58.53	2.64	-6.24	Vehicle	Vehicle	-----	-162.87	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	-----	-----	**8.66**	**8.66**
		L$_{25}$ - L$_{26}$	-205.83	-59.42	28.48	-5.88	-3.61	0.90	1.17	29.96	-62.52	-3.61	-5.88	Vehicle	Vehicle	-----	-348.85	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	-----	-----	**5.88**	**5.88**
		L$_{26}$ - L$_{27}$	-350.61	-60.50	5.63	-5.26	-6.72	0.90	1.17	5.92	-63.66	-5.26	-6.72	Vehicle	Vehicle	-----	-538.54	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	-----	-----	**5.92**	**5.92**
		L$_{27}$ - L$_{28}$	-494.76	-60.19	-20.99	-5.10	-12.12	0.90	1.17	-22.08	-63.33	-5.10	-12.12	Vehicle	Vehicle	-----	-725.52	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	-----	-----	**8.73**	**8.73**
		L$_{28}$ - L$_{29}$	-620.88	-34.76	-32.40	-31.79	-17.19	0.90	1.17	-34.09	-36.57	-17.19	-31.79	Pedestrian	Pedestrian	-----	-896.01	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	-----	-----	**9.58**	**9.58**
		L$_{29}$ - L$_{30}$	-716.82	-24.92	-38.81	0.00	-36.30	0.90	1.17	-26.22	-40.83	0.00	-36.30	Vehicle	Pedestrian	-----	-1032.12	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	-----	-----	**10.35**	**10.35**
		L$_{30}$

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: 5C1 — 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 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	5.65	-63.66	3.44	-12.32	0.90	1.24	6.29	-70.88	3.44	-12.32	Pedestrian	Vehicle	-----	-213.85	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	-----	-----	-----	-----	-----	3.54	3.54
		U$_1$ - L$_1$	-46.50	15.10	-32.80	2.93	-9.05	0.90	1.24	16.81	-36.51	2.93	-9.05	Vehicle	Vehicle	-----	-107.92	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	-----	-----	-----	-----	-----	8.37	8.37
		U$_2$ - L$_2$	-0.07	13.51	-22.10	2.84	-5.68	0.90	1.24	15.04	-24.60	2.84	-5.68	Vehicle	Vehicle	19.47	-32.07	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	28.44	28.44	14.30	14.30
		U$_3$ - L$_3$	39.61	4.05	-8.90	2.70	-2.12	0.90	1.24	4.51	-9.91	2.70	-2.12	Pedestrian	Vehicle	60.86	-----	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	-----	-----	6.56	-----	-----	53.89	53.89	-----	-----
		U$_4$ - L$_4$	-30.21	-12.01	0.51	-3.47	0.00	0.90	1.24	0.56	-13.37	0.00	-3.47	Vehicle	Vehicle	-----	-56.66	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	-----	-----	23.90	23.90
		U$_5$ - L$_5$	-130.50	-37.24	2.27	-10.24	0.00	0.90	1.24	2.52	-41.45	0.00	-10.24	Vehicle	Vehicle	-----	-223.55	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	-----	-----	7.11	7.11
		U$_6$ - L$_6$	-158.19	-41.39	8.87	-13.06	0.00	0.90	1.24	9.87	-46.08	0.00	-13.06	Vehicle	Vehicle	-----	-265.55	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	-----	-----	7.59	7.59
		U$_7$ - L$_7$	-152.33	-41.99	14.16	-13.25	0.00	0.90	1.24	15.77	-46.75	0.00	-13.25	Vehicle	Vehicle	-----	-258.79	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	-----	-----	6.59	6.59
		U$_8$ - L$_8$	-455.44	-44.04	-73.10	-12.74	-18.98	0.90	1.24	-49.03	-81.39	-12.74	-18.98	Vehicle	Vehicle	-----	-697.87	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	-----	-----	7.45	7.45
		U$_9$ - L$_9$	-287.50	3.33	-70.12	0.00	-18.21	0.90	1.20	3.59	-75.60	0.00	-18.21	Vehicle	Vehicle	-----	-472.04	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$_{10}$	-276.27	1.57	-68.29	0.00	-17.55	0.90	1.20	1.70	-73.63	0.00	-17.55	Vehicle	Vehicle	-----	-454.86	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	-----	-----	6.34	6.34
		U$_{11}$ - L$_{11}$	-232.54	0.13	-53.36	0.00	-14.42	0.90	1.20	0.14	-57.53	0.00	-14.42	Vehicle	Vehicle	-----	-377.09	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	-----	-----	7.11	7.11
		U$_{12}$ - L$_{12}$	-178.38	-4.90	-42.40	0.00	-11.20	0.90	1.20	-5.29	-45.72	0.00	-11.20	Vehicle	Vehicle	-----	-291.33	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	-----	-----	7.75	7.75
		U$_{13}$ - L$_{13}$	-127.70	1.81	-32.70	0.00	-7.88	0.90	1.20	1.95	-35.25	0.00	-7.88	Vehicle	Vehicle	-----	-211.84	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	-----	-----	7.17	7.17
		U$_{14}$ - L$_{14}$	-30.38	-8.63	-2.03	0.00	-3.03	0.90	1.20	-2.19	-9.30	0.00	-3.03	Vehicle	Vehicle	-----	-51.59	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	-----	-----	33.80	33.80
		U$_{15}$ - L$_{15}$	-28.93	-28.59	4.74	-4.53	1.55	0.90	1.20	5.11	-30.82	1.55	-4.53	Vehicle	Vehicle	-----	-77.67	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	-----	-----	10.20	10.20
		U$_{16}$ - L$_{16}$	-75.99	-35.56	6.57	-7.07	1.39	0.90	1.20	7.08	-38.34	1.39	-7.07	Vehicle	Vehicle	-----	-148.63	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	-----	-----	6.92	6.92
		U$_{17}$ - L$_{17}$	-161.81	-48.29	7.05	-10.66	1.30	0.90	1.20	7.60	-52.06	1.30	-10.66	Vehicle	Vehicle	-----	-278.03	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	-----	-----	4.79	4.79
		U$_{18}$ - L$_{18}$	-190.09	-50.59	6.05	-12.69	1.12	0.90	1.20	6.53	-54.54	1.12	-12.69	Vehicle	Vehicle	-----	-318.03	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	-----	-----	6.15	6.15
		U$_{19}$ - L$_{19}$	-228.09	-50.47	5.19	-14.99	0.97	0.90	1.20	5.60	-54.41	0.97	-14.99	Vehicle	Vehicle	-----	-367.25	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	-----	-----	7.14	7.14
		U$_{20}$ - L$_{20}$	-242.54	-52.09	-5.07	-15.62	0.95	0.90	1.20	-5.47	-56.16	0.95	-15.62	Vehicle	Vehicle	-----	-388.30	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	-----	-----	5.06	5.06
	Structure 2	U$_0$ - L$_0$	-302.99	3.07	-80.26	2.22	-15.08	0.90	1.18	3.27	-85.46	2.22	-15.08	Pedestrian	Vehicle	-----	-504.98	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	-----	-----	3.97	3.97
		U$_1$ - L$_1$	-268.80	13.94	-70.13	2.12	-13.67	0.90	1.18	14.85	-74.67	2.12	-13.67	Vehicle	Vehicle	-----	-446.51	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	-----	-----	5.41	5.41
		U$_2$ - L$_2$	-220.88	15.05	-64.98	2.34	-12.32	0.90	1.18	16.03	-69.19	2.34	-12.32	Vehicle	Vehicle	-----	-377.09	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	-----	-----	5.11	5.11
		U$_3$ - L$_3$	-175.24	16.13	-53.16	2.49	-10.35	0.90	1.18	17.17	-56.60	2.49	-10.35	Vehicle	Vehicle	-----	-301.40	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	-----	-----	4.89	4.89
		U$_4$ - L$_4$	-82.09	13.96	-38.41	2.21	-6.62	0.90	1.18	14.86	-40.89	2.21	-6.62	Vehicle	Vehicle	-----	-159.87	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	-----	-----	6.29	6.29
		U$_5$ - L$_5$	-19.91	13.79	-29.97	2.23	-4.16	0.90	1.18	14.68	-31.91	2.23	-4.16	Vehicle	Vehicle	-----	-67.36	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	-----	-----	10.05	10.05
		U$_6$ - L$_6$	60.32	19.58	-14.09	1.75	-0.47	0.90	1.18	20.85	-15.00	1.75	-0.47	Vehicle	Vehicle	105.52	-----	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	-----	-----	17.62	17.62	-----	-----
		U$_7$ - L$_7$	-41.78	-12.01	-5.63	-2.49	0.00	0.90	1.18	-5.99	-12.79	0.00	-2.49	Vehicle	Vehicle	-----	-70.93	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	-----	-----	23.36	23.36
		U$_8$ - L$_8$	-189.01	-46.43	4.07	-8.38	0.00	0.90	1.18	4.34	-49.44	0.00	-8.38	Vehicle	Vehicle	-----	-309.98	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	-----	-----	6.91	6.91
		U$_9$ - L$_9$	-254.00	-57.29	0.65	-10.55	0.00	0.90	1.18	0.69	-61.00	0.00	-10.55	Vehicle	Vehicle	-----	-409.49	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	-----	-----	7.17	7.17
		U$_{10}$ - L$_{10}$	-290.02	-61.07	4.37	-12.18	0.00	0.90	1.18	4.65	-65.02	0.00	-12.18	Vehicle	Vehicle	-----	-461.54	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	-----	-----	7.51	7.51
		U$_{11}$ - L$_{11}$	-312.19	-66.32	10.01	-12.59	0.00	0.90	1.18	10.66	-70.61	0.00	-12.59	Vehicle	Vehicle	-----	-497.64	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	-----	-----	6.41	6.41
		U$_{12}$ - L$_{12}$	-327.27	-61.23	14.86	-13.01	-0.93	0.90	1.18	15.83	-65.19	-0.93	-13.01	Vehicle	Vehicle	-----	-510.19	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	-----	-----	7.28	7.28
		U$_{13}$ - L$_{13}$	-277.23	-51.63	21.20	-11.39	0.00	0.90	1.18	22.57	-54.97	0.00	-11.39	Vehicle	Vehicle	-----	-431.87	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	-----	-----	7.51	7.51
		U$_{14}$ - L$_{14}$	-505.47	-37.44	-54.78	-9.95	-11.35	0.90	1.18	-39.86	-58.33	-9.95	-11.35	Vehicle	Vehicle	-----	-732.93	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	-----	-----	9.37	9.37
		U$_{15}$ - L$_{15}$	-232.92	2.52	-63.42	1.67	-11.17	0.90	1.17	2.65	-66.72	1.67	-11.17	Pedestrian	Vehicle	-----	-389.53	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	-----	-----	6.85	6.85
		U$_{16}$ - L$_{16}$	-260.09	8.24	-68.94	0.83	-12.63	0.90	1.17	8.67	-72.53	0.83	-12.63	Vehicle	Vehicle	-----	-432.40	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	-----	-----	5.60	5.60
		U$_{17}$ - L$_{17}$	-228.20	9.29	-65.84	0.66	-11.76	0.90	1.17	9.78	-69.27	0.66	-11.76	Vehicle	Vehicle	-----	-386.71	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	-----	-----	5.70	5.70
		U$_{18}$ - L$_{18}$	-209.23	11.08	-55.23	-0.02	-11.28	0.90	1.17	11.65	-58.10	-0.02	-11.28	Vehicle	Vehicle	-----	-347.53	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	-----	-----	6.33	6.33
		U$_{19}$ - L$_{19}$	-166.51	11.85	-49.76	-0.07	-9.53	0.90	1.17	12.47	-52.35	-0.07	-9.53	Vehicle	Vehicle	-----	-284.51	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	-----	-----	6.59	6.59
		U$_{20}$ - L$_{20}$	-113.91	11.96	-39.35	-0.43	-7.50	0.90	1.17	12.58	-41.40	-0.43	-7.50	Vehicle	Vehicle	-----	-201.90	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	-----	-----	6.31	6.31
		U$_{21}$ - L$_{21}$	-62.73	13.66	-26.81	0.00	-5.22	0.90	1.17	14.37	-28.21	0.00	-5.22	Vehicle	Vehicle	-----	-118.22	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	-----	-----	9.85	9.85
		U$_{22}$ - L$_{22}$	-38.93	-5.70	-6.99	-2.04	-2.15	0.90	1.17	-5.99	-7.36	-2.04	-2.15	Pedestrian	Vehicle	-----	-60.18	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	45.00	Pass	6.56	12.00	Pass	-----	-----	41.17	41.17
		U$_{23}$ - L$_{23}$	-74.45	-36.84	12.69	-6.10	0.48	0.90	1.17	13.35	-38.76	0.48	-6.10	Vehicle	Vehicle	-----	-147.17	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	-----	-----	6.87	6.87
		U$_{24}$ - L$_{24}$	-121.37	-42.84	12.44	-8.17	0.37	0.90	1.17	13.09	-45.07	0.37	-8.17	Vehicle	Vehicle	-----	-216.37	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	-----	-----	5.63	5.63
		U$_{25}$ - L$_{25}$	-169.10	-52.80	11.96	-9.94	0.43	0.90	1.17	12.58	-55.56	0.43	-9.94	Vehicle	Vehicle	-----	-292.06	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	-----	-----	6.16	6.16
		U$_{26}$ - L$_{26}$	-207.93	-56.35	10.82	-11.42	0.14	0.90	1.17	11.38	-59.29	0.14	-11.42	Vehicle	Vehicle	-----	-347.38	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	-----	-----	6.23	6.23
		U$_{27}$ - L$_{27}$	-219.90	-58.25	8.90	-11.49	0.16	0.90	1.17	9.36	-61.28	0.16	-11.49	Vehicle	Vehicle	-----	-365.53	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	-----	-----	6.58	6.58
		U$_{28}$ - L$_{28}$	-240.66	-55.41	12.86	-12.59	-0.25	0.90	1.17	13.53	-58.29	-0.25	-12.59	Vehicle	Vehicle	-----	-388.63	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	-----	-----	7.30	7.30
		U$_{29}$ - L$_{29}$	-202.76	-47.67	20.41	-10.35	0.00	0.90	1.17	21.47	-50.15	0.00	-10.35	Vehicle	Vehicle	-----	-328.78	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	-----	-----	9.72	9.72
		U$_{30}$ - L$_{30}$	-516.45	-34.99	-61.41	-8.21	-13.75	0.90	1.18	-37.25	-65.38	-8.21	-13.75	Vehicle	Vehicle	-----	-756.38	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	-----	-----	7.59	7.59
		U$_{31}$ - L$_{31}$	-318.62	9.24	-68.30	0.00	-12.96	0.90	1.18	9.84	-72.72	0.00	-12.96	Vehicle	Vehicle	-----	-508.74	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	-----	-----	5.11	5.11
		U$_{32}$ - L$_{32}$	-358.52	2.59	-75.65	-0.25	-14.65	0.90	1.18	2.76	-80.54	-0.25	-14.65	Vehicle	Vehicle	-----	-570.77	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	-----	-----	5.50	5.50
		U$_{33}$ - L$_{33}$	-325.85	4.38	-67.59	0.00	-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
(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: 5C1
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 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	-10.31	48.24	14.00	-4.60	0.90	1.24	53.70	-11.48	14.00	-4.60	Vehicle	Pedestrian	183.70	-----	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	-----	-----	-----	-----	-----	**9.29**	**9.29**	-----	-----
		U_1 - L_2	23.84	-23.05	36.63	-4.72	9.20	0.90	1.24	40.77	-25.66	9.20	-4.72	Vehicle	Vehicle	84.00	-2.36	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	-----	-----	-----	**9.90**	**9.90**	**14.00**	**14.00**
		U_2 - L_3	-49.05	-19.00	14.97	-4.33	3.33	0.90	1.24	16.66	-21.15	3.33	-4.33	Vehicle	Vehicle	-----	-91.26	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	-----	-----	-----	-----	-----	**13.48**	**13.48**
		U_3 - L_4	-108.90	-17.11	-9.45	-4.21	-2.10	0.90	1.24	-10.52	-19.05	-2.10	-4.21	Vehicle	Vehicle	-----	-166.32	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	-----	-----	-----	-----	-----	**11.94**	**11.94**
		U_4 - L_4	153.14	8.31	37.57	3.12	7.00	0.90	1.24	41.83	9.25	7.00	3.12	Vehicle	Pedestrian	253.46	-----	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	186.37	0.84	49.26	2.79	10.66	0.90	1.24	54.84	0.94	10.66	2.79	Vehicle	Pedestrian	313.57	-----	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	-----	-----	-----	-----	-----	**8.47**	**8.47**	-----	-----
		U_6 - L_6	177.53	-15.21	50.30	1.60	12.54	0.90	1.24	55.99	-16.94	12.54	1.60	Vehicle	Vehicle	303.58	-----	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	-----	-----	-----	-----	-----	**8.45**	**8.45**	-----	-----
		U_7 - L_7	173.15	-2.04	46.07	0.41	13.46	0.90	1.24	51.29	-2.27	13.46	0.41	Vehicle	Vehicle	291.77	-----	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	-----	-----	-----	-----	-----	**9.31**	**9.31**	-----	-----
		U_8 - L_8	328.03	-2.92	83.16	-0.14	19.45	0.90	1.20	89.66	-3.15	19.45	-0.14	Vehicle	Vehicle	542.99	-----	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	-----	-----	-----	-----	-----	**7.07**	**7.07**	-----	-----
		U_9 - L_{10}	339.64	-0.80	84.76	0.85	18.90	0.90	1.20	91.39	-0.87	18.90	0.85	Vehicle	Vehicle	560.33	-----	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	-----	-----	-----	-----	-----	**6.81**	**6.81**	-----	-----
		U_{10} - L_{11}	313.15	4.38	72.58	1.69	16.46	0.90	1.20	78.25	4.72	16.46	1.69	Vehicle	Pedestrian	508.83	-----	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	-----	-----	-----	-----	-----	**7.64**	**7.64**	-----	-----
		U_{11} - L_{12}	270.62	5.25	56.11	1.81	13.03	0.90	1.20	60.49	5.66	13.03	1.81	Vehicle	Vehicle	430.44	-----	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	-----	-----	-----	-----	-----	**8.38**	**8.38**	-----	-----
		U_{12} - L_{13}	194.11	-1.14	44.82	0.00	10.79	0.90	1.20	48.32	-1.23	10.79	0.00	Vehicle	Vehicle	315.16	-----	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	-----	-----	-----	-----	-----	**9.04**	**9.04**	-----	-----
		U_{13} - L_{14}	123.52	-9.31	27.28	0.00	5.97	0.90	1.20	29.41	-10.04	5.97	0.00	Vehicle	Vehicle	198.80	-----	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	-----	-----	-----	-----	-----	**10.34**	**10.34**	-----	-----
		U_{15} - L_{14}	-16.31	-14.46	22.32	-2.35	1.47	0.90	1.20	24.07	-15.59	1.47	-2.35	Vehicle	Vehicle	10.08	-41.47	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	-----	-----	-----	**18.45**	**18.45**	**20.02**	**20.02**
		U_{15} - L_{15}	59.11	-9.23	36.95	-2.09	6.08	0.90	1.20	39.84	-9.95	6.08	-2.09	Vehicle	Vehicle	128.63	-----	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	-----	-----	-----	-----	-----	**9.25**	**9.25**	-----	-----
		U_{17} - L_{16}	172.05	-9.83	55.95	-1.86	9.93	0.90	1.20	60.32	-10.60	9.93	-1.86	Vehicle	Vehicle	302.09	-----	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	-----	-----	-----	-----	-----	**5.84**	**5.84**	-----	-----
		U_{18} - L_{17}	210.69	-8.33	54.34	-1.53	12.50	0.90	1.20	58.59	-8.98	12.50	-1.53	Vehicle	Vehicle	350.07	-----	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	-----	-----	-----	-----	-----	**7.51**	**7.51**	-----	-----
		U_{19} - L_{18}	242.30	-6.67	60.14	-1.21	13.72	0.90	1.20	64.84	-7.19	13.72	-1.21	Vehicle	Vehicle	399.29	-----	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	-----	-----	-----	-----	-----	**7.22**	**7.22**	-----	-----
		U_{20} - L_{19}	257.77	-5.48	53.26	-1.03	15.71	0.90	1.20	57.42	-5.91	15.71	-1.03	Vehicle	Vehicle	409.75	-----	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	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
		U_0 - L_1	299.01	-5.84	64.26	-2.21	14.21	0.90	1.18	68.42	-6.22	14.21	-2.21	Vehicle	Pedestrian	477.65	-----	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	-----	-----	-----	-----	-----	**6.99**	**6.99**	-----	-----
		U_1 - L_2	284.23	-17.38	77.55	-2.66	14.05	0.90	1.18	82.57	-18.50	14.05	-2.66	Vehicle	Vehicle	476.83	-----	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	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
		U_2 - L_3	221.45	-18.52	61.77	-2.85	11.83	0.90	1.18	65.76	-19.71	11.83	-2.85	Vehicle	Vehicle	373.37	-----	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	-----	-----	-----	-----	-----	**6.53**	**6.53**	-----	-----
		U_3 - L_4	178.33	-20.89	64.25	-3.23	10.08	0.90	1.18	68.40	-22.24	10.08	-3.23	Vehicle	Vehicle	320.75	-----	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	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_4 - L_5	53.52	-17.86	38.45	-2.87	5.38	0.90	1.18	40.93	-19.02	5.38	-2.87	Vehicle	Vehicle	122.78	-----	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	-----	-----	-----	-----	-----	**9.14**	**9.14**	-----	-----
		U_5 - L_6	-16.50	-17.81	30.80	-2.92	2.23	0.90	1.18	32.79	-18.96	2.23	-2.92	Vehicle	Vehicle	21.18	-46.10	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	-----	-----	-----	**13.55**	**13.55**	**16.31**	**16.31**
		U_6 - L_7	-133.20	-38.84	12.78	-2.50	-2.48	0.90	1.18	13.61	-41.36	-2.48	-2.50	Vehicle	Vehicle	-----	-226.92	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	-----	-----	-----	-----	-----	**5.47**	**5.47**
		U_7 - L_7	208.77	-7.22	45.30	0.00	8.33	0.90	1.18	48.23	-7.69	8.33	0.00	Vehicle	Vehicle	334.09	-----	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	-----	-----	-----	-----	-----	**8.18**	**8.18**	-----	-----
		U_8 - L_8	289.58	0.56	65.75	0.00	8.99	0.90	1.18	70.00	0.60	8.99	0.00	Vehicle	Vehicle	467.45	-----	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	-----	-----	-----	-----	-----	**6.01**	**6.01**	-----	-----
		U_{10} - L_9	327.97	0.68	66.22	1.53	11.09	0.90	1.18	70.50	0.72	11.09	1.53	Vehicle	Pedestrian	518.02	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U_{11} - L_{10}	349.27	-4.40	74.08	0.55	12.45	0.90	1.18	78.87	-4.69	12.45	0.55	Vehicle	Vehicle	556.58	-----	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	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
		U_{12} - L_{11}	358.20	-11.07	69.81	0.48	13.32	0.90	1.18	74.33	-11.79	13.32	0.48	Vehicle	Vehicle	562.29	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
		U_{13} - L_{12}	307.76	-21.52	58.32	-0.24	12.26	0.90	1.18	62.10	-22.91	12.26	-0.24	Vehicle	Vehicle	480.81	-----	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	-----	-----	-----	-----	-----	**7.57**	**7.57**	-----	-----
		U_{14} - L_{13}	260.25	-13.74	49.11	-1.50	11.73	0.90	1.18	52.29	-14.63	11.73	-1.50	Vehicle	Vehicle	406.30	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{14} - L_{15}	208.41	-8.82	63.20	-2.52	11.04	0.90	1.17	66.49	-9.28	11.04	-2.52	Vehicle	Vehicle	357.37	-----	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	-----	-----	-----	-----	-----	**6.65**	**6.65**	-----	-----
		U_{15} - L_{16}	243.53	-6.29	71.87	-1.48	11.54	0.90	1.17	75.61	-6.61	11.54	-1.48	Vehicle	Vehicle	414.89	-----	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	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
		U_{16} - L_{17}	255.83	-9.79	70.83	-0.85	11.67	0.90	1.17	74.52	-10.30	11.67	-0.85	Vehicle	Vehicle	429.44	-----	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	-----	-----	-----	-----	-----	**6.10**	**6.10**	-----	-----
		U_{17} - L_{18}	235.25	-11.47	64.86	-0.75	10.45	0.90	1.17	68.24	-12.07	10.45	-0.75	Vehicle	Vehicle	394.54	-----	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	-----	-----	-----	-----	-----	**6.09**	**6.09**	-----	-----
		U_{18} - L_{19}	212.06	-13.98	64.25	0.01	8.95	0.90	1.17	67.60	-14.71	8.95	0.01	Vehicle	Vehicle	363.56	-----	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	-----	-----	-----	-----	-----	**6.49**	**6.49**	-----	-----
	Structure 2	U_{19} - L_{20}	168.18	-15.48	55.23	0.06	9.14	0.90	1.17	58.10	-16.29	9.14	0.06	Vehicle	Vehicle	294.17	-----	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	-----	-----	-----	-----	-----	**7.49**	**7.49**	-----	-----
		U_{20} - L_{21}	97.21	-15.06	32.37	0.45	6.66	0.90	1.17	34.06	-15.85	6.66	0.45	Vehicle	Vehicle	170.65	-----	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	-----	-----	-----	-----	-----	**9.70**	**9.70**	-----	-----
		U_{21} - L_{22}	30.55	-15.72	31.36	0.58	3.66	0.90	1.17	32.99	-16.54	3.66	0.58	Vehicle	Vehicle	82.61	-----	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	-----	-----	-----	-----	-----	**12.04**	**12.04**	-----	-----
		U_{23} - L_{22}	49.81	-18.03	33.48	-0.72	5.11	0.90	1.17	35.22	-18.97	5.11	-0.72	Vehicle	Vehicle	110.54	-----	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	-----	-----	-----	-----	-----	**10.73**	**10.73**	-----	-----
		U_{24} - L_{23}	115.09	-16.87	46.21	-0.72	8.00	0.90	1.17	48.62	-17.74	8.00	-0.72	Vehicle	Vehicle	212.82	-----	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	-----	-----	-----	-----	-----	**6.43**	**6.43**	-----	-----
		U_{25} - L_{24}	179.20	-16.40	60.52	-0.73	10.10	0.90	1.17	63.67	-17.26	10.10	-0.73	Vehicle	Vehicle	315.73	-----	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	-----	-----	-----	-----	-----	**6.66**	**6.66**	-----	-----
		U_{26} - L_{25}	220.95	-14.39	62.25	-0.57	11.89	0.90	1.17	65.49	-15.14	11.89	-0.57	Vehicle	Vehicle	372.37	-----	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	-----	-----	-----	-----	-----	**6.56**	**6.56**	-----	-----
		U_{27} - L_{26}	234.79	-9.21	65.32	-0.35	11.44	0.90	1.17	68.72	-9.69	11.44	-0.35	Vehicle	Vehicle	394.56	-----	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	-----	-----	-----	-----	-----	**6.05**	**6.05**	-----	-----
		U_{28} - L_{27}	253.01	-10.04	63.69	-0.28	12.25	0.90	1.17	67.01	-10.56	12.25	-0.28	Vehicle	Vehicle	416.03	-----	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	-----	-----	-----	-----	-----	**6.82**	**6.82**	-----	-----
		U_{29} - L_{28}	215.83	-21.39	49.71	0.00	10.20	0.90	1.17	52.30	-22.50	10.20	0.00	Vehicle	Vehicle	348.57	-----	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	-----	-----	-----	-----	-----	**8.31**	**8.31**	-----	-----
		U_{30} - L_{29}	179.92	-10.46	45.13	-0.93	8.89	0.90	1.17	47.48	-11.00	8.89	-0.93	Vehicle	Vehicle	295.62	-----	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	-----	-----	-----	-----	-----	**9.91**	**9.91**	-----	-----
		U_{30} - L_{31}	294.37	-10.40	66.70	-1.65	12.88	0.90	1.18	71.02	-11.08	12.88	-1.65	Vehicle	Vehicle	475.00	-----	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	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U_{31} - L_{32}	342.78	-9.50	73.77	-0.55	13.71	0.90	1.18	78.54	-10.11	13.71	-0.55	Vehicle	Vehicle	547.72	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
		U_{32} - L_{33}	363.31	-3.48	71.35	0.37	13.77	0.90	1.18	75.97	-3.71	13.77	0.37	Vehicle	Vehicle	571.05	-----	0.00	33.27	33.2657	1097.77	131.71	16.2500	2.8573	51.18	30.51	-862.

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: SC1
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)
Structure 1	U_0-L_1	-131.25	-22.60	3.09	-9.72	-11.38	-2.18	40.05	-129.90	-152.02	-29.14
	U_0-L_1	-54.49	-51.15	0.89	-5.35	-6.66	-6.02	11.94	-4.62	-89.00	-80.42
	U_1-L_1	-139.47	-54.72	4.63	-11.77	-6.54	-15.21	17.68	-59.10	-157.22	-82.30
	U_1-U_2	-52.26	-61.06	2.78	-6.42	-12.39	-2.47	37.17	-59.08	-165.49	-33.00
	L_1-U_2	-24.29	-50.99	1.83	-3.91	-4.17	-17.57	41.17	-57.37	-217.79	-57.15
	L_1-L_2	48.74	54.17	0.00	-4.06	-12.32	0.00	66.12	-29.09	-211.22	-183.89
	L_2-U_2	84.63	49.27	3.87	-2.35	-2.78	-1.40	51.74	32.74	-151.97	30.21
	L_2-L_3	-69.92	603.38	2.34	4.93	-17.39	19.56	31.23	65.81	-232.36	261.37
	U_2-L_3	531.73	-129.19	14.30	-6.31	-5.04	1.03	185.02	-81.64	-10.45	0.00
	U_2-U_3	68.54	43.95	3.09	-2.92	-2.78	-1.40	40.01	-32.57	-37.95	-19.29
	L_3-U_3	100.48	-176.70	3.48	-8.56	-2.10	-3.99	45.05	-110.73	-27.17	-51.65
	L_3-L_4	-66.96	160.14	3.80	-2.83	-5.10	-5.40	50.20	-53.58	-65.64	-77.31
	U_3-L_4	-56.66	-218.08	3.04	-1.01	-8.95	-6.70	39.35	-14.30	-115.95	-86.64
	U_3-U_4	-173.90	-44.02	4.63	-11.67	-13.38	-11.62	17.68	-59.10	-172.17	-152.88
	L_4-U_4	-287.80	-237.44	2.64	-1.54	-26.35	-7.08	34.18	-19.87	-340.98	-91.98
	U_4-L_5	-196.20	-337.71	2.59	0.19	-22.18	-9.39	33.48	2.46	-286.92	-121.44
	L_5-U_5	-299.83	-154.75	1.10	0.20	-23.95	-6.38	33.48	-19.87	-286.92	-121.44
	U_5-L_6	-189.93	-29.96	0.86	-0.79	-15.31	0.28	11.14	-10.16	-198.02	3.57
	L_6-U_6	-179.63	-39.55	0.27	-3.28	-14.89	-0.86	11.14	-10.16	-198.02	3.57
	U_6-L_7	-249.78	258.69	0.76	-1.93	-15.67	10.34	9.86	-24.92	-202.68	133.72
	L_7-U_7	-28.62	-172.11	6.51	-11.20	-6.03	-7.82	83.11	-143.08	-77.08	-99.91
	U_7-L_8	-24.91	-195.34	1.94	-6.40	-5.84	-5.67	83.11	-143.08	-77.08	-99.91
	L_8-U_8	-53.03	-283.30	3.72	-8.93	-9.81	-10.21	47.55	-114.08	-125.27	-130.49
	U_8-L_9	-339.60	-387.84	3.72	-8.93	-9.81	-10.21	47.55	-114.08	-125.27	-130.49
	L_9-U_9	-360.49	-389.97	3.98	-2.01	-22.26	-15.39	12.50	-25.62	-285.68	-196.60
	U_9-L_{10}	-403.42	-377.72	3.98	-2.01	-22.26	-15.39	12.50	-25.62	-285.68	-196.60
	L_{10}-U_{10}	-349.63	-208.07	4.69	4.69	-25.58	-12.09	59.96	58.67	-326.85	-104.44
	U_{10}-L_{11}	-253.78	-280.71	3.62	5.04	-35.46	-12.02	46.21	64.33	-453.10	-153.02
	L_{11}-U_{11}	-330.32	-33.64	3.62	5.04	-35.46	-12.02	46.21	64.33	-453.10	-153.02
	U_{11}-L_{12}	-237.02	39.91	5.23	6.60	-21.67	-3.86	66.87	84.27	-276.90	-49.28
	L_{12}-U_{12}	-116.69	170.75	5.59	4.48	-19.28	0.48	71.45	57.17	-246.28	6.11
	U_{12}-L_{13}	-116.69	170.75	5.59	4.48	-19.28	0.48	71.45	57.17	-246.28	6.11
	L_{13}-U_{13}	-211.04	121.68	4.12	4.12	-24.12	-28.63	52.98	52.63	-308.19	360.84
	U_{13}-L_{14}	1028.71	-26.69	29.58	-16.45	-1.25	0.08	373.43	-207.71	-15.73	1.06
	L_{14}-U_{14}	9.87	348.41	1.99	1.99	-0.07	-0.07	47.52	47.52	-142.59	-25.06
	U_{14}-L_{15}	271.38	25.19	7.81	0.00	-5.27	-5.41	98.63	-63.13	-79.19	-88.35
	L_{15}-U_{15}	271.38	25.19	7.81	0.00	-5.27	-5.41	98.63	-63.13	-79.19	-88.35
	U_{15}-L_{16}	156.55	-8.67	5.30	4.06	-6.65	-7.56	66.95	51.28	-83.92	-95.40
	L_{16}-U_{16}	48.55	11.41	5.28	4.26	-12.89	-10.00	66.66	53.77	-162.27	-126.26
	U_{16}-L_{17}	-92.57	-65.85	2.14	2.32	-18.13	-10.77	26.95	29.27	-228.93	-135.91
	L_{17}-U_{17}	-92.57	-65.85	2.14	2.32	-18.13	-10.77	26.95	29.27	-228.93	-135.91
	U_{17}-L_{18}	-48.31	-31.52	3.89	-0.48	-23.03	-6.05	49.05	-6.11	-290.77	-76.34
	L_{18}-U_{18}	10.77	137.63	3.90	4.90	-19.39	-0.53	41.60	61.88	-244.79	-6.65
	U_{18}-L_{19}	57.22	-122.85	4.19	3.68	-18.83	1.19	52.87	46.51	-237.76	14.99
	L_{19}-U_{19}	85.41	4.86	3.99	1.71	-18.10	-4.84	50.34	21.58	-228.52	-61.04
	U_{19}-L_{20}	-13.52	808.57	3.99	3.99	-0.07	-0.07	47.52	47.52	-142.59	-25.06
	L_{20}-U_{20}	821.42	-89.58	29.69	-16.45	-1.65	-0.71	373.29	-102.99	-21.12	-9.07
	U_{20}-L_{21}	-25.92	37.60	2.81	3.00	-18.09	-2.61	36.48	72.42	-169.39	-20.61
	L_{21}-U_{21}	145.61	-52.49	5.72	-8.36	-4.54	-3.99	73.04	-106.80	-102.01	-51.02
	U_{21}-L_{22}	17.52	-88.46	5.05	5.31	-5.64	-8.90	64.48	67.80	-72.11	-113.70
	L_{22}-U_{22}	-25.92	37.60	2.81	3.00	-18.09	-2.61	36.48	72.42	-169.39	-20.61
	U_{22}-L_{23}	-75.13	-230.47	5.31	3.27	-12.27	-8.72	67.88	41.79	-156.79	-111.37
	L_{23}-U_{23}	-208.03	-129.29	5.31	3.27	-12.27	-8.72	57.36	34.53	-156.79	-111.37
	U_{23}-L_{24}	-64.17	-278.54	5.24	4.55	-32.33	-14.35	66.94	58.08	-413.00	-183.33
	L_{24}-U_{24}	-274.89	-274.53	3.46	3.46	-33.31	-12.66	42.53	42.53	-425.58	-167.77
	U_{24}-L_{25}	-296.96	-269.01	2.00	0.31	-33.70	-13.40	25.53	3.97	-430.56	-171.22
	L_{25}-U_{25}	-154.35	-61.84	1.34	-0.32	-17.07	-3.60	17.13	-4.13	-218.04	-45.93
	U_{25}-L_{26}	-154.35	-34.80	1.34	-0.32	-17.07	-3.60	17.13	-4.13	-218.04	-45.93
	L_{26}-U_{26}	40.05	-167.81	5.07	-7.15	-6.96	-6.89	65.96	-92.56	-90.10	-87.98
	U_{26}-L_{27}	-10.43	-132.23	2.83	-9.92	-2.72	-5.78	36.62	-128.32	-35.18	-74.76
	L_{27}-U_{27}	-16.09	-153.76	2.83	-9.92	-2.72	-5.78	36.62	-128.32	-35.18	-74.76
	L_{28}-U_{28}	-140.08	-260.72	0.35	-3.14	-11.39	-8.80	4.52	-40.64	-147.37	-113.87
	U_{28}-L_{29}	-187.01	-275.87	1.42	-1.98	-17.15	-6.93	18.42	25.57	-221.83	-89.62
	L_{29}-U_{29}	-187.01	-275.87	1.42	-1.98	-17.15	-6.93	18.42	25.57	-221.83	-89.62
	U_{29}-L_{30}	-322.39	-140.31	1.00	0.11	-17.41	-6.57	14.00	40.25	-225.30	-78.61
	L_{30}-U_{30}	-147.74	26.71	2.36	3.70	-18.26	2.15	30.51	47.92	-236.26	-27.77
	U_{30}-L_{31}	-153.72	61.91	2.36	3.70	-18.26	2.15	30.51	47.92	-236.26	-27.77
	L_{31}-U_{31}	10.81	46.01	3.42	1.72	-9.65	0.72	44.20	22.31	-124.80	9.33
	U_{31}-L_{32}	10.81	46.01	3.42	1.72	-9.65	0.72	44.20	22.31	-124.80	9.33
	L_{32}-U_{32}	-426.14	9.98	17.62	-12.38	-0.25	1.18	235.42	-160.39	-3.34	15.71
	U_{32}-L_{33}	-426.14	9.98	17.62	-12.38	-0.25	1.18	235.42	-160.39	-3.34	15.71
	L_{33}-U_{33}	128.06	54.05	4.29	3.76	-2.54	-4.26	57.30	50.23	-33.97	-56.87
	U_{33}-L_{34}	70.11	43.65	4.62	3.32	-6.90	-6.12	61.65	44.31	-92.17	-81.72
	L_{34}-U_{34}	51.64	48.08	4.62	3.32	-6.90	-6.12	61.65	44.31	-92.17	-81.72
	U_{34}-L_{35}	-8.37	-30.47	2.43	-0.17	-8.89	1.48	37.94	-53.84	-238.94	153.38

ZZ Axis Moment Properties

Location	Member	Max. Neg. Mom. Start (k-in)	Max. Neg. Mom. End (k-in)	S_{xx} (in^3)	S_{nc} (in^3)	Z_x (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula (LB Term / F_y/S_{xx})	M_u (k-in)	Equivalent Mom. Factor a	C_m	$C_m/(1-a)$
Structure 1	U_0-L_1	-118.95	-188.25	368.24	67.26	90.2	90.24	72.24	1.247	4206	0.99880041	2974.3	0.183	0.67	0.67
	U_0-L_1	-58.31	-72.50	-186.54	-171.70	90.2	90.24	72.24	1.247	4206	0.99880041	2974.3	0.917	0.97	0.97
	U_1-L_1	-188.41	-180.91	-355.69	-48.61	90.2	90.24	72.24	1.247	4206	0.99880041	2974.3	0.121	0.61	0.61
	U_1-U_2	-19.62	156.17	-283.07	36.47	90.2	90.24	72.24	1.247	4206	0.99880041	2974.3	-0.129	0.55	0.55
	L_1-U_2	16.76	16.76	-283.07	36.47	90.2	90.24	72.24	1.247	4206	0.99880041	2974.3	-0.129	0.55	0.55
	L_1-L_2	66.12	298.09	211.22	183.89	90.2	90.24	76.71	1.247	4206	0.99880041	2974.3	0.255	0.70	0.70
	L_2-U_2	190.54	106.51	74.28	24.79	71.1	97.1	78.18	1.342	4704	0.99881041	3201.5	0.560	0.82	0.82
	L_2-L_3	-60.29	869.95	-392.97	1124.18	138.2	138.17	111.77	1.197	6699	0.99894541	4564.8	-0.350	0.46	0.46
	U_2-L_3	631.78	-274.08	690.66	-150.58	130.3	130.26	105.11	1.180	7277	0.99894541	4954.8	-0.350	0.46	0.46
	U_2-U_3	141.11	94.80	39.77	32.05	95.6	96.61	79.12	1.239	2172	1.0871E-10	1440	0.105	0.64	0.64
	L_3-U_3	189.19	-373.65	95.30	-266.85	96.6	96.61	83.55	1.230	2174	1.0871E-10	1440	-0.506	0.40	0.40
	L_3-L_4	124.09	-188.11	-32.24	-308.98	96.6	96.61	83.55	1.230	2174	1.0871E-10	1440	-0.506	0.40	0.40
	U_3-L_4	-74.51	-264.91	-276.27	-396.12	151.6	151.78	130.94	1.219	7777	0.99895052	5003.4	0.697	0.88	0.88
	L_4-U_4	-192.13	-420.42	-351.39	-547.61	151.6	151.78	130.94	1.219	7777	0.99895052	5003.4	0.697	0.88	0.88
	U_4-L_5	-329.79	-282.83	-617.41	-427.72	188.5	188.51	157.55	1.214	9648	0.99895052	6214.6	0.523	0.81	0.81
	L_5-U_5	-211.53	-435.83	-528.06	-596.90	188.5	188.51	164.41	1.214	9648	0.99895052	6214.6	0.950	0.98	0.98
	U_5-L_6	-192.13	-420.42	-351.39	-547.61	188.5	188.51	157.55	1.214	9648	0.99895052	6214.6	0.523	0.81	0.81
	L_6-U_6	-232.43	-52.16	-504.34	-34.31	127.3	127.32	110.40	1.186	6146	0.99901716	4197.7	0.068	0.63	0.63
	U_6-L_7	-225.62	-57.84	-483.95	-56.28	104.5	104.75	86.43	1.190	5023	0.99880042	3452.8	0.137	0.65	0.65
	L_7-U_7	-311.89	303.90	-568.19	510.13	104.8	104.75	86.43	1.192	5023	0.99880042	3452.8	0.867	0.25	0.25
	U_7-L_8	70.84	-409.72	-137.40	-353.63	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	L_8-U_8	-1.87	-544.33	-120.30	-469.81	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	U_8-L_9	-1.12	-516.99	-231.79	-537.92	212.0	212.59	170.43	1.247	10199	0.99895052	7005.5	0.431	0.77	0.77
	L_9-U_9	-429.33	-447.30	-522.52	-552.77	188.6	188.65	157.55	1.197	9058	0.99895052	6216.6	0.601	0.85	0.85
	U_9-L_{10}	-452.35	-473.65	-539.98	-762.54	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	L_{10}-U_{10}	-482.36	-443.88	-574.52	-615.73	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	U_{10}-L_{11}	-376.57	-195.01	-879.42	-472.05	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{11}-U_{11}	-269.84	-221.82	-787.87	-335.44	188.5	188.51	157.55	1.197	9058	0.99880042	6216.6	0.601	0.85	0.85
	U_{11}-L_{12}	-365.14	-197.84	-753.32	-504.34	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{12}-U_{12}	-232.43	-52.16	-504.34	-34.31	127.3	127.32	110.40	1.186	6146	0.99901716	4197.7	0.068	0.63	0.63
	U_{12}-L_{13}	-225.62	-57.84	-483.95	-56.28	104.5	104.75	86.43	1.190	5023	0.99880042	3452.8	0.137	0.65	0.65
	L_{13}-U_{13}	-311.89	303.90	-568.19	510.13	104.8	104.75	86.43	1.192	5023	0.99880042	3452.8	0.867	0.25	0.25
	U_{13}-L_{14}	70.84	-409.72	-137.40	-353.63	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	L_{14}-U_{14}	-1.87	-544.33	-120.30	-469.81	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	U_{14}-L_{15}	-1.12	-516.99	-231.79	-537.92	212.0	212.59	170.43	1.247	10199	0.99895052	7005.5	0.431	0.77	0.77
	L_{15}-U_{15}	-429.33	-447.30	-522.52	-552.77	188.6	188.65	157.55	1.197	9058	0.99895052	6216.6	0.601	0.85	0.85
	U_{15}-L_{16}	-452.35	-473.65	-539.98	-762.54	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	L_{16}-U_{16}	-482.36	-443.88	-574.52	-615.73	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	U_{16}-L_{17}	-376.57	-195.01	-879.42	-472.05	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{17}-U_{17}	-269.84	-221.82	-787.87	-335.44	188.5	188.51	157.55	1.197	9058	0.99880042	6216.6	0.601	0.85	0.85
	U_{17}-L_{18}	-365.14	-197.84	-753.32	-504.34	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{18}-U_{18}	-269.84	-274.53	-787.87	-335.44	188.5	188.51	164.41	1.214	9648	0.99895052	6214.6	0.950	0.98	0.98
	U_{18}-L_{19}	-376.57	-195.01	-879.42	-472.05	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{19}-U_{19}	-482.36	-443.88	-574.52	-615.73	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	U_{19}-L_{20}	-452.35	-473.65	-539.98	-762.54	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	L_{20}-U_{20}	-429.33	-447.30	-522.52	-552.77	188.6	188.65	157.55	1.197	9058	0.99895052	6216.6	0.601	0.85	0.85
	U_{20}-L_{21}	-376.57	-195.01	-879.42	-472.05	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{21}-U_{21}	-269.84	-221.82	-787.87	-335.44	188.5	188.51	157.55	1.197	9058	0.99880042	6216.6	0.601	0.85	0.85
	U_{21}-L_{22}	-365.14	-197.84	-753.32	-504.34	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{22}-U_{22}	-232.43	-52.16	-504.34	-34.31	127.3	127.32	110.40	1.186	6146	0.99901716	4197.7	0.068	0.63	0.63
	U_{22}-L_{23}	-225.62	-57.84	-483.95	-56.28	104.5	104.75	86.43	1.190	5023	0.99880042	3452.8	0.137	0.65	0.65
	L_{23}-U_{23}	-311.89	303.90	-568.19	510.13	104.8	104.75	86.43	1.192	5023	0.99880042	3452.8	0.867	0.25	0.25
	U_{23}-L_{24}	70.84	-409.72	-137.40	-353.63	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	L_{24}-U_{24}	-1.87	-544.33	-120.30	-469.81	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	U_{24}-L_{25}	-1.12	-516.99	-231.79	-537.92	212.0	212.59	170.43	1.247	10199	0.99895052	7005.5	0.431	0.77	0.77
	L_{25}-U_{25}	-429.33	-447.30	-522.52	-552.77	188.6	188.65	157.55	1.197	9058	0.99895052	6216.6	0.601	0.85	0.85
	U_{25}-L_{26}	-452.35	-473.65	-539.98	-762.54	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	L_{26}-U_{26}	-482.36	-443.88	-574.52	-615.73	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	U_{26}-L_{27}	-376.57	-195.01	-879.42	-472.05	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{27}-U_{27}	-269.84	-221.82	-787.87	-335.44	188.5	188.51	157.55	1.197	9058	0.99880042	6216.6	0.601	0.85	0.85
	U_{27}-L_{28}	-365.14	-197.84	-753.32	-504.34	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{28}-U_{28}	-232.43	-52.16	-504.34	-34.31	127.3	127.32	110.40	1.186	6146	0.99901716	4197.7	0.068	0.63	0.63
	U_{28}-L_{29}	-225.62	-57.84	-483.95	-56.28	104.5	104.75	86.43	1.190	5023	0.99880042	3452.8	0.137	0.65	0.65
	L_{29}-U_{29}	-311.89	303.90	-568.19	510.13	104.8	104.75	86.43	1.192	5023	0.99880042	3452.8	0.867	0.25	0.25
	U_{29}-L_{30}	70.84	-409.72	-137.40	-353.63	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	L_{30}-U_{30}	-1.87	-544.33	-120.30	-469.81	127.8	127.83	111.16	1.178	6151	0.99881042	4212.5	-0.173	0.53	0.53
	U_{30}-L_{31}	-1.12	-516.99	-231.79	-537.92	212.0	212.59	170.43	1.247	10199	0.99895052	7005.5	0.431	0.77	0.77
	L_{31}-U_{31}	-429.33	-447.30	-522.52	-552.77	188.6	188.65	157.55	1.197	9058	0.99895052	6216.6	0.601	0.85	0.85
	U_{31}-L_{32}	-452.35	-473.65	-539.98	-762.54	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	L_{32}-U_{32}	-482.36	-443.88	-574.52	-615.73	251.7	251.73	219.41	1.147	12066	0.99895181	8298.1	0.908	0.96	0.96
	U_{32}-L_{33}	-376.57	-195.01	-879.42	-472.05	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{33}-U_{33}	-269.84	-221.82	-787.87	-335.44	188.5	188.51	157.55	1.197	9058	0.99880042	6216.6	0.601	0.85	0.85
	U_{33}-L_{34}	-365.14	-197.84	-753.32	-504.34	232.2	232.70	189.45	1.228	9955	0.99880042	6843.2	0.537	0.81	0.81
	L_{34}-U_{34}	-232.43	-52.16	-504.34	-34.31	127.3	127.32	110.40	1.186	6146	0.99901716	4197.7	0.068	0.63	0.63
	U_{34}-L_{35}	-225.62	-57.84	-483.95	-56.28	104.5	104.75	86.43	1.190	5023	0.99880042	3452.8	0.137	0.65	0.65

M_3 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)
Structure 1	U_0-L_1	4.32	-17.87	-6.79	1.55	7.88	-6.95	-10.99	20.68	105.30	-92.90
	U_0-L_1	-0.47	-58.42	-4.29	1.61	-6.35	1.27	-57.34	21.56	-64.89	16.99
	U_1-L_1	-2.22	-27.84	-2.26	-0.10	2.27	-3.73	3.71	-3.46	-33.55	33.01
	U_1-U_2	51.88	38.10	-1.27	-0.33	-0.45	-0.31	-17.02	-4.34	-5.95	-4.14
	L_1-U_2	38.35	-3.80	-0.63	-0.20	0.00	0.00	-6.36	-4.99	-11.35	4.20
	U_2-L_3	19.66	-22.91	-12.72	-2.52	4.25	0.44	-23.02	-6.64	56.82	5.86
	L_2-L_3	-42.44	-73.72	-3.27	-0.29	1.73	-0.67	-43.70	-1.34	103.31	-8.40
	U_2-U_3	-185.44	-89.56	-3.19	2.15	6.64	-2.92	-42.56	28.75	88.72	-39.00
	L_3-U_3	-182.47	-92.09	-3.98	-0.40	-12.46	0.00	-51.46	4.15	-45.20	0.00
	U_3-L_4	-33.57	-114.59	-0.22	2.21	-3.73	3.07	-1.59	20.56	-49.31	39.66
	L_3-L_4	92.30	64.86	1.56	-0.52	-0.59	1.41	20.16	-6.75	-7.61	18.19
	U_3-L_4	-18.94	-4.46	-0.18	0.18	0.00	0.00	-51.46	4.15	-45.20	0.00
	L_4-U_4	-314.63	-172.08	-1.46	-0.35	1.41	2.31	-184.94	-4.46	-18.14	37.68
	U_4-L_5	-252.68	-153.66	-1.

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: 5C1
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) 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
(Does Lumpsteel vs Max. Tension/Compression Load)

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

M_x Information

Location	Member	ZZ Axis Moments from STAAD: Dead Load	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. Pos. Mom. Start	Max. Pos. Mom. End	Max. Neg. Mom. Start	Max. Neg. Mom. End	S_{top}	S_b	Z_x	I	I_{DL}	Shape Factor	M_p (k-in)	Formula 1.8 Term * F'$_y$/S_{top}	M_r	Equivalent Mom. Factor: a	C_{mDL}	C_{mDL}	Pass
		Start-(k-in)	Start-(k-in)	Start-(k-in)	Start-(k-in)	Start-(k-in)	Start-(k-in)	Start-(k-in)	Start-(k-in)	Start-(k-in)	k-in	k-in	k-in	k-in	(in^3)	(in^3)	(in^3)	(in^4)	(in^4)				k-in				
Structure 1	L_0-L_1	-49.04	-101.19	4.08	-8.24	-0.92	1.04				54.47	-83.40	-12.25	13.95	0.00	0.00	0.00	7.06	-239.97	79.67	-113.41	83.6	83.58	74.65	100.97	2577	1626.3	1.21	3332	0.99600094	2755.4	-0.029	0.59	0.59	—	—	—	—
	L_1-L_2	-131.93	-112.57	2.81	-11.93	-5.31	-6.56				37.51	-159.31	-70.99	-87.57	0.00	0.00	0.00	218.97	-353.45	77.92	-260.18	83.6	83.58	67.49	100.97	2577	1626.3	1.21	3332	0.99600094	2755.4	-0.020	0.35	0.35	—	—	—	—
	L_2-L_3	-67.34	-79.42	1.24	-7.83	-11.92	-8.62				16.97	-37.80	-159.22	-119.12	0.00	0.00	0.00	-53.04	-64.37	-202.08	-252.08	99.5	99.53	91.00	120.40	3409	1372.0	1.26	4141	0.99991186	3294.8	0.481	0.75	0.79	—	—	—	—
	L_3-L_4	18.53	15.80	1.39	5.07	-13.53	-7.03				18.58	67.75	-180.76	-93.86	0.00	0.00	0.00	49.24	108.61	-210.90	-101.48	99.9	99.93	84.14	120.49	3409	1372.0	1.26	4141	0.99991186	3294.8	0.481	0.75	0.79	—	—	—	—
	L_4-L_5	68.87	310.29	4.04	33.01	-14.65	1.98				35.53	310.29	-53.84	-150.80	0.00	0.00	0.00	-19.94	413.37	-27.38	427.17	52.6	52.59	76.68	114.47	3186	1283.2	1.21	3332	0.99600094	3052.4	-0.042	0.58	0.58	—	—	—	—
	L_5-L_6	7.25	228.45	3.11	6.09	-8.16	0.39				41.48	81.35	-109.01	5.14	0.00	0.00	0.00	63.35	402.74	-132.30	303.67	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99524645	3448.5	0.157	0.66	0.66	—	—	—	—
	L_6-L_7	-62.67	-77.31	2.17	-6.14	-0.07	-10.08				21.16	-62.67	-13.57	-132.45	0.00	0.00	0.00	-21.66	-259.58	129.12	-144.93	104.6	104.58	91.62	129.09	4040	1678.1	1.31	4520	0.99524645	4776.0	-0.033	0.23	0.23	—	—	—	—
	L_7-L_8	7.98	461.19	1.06	5.16	-5.18	-14.08				14.16	68.94	-69.23	-188.09	0.00	0.00	0.00	28.79	689.17	-79.62	844.07	140.8	140.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952916	4806.3	-0.094	0.56	0.56	—	—	—	—
	L_8-L_9	439.37	-23.36	12.91	-1.60	-0.01	0.01				167.07	-22.69	-0.06	0.09	0.00	0.00	0.00	788.37	-37.26	371.05	-32.05	140.8	140.75	130.74	228.84	6500	2932.4	1.57	7552	0.99952916	4806.4	-0.073	0.57	0.57	—	—	—	—
	L_9-L_{10}	204.91	-116.77	3.97	-10.13	-5.11	0.01				77.18	-45.39	-38.39	-66.14	0.00	0.00	0.00	365.72	-238.10	180.40	-142.19	144.9	144.85	129.09	192.84	5010	2379.6	1.33	6364	0.99991186	4776.1	-0.649	0.34	0.34	—	—	—	—
	L_{10}-L_{11}	168.38	-118.38	4.81	2.22	-3.05	-3.80				62.25	28.75	-13.69	-49.15	0.00	0.00	0.00	299.81	-116.49	291.07	-217.76	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.389	0.44	0.44	—	—	—	—
	L_{11}-L_{12}	234.53	-217.11	5.80	-4.42	-2.81	-4.54				50.45	-83.03	34.13	-42.93	0.00	0.00	0.00	370.95	-395.18	194.26	-365.30	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.203	0.42	0.42	—	—	—	—
	L_{12}-L_{13}	-19.53	-128.46	2.94	-6.44	-6.29	-7.21				38.64	-18.68	-41.40	-83.27	0.00	0.00	0.00	24.06	-142.71	-131.21	-288.25	130.1	130.08	121.10	170.72	3885	1793.2	1.31	5634	0.99952922	4288.6	0.455	0.79	0.78	—	—	—	—
	L_{13}-L_{14}	175.73	-425.17	5.99	-18.21	-7.67	-14.09				77.48	-225.66	-99.24	-162.25	0.00	0.00	0.00	329.20	-819.00	99.47	-789.57	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99991006	5370.6	-0.383	0.40	0.45	—	—	—	—
	L_{14}-L_{15}	408.18	-20.67	2.01	-2.61	-1.21	-3.74				164.35	-20.67	-4.84	-21.01	0.00	0.00	0.00	684.35	-37.73	-68.76	-69.06	140.8	140.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952916	4806.3	-0.094	0.56	0.56	—	—	—	—
	L_{15}-L_{16}	-209.34	-318.54	1.11	0.18	-15.62	-8.51				14.41	2.29	-202.03	-110.07	0.00	0.00	0.00	-253.40	-411.13	-534.78	-557.19	179.7	179.69	170.68	251.43	8743	3050.7	1.40	8297	0.99913202	5524.6	0.960	0.98	0.98	—	—	—	—
	L_{16}-L_{17}	-374.78	-83.83	2.90	-5.30	-14.27	-1.70				11.17	-1.91	-184.68	-21.18	0.00	0.00	0.00	-472.69	-133.99	157.55	103.9	153.89	138.16	206.43	7857	2460.7	1.34	8297	0.99913202	5373.9	-0.180	0.52	0.52	—	—	—	—
	L_{17}-L_{18}	-170.99	-20.48	0.44	-0.71	-8.29	0.58				5.67	-9.20	-108.50	7.52	0.00	0.00	0.00	-214.52	14.66	-363.34	36.39	121.1	121.08	112.11	157.22	3591	1640.0	1.30	5188	0.99904448	3891.8	-0.100	0.56	0.56	—	—	—	—
	L_{18}-L_{19}	-207.50	250.73	0.56	-2.34	-13.22	4.21				7.10	-4.36	137.30	-37.35	0.00	0.00	0.00	-260.96	320.24	-442.25	396.70	83.6	83.58	74.62	100.97	2740	1096.2	1.21	3332	0.99600094	2755.5	-0.897	0.24	0.48	—	—	—	—
	L_{19}-L_{20}	-99.23	0.16	0.44	-0.43	0.97	4.90				5.67	-5.55	-121.18	63.39	0.00	0.00	0.00	-121.63	-7.00	-286.53	82.61	83.6	83.58	67.49	100.97	2740	1096.2	1.21	3332	0.99600094	2755.5	-0.288	0.48	0.48	—	—	—	—
	L_{20}-L_{21}	5.36	-218.26	3.49	-10.14	-0.92	1.18				44.62	-129.58	-6.36	15.10	0.00	0.00	0.00	64.97	-452.18	-1.31	-264.10	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.144	0.54	0.54	—	—	—	—
	L_{21}-L_{22}	36.18	-247.31	3.90	-11.48	-4.02	-0.17				57.23	-130.04	-21.57	-61.37	0.00	0.00	0.00	-284.78	-490.64	-35.35	-306.04	122.0	122.01	103.28	148.92	3592	1395.7	1.22	4914	0.99853332	4022.0	-0.556	0.54	0.54	—	—	—	—
	L_{22}-L_{23}	1.07	-191.80	3.60	-10.56	-4.34	-8.12				95.46	-70.99	-55.41	-103.72	0.00	0.00	0.00	61.13	-341.62	-70.65	-384.18	157.0	157.00	151.98	250.63	8496	2118.1	1.31	8796	0.99960698	5176.2	0.184	0.67	0.67	—	—	—	—
	L_{23}-L_{24}	47.37	-287.31	3.80	-12.53	-5.32	-7.38				35.34	-130.62	-27.82	-87.38	0.00	0.00	0.00	82.08	-437.30	-63.70	-485.04	157.0	157.00	151.98	250.63	8496	2118.1	1.31	8796	0.99960698	5176.2	-0.001	0.61	0.61	—	—	—	—
	L_{24}-L_{25}	-286.08	-268.86	1.59	-9.64	-14.24	-10.06				20.33	-123.18	-181.90	-128.49	0.00	0.00	0.00	-345.48	-548.65	-68.38	-555.55	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.913	0.97	0.97	—	—	—	—
	L_{25}-L_{26}	142.96	-450.11	0.71	-3.98	-11.54	-7.01				39.68	-3.62	-223.43	-28.63	0.00	0.00	0.00	192.28	-1145.4	-648.57	-477.03	174.3	174.28	163.71	320.70	7266	3127.5	1.84	10583	0.99952244	5746.8	0.913	0.97	0.97	—	—	—	—
	L_{26}-L_{27}	-467.27	-273.20	3.11	-8.60	-24.30	-14.64				39.67	-58.73	-207.10	-187.10	0.00	0.00	0.00	-555.88	-278.01	-881.10	-699.19	174.3	174.28	163.71	320.70	7266	3425.8	1.99	11778	0.99991186	7132.6	0.592	0.84	0.84	—	—	—	—
	L_{27}-L_{28}	-310.47	-45.78	3.75	6.94	-23.41	-5.35				47.90	88.60	-299.11	-88.33	0.00	0.00	0.00	-341.34	55.68	-762.45	-148.34	205.7	205.71	195.15	274.47	9445	2642.2	1.33	9057	0.99895427	6781.3	0.187	0.67	0.67	—	—	—	—
	L_{28}-L_{29}	-210.10	223.07	3.52	-6.36	-21.01	-3.74				57.75	53.39	-207.35	-28.58	0.00	0.00	0.00	-278.66	309.40	-623.29	327.10	205.7	205.71	195.15	274.47	9445	2642.2	1.33	9057	0.99895427	6781.3	0.187	0.67	0.67	—	—	—	—
	L_{29}-L_{30}	-261.82	188.40	3.35	6.83	-14.04	0.75				42.74	87.22	-179.34	9.98	0.00	0.00	0.00	-284.80	358.31	-573.51	257.89	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99950008	4912.7	-0.450	0.42	0.42	—	—	—	—
	L_{30}-L_{31}	-271.20	33.97	3.78	2.94	-14.68	2.29				73.87	37.73	-207.35	-48.37	0.00	0.00	0.00	-276.62	82.64	-618.33	-160.49	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99950008	4912.7	-0.450	0.42	0.42	—	—	—	—
	L_{31}-L_{32}	-131.41	389.19	3.83	6.84	-12.77	4.08				48.91	87.35	-163.17	52.11	0.00	0.00	0.00	-107.25	619.50	-382.95	573.69	165.6	165.55	155.01	222.43	5842	2444.6	1.34	7340	0.99916215	5408.6	-0.173	0.53	0.53	—	—	—	—
	L_{32}-L_{33}	-164.24	-140.43	6.03	-1.91	-13.76	-5.10				77.07	-24.34	-175.78	-66.35	0.00	0.00	0.00	-113.32	-214.20	-442.02	-268.61	226.0	225.96	214.39	305.04	11452	3999.0	1.35	11452	0.99900008	8222.0	-0.351	0.46	0.46	—	—	—	—
	L_{33}-L_{34}	-307.36	909.22	2.31	15.95	-13.97	-7.91				110.32	909.22	-230.16	-325.03	0.00	0.00	0.00	-331.02	1291.04	-1169.33	-1291.04	226.0	225.96	214.39	305.04	11452	3999.0	1.35	11452	0.99900008	8222.0	-0.351	0.46	0.46	—	—	—	—
	L_{34}-L_{35}	-911.85	-326.76	26.28	-8.74	-1.00	-5.17				331.85	-112.28	-12.60	-2.11	0.00	0.00	0.00	1616.75	-568.16	1169.33	-427.53	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.0	-0.351	0.46	0.46	—	—	—	—
	L_{35}-L_{36}	-289.04	42.03	6.43	0.51	-1.90	-1.27				58.67	42.03	-39.03	-39.71	0.00	0.00	0.00	1016.75	74.00	-284.44	-284.44	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.0	-0.351	0.46	0.46	—	—	—	—
	L_{36}-L_{37}	515.61	-35.20	10.30	-6.00	-1.74	0.10				130.00	-100.98	-21.90	1.29	0.00	0.00	0.00	839.30	-117.03	641.82	-44.09	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.99991186	5943.8	-0.211	0.52	0.52	—	—	—	—
	L_{37}-L_{38}	1.68	-148.82	7.80	-4.01	-0.27	-0.01				68.05	-148.82	-0.01	-0.27	0.00	0.00	0.00	468.05	-204.73	0.01	-0.27	180.3	180.26	169.70	249.67	6400	2721.8	1.36	8197	0.99991186	5943.8	-0.211	0.52	0.52	—	—	—	—
	L_{38}-L_{39}	252.11	-25.04	6.50	2.84	-5.67	-6.77				82.03	35.83	-71.52	-85.43	0.00	0.00	0.00	434.37	14.03	234.76	-143.62	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	0.032	0.61	0.61	—	—	—	—
	L_{39}-L_{40}	230.58	-46.22	4.30	-9.55	-5.84	-8.51				54.30	-120.62	-73.68	-107.47	0.00	0.00	0.00	370.34	-216.89	-293.77	-199.79	127.4	127.41	108.77	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	-0.586	0.37	0.37	—	—	—	—
	L_{40}-L_{41}	43.89	-183.34	3.11	2.77	-13.47	-17.00				39.28	35.02	-170.04	-214.57	0.00	0.00	0.00	108.11	-192.82	-164.00	-517.28	155.6	155.64	142.40	203.60	4974	2094.1	1.31	6719	0.99908151	5131.4	0.317	0.73	0.73	—	—	—	—
	L_{41}-L_{42}	43.89	-183.34	3.11	2.77	-13.47	-17.00				39.28	35.02	-170.04	-214.57	0.00	0.00	0.00	108.11	-192.82	-164.00	-517.28	155.6	155.64	142.40	203.60	4974	2094.1	1.31	6719	0.99908151	5131.4	0.317	0.73	0.73	—	—	—	—
	L_{42}-L_{43}	-104.37	-8.61	1.90	5.20	-16.40	-3.44				23.92	69.65	-207.02	-43.46	0.00	0.00	0.00	324.58	72.85	-604.80	-88.69	155.6	155.64	150.63	203.60	4974	2094.1	1.31	6719	0.99908151	5131.4	0.170	0.67	0.67	—	—	—	—
	L_{43}-L_{44}	-65.51	173.40	2.49	5.76	-12.21	1.51				31.37	72.70	-154.09	19.01	0.00	0.00	0.00	44.38	319.92	-286.48	250.14	127.4	127.41	116.92	157.02	3808	1501.0	1.23	5182	0.99898898	4200.3	-0.139	0.54	0.54	—	—	—	—
	L_{44}-L_{45}	-30.91	-151.01	4.48	2.26	-14.35	6.12				56.52	29.16	-201.20	77.27	0.00	0.00	0.00	33.29	233.44	275.74	296.15	149.0	149.01	130.61	189.42	4793	1908.4	1.27	6251	0.99950008	4912.7	0.929	0.23	0.23	—	—	—	—
	L_{45}-L_{46}	-70.03	313.89	3.45	6.36	-13.39	2.40				30.77	70.96	-313.89	32.14	0.00	0.00	0.00	30.77	705.54	-264.50	597.46	104.6	104.58	95.61	136.37	4040	1678.1	1.31	4520	0.99524645	3448.5	0.157	0.66	0.66	—	—	—	—
	L_{46}-L_{47}	-19.86	-197.53	3.75	-3.17	-12.74	-3.40				47.32	-39.98	-160.83	-42.89	0.00	0.00	0.00	35.70	-308.77	-234.89	-312.53	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99898786	7449.1	0.752	0.90	0.90	—	—	—	—
	L_{47}-L_{48}	277.47	-103.86	3.39	0.00	-13.99	-5.00				83.03	277.47	-103.86	-139.39	0.00	0.00	0.00	453.76	-202.47	-384.00	-225.96	226.0	225.96	215.39	304.84	7460	3191.4	1.35	10060	0.99898786	7449.1	0.752	0.90	0.90	—	—	—	—
	L_{48}-L_{49}	747.02	-264.15	26.77	-9.93	-1.45	0.13				341.96	-126.91	-18.50	1.60	0.00	0.00	0.00	1415.67	-508.38	947.08	-341.24	249.4	249.40	238.81	347.03	8248	3698.4	1.39	11452	0.99900008	8222.0	-0.359	0.46	0.46	—	—	—	—
	L_{49}-L_{50}	-140.80	-80.21	3.87	-0.74	-15.87	-1.42				49.48	-9.51	-202.78	-18.09	0.00	0.00	0.00	-118.72	-116.63	-446.67	-127.79	220.7	220.65	210.14	301.58	7460	3191.4	1.36	9927	0.99897107	7214.4	0.286	0.71	0.71	—	—	—	—
	L_{50}-L_{51}	95.69	-212.39	5.88	-12.74	-5.50	-10.49				75.18	162.73	-75.33	-134.01	0.00	0.00	0.00	222.12	-487.66	26.47	-450.33	168.0	168.04	149.99	224.57	5911	2429.7	1.33	7411	0.99914821	5557.1	-0.455	0.42	0.42	—	—	—	—
	L_{51}-L_{52}	150.40	-145.70	6.29	-7.64	-2.91	-1.82				80.35	-97.56	-37.18	-23.23	0.00	0.00	0.00	299.37	-316.24	147.18	-219.60	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.99901402	4596.4	-0.949	0.22	0.22	—	—	—	—
	L_{52}-L_{53}	73.37	-113.99	6.00	-4.00	-1.52	-0.95				73.37	-113.99	-0.95	-15.04	0.00	0.00	0.00	299.37	-176.24	0.95	-171.80	138.2	138.21	119.70	173.22	4364	1707.4	1.25	5716	0.99901402	4596.4	-0.949	0.22	0.22	—	—	—	—
	L_{53}-L_{54}	68.06	-36.99	3.99	-297.68	-218.59	0.00				68.06	-36.99	-297.68	-218.59	0.00	0.00	0.00	-421.08	-200.14	-897.81	-351.13	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6519.3	0.391	0.76	0.76	—	—	—	—
	L_{54}-L_{55}	46.25	11.19	-320.47	-104.96	-10.63	0.00				46.25	11.19	-320.47	-104.96	0.00	0.00	0.00	-253.04	-66.71	-1014.33	-263.63	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6519.3	0.391	0.76	0.76	—	—	—	—
	L_{55}-L_{56}	29.55	-3.45	-267.97	-87.74	-8.45	0.00				29.55	-3.45	-267.97	-87.74	0.00	0.00	0.00	-204.34	-66.71	-847.11	-263.63	197.7	197.72	175.89	341.80	7583	3368.5	1.73	11279	0.99917356	6519.3	0.391	0.76	0.76	—	—	—	—
	L_{56}-L_{57}	-304.14	-22.17	1.48	-0.35	-19.83	-0.70				-370.79	-34.59	-724.68	-40.46	176.7	176.70	168.45	268.88	8704	2849.3	1.47	8543	0.99918481	5826.4	0.056	0.62	0.62	—	—	—	—
	L_{57}-L_{58}	-304.14	-22.17	1.48	-0.35	-19.83	-0.70				16.32	-34.59	-724.68	-40.46	176.7	176.70	168.45	268.88	8704	2849.3	1.47	8543	0.99918481	5826.4	0.056	0.62	0.62	—	—	—	—
	L_{58}-L_{59}	-222.88	59.03	1.13	-0.91	-13.15	4.12				14.41	-11.61	-168.02	52.09	0.00	0.00	0.00	-271.01	61.64	-568.17	145.10	113.0	110.99	103.28	140.36	3592	1352.9	1.26	4652	0.99899956	3609.0	-0.286	0.49	0.49	—	—	—	—
	L_{59}-L_{60}	-222.88	59.03	1.13	-0.91	-13.15	4.12				11.54	-11.61	-168.02	52.09	0.00	0.00	0.00	-271.01	61.64	-568.17	145.10	113.0	110.99	103.28	140.36	3592	1352.9	1.26	4652	0.99899956	3609.0	-0.286	0.49	0.49	—	—	—	—
	L_{60}-L_{61}	42.77	-120.03	5.07	-8.15	-0.38	0.40				65.62	-105.38	-4.92	5.20	0.00	0.00	0.00	140.92	-250.04	49.21	-149.28	83.5	83.50	67.49	100.40	2740	1044.7	1.20	3313	0.99600094	2752.8	-0.481	0.41	0.41	—	—	—	—
	L_{61}-L_{62}	192.98	-177.52	4.34	-6.73	-0.77	-1.23				56.15	-87.13	-10.01	-15.86	0.00	0.00	0.00	269.28	-344.05	183.26	-251.40	83.6	83.58	74.62	100.97	2740	1096.2	1.21	3332	0.99600094	2755.5	-0.783	0.29	0.29	—	—	—	—
	L_{62}-L_{63}	55.38	-320.81	3.44	-10.61	-4.95	-6.02				73.73	-88.53	-27.97	-85.96	0.00	0.00	0.00	129.77	-595.46	-10.47	-518.25	153.3	153.89	138.16	206.43	5812	2460.7	1.34	8297	0.99913202	5524.6	0.960	0.98	0.98	—	—	—	—
	L_{63}-L_{64}	-64.00	-370.85	1.58	-18.68	-12.14	-13.39				20.47	-241.69	-157.05	-173.18	0.00	0.00	0.00	-66.59	-796.30	-287.36	-707.24	179.7	179.69	164.15	251.43	6743	3050.7	1.40	8297	0.99913202	5524.6	0.071	0.63	0.63	—	—	—	—
	L_{64}-L_{65}	-370.80	82.40	1.45	-2.40	-20.83	1.85				18.76	31.09	-269.44	-23.87	0.00	0.00	0.00	-370.79	-147.53	-832.60	-138.91	162.9	162.89	147.19	219.93	6887	2613.8	1.35	7258	0.99991006	5370.6	-0.383	0.40	0.45	—	—	—	—
	L_{65}-L_{66}	-200.72	149.84	1.78	2.82	-11.29	2.05				23.02	36.45	-146.04	28.52	0.00	0.00	0.00	-220.99	242.17	-450.76	229.27	92.6	92.58	76.68	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.509	0.40	0.40	—	—	—	—
	L_{66}-L_{67}	-131.46	104.72	1.34	-1.97	-8.53	1.43				24.13	25.49	-102.19	19.94	0.00	0.00	0.00	-134.96	171.63	-274.50	160.39	92.6	92.58	83.65	114.47	3295	1304.9	1.24	3777	0.99991387	3052.5	-0.203	0.42	0.42	—	—	—	—
	L_{67}-L_{68}	-131.75	166.74	3.29	-11.11	-8.53	2.63				42.59	-14.32	-155.57	34.00	0.00	0.00	0.00	-155.99	198.14	-321.51	260.96	144.9	144.85	129.09	192.84	5010	2379.6	1.33	6364	0.99991186	4776.1	-0.812	0.28	0.28	—	—	—	—
	L_{68}-L_{69}	-31.08	38.46	1.33	-3.97	-2.74	0.34				10.27	-3.97	-37.36	8.50	0.00	0.00	0.00	-38.99	49.54	-80.38	67.60	144.9	144.85	129.09	192.84	5010	2379.6	1.33	6364	0.99991186	4776.1	-0.812	0.28	0.28	—	—	—	—
	L_{69}-L_{70}	361.79	-179.90	14.31	-9.96	-0.66	0.52				191.23	-122.77	-6.75	0.27	0.00	0.00	0.00	718.93	-339.89	469.36	-22.93	140.8	140.75	130.44	228.84	6500	2932.4	1.57	7552	0.99952916	4806.3	-0.055	0.58	0.58	—	—	—	—
	L_{70}-L_{71}	61.95	-270.79	12.52	-4.49	-5.85	-0.13				68.23	-54.98	-78.19	-2.50	0.00	0.00	0.00	169.37	-441.14	-22.04	-324.52	144.9	144.85	129.09	192.84	5010	2379.6	1.33	6364	0.99991186	4776.1	-0.812

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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, Section 3.22.1
(Case I considered in Max. Tension/Compression Load)

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

North/Truss Vertices

| Location | Member | M_2 Information: 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 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 Moments from STAAD — Max. Neg. Mom. Start (k-in) | Max. Neg. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_{ZZ} (in^3) | J (in^4) | I_{YY} (in^4) | Shape Factor | M_p (k-in) | Formula 1.8 Term * F_y/S_{top} | M_u (k-in) | M_2 Information: Equivalent Mom. Factor — a | $C_{m(x)}$ | $C_{m(y)}$ | 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) 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) | Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | Z_{YY} (in^3) | I_{YY} (in^4) | Shape Factor | M_p (k-in) | σ_{allow} (ksi) | Formula 1.8 Term * F_y/S_{top} | M_u (k-in) | Equivalent Mom. Factor — a | $C_{m(x)}$ | $C_{m(y)}$ | Tension — Yield: Axial Action | Moment Action | Total | Pass | Fracture: Axial Action | Moment Action | Total | Pass | Compression — Buckle: Axial Action | Moment Action | Total | Pass | Yield: Axial Action | Moment Action | 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: SC1
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_1-L_1	-23.63	7.60	0.29	-0.22	-2.00	0.96	3.87	-2.99	-26.77	12.77
	U_1-L_2	-3.36	-8.44	0.37	-0.14	-1.30	0.10	4.92	-1.91	-17.33	1.39
	U_1-L_3	0.00	9.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_1-L_4	7.94	-13.41	0.42	0.10	-0.82	-0.75	5.61	1.39	-10.91	9.95
	U_1-L_5	-14.57	18.47	0.19	0.67	-1.44	-0.20	6.31	4.56	-19.22	-4.05
	U_2-L_1	-37.80	17.38	0.43	1.06	-2.95	1.63	5.70	14.17	-39.42	21.78
	U_2-L_2	-9.33	10.64	0.88	0.68	-1.96	3.52	11.78	9.07	-26.18	52.32
	U_2-L_3	-5.01	118.90	1.55	1.18	-1.27	2.76	19.19	15.24	-18.43	75.14
	U_2-L_4	-78.82	74.45	2.94	0.10	-3.01	1.98	5.19	11.54	-38.96	25.63
	U_2-L_5	-64.28	73.58	0.45	0.97	-2.49	1.35	5.78	12.56	-32.19	17.42
	U_3-L_1	-14.57	18.47	0.19	0.67	-1.44	-0.20	6.31	4.56	-19.22	-4.05
	U_3-L_2	-37.80	17.38	0.43	1.06	-2.95	1.63	5.70	14.17	-39.42	21.78
	U_3-L_3	-9.33	10.64	0.88	0.68	-1.96	3.52	11.78	9.07	-26.18	52.32
	U_3-L_4	-5.01	118.90	1.55	1.18	-1.27	2.76	19.19	15.24	-18.43	75.14
	U_3-L_5	-78.82	74.45	2.94	0.10	-3.01	1.98	5.19	11.54	-38.96	25.63
	U_4-L_1	-64.28	73.58	0.45	0.97	-2.49	1.35	5.78	12.56	-32.19	17.42
	U_4-L_2	-9.33	10.64	0.88	0.68	-1.96	3.52	11.78	9.07	-26.18	52.32
	U_4-L_3	-5.01	118.90	1.55	1.18	-1.27	2.76	19.19	15.24	-18.43	75.14
	U_4-L_4	-78.82	74.45	2.94	0.10	-3.01	1.98	5.19	11.54	-38.96	25.63
	U_4-L_5	-64.28	73.58	0.45	0.97	-2.49	1.35	5.78	12.56	-32.19	17.42
	U_5-L_1	-65.20	48.77	0.12	0.10	-2.26	1.17	1.49	-1.35	-29.21	15.18
	U_5-L_2	-24.89	8.62	0.28	0.45	-1.33	0.34	3.34	-0.78	-17.26	4.00
	U_5-L_3	-0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_5-L_4	-25.30	9.99	0.38	0.00	-1.66	1.11	4.93	-7.80	-21.41	14.34
	U_5-L_5	-37.50	20.00	0.35	0.63	-1.70	0.86	4.52	-4.06	-26.64	16.99
	U_6-L_1	-101.98	74.35	0.49	0.48	-4.41	3.26	6.31	-6.24	-57.11	42.21
	U_6-L_2	-115.65	79.79	0.45	0.48	-4.98	3.62	5.70	-6.44	-62.82	46.92
	U_6-L_3	-76.53	79.74	0.48	0.05	-3.65	3.24	6.24	-0.66	-47.23	41.88
	U_6-L_4	-109.78	99.44	0.53	-0.55	-3.94	3.85	6.81	-7.05	-50.36	49.13
	U_6-L_5	-88.86	78.41	0.53	-0.55	-3.45	3.36	6.48	-7.51	-50.43	43.40
	U_7-L_1	-90.94	71.81	0.76	-0.66	-4.33	3.18	9.76	-8.38	-55.27	40.60
	U_7-L_2	-92.38	71.34	0.46	-0.62	-4.33	3.15	5.94	-8.01	-55.27	40.60
	U_7-L_3	-20.34	9.87	0.52	0.45	-1.66	1.39	6.64	-5.75	-23.82	17.70
	U_7-L_4	-1.38	-11.20	0.60	0.61	-1.91	2.29	7.25	-5.69	-10.72	20.00
	U_7-L_5	6.85	-23.86	0.74	1.30	-1.25	0.20	9.42	-16.57	-10.61	2.59
	U_8-L_1	-44.40	35.30	0.40	-0.92	-2.26	0.75	5.06	-11.81	-29.89	9.57
	U_8-L_2	-96.54	69.68	0.23	-0.68	-4.69	2.52	1.07	-4.05	-52.20	25.62
	U_8-L_3	-85.37	67.20	0.36	0.75	-3.57	2.22	4.63	-9.71	-50.71	28.98
	U_8-L_4	-97.50	93.00	0.35	0.53	-4.29	3.31	5.63	-4.29	-59.73	49.73
	U_8-L_5	-109.81	116.32	0.63	0.27	-4.77	3.71	8.07	3.49	-60.89	67.34
	U_9-L_1	-141.94	130.59	0.85	-0.42	-6.15	4.95	10.85	-5.38	-78.55	63.27
	U_9-L_2	-96.37	139.98	0.26	0.45	-4.26	3.73	4.56	-0.52	-59.73	63.27
	U_9-L_3	-11.95	79.16	1.26	0.37	-2.88	3.42	15.96	4.71	-36.41	43.20
	U_9-L_4	-77.25	72.67	0.18	0.50	-3.40	2.82	2.25	-0.29	-50.25	43.29
	U_9-L_5	-66.17	89.96	0.53	-0.32	-4.10	3.89	6.70	-4.00	-58.79	49.15
	U_{10}-L_1	-66.17	89.96	0.53	-0.32	-4.10	3.89	6.70	-4.00	-58.79	49.15
	U_{10}-L_2	-96.37	139.98	0.26	0.45	-4.26	3.73	4.56	-0.52	-59.73	63.27
	U_{10}-L_3	-56.05	72.68	0.49	-0.55	-3.83	2.75	6.17	-6.93	-48.35	34.73
	U_{10}-L_4	-77.25	72.67	0.18	0.50	-3.40	2.82	2.25	-0.29	-50.25	43.29
	U_{10}-L_5	-37.83	37.59	0.48	-0.49	-2.64	1.96	6.10	-6.21	-33.36	25.02
	U_{11}-L_1	-37.80	17.38	0.43	1.06	-2.95	1.63	5.70	14.17	-39.42	21.78
	U_{11}-L_2	-10.04	3.78	0.46	0.74	-1.53	0.41	5.79	-9.28	-19.34	0.00
	U_{11}-L_3	-8.76	2.44	0.97	0.71	-1.54	0.41	9.01	-11.47	-14.16	0.00
	U_{11}-L_4	-19.42	19.56	0.54	0.49	-1.79	1.05	5.15	-6.15	-22.62	13.29
	U_{11}-L_5	-78.82	74.45	2.94	0.10	-3.01	1.98	5.19	11.54	-38.96	25.63
	U_{12}-L_1	-46.48	58.24	0.66	0.73	-4.05	3.20	8.33	-9.25	-41.11	40.45
	U_{12}-L_2	-54.27	68.32	0.54	0.67	-4.37	3.35	6.87	-8.45	-50.21	42.23
	U_{12}-L_3	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{12}-L_4	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{12}-L_5	-36.18	54.54	1.53	0.34	-3.07	3.78	19.56	4.36	-39.17	48.28
	U_{13}-L_1	-37.80	17.38	0.43	1.06	-2.95	1.63	5.70	14.17	-39.42	21.78
	U_{13}-L_2	-77.08	85.18	0.68	-0.25	-4.03	3.45	8.71	-3.21	-51.48	44.03
	U_{13}-L_3	-78.35	71.28	0.61	0.00	-3.89	2.70	7.82	-0.04	-49.73	34.52
	U_{13}-L_4	-76.52	55.14	0.25	0.24	-4.07	2.56	3.16	3.08	-52.01	32.68
	U_{13}-L_5	-76.52	55.14	0.25	0.24	-4.07	2.56	3.16	3.08	-52.01	32.68
	U_{14}-L_1	-78.35	71.28	0.61	0.00	-3.89	2.70	7.82	-0.04	-49.73	34.52
	U_{14}-L_2	-77.08	85.18	0.68	-0.25	-4.03	3.45	8.71	-3.21	-51.48	44.03
	U_{14}-L_3	-36.18	54.54	1.53	0.34	-3.07	3.78	19.56	4.36	-39.17	48.28
	U_{14}-L_4	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{14}-L_5	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{15}-L_1	-46.48	58.24	0.66	0.73	-4.05	3.20	8.33	-9.25	-41.11	40.45
	U_{15}-L_2	-54.27	68.32	0.54	0.67	-4.37	3.35	6.87	-8.45	-50.21	42.23
	U_{15}-L_3	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{15}-L_4	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{15}-L_5	-36.18	54.54	1.53	0.34	-3.07	3.78	19.56	4.36	-39.17	48.28
	U_{16}-L_1	-37.80	17.38	0.43	1.06	-2.95	1.63	5.70	14.17	-39.42	21.78
	U_{16}-L_2	-77.08	85.18	0.68	-0.25	-4.03	3.45	8.71	-3.21	-51.48	44.03
	U_{16}-L_3	-78.35	71.28	0.61	0.00	-3.89	2.70	7.82	-0.04	-49.73	34.52
	U_{16}-L_4	-76.52	55.14	0.25	0.24	-4.07	2.56	3.16	3.08	-52.01	32.68
	U_{16}-L_5	-76.52	55.14	0.25	0.24	-4.07	2.56	3.16	3.08	-52.01	32.68
	U_{17}-L_1	-78.35	71.28	0.61	0.00	-3.89	2.70	7.82	-0.04	-49.73	34.52
	U_{17}-L_2	-77.08	85.18	0.68	-0.25	-4.03	3.45	8.71	-3.21	-51.48	44.03
	U_{17}-L_3	-36.18	54.54	1.53	0.34	-3.07	3.78	19.56	4.36	-39.17	48.28
	U_{17}-L_4	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{17}-L_5	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{18}-L_1	-46.48	58.24	0.66	0.73	-4.05	3.20	8.33	-9.25	-41.11	40.45
	U_{18}-L_2	-54.27	68.32	0.54	0.67	-4.37	3.35	6.87	-8.45	-50.21	42.23
	U_{18}-L_3	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{18}-L_4	-49.31	71.94	0.38	-0.23	-5.45	4.82	4.83	-2.90	-48.98	50.84
	U_{18}-L_5	-36.18	54.54	1.53	0.34	-3.07	3.78	19.56	4.36	-39.17	48.28
	U_{19}-L_1	-37.80	17.38	0.43	1.06	-2.95	1.63	5.70	14.17	-39.42	21.78
	U_{19}-L_2	-10.04	3.78	0.46	0.74	-1.53	0.41	5.79	-9.28	-19.34	0.00
	U_{19}-L_3	-8.76	2.44	0.97	0.71	-1.54	0.41	9.01	-11.47	-14.16	0.00
	U_{19}-L_4	-19.42	19.56	0.54	0.49	-1.79	1.05	5.15	-6.15	-22.62	13.29
	U_{19}-L_5	-78.82	74.45	2.94	0.10	-3.01	1.98	5.19	11.54	-38.96	25.63
	U_{20}-L_1	-23.63	7.60	0.29	-0.22	-2.00	0.96	3.87	-2.99	-26.77	12.77
	U_{20}-L_2	-3.36	-8.44	0.37	-0.14	-1.30	0.10	4.92	-1.91	-17.33	1.39
	U_{20}-L_3	0.00	9.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20}-L_4	7.94	-13.41	0.42	0.10	-0.82	-0.75	5.61	1.39	-10.91	9.95
	U_{20}-L_5	-14.57	18.47	0.19	0.67	-1.44	-0.20	6.31	4.56	-19.22	-4.05

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/S_b	M_2 (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor $C_{mx/0.85}$
Structure 1	U_1-L_1	3.87	-2.99	-26.77	12.77	0.00	0.00	-26.68	5.69	65.52	26.48	15.6	15.63	15.58	25.96	5	804.0
	U_1-L_2	4.92	-1.91	-17.33	1.39	0.00	0.00	2.02	-13.45	-26.89	-9.16	15.4	15.42	15.42	23.71	2	751.9
	U_1-L_3	0.00	0.00	0.00	0.00	0.00	0.00	5.23	-15.37	-22.63	-17.35	15.4	15.42	15.42	23.71	2	751.9
	U_1-L_4	5.61	1.39	-10.91	9.95	0.00	0.00	17.62	-15.63	-3.87	-30.38	15.4	15.42	15.42	23.71	2	751.9
	U_1-L_5	6.31	4.56	-19.22	-4.05	0.00	0.00	0.00	-15.73	16.67	-42.27	15.4	15.42	15.42	23.71	2	751.9
	U_2-L_1	5.70	14.17	-39.42	21.78	0.00	0.00	-41.73	119.02	-100.39	128.90	35.1	35.09	35.09	53.13	4	1183.7
	U_2-L_2	11.78	9.07	-26.18	52.32	0.00	0.00	-76.04	111.99	-125.47	118.30	39.8	39.77	39.56	65.61	21	1616.3
	U_2-L_3	19.19	15.24	-18.43	75.14	0.00	0.00	-85.25	83.52	-140.02	59.94	42.7	42.74	42.74	65.30	8	1389.6
	U_2-L_4	5.19	11.54	-38.96	25.63	0.00	0.00	-85.72	74.32	-153.11	130.10	40.7	40.70	40.44	67.92	25	1661.0
	U_2-L_5	5.78	12.56	-32.19	17.42	0.00	0.00	-76.04	111.99	-125.47	118.30	39.8	39.77	39.56	65.61	21	1616.3
	U_3-L_1	6.31	4.56	-19.22	-4.05	0.00	0.00	0.00	-15.73	16.67	-42.27	15.4	15.42	15.42	23.71	2	751.9
	U_3-L_2	5.70	14.17	-39.42	21.78	0.00	0.00	-41.73	119.02	-100.39	128.90	35.1	35.09	35.09	53.13	4	1183.7
	U_3-L_3	11.78	9.07	-26.18	52.32	0.00	0.00	-76.04	111.99	-125.47	118.30	39.8	39.77	39.56	65.61	21	1616.3
	U_3-L_4	19.19	15.24	-18.43	75.14	0.00	0.00	-85.25	83.52	-140.02	59.94	42.7	42.74	42.74	65.30	8	1389.6
	U_3-L_5	5.19	11.54	-38.96	25.63	0.00	0.00	-85.72	74.32	-153.11	130.10	40.7	40.70	40.44	67.92	25	1661.0
	U_4-L_1	5.78	12.56	-32.19	17.42	0.00	0.00	-76.04	111.99	-125.47	118.30	39.8	39.77	39.56	65.61	21	1616.3
	U_4-L_2	11.78	9.07	-26.18	52.32	0.00	0.00	-76.04	111.99	-125.47	118.30	39.8	39.77	39.56	65.61	21	1616.3
	U_4-L_3	19.19	15.24	-18.43	75.14	0.00	0.00	-85.25	83.52	-140.02	59.94	42.7	42.74	42.74	65.30	8	1389.6
	U_4-L_4	5.19	11.54	-38.96	25.63	0.00	0.00	-85.72	74.32	-153.11	130.10	40.7	40.70	40.44	67.92	25	1661.0
	U_4-L_5	5.78	12.56	-32.19	17.42	0.00	0.00	-76.04	111.99	-125.47	118.30	39.8	39.77	39.56	65.61	21	1616.3
	U_5-L_1	1.49	-1.35	-29.21	15.18	0.00	0.00	-82.83	61.66	-122.74	83.14	20.8	20.80	20.67	34.66	1	1079.0
	U_5-L_2	3.34	-0.78	-17.26	4.00	0.00	0.00	-28.02	3.69	-54.80	16.93	15.4	15.42	15.42	23.71	2	751.9
	U_5-L_3	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	0.00	0.00
	U_5-L_4	4.93	-7.80	-21.41	14.34	0.00	0.00	-26.48	2.85	-50.73	31.63	15.4	15.42	15.42	23.71	2	751.9
	U_5-L_5	4.52	-4.06	-26.64	16.99	0.00	0.00	-42.23	20.72	-80.64	48.09	19.4	19.37	19.37	29.87	1	907.0
	U_6-L_1	6.31	-6.24	-57.11	42.21	0.00	0.00	-124.39	88.55	-206.80	151.52	35.1	35.09	35.09	53.51	4	1183.7
	U_6-L_2	5.70	-6.44	-62.82	46.92	0.00	0.00	-142.62	96.92	-233.68	164.07	35.8	35.83	35.83	59.23	3	1264.6
	U_6-L_3	6.24	-0.66	-47.23	41.88	0.00	0.00	-91.38	102.80	-160.88	158.11	35.8	35.83	35.83	59.23	3	1264.6
	U_6-L_4	6.81	-7.05	-50.36	49.13	0.00	0.00	-133.86	120.10	-208.19	193.14	42.7	42.74	42.74	65.30	8	1389.6
	U_6-L_5	6.48	-7.51	-50.43	43.40	0.00	0.00	-118.53	92.16	-207.37	153.36	35.1	35.09	35.09	53.13	4	1183.7
	U_7-L_1	9.76	-8.38	-55.27	40.60	0.00	0.00	-105.53	82.45	-192.00	146.13	35.1	35.09	35.09	53.51	4	1183.7
	U_7-L_2	5.94	-8.01	-55.27	40.60	0.00	0.00	-105.53	82.45	-192.00	146.13	35.1	35.09	35.09	53.51	4	1183.7
	U_7-L_3	6.64	-5.75	-23.82	17.70	0.00	0.00	-62.57	31.36	-113.74	47.54	20.8	20.80	20.67	34.66	1	1079.0
	U_7-L_4	7.25	-5.69	-10.72	20.00	0.00	0.00	-17.85	3.36	-57.43	35.83	15.4	15.42	15.42	23.71	2	751.9
	U_7-L_5	9.42	-16.57	-10.61	2.59	0.00	0.00	-8.94	-27.55	-23.44	-27.65	15.4	15.42	15.42	23.71	2	751.9
	U_8-L_1	5.06	-11.81	-29.89	9.57	0.00	0.00	-51.14	30.54	-86.27	58.33	20.5	20.51	20.40	33.89	8	1017.2
	U_8-L_2	1.07	-4.05	-52.20	25.62	0.00	0.00	-124.11	76.30	-233.46	142.97	35.8	35.83	35.83	59.23	3	1264.6
	U_8-L_3	4.63	-9.71	-50.71	28.98	0.00	0.00	-104.94	100.11	-176.91	125.15	42.7	42.74	42.74	65.30	8	1389.6
	U_8-L_4	5.63	-4.29	-59.73	49.73	0.00	0.00	-117.28	128.63	-199.39	182.79	46.7	46.71	46.71	71.43	10	1710.0
	U_8-L_5	8.07	3.49	-60.89	67.34	0.00	0.00	-127.06	193.76	-216.71	212.76	46.7	46.71	46.71	71.43	10	1711.0
	U_9-L_1	10.85	-5.38	-78.55	63.27	0.00	0.00	-110.42	162.78	-298.63	252.32	42.7	42.74	42.74	65.30	8	1389.6
	U_9-L_2	4.56	-0.52	-59.73	63.27	0.00	0.00	-63.61	173.34	-108.39	263.89	42.7	42.74	42.74	65.30	8	1389.6
	U_9-L_3	15.96	4.71	-36.41	43.20	0.00	0.00	-5.21	109.05	-62.87	159.10	35.1	35.09	35.09	53.51	4	1183.7
	U_9-L_4	2.25	-0.29	-50.25	43.29	0.00	0.00	-68.46	71.14	-108.39	108.39	35.1	35.09	35.09	53.51	4	1183.7
	U_9-L_5	6.70	-4.00	-58.79	49.15	0.00	0.00	-77.31	111.74	-153.33	180.84	38.8	38.83	38.83	59.23	3	1264.6
	U_{10}-L_1	6.70	-4.00	-58.79	49.15	0.00	0.00	-77.31	111.74	-153.33	180.84	38.8	38.83	38.83	59.23	3	1264.6
	U_{10}-L_2	4.56	-0.52	-59.73	63.27	0.00	0.00	-63.61	173.34	-108.39	263.89	42.7	42.74	42.74	65.30	8	1389.6
	U_{10}-L_3	6.17	-6.93	-48.35	34.73	0.00	0.00	-64.84	80.35	-130.72	139.51	35.1	35.09	35.09	53.51	4	1183.7
	U_{10}-L_4	2.25	-0.29	-50.25	43.29	0.00	0.00	-68.46	71.14	-108.39	108.39	35.1	35.09	35.09	53.51	4	1183.7
	U_{10}-L_5	6.10	-6.21	-33.36	25.02	0.00	0.00	-33.46	40.80	-84.75	61.40	20.5	20.51	20.40	33.89	8	1017.2
	U_{11}-L_1	5.70	14.17	-39.42	21.78	0.00	0.00	-41.73	119.02	-100.39	128.90	35.1	35.09	35.09	53.13	4	1183.7
	U_{11}-L_2	5.79	-9.28	-19.34	0.00	0.00	0.00	-5.52	-7.15	-38.20	11.59	15.4	15.42	15.42	23.71	2	751.9
	U_{11}-L_3	9.01	-11.47	-14.16	0.00	0.00	0.00	0.00	-9.54	-18.88	0.00	15.4	15.42	15.42	23.71	2	751.9
	U_{11}-L_4	5.15	-6.15	-22.62	13.29	0.00	0.00	-16.43	17.43	-54.65	42.71	15.4	15.42	15.42	23.71	2	751.9
	U_{11}-L_5	5.19	11.54	-38.96	25.63	0.00	0.00	-85.72	74.32	-153.11	130.10	40.7	40.70	40.44	67.92	25	1661.0
	U_{12}-L_1	8.33	-9.25	-41.11	40.45	0.00	0.00	-49.93	63.68	-126.86	128.30	35.1	35.09	35.09	53.51	4	1183.7
	U_{12}-L_2	6.87	-8.45	-50.21	42.23	0.00	0.00	-61.63	77.84	-142.33	143.72	35.1	35.09	35.09	53.51	4	1183.7
	U_{12}-L_3	4.83	-2.90	-48.98	50.84	0.00	0.00	-64.22	27.86	-122.62	52.29	35.8	35.83	35.83	59.23	3	1264.6
	U_{12}-L_4	4.83	-2.90	-48.98	50.84	0.00	0.00	-83.86	89.75	-179.78	172.62	35.1	35.09	35.09	53.51	4	1183.7
	U_{12}-L_5	19.56	4.36	-39.17	48.28	0.00	0.00	-85.56	185.67	-179.78	356.87	46.7	46.71	46.71	71.43	10	1710.0
	U_{13}-L_1	5.70	14.17	-39.42	21.78	0.00	0.00	-41.73	119.02	-100.39	128.90	35.1	35.09	35.09	53.13	4	1183.7
	U_{13}-L_2	3.16	3.08	-52.01	32.68	0.00	0.00	-95.51	75.69	-167.23	114.17	38.8	38.83	38.83	59.23	3	1264.6
	U_{13}-L_3	7.82	-0.04	-49.73	34.52	0.00	0.00	-91.69	92.62	-166.50	137.54	46.7	46.71	46.71	71.43	10	1711.0
	U_{13}-L_4	3.16	3.08	-52.01	32.68	0.00	0.00	-95.51	75.69	-167.23	114.17	38.8	38.83	38.83	59.23	3	1264.6
	U_{13}-L_5	3.16	3.08	-52.01	32.68	0.00	0.00	-95.51	75.69	-167.23	114.17	38.8	38.83	38.83	59.23	3	1264.6
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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: SCI
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

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

(Case I unrelated to Max. Tension/Compression Load)

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) 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	-75.17	-0.72	8.79	-11.39	-15.85	-1.14	57.89	-82.28	-176.41	-12.64
	U_1-U_2	-80.82	-29.29	11.19	-8.50	-9.94	-3.94	13.27	-61.34	-110.61	-43.89
	U_2-U_3	-112.29	-86.52	1.46	-3.61	-11.41	-5.89	15.21	-40.17	-126.98	-85.42
	U_3-U_4	-15.71	-66.12	2.32	-3.40	-12.95	-7.26	25.87	-57.83	-140.92	-111.41
	U_4-U_5	-9.25	-61.62	2.36	-3.37	-16.41	-3.79	26.23	-37.53	-182.73	-42.22
	U_5-U_6	-42.76	-120.21	2.63	-3.29	-15.01	-9.19	29.29	-34.62	-167.05	-2.09
	U_6-U_7	-14.82	-43.60	2.63	-3.29	-15.01	-9.19	29.29	-34.62	-167.05	-2.09
	U_7-U_8	-47.38	-526.15	1.28	-3.81	-19.80	-19.33	14.23	-42.46	-220.46	-216.21
	U_8-U_9	-475.03	-124.16	1.25	-3.62	-11.64	-11.07	185.37	-104.11	-1.25	-4.47
	U_9-U_{10}	-46.82	-20.59	3.14	-1.09	-4.39	-2.06	33.61	-11.77	-47.29	-22.21
	U_{10}-U_{11}	-64.59	-138.73	3.80	-1.00	-3.11	-4.55	40.97	-76.53	-83.51	-60.16
	U_{11}-U_{12}	-27.91	-140.51	3.28	-1.56	-6.95	-7.18	35.35	-16.78	-74.95	-77.40
	U_{12}-U_{13}	-106.12	-155.13	3.47	-0.81	-10.94	-6.64	37.36	-8.78	-118.00	-21.57
	U_{13}-U_{14}	-138.04	-202.94	3.47	-0.81	-10.94	-6.64	37.36	-8.78	-118.00	-21.57
	U_{14}-U_{15}	-245.80	-183.07	1.95	-11.79	-27.73	-4.11	21.07	-127.18	-299.51	-44.26
	U_{15}-U_{16}	-269.97	-145.19	0.76	-0.28	-24.78	-6.09	8.14	-3.01	-267.21	-65.67
	U_{16}-U_{17}	-154.36	-67.49	0.75	-0.33	-13.27	-5.01	8.12	-3.67	-150.11	-72.37
	U_{17}-U_{18}	-19.82	-20.32	0.76	-0.37	-15.05	-2.24	8.17	-57.86	-162.26	-2.63
	U_{18}-U_{19}	-186.22	-23.42	2.69	-14.56	-14.25	-2.52	29.00	-156.94	-153.60	-28.25
	U_{19}-U_{20}	-14.62	-29.67	2.75	-15.66	-15.09	-2.67	29.00	-156.94	-153.60	-28.25
	U_{20}-U_{21}	-71.24	-180.99	4.12	-2.37	-7.57	-6.08	43.89	-25.24	-80.62	-64.69
	U_{21}-U_{22}	-59.69	-252.13	4.12	-2.37	-7.57	-6.08	59.69	-25.24	-80.62	-64.69
	U_{22}-U_{23}	-327.34	-325.40	1.43	3.05	-22.30	-12.94	15.18	-32.46	-237.40	-137.75
	U_{23}-U_{24}	-338.58	-271.31	1.43	-3.31	-22.30	-12.94	15.18	-32.46	-237.40	-137.75
	U_{24}-U_{25}	-396.14	-197.74	3.02	5.85	-31.05	-6.99	32.11	-62.25	-330.58	-74.44
	U_{25}-U_{26}	-344.18	-179.44	4.51	3.93	-25.62	-9.37	48.06	-41.87	-272.73	-99.74
	U_{26}-U_{27}	-226.16	-295.72	3.30	-4.06	-24.78	-9.24	35.12	-67.92	-224.85	-93.21
	U_{27}-U_{28}	-350.21	-90.73	3.85	5.00	-26.09	-6.13	40.59	-53.27	-277.78	-55.21
	U_{28}-U_{29}	-75.27	-75.27	4.50	4.50	-26.09	-6.13	40.59	-53.27	-277.78	-55.21
	U_{29}-U_{30}	-167.09	-39.84	4.52	4.84	-18.91	-4.63	52.34	-51.50	-201.30	-49.32
	U_{30}-U_{31}	-109.78	-170.74	4.40	3.93	-20.39	0.10	46.63	-41.87	-217.08	-1.02
	U_{31}-U_{32}	-75.59	-79.55	4.15	4.15	-8.75	-8.75	46.05	-75.32	-77.10	-77.10
	U_{32}-U_{33}	-261.01	-266.00	3.06	2.77	-28.37	30.02	32.62	29.45	-302.04	319.68
	U_{33}-U_{34}	-1192.78	-62.92	3.49	-0.61	-2.43	7.23	389.31	-38.53	-5.53	42.60
	U_{34}-U_{35}	-25.29	-11.66	3.19	0.82	-18.45	-4.39	33.59	8.61	-194.12	-46.03
	U_{35}-U_{36}	-34.01	-34.01	3.13	3.13	-8.57	-8.57	39.53	32.47	-194.12	-46.03
	U_{36}-U_{37}	-150.60	-33.06	4.69	4.51	-10.08	-4.54	49.33	-47.47	-106.06	-47.71
	U_{37}-U_{38}	-147.31	-4.37	5.46	-2.06	-9.91	-8.40	57.47	-28.01	-104.22	-88.34
	U_{38}-U_{39}	-35.42	-35.42	5.46	5.46	-9.91	-8.40	57.47	-28.01	-104.22	-88.34
	U_{39}-U_{40}	-31.69	-33.99	3.51	0.44	-16.21	-5.97	36.88	-4.61	-110.53	-62.76
	U_{40}-U_{41}	-86.03	-71.72	2.19	1.91	-9.27	-7.18	42.09	-31.44	-124.63	-93.35
	U_{41}-U_{42}	-60.96	-66.56	2.65	1.77	-26.39	-8.68	27.84	-197.52	-277.60	-101.87
	U_{42}-U_{43}	-21.91	-21.91	3.11	3.11	-8.51	-8.51	34.13	-43.96	-208.99	-59.37
	U_{43}-U_{44}	-33.01	-28.69	3.24	4.14	-22.63	-5.64	34.13	-43.96	-208.99	-59.37
	U_{44}-U_{45}	-15.13	-112.78	3.20	4.18	-21.82	-1.24	24.12	-205.11	-318.08	-130.91
	U_{45}-U_{46}	-35.22	-35.22	3.06	3.06	-8.51	-8.51	35.22	-34.06	-227.83	-70.14
	U_{46}-U_{47}	-2.74	-209.84	2.64	3.32	-21.25	-1.57	27.78	-34.54	-223.59	-16.48
	U_{47}-U_{48}	-1.62	-1.62	3.06	3.06	-8.51	-8.51	32.54	-34.06	-227.83	-70.14
	U_{48}-U_{49}	-122.51	-1157.56	2.05	4.91	-29.03	31.84	-131.29	-1571.95	-656.37	334.99
	U_{49}-U_{50}	-1154.91	-197.36	55.80	-10.10	-1.26	-0.75	381.65	-107.58	-13.64	-8.00
	U_{50}-U_{51}	-67.84	-92.39	4.76	-0.31	-6.59	-2.11	28.27	-41.53	-169.39	-22.11
	U_{51}-U_{52}	-178.89	-59.81	6.21	-5.06	-6.20	-4.95	66.13	-53.82	-66.03	-52.68
	U_{52}-U_{53}	-68.66	-178.68	5.27	-4.23	-11.11	-9.60	56.69	-45.08	-118.27	-102.21
	U_{53}-U_{54}	-68.66	-178.68	5.27	-4.23	-11.11	-9.60	56.69	-45.08	-118.27	-102.21
	U_{54}-U_{55}	-236.51	-153.10	4.10	3.15	-19.24	-6.18	43.62	33.56	-204.82	-65.78
	U_{55}-U_{56}	-98.60	-313.21	4.21	3.98	-38.61	-11.18	44.77	42.35	-411.09	-119.04
	U_{56}-U_{57}	-159.54	-360.07	3.46	3.46	-14.34	-520.50	-183.31	-162.73	-629.66	-1044.05
	U_{57}-U_{58}	-350.37	-386.86	3.14	0.89	-40.45	-12.00	33.45	9.40	-430.62	-127.76
	U_{58}-U_{59}	-263.11	-263.11	3.61	3.61	-8.32	-8.32	22.55	-5.89	-329.79	-34.46
	U_{59}-U_{60}	-278.98	-117.76	2.12	-0.55	-30.98	-3.24	22.55	-5.89	-329.79	-34.46
	U_{60}-U_{61}	-252.51	-231.61	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{61}-U_{62}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{62}-U_{63}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{63}-U_{64}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{64}-U_{65}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{65}-U_{66}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{66}-U_{67}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{67}-U_{68}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{68}-U_{69}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{69}-U_{70}	-136.67	-67.06	0.87	3.06	-16.81	-14.62	9.34	-32.98	-181.20	-107.65
	U_{70}-U_{71}	-497.26	-34.44	22.03	-19.28	-0.65	0.07	245.22	-214.69	-0.53	0.73
	U_{71}-U_{72}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{72}-U_{73}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{73}-U_{74}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{74}-U_{75}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{75}-U_{76}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{76}-U_{77}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{77}-U_{78}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{78}-U_{79}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{79}-U_{80}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{80}-U_{81}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{81}-U_{82}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{82}-U_{83}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{83}-U_{84}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{84}-U_{85}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{85}-U_{86}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{86}-U_{87}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{87}-U_{88}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{88}-U_{89}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{89}-U_{90}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{90}-U_{91}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{91}-U_{92}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{92}-U_{93}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{93}-U_{94}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{94}-U_{95}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{95}-U_{96}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{96}-U_{97}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{97}-U_{98}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{98}-U_{99}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{99}-U_{100}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{100}-U_{101}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{101}-U_{102}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{102}-U_{103}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{103}-U_{104}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{104}-U_{105}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{105}-U_{106}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{106}-U_{107}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{107}-U_{108}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{108}-U_{109}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{109}-U_{110}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{110}-U_{111}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{111}-U_{112}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{112}-U_{113}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{113}-U_{114}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{114}-U_{115}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{115}-U_{116}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{116}-U_{117}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{117}-U_{118}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{118}-U_{119}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{119}-U_{120}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{120}-U_{121}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{121}-U_{122}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{122}-U_{123}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{123}-U_{124}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{124}-U_{125}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{125}-U_{126}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{126}-U_{127}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{127}-U_{128}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{128}-U_{129}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{129}-U_{130}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{130}-U_{131}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{131}-U_{132}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{132}-U_{133}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{133}-U_{134}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{134}-U_{135}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{135}-U_{136}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{136}-U_{137}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{137}-U_{138}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{138}-U_{139}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{139}-U_{140}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{140}-U_{141}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{141}-U_{142}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{142}-U_{143}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{143}-U_{144}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{144}-U_{145}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{145}-U_{146}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{146}-U_{147}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{147}-U_{148}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{148}-U_{149}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{149}-U_{150}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{150}-U_{151}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{151}-U_{152}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{152}-U_{153}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{153}-U_{154}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{154}-U_{155}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{155}-U_{156}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{156}-U_{157}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{157}-U_{158}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{158}-U_{159}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{159}-U_{160}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{160}-U_{161}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{161}-U_{162}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{162}-U_{163}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{163}-U_{164}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{164}-U_{165}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{165}-U_{166}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{166}-U_{167}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{167}-U_{168}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{168}-U_{169}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{169}-U_{170}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{170}-U_{171}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{171}-U_{172}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{172}-U_{173}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{173}-U_{174}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{174}-U_{175}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{175}-U_{176}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{176}-U_{177}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{177}-U_{178}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{178}-U_{179}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{179}-U_{180}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{180}-U_{181}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{181}-U_{182}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{182}-U_{183}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
	U_{183}-U_{184}	-139.08	-187.57	0.81	-9.53	-14.95	-2.17	95.02	-102.70	-161.21	-23.44
	U_{184}-U_{185}	-47.38	-119.55	0.81	-9.53	-14.95	-2.17	48.31	-171.02	-72.56	-11.39
	U_{185}-U_{186}	-52.58	-129.17	4.48	-15.86	-6.73	-6.62	48.31	-171.02	-72.56	-11.39
	U_{186}-U_{187}	-277.84	-111.68	1.77	-0.62	-18.29	-5.53	19.03	-6.68	-197.18	-69.67
	U_{187}-U_{188}	-166.98	-243.52	1.77	-1.87	-18.76	0.16	14.67	-20.12	-202.36	-1.77
	U_{188}-U_{189}	-287.74	-127.82	2.41	-0.64	-28.28	-6.03	25.58	-89.40	-304.91	-64.96
	U_{189}-U_{190}	-141.43	-113.94	1.24	0.31	-23.02	-3.12	13.36	3.33	-248.20	-33.65
	U_{190}-U_{191}	-139.50	-227.71	1.32	-0.53	-30.98	-3.24	28.67	-148.78	-184.13	-34.25
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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: 5C1
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
Governing Guidelines 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-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	L_0-L_1	-15.50	-73.38	4.75	-6.12	-1.00	1.04	52.89	-68.11	-11.11	11.62
	L_1-L_2	39.75	-88.06	3.76	-10.18	-6.81	-6.75	41.85	-117.79	-75.83	75.18
	L_2-L_3	39.30	-42.24	1.65	-2.43	-11.71	-6.57	16.12	-27.05	-130.39	-67.60
	L_3-L_4	-11.39	11.52	2.05	-12.40	-14.42	-7.06	22.83	-138.02	-160.57	-78.54
	L_4-L_5	-49.18	208.14	3.00	33.40	-35.90	-13.51	33.40	-35.90	-153.51	-23.70
	L_5-L_6	-0.43	187.22	2.26	5.40	-8.11	0.57	25.13	60.16	-101.39	8.37
	L_6-L_7	41.36	78.74	2.82	-0.51	-4.22	0.85	32.53	-3.43	-110.51	12.39
	L_7-L_8	-25.09	448.92	3.91	4.22	-7.82	14.79	10.16	47.01	-87.04	164.63
	L_8-L_9	426.08	-36.00	15.65	-3.06	-0.09	0.21	168.72	-33.00	-0.92	2.24
	L_9-L_{10}	120.53	-126.15	5.80	-6.92	-6.05	-0.66	276.46	-261.17	-20.52	14.35
	L_{10}-L_{11}	120.53	-116.03	4.20	-3.50	-2.08	-5.19	45.23	-37.70	-22.39	-55.97
	L_{11}-L_{12}	39.16	-198.23	4.30	-8.06	-4.31	-5.20	47.18	-72.10	-43.14	-56.68
	L_{12}-L_{13}	-45.20	-121.29	2.43	-0.37	-7.44	-8.16	26.24	-3.99	-80.24	-87.93
	L_{13}-L_{14}	96.42	-350.16	7.54	-17.34	-10.02	-12.24	81.24	-186.97	-108.01	-131.92
	L_{14}-L_{15}	-352.17	44.61	3.15	-5.75	-5.92	-5.92	43.73	-72.76	-64.10	-64.10
	L_{15}-L_{16}	-192.00	-318.69	7.79	0.39	-16.81	-6.10	238.54	-408.90	-495.26	-499.53
	L_{16}-L_{17}	-0.43	187.22	2.26	5.40	-8.11	0.57	7.53	-3.29	-153.27	8.11
	L_{17}-L_{18}	-154.69	-31.48	3.36	-0.21	-8.78	1.23	3.89	-2.21	-105.39	13.28
	L_{18}-L_{19}	-216.17	146.84	2.53	-0.24	-8.79	3.01	1.67	-2.24	-133.15	33.05
	L_{19}-L_{20}	-136.64	-69.93	2.40	-0.23	-8.73	4.79	4.30	-2.34	-104.91	51.52
	L_{20}-L_{21}	2.99	-170.85	4.55	-10.66	-0.74	1.42	48.43	-113.50	-7.89	15.13
	L_{21}-L_{22}	16.59	-265.54	5.39	-16.56	-1.04	4.56	62.26	-170.42	-28.48	48.57
	L_{22}-L_{23}	-6.26	-180.81	4.91	-11.31	-5.74	-6.57	52.26	-120.44	-61.16	-69.92
	L_{23}-L_{24}	-0.43	-41.33	1.68	-2.43	-11.71	-6.57	41.90	-73.73	-130.39	-67.60
	L_{24}-L_{25}	-253.33	-295.08	4.52	-13.71	-16.95	-12.82	48.15	-149.56	-180.41	-136.54
	L_{25}-L_{26}	-41.36	-43.33	1.68	-2.43	-11.71	-6.57	41.90	-73.73	-130.39	-67.60
	L_{26}-L_{27}	-475.14	-252.78	3.90	-23.40	-17.60	-187.42	41.97	-41.86	-249.15	-187.42
	L_{27}-L_{28}	-280.52	-64.48	3.20	-5.64	-24.34	-0.33	34.11	-60.01	-299.15	-3.48
	L_{28}-L_{29}	-292.37	219.77	4.92	-12.04	-25.47	-5.92	42.80	-34.40	-197.52	-27.43
	L_{29}-L_{30}	-225.88	141.33	-2.76	5.37	-14.65	0.86	29.43	-57.12	-155.99	9.10
	L_{30}-L_{31}	-203.56	-255.20	4.44	-13.29	-2.50	3.77	47.29	-129.76	-40.56	63.01
	L_{31}-L_{32}	-160.09	387.78	2.86	6.18	-12.82	4.20	30.46	65.75	-137.59	44.70
	L_{32}-L_{33}	-202.72	-204.41	4.61	-5.53	-14.50	-5.37	45.11	-5.63	-154.36	-37.12
	L_{33}-L_{34}	-76.75	-103.15	1.91	-4.60	-6.05	-0.66	14.45	-27.05	-64.10	-6.57
	L_{34}-L_{35}	1072.48	-412.36	33.04	-12.39	-1.87	-5.13	347.62	-130.40	-19.68	-1.38
	L_{35}-L_{36}	339.48	-41.53	1.68	-2.43	-11.71	-6.57	41.90	-73.73	-130.39	-67.60
	L_{36}-L_{37}	-475.61	-49.01	10.78	-11.04	-2.43	-2.96	113.38	-116.18	-25.60	-31.14
	L_{37}-L_{38}	-253.34	-295.08	4.52	-13.71	-16.95	-12.82	48.15	-149.56	-180.41	-136.54
	L_{38}-L_{39}	-226.53	-41.80	6.20	-8.20	-7.40	-7.73	65.22	-86.31	-77.83	-81.55
	L_{39}-L_{40}	-214.46	-56.44	4.90	-11.16	-8.09	-11.11	51.56	-117.36	-85.16	-116.85
	L_{40}-L_{41}	-46.80	26.84	3.27	-4.90	-11.15	-6.57	46.80	-73.73	-130.39	-67.60
	L_{41}-L_{42}	49.26	-202.49	2.86	-18.17	-17.09	-9.89	30.12	-191.20	-179.85	-104.05
	L_{42}-L_{43}	-197.13	34.93	3.36	-0.21	-8.78	1.23	32.39	-2.21	-105.39	13.28
	L_{43}-L_{44}	-111.93	0.87	2.07	-4.68	-18.19	-1.92	21.74	-47.18	-191.37	-20.24
	L_{44}-L_{45}	-76.75	-103.15	1.91	-4.60	-6.05	-0.66	14.45	-27.05	-64.10	-6.57
	L_{45}-L_{46}	-60.79	179.83	2.21	5.12	-12.96	0.96	23.22	53.81	-136.36	10.26
	L_{46}-L_{47}	-81.88	265.66	3.79	2.17	-14.25	4.50	39.89	22.86	-149.92	47.39
	L_{47}-L_{48}	-253.34	-41.80	6.20	-8.20	-7.40	-7.73	65.22	-86.31	-77.83	-81.55
	L_{48}-L_{49}	-100.08	-279.84	3.37	-2.20	-14.27	-6.07	35.40	-23.19	-150.16	-63.90
	L_{49}-L_{50}	-372.05	1003.44	3.25	3.37	-22.42	-3.04	32.37	-23.19	-202.16	-30.40
	L_{50}-L_{51}	1027.57	362.88	32.16	-12.51	-1.67	-1.86	342.39	-133.16	-17.80	-19.76
	L_{51}-L_{52}	-227.20	-125.85	2.20	-3.16	-18.73	-2.83	23.38	-33.85	-199.37	-30.10
	L_{52}-L_{53}	-219.74	-118.31	3.42	-4.93	-18.19	-1.92	21.74	-47.18	-191.37	-20.24
	L_{53}-L_{54}	-278.16	-133.13	5.87	-8.91	-4.48	-1.53	62.48	-84.86	-47.95	-16.31
	L_{54}-L_{55}	-219.74	-118.31	3.42	-4.93	-18.19	-1.92	21.74	-47.18	-191.37	-20.24
	L_{55}-L_{56}	-222.36	-243.33	5.89	-11.72	-8.19	-5.13	62.72	-124.78	-87.19	-54.63
	L_{56}-L_{57}	-278.16	-133.13	5.87	-8.91	-4.48	-1.53	62.48	-84.86	-47.95	-16.31
	L_{57}-L_{58}	-167.99	-470.86	4.11	2.98	-26.27	-11.21	43.76	-31.71	-279.64	-119.31
	L_{58}-L_{59}	-445.18	-93.63	5.84	-23.39	-7.69	1.44	36.66	8.89	-251.21	-81.86
	L_{59}-L_{60}	-291.76	-319.69	3.11	-6.00	-26.01	-10.96	22.44	-28.51	-407.91	-81.68
	L_{60}-L_{61}	-392.42	-38.25	1.68	-0.45	-18.45	-1.41	12.44	-4.83	-196.44	-14.96
	L_{61}-L_{62}	-297.29	-109.08	1.31	-0.55	-12.69	2.36	13.97	-5.82	-135.06	25.35
	L_{62}-L_{63}	-291.76	-319.69	3.11	-6.00	-26.01	-10.96	22.44	-28.51	-407.91	-81.68
	L_{63}-L_{64}	24.89	-109.63	5.30	-8.31	-0.38	0.58	57.19	-89.56	-4.04	6.20
	L_{64}-L_{65}	-139.96	-178.06	4.32	-9.07	-1.90	-1.93	46.60	-97.79	-20.44	-20.82
	L_{65}-L_{66}	24.89	-109.63	5.30	-8.31	-0.38	0.58	57.19	-89.56	-4.04	6.20
	L_{66}-L_{67}	47.96	-293.32	3.91	-10.39	-6.56	-5.47	42.64	-111.97	-70.70	-58.95
	L_{67}-L_{68}	-41.79	-343.26	2.96	-16.38	-14.89	-14.88	31.96	-178.56	-160.50	-160.47
	L_{68}-L_{69}	-341.31	86.25	1.69	-0.86	-19.69	-2.42	18.20	9.24	-211.21	-26.05
	L_{69}-L_{70}	-201.18	-152.50	1.34	-1.96	-13.13	1.68	14.44	-21.10	-109.18	18.14
	L_{70}-L_{71}	-147.72	-149.48	2.38	-1.31	-9.28	2.36	25.65	-14.15	-100.01	25.47
	L_{71}-L_{72}	-428.40	-26.47	17.92	-3.12	-0.03	0.03	195.05	-23.60	-0.36	0.33
	L_{72}-L_{73}	70.64	-27.51	5.01	-6.42	-7.35	-1.37	56.97	-80.32	-81.83	-15.25
	L_{73}-L_{74}	-194.51	-25.06	5.09	-12.10	-5.26	-6.44	56.70	-134.71	-58.54	-71.65
	L_{74}-L_{75}	-45.44	-80.85	2.07	-5.73	-13.26	-5.02	23.05	-8.15	-147.82	-55.92
	L_{75}-L_{76}	-74.43	-5.53	0.79	-0.72	-9.15	4.06	8.84	-7.96	-101.85	45.44

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 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	-4.03	-14.79	-1.19	-4.38	0.19	0.71	-13.26	-48.74	2.14	7.87
	L_1-L_2	-17.25	-8.53	-67.34	-1.00	0.00	0.00	-10.21	27.86	1.55	-17.77
	L_2-L_3	-3.41	-3.06	-13.31	-0.28	-0.12	0.27	-17.56	3.85	0.33	-2.28
	L_3-L_4	-12.50	-4.71	-11.69	17.35	0.00	0.00	5.12	56.05	-1.12	-0.42
	L_4-L_5	19.14	-5.67	-25.35	21.40	0.00	0.00	30.99	-72.30	1.72	-0.61
	L_5-L_6	4.61	-4.42	-4.07	1.58	0.00	0.00	-15.53	74.38	-26.81	82.18
	L_6-L_7	6.65	8.52	6.64	-17.66	0.00	0.00	125.61	-30.91	108.38	-94.86
	L_7-L_8	23.91	-34.68	4.66	6.60	0.00	0.00	72.36	117.05	47.35	80.55
	L_8-L_9	27.04	-10.45	0.00	-0.15	0.19	0.16	28.96	-10.45	40.33	-11.33
	L_9-L_{10}	16.18	0.54	8.40	-4.08	0.00	0.00	45.64	9.54	35.52	3.54
	L_{10}-L_{11}	50.77	23.90	21.69	-41.53	158.2	158.16	151.51	173.24	694.3	1.10
	L_{11}-L_{12}	-27.01	-46.27	-0.72	-0.61	1.61	0.68	-45.58	51.63	-15.89	20.52
	L_{12}-L_{13}	-24.86	-13.60	0.21	-6.97	0.00	0.00	0.00	-30.42	27.33	-1.62
	L_{13}-L_{14}	-144.07	86.09	-115.08	122.91	321.7	321.70	275.89	363.71	1221.7	1.13
	L_{14}-L_{15}	-0.62	-2.30	0.14	-0.01	-0.03	0.00	-0.53	0.00	-0.03	0.00
	L_{15}-L_{16}	-1.25	-2.78	2.01	8.13	0.00	0.00	-68.44	30.58	-64.21	44.77
	L_{16}-L_{17}	0.60	1.95	-11.32	10.98	0.00	0.00	-28.23	-58.66	0.18	-1.00
	L_{17}-L_{18}	4.32	3.78	4.23	-4.93	0.00	0.00	-99.13	-34.30	-99.26	-45.63
	L_{18}-L_{19}	1.23	7.08	-27.46	27.24	0.00	0.00	-8.47	-36.45	-46.47	-24.29
	L_{19}-L_{20}	-1.61	-0.36	47.66	10.67	0.00	0.00	6.16	-1.39	57.88	12.99
	L_{20}-L_{21}	-18.29	-63.52	0.88	3.06	0.00	0.00	-28.76	89.90	-3.83	-13.35
	L_{21}-L_{22}	8.37	-2.47	-0.24	0.00	0.00	0.00	56.74	125.45	-0.07	-54.28
	L_{22}-L_{23}	-0.70	11.09	33.79	-15.12	0.00	0.00	135.42	156.22	176.37	122.15
	L_{23}-L_{24}	30.07	28.95	176.70	108.45	0.00	0.00	37.33	115.72	176.70	108.45
	L_{24}-L_{25}	-28.19	-11.94	24.26	-13.51	0.00	0.00	-13.66	22.66	54.53	-24.71
	L_{25}-L_{26}	30.07	28.95	176.70	108.45	0.00	0.00	-13.14	144.30	176.70	108.45
	L_{26}-L_{27}	16.63	-2.95	-1.02	-0.68	2.34	0.22	0.00	7.91	-13.11	53.92
	L_{27}-L_{28}	2.99	2.64	0.64	-0.09	0.00	0.00	-13.42	-8.46	6.69	-3.28
	L_{28}-L_{29}	3.99	-26.93	30.13	-47.42	180.6	180.57	174.56	198.17	1146.7	1.10
	L_{29}-L_{30}	-60.03	27.35	-62.60	53.33	160.6	160.57	168.20	198.17	1146.7	1.10
	L_{30}-L_{31}	12.95	-16.72	-0.42	-0.34	0.00	0.00	0.00	29.03	-16.72	29.03
	L_{31}-L_{32}	-99.98	57.35	-79.24	75.12	256.0	256.03	211.86	281.97	1450.4	1.10
	L_{32}-L_{33}	-42.40	23.09	-32.39	30.63	160.6	160.57	168.20	198.17	1146.7	1.10
	L_{33}-L_{34}	-3.67	2.67	12.98	11.22	0.00	0.00	-24.48	53.29	-12.35	64.40
	L_{34}-L_{35}	-21.21	202.38	-3.44	25.44	0.00	0.00	0.00	62.15	180.66	25.44
	L_{35}-L_{36}	3.84	4.19	10.26	-0.86	0.00	0.00	-8.54	57.06	-0.20	50.49
	L_{36}-L_{37}	10.77	1.56	-9.61	9.58	0.00	0.00	16.43	28.05	49.94	-17.67
	L_{37}-L_{38}	8.32	7.21	-28.04	17.84	0.00	0.00	0.00	28.05	-28.04	17.84
	L_{38}-L_{39}	9.26	-17.26	-14.06	-2.71	0.00	0.00	133.29	35.73	122.95	12.75
	L_{39}-L_{40}	15.83	3.97	-20.92	19.97	0.00	0.00	-22.26	67.13	-20.92	67.13
	L_{40}-L_{41}	-11.20	-18.41	-51.89	48.89	0.00	0.00	0.00	29.69	-70.31	48.89
	L_{41}-L_{42}	-109.53	57.62	-121.83	84.68	0.00	0.00	-109.53	57.62	-121.83	84.68
	L_{42}-L_{43}	1.61	-0.75	3.55	14.26	0.00	0.00	5.91	-30.39	15.11	21.80
	L_{43}-L_{44}	-2.61	-3.76	5.03	-0.01	0.00	0.00	-2.61	-3.76	5.03	-0.01
	L_{44}-L_{45}	1.70	4.74	-10.62	34.26	0.00	0.00	-13.97	-32.89	-31.79	-16.63
	L_{45}-L_{46}	-2.97	2.97	-13.09	13.09	0.00	0.00	-23.52	23.52	-13.09	13.09
	L_{46}-L_{47}	4.05	1.80	-13.29	26.40	0.00	0.00	-5.06	32.85	3.37	10.42
	L_{47}-L_{48}	9.47	2.82	-9.47	9.47	0.00	0.00	0.00	18.94	-9.47	18.94
	L_{48}-L_{49}	-12.47	-56.54	0.79	8.03	0.00	0.00	-6.35	28.84	-1.16	4.24
	L_{49}-L_{50}	-11.12	30.42	-5.32	3.63	0.00	0.00	12.97	107.46	20.57	72.65
	L_{50}-L_{51}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{51}-L_{52}	-12.47	-56.54	0.79	8.03	0.00	0.00	-6.35	28.84	-1.16	4.24
	L_{52}-L_{53}	-2.51	4.43	-4.06	17.49	0.00	0.00	24.44	-20.05	22.42	-137.03
	L_{53}-L_{54}	1.97	-0.05	1.21	0.00	0.00	0.00	1.97	-0.05	1.21	0.00
	L_{54}-L_{55}	-2.51	4.43	-4.06	17.49	0.00	0.00	24.44	-20.05	22.42	-137.03
	L_{55}-L_{56}	-27.98	-3.26	-8.89	28.66	0.00	0.00	-104.23	139.13	-69.02	180.62
	L_{56}-L_{57}	1.97	-0.05	1.21	0.00	0.00	0.00	1.97	-0.05	1.21	0.00
	L_{57}-L_{58}	1.34	-0.45	0.03	3.01	0.00	0.00	-22.10	-18.12	-0.60	0.28
	L_{58}-L_{59}	-2.61	-3.76	5.03	-0.01	0.00	0.00	-2.61	-3.76	5.03	-0.01
	L_{59}-L_{60}	-7.56	-0.68	-3.07	16.83	0.00	0.00	-26.86	-79.60	12.24	-45.92
	L_{60}-L_{61}	-1.70	4.74	-10.62	34.26	0.00	0.00	-13.97	-32.89	-31.79	-16.63
	L_{61}-L_{62}	-2.97	2.97	-13.09	13.09	0.00	0.00	-23.52	23.52	-13.09	13.09
	L_{62}-L_{63}	-7.56	-0.68	-3.07	16.83	0.00	0.00	-26.86	-79.60	12.24	-45.92
	L_{63}-L_{64}	-12.47	-56.54	0.79	8.03	0.00	0.00	-6.35	28.84	-1.16	4.24
	L_{64}-L_{65}	-11.12	30.42	-5.32	3.63	0.00	0.00	12.97	107.46	20.57	72.65
	L_{65}-L_{66}	-12.47	-56.54	0.79	8.03	0.00	0.00	-6.35	28.84	-1.16	4.24
	L_{66}-L_{67}	21.31	87.92	-0.23	0.41	-0.38	1.62	-11.55	-0.63	-0.23	0.41
	L_{67}-L_{68}	-27.98	-3.26	-8.89	28.66	0.00	0.00	-104.23	139.13	-69.02	180.62
	L_{68}-L_{69}	1.34	-0.45	0.03	3.01	0.00	0.00	-22.10	-18.12	-0.60	0.28
	L_{69}-L_{70}	-7.56	-0.68	-3.07	16.83	0.00	0.00	-26.86	-79.60	12.24	-45.92
	L_{70}-L_{71}	-2.04	-1.36	0.31	0.38	0.00	0.00	-12.90	-38.89	-129.14	-137.17
	L_{71}-L_{72}	13.32	0.76	2.52	0.00	0.00	0.00	-13.32	0.76	2.52	0.00
	L_{72}-L_{73}	23.72	0.00	0.00	0.00	0.00	0.00	23.72	0.00	0.00	0.00
	L_{73}-L_{74}	-11.96	12.81	-10.59	19.79	0.00	0.00	-43.37	62.76	-41.59	71.86
	L_{74}-L_{75}	-0.11	0.00	0.00	0.00	0.00	0.00	-0.11	0.00	0.00	0.00
	L_{75}-L_{76}	-0.11	0.00	0.00	0.00	0.00	0.00	-0.11	0.00	0.00	0.00

M_2 Information

ZZ Axis Moments from STAAD

Location	Member	Max. Pos. Moment Start (k-in)	Max. Pos. Moment End (k-in)	Max. Neg. Moment Start (k-in)	Max. Neg. Moment End (k-in)
Structure 2	L_0-L_1	48.55	-183.93	34.65	80.28
	L_1-L_2	106.08	-267.60	46.90	-212.21
	L_2-L_3	81.74	-19.79	272.16	-142.22
	L_3-L_4	14.88	-164.44	-223.00	-97.13
	L_4-L_5	20.52	313.36	192.6	52.93
	L_5-L_6	32.11	313.80	-132.37	243.86
	L_6-L_7	52.83	-3.43	-110.51	-12.39
	L_7-L_8	10.16	47.01	-87.04	164.63
	L_8-L_9	168.72	-33.00	-0.92	2.24
	L_9-L_{10}	276.46	-261.17	-20.52	14.35
	L_{10}-L_{11}	45.23	-37.70	-22.39	-55.97
	L_{11}-L_{12}	47.18	-72.10	-43.14	-56.68
	L_{12}-L_{13}	26.24	-3.99	-80.24	-87.93
	L_{13}-L_{14}	81.24	-186.97	-108.01	-131.92
	L_{14}-L_{15}	43.73	-72.76	-64.10	-64.10
	L_{15}-L_{16}	238.54	-408.90	-495.26	-499.53
	L_{16}-L_{17}	7.53	-3.29	-153.27	8.11
	L_{17}-L_{18}	3.89	-2.21	-105.39	13.28
	L_{18}-L_{19}	1.67	-2.24	-133.15	33.05
	L_{19}-L_{20}	4.30	-2.34	-104.91	51.52
	L_{20}-L_{21}	48.43	-113.50	-7.89	15.13
	L_{21}-L_{22}	62.26	-170.42	-28.48	48.57
	L_{22}-L_{23}	52.26	-120.44	-61.16	-69.92
	L_{23}-L_{24}	41.90	-73.73	-130.39	-67.60
	L_{24}-L_{25}	48.15	-149.56	-180.41	-136.54
	L_{25}-L_{26}	41.90	-73.73	-130.39	-67.60
	L_{26}-L_{27}	41.97	-41.86	-249.15	-187.42
	L_{27}-L_{28}	34.11	-60.01	-299.15	-3.48
	L_{28}-L_{29}	42.80	-34.40	-197.52	-27.43
	L_{29}-L_{30}	29.43	-57.12	-155.99	9.10
	L_{30}-L_{31}	47.29	-129.76	-40.56	63.01
	L_{31}-L_{32}	30.46	65.75	-137.59	44.70
	L_{32}-L_{33}	45.11	-5.63	-154.36	-37.12
	L_{33}-L_{34}	14.45	-27.05	-64.10	-6.57
	L_{34}-L_{35}	347.62	-130.40	-19.68	-1.38
	L_{35}-L_{36}	41.90	-73.73	-130.39	-67.60
	L_{36}-L_{37}	113.38	-116.18	-25.60	-31.14
	L_{37}-L_{38}	48.15	-149.56	-180.41	-136.54
	L_{38}-L_{39}	65.22	-86.31	-77.83	-81.55
	L_{39}-L_{40}	51.56	-117.36	-85.16	-116.85
	L_{40}-L_{41}	46.80	-73.73	-130.39	-67.60
	L_{41}-L_{42}	30.12	-191.20	-179.85	-104.05
	L_{42}-L_{43}	32.39	-2.21	-105.39	13.28
	L_{43}-L_{44}	21.74	-47.18	-191.37	-20.24
	L_{44}-L_{45}	14.45	-27.05	-64.10	-6.57
	L_{45}-L_{46}	23.22	53.81	-136.36	10.26
	L_{46}-L_{47}	39.89	22.86	-149.92	47.39
	L_{47}-L_{48}	65.22	-86.31	-77.83	-81.55
	L_{48}-L_{49}	35.40	-23.19	-150.16	-63.90
	L_{49}-L_{50}	32.37	-23.19	-202.16	-30.40
	L_{50}-L_{51}	342.39	-133.16	-17.80	-19.76
	L_{51}-L_{52}	23.38	-33.85	-199.37	-30.10
	L_{52}-L_{53}	21.74	-47.18	-191.37	-20.24
	L_{53}-L_{54}	62.48	-84.86	-47.95	-16.31
	L_{54}-L_{55}	21.74	-47.18	-191.37	-20.24
	L_{55}-L_{56}	62.72	-124.78	-87.19	-54.63
	L_{56}-L_{57}	62.48	-84.86	-47.95	-16.31
	L_{57}-L_{58}	43.76	-31.71	-279.64	-119.31
	L_{58}-L_{59}	36.66	8.89	-251.21	-81.86
	L_{59}-L_{60}	22.44	-28.51	-407.91	-81.68
	L_{60}-L_{61}	12.44	-4.83	-196.44	-14.96
	L_{61}-L_{62}	13.97	-5.82	-135.06	25.35
	L_{62}-L_{63}	22.44	-28.51	-407.91	-81.68
	L_{63}-L_{64}	57.19	-89.56	-4.04	6.20
	L_{64}-L_{65}	46.60	-97.79	-20.44	-20.82

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans:
Loading: SC1
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 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 | M_3 Information

| Location | Member | ZZ Axis Moments from STAAD: 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) | Max. Neg. Mom. Start (k-ft) | Max. Neg. Mom. 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 f | M_p (k-in) | Formula 1.8 Term * F_y/S_{bc} | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{bxb} | YY Axis Moments from STAAD: 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 (k-ft) | Lane Reduction & Impact Live Load Min (k-ft) | Impact Pedestrian Load Max (k-ft) | Impact Pedestrian Load Min (k-ft) | Max. Pos. Mom. Start (k-ft) | Max. Pos. Mom. End (k-ft) | S_{top} (in^3) | S_b (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | F_{crit} (ksi) | Formula 1.8 Term * F_y/S_{bc} | M_y (k-in) | Equivalent Mom. Factor a | Equivalent Mom. Factor C_{mx} | Equivalent Mom. Factor C_{bxb} | Tension: Yield Axial Factor | Yield Moment Factor | Yield Total | Pass | Fracture Axial Factor | Fracture Moment Factor | Fracture Total | Pass | Compression: Buckle Axial Factor | Buckle Moment Factor | Buckle Total | Pass | Yield Axial Factor | Yield Moment Factor | Yield 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:	5C1
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
& 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_x 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 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_{top} (in^3)	S_b (in^3)	Z_x (in^3)	I_x (in^4)	$I_{x/c}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Pass
Structure 1	U_0-L_1	-12.57	3.38	0.42	-0.24	-2.73	1.30					4.69	-2.64	-30.35	14.46	0.00	0.00	-10.24	0.96	-55.79	23.19	15.6	15.63	15.58	25.96	5	804.0	1,666	857	1.5	773.7	-0.416	0.43	0.43	-52.80	-19.29	0.43	0.18	-8.85	-1.96				

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SCT
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, 17th Edition, 2002

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 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) | ZZ Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | S_z (in^3) | I (in^4) | I_{xx} (in^4) | Shape Factor f | M_p (k-in) | Formula I & Y Terms F-Y$_{bot}$ | M_z (k-in) | Equivalent Mom. Factor | $C_{m(x)}$ | $C_{m(y)}$ | 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 Start (k-in) | Impact Pedestrian Load End (k-in) | YY Axis Moment Properties: Max. Pos. Mom. Start (k-in) | Max. Pos. Mom. End (k-in) | S_{top} (in^3) | S_{bot} (in^3) | S_y (in^3) | Z_y (in^3) | I_{yy} (in^4) | Shape Factor f | M_p (k-in) | P_{allow} (kip) | Formula I & Y Terms F-σ_{bot} | M_y (k-in) | Equivalent Mom. Factor $C_{m(x)}$ | $C_{m(y)}$ | Pass | Yield: Axial Portion | Yield: Moment Portion | Yield: Total | Pass | Tension: Axial Portion | Tension: Moment Portion | Tension: Total | Pass | Fracture: Axial Portion | Fracture: Moment Portion | Fracture: Total | Pass | Buckle: Axial Portion | Buckle: Moment Portion | Buckle: Total | Pass | Compression: Axial Portion | Compression: Moment Portion | Compression: Total | Pass |
|---|---|---|---

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SCI
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
(See Columbia Parkway Load Rating Description Sheet for Guide Bridge Drawings, Article 3.22.1

* 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

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

M_2 Information | **M_1 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 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'c/S_{bb}	M_2 Equivalent Mom. Factor			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)	Impact Pedestrian Load Max (k-in)	Max. Neg. Mom. (k-in)	M_1 Information: Tension: Yield: Axial Axial	Yield: Moment Project.	Yield: Total	Tension: Yield: Pass	Tension: Fracture: Axial Axial	Tension: Fracture: Moment Project.	Tension: Fracture: Total	Tension: Fracture: Pass	Compression: Buckle: Axial Axial	Compression: Buckle: Moment Total	Compression: Buckle: Pass	Compression: Yield: Axial Axial	Compression: Yield: Moment Project.	Compression: Yield: Total	Compression: Yield: Pass
South Truss - Lower Chord	Structure 1																					a	C_{mm}	C_{bm}																							
	L_0-L_1	-19.48	-91.69	3.11	-3.34	-0.70	0.74	0.30	-0.64	-0.11	0.13	41.56	-44.67	-0.34	9.83	3.54	-7.68	-1.37	1.50	28.71	-177.27	39.24	-10.99	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.162	0.54	0.54	35.17	129.34	-2.80	-10.29	0.08	0.28	0.46	1.68	-0.03	-0.11	-37.41	-137.50	1.02	3.69	6.78	24.94	-0.45	-1.66	2.91	-10.61	46.46	48.35	128.3	128.29	121.63	141.18	626.8	1.10	4659	—	0.99805042	4225.3	0.961	0.98	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	L_1-L_2	30.30	-116.56	1.38	-5.35	-3.39	-3.47	0.00	0.00	-0.22	-0.91	18.48	-71.49	-45.33	-46.30	0.00	0.00	-2.66	-10.86	63.41	-244.47	-19.54	211.73	83.6	83.58	67.49	100.97	2577	1026.3	1.21	3332	0.99900394	2755.4	-0.259	0.50	0.50	169.27	-70.78	-3.85	3.81	-13.26	3.81	0.00	2.11	-0.99	-5.43	50.83	-178.28	50.94	0.00	0.00	0.00	14.62	153.19	-25.94	-11.71	-25.80	128.3	128.29	115.05	141.18	626.8	1.10	6220	—	0.99788167	5653.3	0.962	0.98	0.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	L_2-L_3	77.37	-78.01	-1.26	-7.24	-7.21	-5.25	0.23	0.30	-1.04	-1.27	19.26	33.95	-86.26	-70.14	2.57	3.49	-1.23	-1.72	161.85	-172.95	99.5	99.53	91.00	135.43	1889.4	2567.5	26	4141	0.99911881	3294.8	0.313	0.73	0.73	128.65	-133.98	-144.75	1.75	-0.80	-16.01	1.53	0.04	1.09	-1.01	23.41	-10.65	-213.86	20.39	0.62	1.40	26.51	-10.02	206.62	-202.02	-101.63	-161.67	171.6	171.62	158.81	188.47	749.5	1.10	6220	—	0.99795195	5651.9	-0.977	0.21	0.21	0.195	0.083	0.28	Yes	0.116	0.052	0.17	Yes	0.037	0.053	0.09	Yes	0.036	0.049	0.09	Yes
	L_3-L_4	-50.69	-224.12	3.43	-9.20	-6.22	-7.48	-0.28	-0.35	-2.00	-2.46	33.29	-104.45	-52.29	2.73	8.68	-21.16	-3.79	4.14	39.25	-316.77	162.1	162.09	76.68	76.17	1474.7	3186	2572	4141	0.99911881	3052.4	-0.493	0.35	0.35	58.46	-66.40	-170.43	0.11	-0.22	-2.84	-5.34	-0.19	-0.30	-1.14	1.94	1.46	-2.91	19.77	-63.01

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 System
Loading: SC1
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
Load Rating Analysis 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-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_0–L_1	-15.73	54.50	0.48	-0.50	2.65	2.90	0.03	-0.13	-0.04	0.43
	U_1–L_1	-27.56	29.23	0.98	-0.91	-2.26	2.22	0.20	-0.18	-0.57	0.52
	U_1–L_2	40.63	-41.52	0.84	-0.71	-0.77	0.82	0.17	-0.21	-0.06	0.10
	L_1–L_2	56.81	-57.81	1.30	-1.09	-3.03	3.04	0.21	-0.31	-0.70	0.62
	L_1–U_2	64.44	-72.23	1.56	-1.77	-0.10	0.17	0.42	-0.47	0.00	0.00
	L_2–U_2	72.27	-89.72	1.81	-2.26	0.48	0.48	0.48	-0.50	0.00	0.00
	U_2–L_3	109.02	-121.41	2.21	-2.26	-0.80	0.85	0.74	-0.81	0.00	0.00
	L_3–U_3	-42.58	47.08	2.70	-3.23	4.24	0.77	-0.93	-0.77	0.93	0.00
	U_3–L_4	-181.49	200.17	3.14	-3.63	-3.62	3.81	0.00	0.00	-0.94	1.08
	L_4–U_4	-123.88	126.08	3.05	-0.13	-2.62	2.98	0.00	0.00	-0.65	0.66
	U_4–L_5	-122.98	127.66	3.01	-0.01	-2.77	3.20	0.00	0.00	-0.68	0.69
	L_5–U_5	-106.25	107.52	3.03	-1.10	-2.20	2.27	0.00	0.00	-0.52	0.55
	U_5–L_6	-66.44	79.85	3.24	-0.16	-1.68	1.81	0.00	0.00	-0.40	0.40
	L_6–U_6	-31.82	36.77	3.39	-0.13	-0.80	0.85	0.00	0.00	-0.19	0.20
	U_6–L_7	17.15	-23.67	1.83	-1.34	-0.45	0.36	0.26	-0.30	-0.10	0.11
	L_7–U_7	60.44	-64.12	1.94	-2.20	-0.43	0.49	0.59	-0.66	-0.10	0.10
	U_7–L_8	74.38	-85.04	2.05	-2.14	-0.32	0.33	0.43	-0.46	-0.06	0.06
	L_8–U_8	137.76	-162.61	2.37	-2.48	-0.44	0.83	0.87	-0.98	0.00	0.00
	U_8–L_9	163.50	-173.08	3.30	-3.40	-0.38	0.39	-0.95	-0.97	0.07	0.82
	L_9–U_9	187.90	-226.20	2.73	-3.28	-0.28	0.00	1.03	-1.13	-0.06	0.07
	U_9–L_{10}	-13.50	204.40	1.51	-2.29	-0.29	0.00	0.00	0.00	-3.50	0.63
	L_{10}–U_{10}	-201.27	204.78	0.94	-0.90	-4.61	4.53	0.15	-0.14	-1.81	0.88
	U_{10}–L_{11}	-79.55	88.71	0.63	-0.66	-2.21	2.28	0.10	-0.10	-0.37	0.41
	L_{11}–U_{11}	-47.01	54.08	0.72	-0.72	-1.21	1.27	0.11	-0.11	-0.21	0.23
	U_{11}–L_{12}	-4.55	12.51	0.78	-0.82	-1.49	1.65	0.13	-0.13	-0.17	0.21
	L_{12}–U_{12}	27.52	-27.99	1.11	-1.11	-1.09	1.13	0.10	-0.12	-0.04	0.05
	U_{12}–L_{13}	59.94	-61.39	1.31	-1.31	-0.68	0.70	0.06	-0.07	-0.03	0.03
	L_{13}–U_{13}	130.30	-141.79	2.74	-2.90	-0.24	0.17	0.47	-0.50	0.00	0.00
	U_{13}–L_{14}	219.50	-221.44	3.06	-3.12	-0.40	0.00	0.72	-0.73	0.00	0.00
	L_{14}–U_{14}	193.17	-200.18	3.47	-3.67	-0.24	0.36	0.67	-0.68	0.00	0.00
	U_{14}–L_{15}	194.78	-194.58	3.40	-3.48	-0.45	0.96	0.65	-0.65	0.00	0.00
	L_{15}–U_{15}	177.71	-169.99	3.17	-3.01	-0.47	0.00	0.00	0.00	0.00	0.00
	U_{15}–L_{16}	231.79	-230.81	3.11	-2.93	-1.34	1.35	0.77	0.00	0.00	0.00
	L_{16}–U_{16}	26.69	-26.69	1.19	-1.19	-0.18	0.18	0.10	-0.10	-0.16	0.16
	U_{16}–L_{17}	-225.27	219.21	0.38	-0.46	-4.47	4.11	0.02	-0.83	0.81	4.75
	L_{17}–U_{17}	-192.72	187.55	0.33	-0.39	-3.82	3.51	0.02	-0.71	0.69	4.06
	U_{17}–L_{18}	-182.72	181.55	0.69	-0.66	-4.42	4.52	0.07	-0.08	0.77	0.89
	L_{18}–U_{18}	-159.30	160.85	0.84	-0.84	-4.31	4.30	0.05	-0.09	-0.74	0.76
	U_{18}–L_{19}	-69.62	94.95	0.46	-0.46	-2.32	2.32	0.03	-0.04	-0.32	0.32
	L_{19}–U_{19}	-69.48	63.33	0.64	-0.64	-1.79	1.90	0.01	-0.04	-0.15	0.25
	U_{19}–L_{20}	-37.60	-4.29	0.77	-0.77	-0.91	1.00	0.00	-0.01	-0.06	0.13
	L_{20}–U_{20}	-5.05	11.01	1.23	-1.23	-0.83	0.87	0.13	-0.14	-0.07	0.09
	U_{20}–L_{21}	28.89	-55.10	2.19	-2.19	-0.53	0.58	0.35	-0.35	-0.47	0.47
	L_{21}–U_{21}	70.77	-74.09	2.23	-2.30	-0.72	0.72	0.40	-0.41	-0.05	0.05
	U_{21}–L_{22}	104.64	-104.99	2.79	-2.76	-0.68	0.66	0.52	-0.51	-0.06	0.06
	L_{22}–U_{22}	178.14	-178.71	2.42	-2.42	-0.18	0.18	0.29	-0.29	-0.06	0.06
	U_{22}–L_{23}	189.52	-191.09	4.26	-4.29	-0.68	0.68	0.80	-0.81	-0.06	0.05
	L_{23}–U_{23}	204.86	-207.66	4.01	-4.01	-0.71	0.71	0.75	-0.77	-0.06	0.06
	U_{23}–L_{24}	207.45	-212.05	3.36	-3.12	-1.44	1.49	0.81	-0.82	0.00	0.00
	L_{24}–U_{24}	242.53	-244.00	3.63	-3.63	-1.49	1.49	0.87	-0.87	0.00	0.00
	U_{24}–L_{25}	251.63	246.63	0.42	-0.42	-4.10	3.92	0.02	-0.82	0.81	5.51
	L_{25}–U_{25}	185.28	177.57	0.38	-0.38	-3.54	3.63	0.05	-0.11	-0.66	0.69
	U_{25}–L_{26}	187.36	186.96	0.88	-0.88	-3.54	3.63	0.05	-0.11	-0.66	0.69
	L_{26}–U_{26}	185.33	192.16	0.86	0.01	-3.51	3.65	0.00	0.00	-0.64	0.74
	U_{26}–L_{27}	187.36	191.13	0.86	0.00	-3.51	3.65	0.00	0.00	-0.64	0.74
	L_{27}–U_{27}	185.28	177.57	0.38	-0.38	-3.54	3.63	0.05	-0.11	-0.66	0.69
	U_{27}–L_{28}	251.63	246.63	0.42	-0.42	-4.10	3.92	0.02	-0.82	0.81	5.51
	L_{28}–U_{28}	242.53	-244.00	3.63	-3.63	-1.49	1.49	0.87	-0.87	0.00	0.00
	U_{28}–L_{29}	207.45	-212.05	3.36	-3.12	-1.44	1.49	0.81	-0.82	0.00	0.00
	L_{29}–U_{29}	204.86	-207.66	4.01	-4.01	-0.71	0.71	0.75	-0.77	-0.06	0.06
	U_{29}–L_{30}	189.52	-191.09	4.26	-4.29	-0.68	0.68	0.80	-0.81	-0.06	0.05
	L_{30}–U_{30}	178.14	-178.71	2.42	-2.42	-0.18	0.18	0.29	-0.29	-0.06	0.06
	U_{30}–L_{31}	104.64	-104.99	2.79	-2.76	-0.68	0.66	0.52	-0.51	-0.06	0.06
	L_{31}–U_{31}	70.77	-74.09	2.23	-2.30	-0.72	0.72	0.40	-0.41	-0.05	0.05
	U_{31}–L_{32}	28.89	-55.10	2.19	-2.19	-0.53	0.58	0.35	-0.35	-0.47	0.47
	L_{32}–U_{32}	-5.05	11.01	1.23	-1.23	-0.83	0.87	0.13	-0.14	-0.07	0.09
	U_{32}–L_{33}	-37.60	-4.29	0.77	-0.77	-0.91	1.00	0.00	-0.01	-0.06	0.13
	L_{33}–U_{33}	-69.48	63.33	0.64	-0.64	-1.79	1.90	0.01	-0.04	-0.15	0.25
	U_{33}–L_{34}	-69.62	94.95	0.46	-0.46	-2.32	2.32	0.03	-0.04	-0.32	0.32
	L_{34}–U_{34}	-159.30	160.85	0.84	-0.84	-4.31	4.30	0.05	-0.09	-0.74	0.76
	U_{34}–L_{35}	-182.72	181.55	0.69	-0.66	-4.42	4.52	0.07	-0.08	0.77	0.89
	L_{35}–U_{35}	-192.72	187.55	0.33	-0.39	-3.82	3.51	0.02	-0.71	0.69	4.06
	U_{35}–L_{36}	-225.27	219.21	0.38	-0.46	-4.47	4.11	0.02	-0.83	0.81	4.75
	L_{36}–U_{36}	-79.55	88.71	0.63	-0.66	-2.21	2.28	0.10	-0.10	-0.37	0.41
	U_{36}–L_{37}	-201.27	204.78	0.94	-0.90	-4.61	4.53	0.15	-0.14	-1.81	0.88
	L_{37}–U_{37}	-13.50	204.40	1.51	-2.29	-0.29	0.00	0.00	0.00	-3.50	0.63
	U_{37}–L_{38}	163.50	-173.08	3.30	-3.40	-0.38	0.39	-0.95	-0.97	0.07	0.82
	L_{38}–U_{38}	187.90	-226.20	2.73	-3.28	-0.28	0.00	1.03	-1.13	-0.06	0.07
	U_{38}–L_{39}	137.76	-162.61	2.37	-2.48	-0.44	0.83	0.87	-0.98	0.00	0.00
	L_{39}–U_{39}	74.38	-85.04	2.05	-2.14	-0.32	0.33	0.43	-0.46	-0.06	0.06
	U_{39}–L_{40}	60.44	-64.12	1.94	-2.20	-0.43	0.49	0.59	-0.66	-0.10	0.10
	L_{40}–U_{40}	17.15	-23.67	1.83	-1.34	-0.45	0.36	0.26	-0.30	-0.10	0.11
	U_{40}–L_{41}	-31.82	36.77	3.39	-0.13	-0.80	0.85	0.00	0.00	-0.19	0.20
	L_{41}–U_{41}	-66.44	79.85	0.24	-0.16	-1.68	1.81	0.00	0.00	-0.40	0.40
	U_{41}–L_{42}	-106.25	107.52	0.03	-1.10	-2.20	2.27	0.00	0.00	-0.52	0.55
	L_{42}–U_{42}	-122.98	127.66	0.01	-0.01	-2.77	3.20	0.00	0.00	-0.68	0.69
	U_{42}–L_{43}	-123.88	126.08	0.05	-0.13	-2.62	2.98	0.00	0.00	-0.65	0.66
	L_{43}–U_{43}	-181.49	200.17	0.14	-0.13	-3.62	3.81	0.00	0.00	-0.94	1.08
	U_{43}–L_{44}	-79.55	88.71	0.63	-0.66	-2.21	2.28	0.10	-0.10	-0.37	0.41
	L_{44}–U_{44}	-47.01	54.08	0.72	-0.72	-1.21	1.27	0.11	-0.11	-0.21	0.23
	U_{44}–L_{45}	-4.55	12.51	0.78	-0.82	-1.49	1.65	0.13	-0.13	-0.17	0.21
	L_{45}–U_{45}	27.52	-27.99	1.11	-1.11	-1.09	1.13	0.10	-0.12	-0.04	0.05
	U_{45}–L_{46}	59.94	-61.39	1.31	-1.31	-0.68	0.70	0.06	-0.07	-0.03	0.03
	L_{46}–U_{46}	130.30	-141.79	2.74	-2.90	-0.24	0.17	0.47	-0.50	0.00	0.00
	U_{46}–L_{47}	219.50	-221.44	3.06	-3.12	-0.40	0.00	0.72	-0.73	0.00	0.00
	L_{47}–U_{47}	193.17	-200.18	3.47	-3.67	-0.24	0.36	0.67	-0.68	0.00	0.00
	U_{47}–L_{48}	194.78	-194.58	3.40	-3.48	-0.45	0.96	0.65	-0.65	0.00	0.00
	L_{48}–U_{48}	177.71	-169.99	3.17	-3.01	-0.47	0.00	0.00	0.00	0.00	0.00
	U_{48}–L_{49}	231.79	-230.81	3.11	-2.93	-1.34	1.35	0.77	0.00	0.00	0.00
	L_{49}–U_{49}	26.69	-26.69	1.19	-1.19	-0.18	0.18	0.10	-0.10	-0.16	0.16
	U_{49}–L_{50}	-225.27	219.21	0.38	-0.46	-4.47	4.11	0.02	-0.83	0.81	4.75
	L_{50}–U_{50}	-192.72	187.55	0.33	-0.39	-3.82	3.51	0.02	-0.71	0.69	4.06
	U_{50}–L_{51}	-182.72	181.55	0.69	-0.66	-4.42	4.52	0.07	-0.08	0.77	0.89
	L_{51}–U_{51}	-159.30	160.85	0.84	-0.84	-4.31	4.30	0.05	-0.09	-0.74	0.76
	U_{51}–L_{52}	-69.62	94.95	0.46	-0.46	-2.32	2.32	0.03	-0.04	-0.32	0.32
	L_{52}–U_{52}	-69.48	63.33	0.64	-0.64	-1.79	1.90	0.01	-0.04	-0.15	0.25
	U_{52}–L_{53}	-37.60	-4.29	0.77	-0.77	-0.91	1.00	0.00	-0.01	-0.06	0.13
	L_{53}–U_{53}	-5.05	11.01	1.23	-1.23	-0.83	0.87	0.13	-0.14	-0.07	0.09
	U_{53}–L_{54}	28.89	-55.10	2.19	-2.19	-0.53	0.58	0.35	-0.35	-0.47	0.47
	L_{54}–U_{54}	70.77	-74.09	2.23	-2.30	-0.72	0.72	0.40	-0.41	-0.05	0.05
	U_{54}–L_{55}	104.64	-104.99	2.79	-2.76	-0.68	0.66	0.52	-0.51	-0.06	0.06
	L_{55}–U_{55}	178.14	-178.71	2.42	-2.42	-0.18	0.18	0.29	-0.29	-0.06	0.06
	U_{55}–L_{56}	189.52	-191.09	4.26	-4.29	-0.68	0.68	0.80	-0.81	-0.06	0.05
	L_{56}–U_{56}	204.86	-207.66	4.01	-4.01	-0.71	0.71	0.75	-0.77	-0.06	0.06
	U_{56}–L_{57}	207.45	-212.05	3.36	-3.12	-1.44	1.49	0.81	-0.82	0.00	0.00
	L_{57}–U_{57}	242.53	-244.00	3.63	-3.63	-1.49	1.49	0.87	-0.87	0.00	0.00
	U_{57}–L_{58}	251.63	246.63	0.42	-0.42	-4.10	3.92	0.02	-0.82	0.81	5.51
	L_{58}–U_{58}	185.28	177.57	0.38	-0.38	-3.54	3.63	0.05	-0.11	-0.66	0.69
	U_{58}–L_{59}	187.36	186.96	0.88	-0.88	-3.54	3.63	0.05	-0.11	-0.66	0.69
	L_{59}–U_{59}	185.33	192.16	0.86	0.01	-3.51	3.65	0.00	0.00	-0.64	0.74
	U_{59}–L_{60}	187.36	191.13	0.86	0.00	-3.51	3.65	0.00	0.00	-0.64	0.74
	L_{60}–U_{60}	185.28	177.57	0.38	-0.38	-3.54	3.63	0.05	-0.11	-0.66	0.69
	U_{60}–L_{61}	251.63	246.63	0.42	-0.42	-4.10	3.92	0.02	-0.82	0.81	5.51
	L_{61}–U_{61}	242.53	-244.00	3.63	-3.63	-1.49	1.49	0.87	-0.87	0.00	0.00
	U_{61}–L_{62}	207.45	-212.05	3.36	-3.12	-1.44	1.49	0.81	-0.82	0.00	0.00
	L_{62}–U_{62}	204.86	-207.66	4.01	-4.01	-0.71	0.71	0.75	-0.77	-0.06	0.06
	U_{62}–L_{63}	189.52	-191.09	4.26	-4.29	-0.68	0.68	0.80	-0.81	-0.06	0.05
	L_{63}–U_{63}	178.14	-178.71	2.42	-2.42	-0.18	0.18	0.29	-0.29	-0.06	0.06
	U_{63}–L_{64}	104.64	-104.99	2.79	-2.76	-0.68	0.66	0.52	-0.51	-0.06	0.06
	L_{64}–U_{64}	70.77	-74.09	2.23	-2.30	-0.72	0.72	0.40	-0.41	-0.05	0.05
	U_{64}–L_{65}	28.89	-55.10	2.19	-2.19	-0.53	0.58	0.35	-0.35	-0.47	0.47
	L_{65}–U_{65}	-5.05	11.01	1.23	-1.23	-0.83	0.87	0.13	-0.14	-0.07	0.09
	U_{65}–L_{66}	-37.60	-4.29	0.77	-0.77	-0.91	1.00	0.00	-0.01	-0.06	0.13
	L_{66}–U_{66}	-69.48	63.33	0.64	-0.64	-1.79	1.90	0.01	-0.04	-0.15	0.25
	U_{66}–L_{67}	-69.62	94.95	0.46	-0.46	-2.32	2.32	0.03	-0.04	-0.32	0.32
	L_{67}–U_{67}	-159.30	160.85	0.84	-0.84	-4.31	4.30	0.05	-0.09	-0.74	0.76
	U_{67}–L_{68}	-182.72	181.55	0.69	-0.66	-4.42	4.52	0.07	-0.08	0.77	0.89
	L_{68}–U_{68}	-192.72	187.55	0.33	-0.39	-3.82	3.51	0.02	-0.71	0.69	4.06
	U_{68}–L_{69}	-225.27	219.21	0.38	-0.46	-4.47	4.11	0.02	-0.83	0.81	4.75
	L_{69}–U_{69}	-79.55	88.71	0.63	-0.66	-2.21	2.28	0.10	-0.10	-0.37	0.41
	U_{69}–L_{70}	-201.27	204.78	0.94	-0.90	-4.61	4.53	0.15	-0.14	-1.81	0.88
	L_{70}–U_{70}	-13.50	204.40	1.51	-2.29	-0.29	0.00	0.00	0.00	-3.50	0.63
	U_{70}–L_{71}	163.50	-173.08	3.30	-3.40	-0.38	0.39	-0.95	-0.97	0.07	0.82
	L_{71}–U_{71}	187.90	-226.20	2.73	-3.28	-0.28	0.00	1.03	-1.13	-0.06	0.07
	U_{71}–L_{72}	137.76	-162.61	2.37	-2.48	-0.44	0.83	0.87	-0.98	0.00	0.00
	L_{72}–U_{72}	74.38	-85.04	2.05	-2.14	-0.32	0.33	0.43	-0.46	-0.06	0.06
	U_{72}–L_{73}	60.44	-64.12	1.94	-2.20	-0.43	0.49	0.59	-0.66	-0.10	0.10
	L_{73}–U_{73}	17.15	-23.67	1.83	-1.34	-0.45	0.36	0.26	-0.30	-0.10	0.11
	U_{73}–L_{74}	-31.82	36.77	3.39	-0.13	-0.80	0.85	0.00	0.00	-0.19	0.20
	L_{74}–U_{74}	-66.44	79.85	0.24	-0.16	-1.68	1.81	0.00	0.00	-0.40	0.40
	U_{74}–L_{75}	-106.25	107.52	0.03	-1.10	-2.20	2.27	0.00	0.00	-0.52	0.55
	L_{75}–U_{75}	-122.98	127.66	0.01	-0.01	-2.77	3.20	0.00	0.00	-0.68	0.69
	U_{75}–L_{76}	-123.88	126.08	0.05	-0.13	-2.62	2.98	0.00	0.00	-0.65	0.66
	L_{76}–U_{76}	-181.49	200.17	0.14	-0.13	-3.62	3.81	0.00	0.00	-0.94	1.08
	U_{76}–L_{77}	-79.55	88.71	0.63	-0.66	-2.21	2.28	0.10	-0.10	-0.37	0.41
	L_{77}–U_{77}	-47.01	54.08	0.72	-0.72	-1.21	1.27	0.11	-0.11	-0.21	0.23
	U_{77}–L_{78}	-4.55	12.51	0.78	-0.82	-1.49	1.65	0.13	-0.13	-0.17	0.21
	L_{78}–U_{78}	27.52	-27.99	1.11	-1.11	-1.09	1.13	0.10	-0.12	-0.04	0.05
	U_{78}–L_{79}	59.94	-61.39	1.31	-1.31	-0.68	0.70	0.06	-0.07	-0.03	0.03
	L_{79}–U_{79}	130.30	-141.79	2.74	-2.90	-0.24	0.17	0.47	-0.50	0.00	0.00
	U_{79}–L_{80}	219.50	-221.44	3.06	-3.12	-0.40	0.00	0.72	-0.73	0.00	0.00
	L_{80}–U_{80}	193.17	-200.18	3.47	-3.67	-0.24	0.36	0.67	-0.68	0.00	0.00
	U_{80}–L_{81}	194.78	-194.58	3.40	-3.48	-0.45	0.96	0.65	-0.65	0.00	0.00
	L_{81}–U_{81}	177.71	-169.99	3.17	-3.01	-0.47	0.00	0.00	0.00	0.00	0.00
	U_{81}–L_{82}	231.79	-230.81	3.11	-2.93	-1.34	1.35	0.77	0.00	0.00	0.00
	L_{82}–U_{82}	26.69	-26.69	1.19	-1.19	-0.18	0.18	0.10	-0.10	-0.16	0.16
	U_{82}–L_{83}	-225.27	219.21	0.38	-0.46	-4.47	4.11	0.02	-0.83	0.81	4.75
	L_{83}–U_{83}	-192.72	187.55	0.33	-0.39	-3.82	3.51	0.02	-0.71	0.69	4.06
	U_{83}–L_{84}	-182.72	181.55	0.69	-0.66	-4.42	4.52	0.07	-0.08	0.77	0.89
	L_{84}–U_{84}	-159.30	160.85	0.84	-0.84	-4.31	4.30	0.05	-0.09	-0.74	0.76
	U_{84}–L_{85}	-69.62	94.95	0.46	-0.46	-2.32	2.32	0.03	-0.04	-0.32	0.32
	L_{85}–U_{85}	-69.48	63.33	0.64	-0.64	-1.79	1.90	0.01	-0.04	-0.15	0.25
	U_{85}–L_{86}	-37.60	-4.29	0.77	-0.77	-0.91	1.00	0.00	-0.01	-0.06	0.13
	L_{86}–U_{86}	-5.05	11.01	1.23	-1.23	-0.83	0.87	0.13	-0.14	-0.07	0.09
	U_{86}–L_{87}	28.89	-55.10	2.19	-2.19	-0.53	0.58	0.35	-0.35	-0.47	0.47
	L_{87}–U_{87}	70.77	-74.09	2.23	-2.30	-0.72	0.72	0.40	-0.41	-0.05	0.05
	U_{87}–L_{88}	104.64	-104.99	2.79	-2.76	-0.68	0.66	0.52	-0.51	-0.06	0.06
	L_{88}–U_{88}	178.14	-178.71	2.42	-2.42	-0.18	0.18	0.29	-0.29	-0.06	0.06
	U_{88}–L_{89}	189.52	-191.09	4.26	-4.29	-0.68	0.68	0.80	-0.81	-0.06	0.05
	L_{89}–U_{89}	204.86	-207.66	4.01	-4.01	-0.71	0.71	0.75	-0.77	-0.06	0.06
	U_{89}–L_{90}	207.45	-212.05	3.36	-3.12	-1.44	1.49	0.81	-0.82	0.00	0.00
	L_{90}–U_{90}	242.53	-244.00	3.63	-3.63	-1.49	1.49	0.87	-0.87	0.00	0.00
	U_{90}–L_{91}	251.63	246.63	0.42	-0.42	-4.10	3.92	0.02	-0.82	0.81	5.51
	L_{91}–U_{91}	185.28	177.57	0.38	-0.38	-3.54	3.63	0.05	-0.11	-0.66	0.69
	U_{91}–L_{92}	187.36	186.96	0.88	-0.88	-3.54	3.63	0.05	-0.11	-0.66	0.69
	L_{92}–U_{92}	185.33	192.16	0.86	0.01	-3.51	3.65	0.00	0.00	-0.64	0.74
	U_{92}–L_{93}	187.36	191.13	0.86	0.00	-3.51	3.65	0.00	0.00	-0.64	0.74
	L_{93}–U_{93}	185.28	177.57	0.38	-0.38	-3.54	3.63	0.05	-0.11	-0.66	0.69
	U_{93}–L_{94}	251.63	246.63	0.42	-0.42	-4.10	3.92	0.02	-0.82	0.81	5.51
	L_{94}–U_{94}	242.53	-244.00	3.63	-3.63	-1.49	1.49	0.87	-0.87	0.00	0.00
	U_{94}–L_{95}	207.45	-212.05	3.36	-3.12	-1.44	1.49	0.81	-0.82	0.00	0.00
	L_{95}–U_{95}	204.86	-207.66	4.01	-4.01	-0.71	0.71	0.75	-0.77	-0.06	0.06
	U_{95}–L_{96}	189.52	-191.09

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: SCI
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) 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-L_1	3.62	-1.41	22	-0.12	1.52	0.77	0.15	0.01	0.03	-0.02
	L_1-L_2	-11.46	-3.33	39	-0.16	-0.82	0.02	0.08	-0.04	-0.25	0.07
	L_2-L_3	-10.03	-11.79	33	-0.02	-0.63	-0.10	0.09	-0.03	-0.13	-0.05
	L_3-L_4	9.82	-15.00	34	0.10	-0.38	-0.53	0.08	0.01	-0.08	-0.12
	L_4-L_5	-16.21	57.07	-26	-0.26	0.40	1.12	-0.17	-0.01	0.21	0.40
	U_5-L_5	-34.06	79.11	-39	0.28	-1.63	0.93	0.06	0.21	-0.33	0.22
	L_5-L_6	-37.44	73.73	-42	0.47	-1.49	0.92	0.11	0.27	-0.41	0.22
	L_6-L_7	-1.45	103.74	0.71	0.56	-0.86	1.58	0.15	0.18	0.24	0.62
	L_7-L_8	-12.32	139.19	0.73	0.34	-0.94	2.30	0.21	0.13	-0.19	0.58
	L_8-L_9	-100.86	90.26	0.25	0.29	-1.61	3.03	0.38	0.33	-0.62	0.78
	L_9-L_{10}	-73.41	69.80	0.32	0.52	-1.84	0.86	0.06	0.14	-0.38	0.21
	L_{10}-L_{11}	-87.96	62.23	0.32	0.52	-1.84	0.86	0.06	0.14	-0.38	0.21
	L_{11}-L_{12}	-69.88	47.84	0.08	0.00	0.40	0.72	0.00	0.00	-0.31	0.21
	L_{12}-L_{13}	-27.39	6.37	0.05	0.01	-0.70	0.05	0.00	0.00	-0.15	0.03
	L_{13}-L_{14}	-5.38	-3.24	0.05	0.00	-0.70	0.05	0.00	0.00	-0.15	0.03
	L_{14}-L_{15}	-31.03	12.71	0.22	-0.19	-1.07	0.65	0.05	-0.04	-0.19	0.11
	L_{15}-L_{16}	-46.63	27.25	0.52	-0.54	-0.94	0.28	0.08	-0.10	-0.48	0.06
	L_{16}-L_{17}	-118.88	85.28	0.31	-0.29	-2.49	1.76	0.06	-0.05	-0.56	0.42
	L_{17}-L_{18}	-117.64	87.57	0.26	-0.32	-1.80	1.84	0.04	-0.04	-0.57	0.43
	L_{18}-L_{19}	-148.08	120.85	0.17	-0.18	2.68	2.01	0.04	-0.04	-0.79	0.63
	L_{19}-L_{20}	-86.91	116.74	0.46	-0.31	-3.05	2.85	0.01	-0.06	-0.13	0.88
	L_{20}-L_{21}	-76.14	114.46	0.53	-0.12	-3.10	2.69	0.03	-0.02	-0.09	0.83
	L_{21}-L_{22}	-118.23	92.26	0.76	-0.67	-2.94	2.18	0.11	-0.10	-0.52	0.43
	L_{22}-L_{23}	-94.33	94.33	0.43	-0.43	-2.64	2.64	0.00	0.00	-0.43	0.43
	L_{23}-L_{24}	-24.33	8.61	0.46	-0.37	-1.14	0.72	0.07	-0.06	-0.18	0.11
	L_{24}-L_{25}	-1.47	18.42	0.45	-0.01	-0.56	0.56	0.00	0.00	-0.11	0.11
	L_{25}-L_{26}	13.33	-37.03	0.47	-0.83	-0.56	0.00	0.04	-0.03	-0.09	0.03
	L_{26}-L_{27}	-66.01	54.01	0.08	-0.29	-1.53	0.78	0.00	0.00	-0.23	0.00
	L_{27}-L_{28}	-133.77	104.34	0.27	-0.29	-1.69	1.52	0.03	0.05	-0.27	0.25
	L_{28}-L_{29}	-116.17	105.67	0.42	-0.31	-2.45	1.46	0.04	0.11	-0.41	0.24
	L_{29}-L_{30}	-139.98	104.34	0.27	-0.29	-1.69	1.52	0.03	0.05	-0.27	0.25
	L_{30}-L_{31}	-131.97	101.07	0.65	-0.34	-2.69	2.27	0.05	0.08	-0.49	0.43
	L_{31}-L_{32}	-175.19	162.79	1.09	-0.78	-2.80	2.51	0.04	-0.02	-0.64	0.56
	L_{32}-L_{33}	-45.28	-135.71	0.23	-0.09	-2.15	2.70	0.18	-0.02	-0.36	0.49
	L_{33}-L_{34}	-143.90	77.79	0.27	-0.10	-2.98	2.61	0.05	-0.08	-0.61	0.53
	L_{34}-L_{35}	-112.49	136.83	0.34	-0.41	-3.12	2.83	0.07	-0.50	-0.49	0.33
	L_{35}-L_{36}	-108.58	108.58	0.43	-0.43	-3.26	3.26	0.00	0.00	-0.43	0.43
	L_{36}-L_{37}	-83.86	94.66	0.46	-0.47	-2.55	1.86	0.06	0.00	-0.37	0.27
	L_{37}-L_{38}	-91.74	54.21	0.42	-0.39	-1.69	1.52	0.03	0.05	-0.27	0.25
	L_{38}-L_{39}	-53.04	22.03	0.18	-0.15	-1.44	0.61	0.01	-0.01	-0.18	0.06
	L_{39}-L_{40}	-14.00	1.02	0.32	-0.22	-0.79	0.17	0.00	0.04	-0.11	0.03
	L_{40}-L_{41}	-18.17	5.29	0.32	-0.22	-0.79	0.17	0.00	0.04	-0.11	0.03
	L_{41}-L_{42}	-32.82	30.91	0.39	-0.36	-1.21	0.90	0.03	0.00	-0.20	0.17
	L_{42}-L_{43}	-53.04	22.03	0.45	-0.50	-1.44	0.61	0.01	-0.01	-0.18	0.06
	L_{43}-L_{44}	-83.86	100.04	0.45	-0.50	-2.56	1.92	0.06	0.00	-0.42	0.27
	L_{44}-L_{45}	-88.49	117.09	0.45	-0.15	-2.59	2.23	0.05	0.28	-0.02	0.56
	L_{45}-L_{46}	-30.08	120.33	0.45	-0.46	-3.56	3.56	0.00	0.00	-0.43	0.43
	L_{46}-L_{47}	-125.63	123.54	1.08	-0.83	-2.55	2.28	0.00	0.00	-0.52	0.49
	L_{47}-L_{48}	-30.08	120.33	0.45	-0.46	-3.56	3.56	0.00	0.00	-0.43	0.43
	L_{48}-L_{49}	-83.58	187.86	0.89	-0.15	-2.39	2.98	0.17	0.01	-0.45	0.61
	L_{49}-L_{50}	-30.08	120.33	0.45	-0.46	-3.56	3.56	0.00	0.00	-0.43	0.43
	L_{50}-L_{51}	-138.54	150.45	0.43	0.07	-2.80	2.32	0.04	0.06	-0.51	0.45
	L_{51}-L_{52}	-128.90	122.99	0.42	-0.30	-2.63	1.86	0.04	0.09	-0.46	0.33
	L_{52}-L_{53}	-128.46	96.46	0.46	-0.46	-2.63	2.63	0.00	0.00	-0.46	0.46
	L_{53}-L_{54}	-128.40	95.00	0.18	0.21	-2.40	1.28	0.00	0.00	-0.41	0.35
	L_{54}-L_{55}	-88.49	117.09	0.45	-0.15	-2.59	2.23	0.05	0.28	-0.02	0.56
	L_{55}-L_{56}	-88.88	-32.25	0.37	-0.33	-0.65	0.03	0.06	-0.04	-0.14	0.03
	L_{56}-L_{57}	-4.65	-13.30	0.44	-0.33	-0.92	0.55	0.07	-0.06	-0.11	0.03
	L_{57}-L_{58}	-18.17	5.29	0.32	-0.22	-0.79	0.17	0.00	0.04	-0.11	0.03
	L_{58}-L_{59}	-43.21	40.39	0.46	-0.40	-1.58	1.08	0.07	-0.07	-0.27	0.19
	L_{59}-L_{60}	-43.21	40.39	0.46	-0.40	-1.58	1.08	0.07	-0.07	-0.27	0.19
	L_{60}-L_{61}	-135.93	107.52	0.57	-0.51	-2.62	2.14	0.08	-0.08	-0.55	0.45
	L_{61}-L_{62}	-135.93	107.52	0.57	-0.51	-2.62	2.14	0.08	-0.08	-0.55	0.45
	L_{62}-L_{63}	-66.35	89.44	0.24	-0.15	-3.56	2.88	0.01	-0.03	-0.13	0.38
	L_{63}-L_{64}	-137.90	96.45	0.38	-0.31	-3.01	2.13	0.05	-0.05	-0.75	0.56
	L_{64}-L_{65}	-89.32	90.65	0.26	-0.23	-2.91	1.99	0.05	0.08	-0.62	0.45
	L_{65}-L_{66}	-89.32	90.65	0.26	-0.23	-2.91	1.99	0.05	0.08	-0.62	0.45
	L_{66}-L_{67}	-18.99	22.49	0.15	0.50	-0.78	-0.27	0.04	0.01	-0.18	-0.02
	L_{67}-L_{68}	-18.99	22.49	0.15	0.50	-0.78	-0.27	0.04	0.01	-0.18	-0.02
	L_{68}-L_{69}	-4.48	-12.52	0.37	-0.13	-0.71	-0.09	-0.03	-0.14	-0.05	-0.03
	L_{69}-L_{70}	-4.48	-12.52	0.37	-0.13	-0.71	-0.09	-0.03	-0.14	-0.05	-0.03
	L_{70}-L_{71}	-34.24	14.49	0.18	0.08	-0.68	0.53	0.07	-0.05	-0.20	-0.14

Location	Member	Live Load (Min) Start (k-ft)	Live Load (Min) End (k-ft)	Pedestrian Load (Min) Start (k-ft)	Pedestrian Load (Min) End (k-ft)	Lane Reduction & Impact Live Load Min Start (k-ft)	Lane Reduction & Impact Live Load Min End (k-ft)	Impact Pedestrian Load Min Start (k-ft)	Impact Pedestrian Load Min End (k-ft)
Structure 1	U_0-L_1	-19.79	7.73	-0.59	0.04	-2.92	1.49	-0.21	0.01
	L_1-L_2	-38.03	1.14	-1.16	0.03	-5.61	0.17	-0.36	0.01
	L_2-L_3	-32.58	0.00	-0.99	0.00	-4.81	0.00	-0.30	0.00
	L_3-L_4	-31.97	0.00	-0.97	0.00	-4.72	0.00	-0.29	0.00
	L_4-L_5	52.68	-16.21	1.60	-0.49	7.78	-2.39	0.48	-0.15
	U_5-L_5	108.77	-33.47	3.31	-1.02	16.06	-4.94	0.99	-0.30
	L_5-L_6	119.52	-36.78	3.64	-1.12	17.65	-5.43	1.09	-0.34
	L_6-L_7	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_7-L_8	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_8-L_9	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_9-L_{10}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{10}-L_{11}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{11}-L_{12}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{12}-L_{13}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{13}-L_{14}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{14}-L_{15}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{15}-L_{16}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{16}-L_{17}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{17}-L_{18}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{18}-L_{19}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{19}-L_{20}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{20}-L_{21}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{21}-L_{22}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{22}-L_{23}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{23}-L_{24}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{24}-L_{25}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{25}-L_{26}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{26}-L_{27}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{27}-L_{28}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{28}-L_{29}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{29}-L_{30}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{30}-L_{31}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{31}-L_{32}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{32}-L_{33}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{33}-L_{34}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{34}-L_{35}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{35}-L_{36}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{36}-L_{37}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{37}-L_{38}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{38}-L_{39}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{39}-L_{40}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{40}-L_{41}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{41}-L_{42}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{42}-L_{43}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{43}-L_{44}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{44}-L_{45}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{45}-L_{46}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{46}-L_{47}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{47}-L_{48}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{48}-L_{49}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{49}-L_{50}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{50}-L_{51}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{51}-L_{52}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{52}-L_{53}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{53}-L_{54}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{54}-L_{55}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{55}-L_{56}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{56}-L_{57}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{57}-L_{58}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{58}-L_{59}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{59}-L_{60}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{60}-L_{61}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{61}-L_{62}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{62}-L_{63}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{63}-L_{64}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{64}-L_{65}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{65}-L_{66}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{66}-L_{67}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{67}-L_{68}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{68}-L_{69}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{69}-L_{70}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00
	L_{70}-L_{71}	-0.72	0.00	-0.02	0.00	-0.11	0.00	-0.02	0.00

YY Axis Moments from STAAD

Location	Member	Start (k-ft)	End (k-ft)	S_{top} (in^3)	S_{bot} (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_{bot}	M_y (k-in)	a	C_{a1}	C_{a2}	C_{a3}
Structure 1	U_0-L_1	-84.71	-28.00	-0.05	0.19	-14.09	-0.61	-1.09	-0.56	0.65	0.50	-0.64	2.50	-188.24	-74.96	-16.17
	L_1-L_2	-122.41	-23.66	3.23	2.51	-15.12	-7.94	0.49	0.45	1.18	-0.11	43.08	33.47	-202.00	-106.08	7.33
	L_2-L_3	-139.81	-83.93	1.55	1.16	-7.61	-5.28	0.26	0.23	1.30	0.15	40.25	26.21	-193.60	-128.55	5.17
	L_3-L_4	206.42	91.50	2.68	1.78	-13.05	-4.87	0.11	0.69	2.20	0.58	35.83	23.83	-174.37	-65.11	1.69
	L_4-L_5	-254.35	8.21	0.65	0.43	-8.74	16.31	61.89	0.25	0.24	-2.19	-5.83	8.74	16.31	61.89	0.25
	U_5-L_5	150.55	23.39	3.07	2.32	-21.12	-115.71	31.14	8.64	-3.08	0.95	37.93	27.04	-21.12	-115.71	31.14
	L_5-L_6	217.07	14.80	3.07	2.32	-21.12	-115.71	31.14	8.64	-3.08	0.95	37.93	27.04	-21.12	-115.71	31.14
	L_6-L_7	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_7-L_8	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_8-L_9	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_9-L_{10}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{10}-L_{11}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{11}-L_{12}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{12}-L_{13}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{13}-L_{14}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{14}-L_{15}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{15}-L_{16}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{16}-L_{17}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{17}-L_{18}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{18}-L_{19}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{19}-L_{20}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{20}-L_{21}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{21}-L_{22}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{22}-L_{23}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{23}-L_{24}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{24}-L_{25}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{25}-L_{26}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{26}-L_{27}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{27}-L_{28}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{28}-L_{29}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{29}-L_{30}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{30}-L_{31}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{31}-L_{32}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{32}-L_{33}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{33}-L_{34}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{34}-L_{35}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{35}-L_{36}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{36}-L_{37}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{37}-L_{38}	1.45	1.45	0.71	0.71	-1.41	-12.24	-8.01	0.00	0.94	0.69	17.07	14.40	-168.37	-102.66	0.00
	L_{38}-$L_{39

Moment (Start) Al Operating

Operating Loads - 5C1

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																		
North Truss - Upper Chord	Structure 1	U_0 - U_1			-----	-544.10	46	-731	-991	-187	-52	88	574	-525	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.253	1.00	Yes	0.734	0.236	0.97	Yes	1.00	**4.15**
		U_1 - U_2			-----	-543.89	-6	-91	-551	-501	-315	41	-464	16	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.256	1.00	Yes	0.733	0.131	0.87	Yes	1.00	**4.15**
		U_2 - U_3			151.92	-596.69	-117	272	-751	-240	11	24	-124	146	0.174	0.203	0.38	Yes	0.117	0.132	0.25	Yes	0.812	0.179	1.00	Yes	0.805	0.178	0.99	Yes	1.00	**2.79**
		U_3 - U_4			425.08	-587.42	112	365	-867	-80	-15	29	39	30	0.487	0.213	0.70	Yes	0.334	0.146	0.49	Yes	0.799	0.171	0.98	Yes	0.792	0.206	1.00	Yes	1.00	**3.72**
		U_4 - U_5			372.86	-572.32	135	305	-943	-172	15	-33	44	-47	0.427	0.232	0.66	Yes	0.293	0.159	0.46	Yes	0.779	0.203	0.99	Yes	0.772	0.224	1.00	Yes	1.00	**3.20**
		U_5 - U_6			658.71	-386.96	250	463	-831	209	-142	-63	262	0	0.755	0.242	1.00	Yes	0.509	0.158	0.67	Yes	0.527	0.245	0.78	Yes	0.522	0.197	0.72	Yes	1.00	**3.90**
		U_6 - U_7			846.12	-----	370	220	-602	-80	-290	-112	412	-138	0.809	0.185	1.00	Yes	0.565	0.127	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		U_7 - U_8			955.01	-----	46	1073	-1109	1929	-428	10	148	-287	0.662	0.336	1.00	Yes	0.462	0.229	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.37**
		U_8 - U_9			669.15	-----	2101	-790	688	-66	-629	-88	-736	-215	0.548	0.443	1.00	Yes	0.375	0.301	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		U_9 - U_{10}			124.31	-469.17	1333	-956	-1091	-543	-93	1038	-1546	1382	0.135	0.547	0.69	Yes	0.091	0.367	0.46	Yes	0.604	0.387	1.00	Yes	0.599	0.299	0.90	Yes	1.00	**23.92**
		U_{10} - U_{11}			-----	-624.61	405	-905	-35	-545	243	43	74	195	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.153	0.96	Yes	0.797	0.203	1.00	Yes	1.00	**4.69**
		U_{11} - U_{12}			127.70	-861.17	369	-22	-349	-687	56	395	102	747	0.102	0.203	0.31	Yes	0.069	0.136	0.21	Yes	0.815	0.183	1.00	Yes	0.808	0.114	0.93	Yes	1.00	**4.75**
		U_{12} - U_{13}			-----	-1228.34	55	-218	-657	-681	322	205	492	398	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.165	1.00	Yes	0.820	0.094	0.92	Yes	1.00	**3.53**
		U_{13} - U_{14}			-----	-1372.99	-119	-360	-936	-1075	207	163	322	557	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.201	1.00	Yes	0.787	0.119	0.91	Yes	1.00	**3.15**
		U_{14} - U_{15}			-----	-1326.97	-264	-245	-1473	-604	207	29	531	186	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.229	1.00	Yes	0.761	0.163	0.93	Yes	1.00	**2.48**
		U_{15} - U_{16}			-----	-1360.30	-156	-432	-1102	-797	85	36	428	176	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.206	1.00	Yes	0.780	0.122	0.91	Yes	1.00	**2.27**
		U_{16} - U_{17}			-----	-1358.26	-337	-193	-1419	-477	157	-48	611	63	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.208	1.00	Yes	0.779	0.157	0.94	Yes	1.00	**2.57**
		U_{17} - U_{18}			-----	-994.52	-194	-87	-1181	-22	-22	-59	410	22	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.205	1.00	Yes	0.778	0.192	0.98	Yes	1.00	**3.63**
		U_{18} - U_{19}			-----	-707.80	-201	-68	-868	-89	25	-121	429	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.804	0.191	1.00	Yes	0.796	0.175	0.98	Yes	1.00	**2.54**
		U_{19} - U_{20}			-----	-544.17	-248	143	-1901	1376	-113	-34	464	-758	-----	-----	-----	-----	-----	-----	-----	-----	0.618	0.218	0.84	Yes	0.612	0.382	1.00	Yes	1.00	**5.98**
	Structure 2	U_0 - U_1			-----	-638.47	663	-1428	-686	-1065	-51	21	615	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.210	0.97	Yes	0.754	0.242	1.00	Yes	1.00	**6.48**
		U_1 - U_2			-----	-883.24	92	-624	-414	-649	-91	-250	-179	-238	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.133	1.00	Yes	0.852	0.098	0.96	Yes	1.00	**4.08**
		U_2 - U_3			-----	-1195.71	157	-909	-663	-987	-8	55	-199	492	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.138	1.00	Yes	0.849	0.101	0.95	Yes	1.00	**3.65**
		U_3 - U_4			-----	-1388.18	-407	-389	-1321	-955	311	454	145	240	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.198	1.00	Yes	0.790	0.118	0.91	Yes	1.00	**2.92**
		U_4 - U_5			-----	-1471.56	-412	-391	-1766	-1400	370	119	392	262	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.231	1.00	Yes	0.756	0.146	0.91	Yes	1.00	**3.49**
		U_5 - U_6			-----	-1519.48	-386	95	-2002	-691	179	-250	223	370	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.205	1.00	Yes	0.780	0.166	0.95	Yes	1.00	**3.28**
		U_6 - U_7			-----	-1403.06	-236	-57	-1647	-835	-162	-203	237	168	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.195	1.00	Yes	0.799	0.147	0.95	Yes	1.00	**2.81**
		U_7 - U_8			-----	-1364.62	-183	-160	-1771	-853	-111	-189	182	36	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.212	1.00	Yes	0.777	0.158	0.94	Yes	1.00	**2.45**
		U_8 - U_9			-----	-1171.81	-271	122	-1541	-381	-97	-200	348	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.193	1.00	Yes	0.795	0.164	0.96	Yes	1.00	**2.43**
		U_9 - U_{10}			177.00	-956.07	-59	365	-1340	-132	-146	-155	259	-52	0.130	0.191	0.33	Yes	0.088	0.130	0.22	Yes	0.830	0.167	1.00	Yes	0.825	0.163	0.99	Yes	1.00	**2.87**
		U_{10} - U_{11}			550.84	-764.44	213	405	-1475	-215	-191	-167	460	-61	0.465	0.264	0.73	Yes	0.317	0.172	0.49	Yes	0.764	0.232	1.00	Yes	0.760	0.208	0.97	Yes	1.00	**3.83**
		U_{11} - U_{12}			842.74	-327.08	254	547	-1550	257	-353	-126	527	23	0.712	0.283	1.00	Yes	0.478	0.189	0.67	Yes	0.327	0.181	0.51	Yes	0.325	0.219	0.55	Yes	1.00	**4.37**
		U_{12} - U_{13}			1165.09	-----	488	161	-1201	-550	-436	-379	563	-313	0.787	0.205	1.00	Yes	0.561	0.140	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		U_{13} - U_{14}			1192.03	-----	58	1789	-2209	3755	-763	-392	13	-864	0.586	0.407	1.00	Yes	0.415	0.267	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.83**
		U_{14} - U_{15}			854.42	-----	5397	-2293	1166	-23	-1109	-320	-559	-519	0.420	0.575	1.00	Yes	0.297	0.377	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.36**
		U_{15} - U_{16}			1204.98	-----	602	202	-1760	-121	-496	482	-771	808	0.728	0.268	1.00	Yes	0.518	0.181	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.53**
		U_{16} - U_{17}			155.81	-559.11	3874	-2221	-2475	-2408	1048	64	760	1011	0.115	0.597	0.72	Yes	0.076	0.393	0.47	Yes	0.488	0.504	1.00	Yes	0.485	0.487	0.98	Yes	1.00	**27.47**
		U_{17} - U_{18}			-----	-589.26	1053	-944	-1199	-850	60	870	-45	1163	-----	-----	-----	-----	-----	-----	-----	-----	0.700	0.297	1.00	Yes	0.696	0.204	0.90	Yes	1.00	**11.12**
		U_{18} - U_{19}			810.09	-534.02	702	371	-422	-722	32	99	412	398	0.813	0.183	1.00	Yes	0.533	0.117	0.66	Yes	0.635	0.179	0.82	Yes	0.631	0.123	0.76	Yes	1.00	**5.73**
		U_{19} - U_{20}			441.98	-704.95	415	299	-794	-652	-12	-19	101	451	0.414	0.188	0.61	Yes	0.275	0.123	0.40	Yes	0.783	0.208	1.00	Yes	0.778	0.127	0.91	Yes	1.00	**4.06**
		U_{20} - U_{21}			298.01	-857.16	270	-11	-1023	-464	-67	-79	289	238	0.231	0.180	0.42	Yes	0.162	0.116	0.28	Yes	0.788	0.207	1.00	Yes	0.782	0.148	0.94	Yes	1.00	**4.00**
		U_{21} - U_{22}			123.97	-845.02	-12	32	-1042	-632	-20	60	49	345	0.096	0.189	0.29	Yes	0.068	0.127	0.20	Yes	0.777	0.221	1.00	Yes	0.771	0.151	0.93	Yes	1.00	**3.10**
		U_{22} - U_{23}			93.20	-797.16	85	-27	-1269	-600	52	-2	385	88	0.072	0.226	0.30	Yes	0.051	0.152	0.21	Yes	0.733	0.258	1.00	Yes	0.728	0.184	0.92	Yes	1.00	**2.69**
		U_{23} - U_{24}			74.02	-845.81	129	-65	-1202	-340	-47	9	356	65	0.057	0.213	0.28	Yes	0.040	0.138	0.18	Yes	0.778	0.215	1.00	Yes	0.772	0.174	0.95	Yes	1.00	**3.01**
		U_{24} - U_{25}			365.33	-714.32	232	332	-1240	-257	-82	-87	370	-15	0.343	0.248	0.60	Yes	0.227	0.163	0.40	Yes	0.793	0.200	1.00	Yes	0.788	0.199	0.99	Yes	1.00	**3.53**
		U_{25} - U_{26}			564.40	-662.60	227	496	-1240	145	-171	-77	349	-77	0.567	0.262	0.83	Yes	0.372	0.167	0.54	Yes	0.787	0.165	0.96	Yes	0.783	0.211	1.00	Yes	1.00	**3.94**
		U_{26} - U_{27}			734.27	-357.33	353	405	-1179	239	-241	-69	418	-153	0.737	0.261	1.00	Yes	0.491	0.173	0.67	Yes	0.425	0.144	0.57	Yes	0.422	0.200	0.63	Yes	1.00	**4.06**
		U_{27} - U_{28}			1061.20	-----	330	573	-1352	306	-371	-11	271	59	0.782	0.209	1.00	Yes	0.520	0.138	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		U_{28} - U_{29}			1257.43	-----	502	174	-1664	-468	-390	-267	560	-267	0.760	0.236	1.00	Yes	0.541	0.159	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		U_{29} - U_{30}			1222.95	-----	201	1698	-2138	3739	-690	-362	92	-571	0.601	0.393	1.00	Yes	0.426	0.258	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		U_{30} - U_{31}			803.10	-----	5567	-1338	817	-224	-1180	-293	-149	9	0.395	0.596	1.00	Yes	0.280	0.391	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.12**
		U_{31} - U_{32}			997.96	-----	431	11	-2009	-192	-320	543	-556	731	0.674	0.323	1.00	Yes	0.480	0.219	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.96**
		U_{32} - U_{33}			-----	-572.65	2231	-3054	-1433	-1495	1228	701	451	969	-----	-----	-----	-----	-----	-----	-----	-----	0.573	0.347	0.92	Yes	0.569	0.431	1.00	Yes	1.00	**21.51**
		U_{33} - U_{34}			887.97	-544.80	478	363	-486	-917	-38	209	299	941	0.750	0.244	1.00	Yes	0.510	0.162	0.68	Yes	0.545	0.230	0.78	Yes	0.541	0.129	0.68	Yes	1.00	**5.43**
		U_{34} - U_{35}			662.33	-925.20	541	227	-712	-1035	102	116	484	569	0.486	0.188	0.68	Yes	0.329	0.127	0.46	Yes	0.803	0.192	1.00	Yes	0.798	0.126	0.93	Yes	1.00	**5.27**
		U_{35} - U_{36}			364.59	-1175.21	307	-51	-1031	-963	52	73	264	552	0.210	0.155	0.37	Yes	0.148	0.103	0.26	Yes	0.803	0.194	1.00	Yes	0.797	0.110	0.91	Yes	1.00	**4.58**
		U_{36} - U_{37}			58.37	-1424.82	-6	86	-1349	-875	71	-9	271	293	0.028	0.141	0.17	Yes	0.020	0.096	0.12	Yes	0.817	0.174	1.00	Yes	0.811	0.120	0.94	Yes	1.00	**3.55**
		U_{37} - U_{38}			-----	-1302.13	146	-129	-1780	-1098	42	19	330	265	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.251	1.00	Yes	0.741	0.159	0.91	Yes	1.00	**3.09**
		U_{38} - U_{39}			-----	-1467.70	133	-285	-1701	-1325	132	-31	667	201	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.236	1.00	Yes	0.754	0.141	0.90	Yes	1.00	**3.10**
		U_{39} - U_{40}			-----	-1409.10	-156	-329	-2372	-1123	28	-14	423	233	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.267	1.00	Yes	0.723	0.197	0.93	Yes	1.00	**3.64**
		U_{40} - U_{41}			-----	-1323.99	-239	-335	-1940	-989	48	-112	520	1	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.239	1.00	Yes	0.754	0.173	0.93	Yes	1.00	**2.87**
		U_{41} - U_{42}			-----	-1117.60	-142	-134	-1675	-206	-68	-98	401	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.197	1.00	Yes	0.793	0.171	0.97	Yes	1.00	**3.10**
		U_{42} - U_{43}			-----	-817.37	-126	-63	-1154	-246	-39	-90	380	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.199	1.00	Yes	0.789	0.175	0.97	Yes	1.00	**3.36**
		U_{43} - U_{44}			-----	-534.52	6	-243	-2126	1032	-64	48	328	-561	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.298	0.94	Yes	0.631	0.361	1.00	Yes	1.00	**5.82**
	Structure 3	U_0 - U_1			-----	-672.63	738	-1186	-891	-1139	-103	-180	969	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.203	0.97	Yes	0.757	0.239	1.00	Yes	1.00	**8.05**
		U_1 - U_2			-----	-744.36	140	-709	-161	-485	-52	-271	-240	-254	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.151	1.00	Yes	0.837	0.143	0.99	Yes	1.00	**3.22**
		U_2 - U_3			-----	-1046.66	137	-947	-301	-516	26	284	-261	450	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.161	1.00	Yes	0.819	0.154	0.98	Yes	1.00	**2.96**
		U_3 - U_4			-----	-1362.60	-155	-579	-1054	-1013	167	123	350	717	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1.00	Yes	0.781	0.116	0.90	Yes	1.00	**4.55**
		U_4 - U_5			-----	-1410.10	-372	-133	-1097	-572	509	153	263	179	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.176	1.00	Yes	0.808	0.121	0.93	Yes	1.00	**2.88**
		U_5 - U_6			-----	-1402.56	-174	-263	-1072	-694	135	-157	135	343	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.179	1.00	Yes	0.804	0.118	0.93	Yes	1.00	**2.88**
		U_6 - U_7			-----	-1339.69	-378	-104	-1587	-468	-89	-187	351	41	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.215	1.00	Yes	0.768	0.175	0.95	Yes	1.00	**2.45**
		U_7 - U_8			-----	-1218.13	-167	-7	-937	-389	-59	-174	272	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.172	1.00	Yes	0.814	0.129	0.95	Yes	1.00	**2.48**
		U_8 - U_9			-----	-896.53	-105	171	-865	-44	-29	-153	282	-145	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.150	1.00	Yes	0.841	0.144	0.99	Yes	1.00	**2.19**
		U_9 - U_{10}			140.41	-617.78	-80	222	-925	114	-97	-102	239	-80	0.152	0.246	0.40	Yes	0.101	0.157	0.26	Yes	0.795	0.195	1.00	Yes	0.788	0.207	1.00	Yes	1.00	**2.63**
		U_{10} - U_{11}			673.17	-381.75	315	212	-835	123	-239	-146	492	-305	0.730	0.266	1.00	Yes	0.495	0.179	0.68	Yes	0.492	0.149	0.65	Yes	0.487	0.187	0.68	Yes	1.00	**5.23**
		U_{11} - U_{12}			798.79	-----	-40	938	-1311	1678	-410	-115	233	-490	0.654	0.342	1.00	Yes	0.448	0.232	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.67**
		U_{12} - U_{13}			718.67	-----	2838	-1593	522	164	-547	53	-701	-374	0.498	0.501	1.00	Yes	0.347	0.342	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.46**
		U_{13} - U_{14}			885.71	-----	238	449	-293	82	-349	-228	-315	295	0.847	0.143	1.00	Yes	0.592	0.099	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		U_{14} - U_{15}			744.85	-71.15	483	348	-21	-244	-157	-39	45	37	0.854	0.141	1.00	Yes	0.576	0.092	0.67	Yes	0.097	0.160	0.26	Yes	0.096	0.115	0.22	Yes	1.00	**4.25**
		U_{15} - U_{16}			682.48	-513.52	517	363	-546	-508	-123	106	-51	506	0.782	0.215	1.00	Yes	0.537	0.147	0.69	Yes	0.699	0.223	0.93	Yes	0.692	0.130	0.83	Yes	1.00	**5.31**
		U_{16} - U_{17}			562.61	-555.13	506	196	-797	-369	44	70	382	240	0.645	0.254	0.90	Yes	0.443	0.174	0.62	Yes	0.755	0.244	1.00	Yes	0.749	0.189	0.94	Yes	1.00	**4.26**
		U_{17} - U_{18}			229.76	-547.96	337	-63	-645	-477	-59	71	266	207	0.263	0.198	0.47	Yes	0.178	0.130	0.31	Yes	0.746	0.244	1.00	Yes	0.739	0.153	0.90	Yes	1.00	**2.70**
		U_{18} - U_{19}			93.62	-525.19	168	-37	-798	-335	-39	31	462	2	0.107	0.268	0.38	Yes	0.074	0.183	0.26	Yes	0.715	0.282	1.00	Yes	0.708	0.190	0.90	Yes	1.00	**2.51**
		U_{19} - U_{20}			73.59	-439.50	255	-417	-1686	1036	-166	174	281	343	0.084	0.459	0.55	Yes	0.058	0.315	0.38	Yes	0.598	0.269	0.87	Yes	0.593	0.401	1.00	Yes	1.00	**5.39**

Operating Loads - 5C1

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			-----	-89.31	1660	-2771	-451	310	-317	-1163	-38	-142	-----	-----	-----	-----	-----	-----	-----	-----	0.162	0.791	0.96	Yes	0.161	0.832	1.00	Yes	1.00	**24.34**
		L_1 - L_2			440.77	-----	352	-917	-173	-570	-166	-78	208	-96	0.675	0.320	1.00	Yes	0.412	0.215	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**
		L_2 - L_3			702.03	-74.91	-3	57	-750	-591	-38	34	-29	-21	0.808	0.187	1.00	Yes	0.467	0.113	0.59	Yes	0.102	0.223	0.33	Yes	0.101	0.181	0.29	Yes	1.00	**3.26**
		L_3 - L_4			684.71	-192.12	100	297	-714	-363	77	69	214	28	0.788	0.207	1.00	Yes	0.468	0.133	0.61	Yes	0.263	0.201	0.47	Yes	0.260	0.172	0.44	Yes	1.00	**3.14**
		L_4 - L_5			157.43	-515.36	105	599	-802	499	55	37	-139	155	0.204	0.240	0.45	Yes	0.122	0.158	0.28	Yes	0.792	0.168	0.97	Yes	0.785	0.212	1.00	Yes	1.00	**2.80**
		L_5 - L_6			-----	-733.72	165	602	-399	316	72	121	161	124	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.141	1.00	Yes	0.847	0.133	0.98	Yes	1.00	**2.88**
		L_6 - L_7			-----	-1080.33	205	175	-790	441	115	-100	16	252	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.045	0.93	Yes	0.870	0.124	1.00	Yes	1.00	**3.98**
		L_7 - L_8			-----	-1216.97	89	982	-374	1644	62	188	218	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.211	1.00	Yes	0.771	0.218	0.99	Yes	1.00	**4.27**
		L_8 - L_9			-----	-1206.79	1632	-162	571	-30	-231	-220	-121	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.221	1.00	Yes	0.764	0.216	0.99	Yes	1.00	**4.88**
		L_9 - L_{10}			-----	-1024.50	1066	-840	-419	-75	-402	-480	624	270	-----	-----	-----	-----	-----	-----	-----	-----	0.834	0.126	0.97	Yes	0.825	0.168	1.00	Yes	1.00	**7.97**
		L_{10} - L_{11}			-----	-560.25	538	-7	149	-405	144	48	143	85	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.096	0.96	Yes	0.854	0.142	1.00	Yes	1.00	**3.94**
		L_{11} - L_{12}			559.27	-----	654	-857	65	-724	-216	-213	264	27	0.724	0.273	1.00	Yes	0.435	0.178	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.32**
		L_{12} - L_{13}			1053.65	-23.58	194	-59	-494	-704	14	28	315	332	0.831	0.164	1.00	Yes	0.532	0.098	0.64	Yes	0.022	0.169	0.20	Yes	0.022	0.125	0.15	Yes	1.00	**4.43**
		L_{13} - L_{14}			1272.17	-----	588	-1647	-232	-1399	-15	-81	295	99	0.748	0.252	1.00	Yes	0.485	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		L_{14} - L_{15}			1501.58	-----	-328	-26	-2078	-302	-117	-69	-186	96	0.734	0.264	1.00	Yes	0.477	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		L_{15} - L_{16}			1598.12	-----	-181	-400	-1546	-1108	-87	-34	6	-383	0.781	0.213	1.00	Yes	0.501	0.125	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		L_{16} - L_{17}			1122.93	-----	-419	85	-1621	244	-84	-59	-521	143	0.710	0.284	1.00	Yes	0.461	0.176	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**
		L_{17} - L_{18}			856.67	-----	-177	-48	-1097	87	-54	14	39	-287	0.746	0.248	1.00	Yes	0.478	0.149	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		L_{18} - L_{19}			154.02	-----	-183	273	-1880	988	-12	-39	-960	290	0.236	0.763	1.00	Yes	0.159	0.483	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.36**
		L_{19} - L_{20}			94.02	-390.72	-90	-38	-956	433	-27	-6	324	73	0.144	0.354	0.50	Yes	0.088	0.237	0.33	Yes	0.710	0.225	0.94	Yes	0.704	0.287	1.00	Yes	1.00	**5.25**
	Structure 2	L_0 - L_1			29.55	-234.05	1029	-3251	-139	62	-304	-1055	-26	-92	0.036	0.835	0.88	Yes	0.021	0.533	0.56	Yes	0.337	0.580	0.92	Yes	0.334	0.662	1.00	Yes	1.00	**17.62**
		L_1 - L_2			546.71	-----	710	-1457	22	-770	-187	-177	-226	157	0.664	0.334	1.00	Yes	0.395	0.215	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.72**
		L_2 - L_3			995.66	-----	392	-852	-469	-1130	-131	-222	56	277	0.795	0.197	1.00	Yes	0.523	0.114	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.53**
		L_3 - L_4			1364.78	-----	334	-1297	-620	-1179	-351	-155	251	145	0.810	0.183	1.00	Yes	0.546	0.118	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_4 - L_5			1693.05	-----	-214	-1347	-1787	-1388	115	-479	-80	69	0.789	0.201	1.00	Yes	0.523	0.120	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_5 - L_6			1844.00	-----	-133	-316	-1525	-2105	127	-17	221	47	0.791	0.200	1.00	Yes	0.531	0.122	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		L_6 - L_7			1816.02	-----	-392	-36	-2292	-1371	-174	43	21	439	0.769	0.229	1.00	Yes	0.511	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.18**
		L_7 - L_8			1351.12	-85.48	-170	373	-1865	-393	-129	10	76	-99	0.775	0.217	1.00	Yes	0.509	0.126	0.64	Yes	0.058	0.193	0.26	Yes	0.058	0.206	0.27	Yes	1.00	**3.76**
		L_8 - L_9			1076.38	-415.71	-18	600	-1558	456	-18	19	-238	294	0.753	0.238	1.00	Yes	0.507	0.148	0.66	Yes	0.345	0.121	0.47	Yes	0.342	0.210	0.56	Yes	1.00	**4.47**
		L_9 - L_{10}			627.22	-720.04	-68	801	-1484	309	29	107	166	-137	0.560	0.257	0.82	Yes	0.326	0.160	0.49	Yes	0.761	0.137	0.90	Yes	0.756	0.237	1.00	Yes	1.00	**4.90**
		L_{10} - L_{11}			17.85	-690.98	95	531	-1030	577	58	-1	-313	181	0.018	0.222	0.25	Yes	0.010	0.139	0.15	Yes	0.817	0.071	0.89	Yes	0.812	0.180	1.00	Yes	1.00	**3.31**
		L_{11} - L_{12}			-----	-1039.57	101	992	-1078	796	79	230	218	45	-----	-----	-----	-----	-----	-----	-----	-----	0.859	0.125	0.99	Yes	0.852	0.147	1.00	Yes	1.00	**4.28**
		L_{12} - L_{13}			-----	-1369.20	327	-353	-1445	-648	176	-134	-94	128	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.172	1.00	Yes	0.819	0.144	0.97	Yes	1.00	**5.39**
		L_{13} - L_{14}			-----	-1335.50	-250	1289	-1893	3668	-99	-96	195	-196	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.217	0.90	Yes	0.672	0.320	1.00	Yes	1.00	**5.74**
		L_{14} - L_{15}			-----	-1288.31	3994	-1358	1079	-443	-377	-299	-319	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.654	0.252	0.91	Yes	0.648	0.349	1.00	Yes	1.00	**6.51**
		L_{15} - L_{16}			-----	-1367.98	34	215	-1778	-146	-402	-284	260	269	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.165	1.00	Yes	0.818	0.177	1.00	Yes	1.00	**5.38**
		L_{16} - L_{17}			-----	-1053.79	1879	-984	467	-34	-373	-471	215	3	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.189	0.97	Yes	0.767	0.232	1.00	Yes	1.00	**7.15**
		L_{17} - L_{18}			-----	-634.92	1797	-2080	-400	-665	-744	-375	292	55	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.265	0.94	Yes	0.667	0.333	1.00	Yes	1.00	**11.38**
		L_{18} - L_{19}			25.67	-647.10	671	117	29	-390	-4	33	168	186	0.029	0.158	0.19	Yes	0.017	0.094	0.12	Yes	0.868	0.130	1.00	Yes	0.862	0.129	1.00	Yes	1.00	**3.22**
		L_{19} - L_{20}			638.11	-----	764	-1092	-330	-979	7	-223	383	-3	0.723	0.269	1.00	Yes	0.428	0.170	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.58**
		L_{20} - L_{21}			956.85	-582.65	669	94	-1058	-1246	-116	-120	175	361	0.773	0.225	1.00	Yes	0.508	0.131	0.64	Yes	0.558	0.213	0.78	Yes	0.554	0.185	0.74	Yes	1.00	**5.84**
		L_{21} - L_{22}			912.78	-308.67	291	-30	-954	-1514	-104	-42	306	96	0.738	0.259	1.00	Yes	0.495	0.157	0.66	Yes	0.296	0.239	0.54	Yes	0.293	0.225	0.52	Yes	1.00	**4.57**
		L_{22} - L_{23}			802.54	-93.52	63	54	-2143	-382	13	-31	-81	277	0.649	0.349	1.00	Yes	0.435	0.212	0.65	Yes	0.090	0.274	0.37	Yes	0.089	0.319	0.41	Yes	1.00	**4.46**
		L_{23} - L_{24}			849.33	-432.53	63	532	-1852	-373	18	98	290	-88	0.686	0.307	1.00	Yes	0.451	0.177	0.63	Yes	0.414	0.268	0.69	Yes	0.411	0.276	0.69	Yes	1.00	**6.38**
		L_{24} - L_{25}			438.60	-543.00	321	433	-1427	-1	83	-1	-312	521	0.497	0.355	0.86	Yes	0.294	0.224	0.52	Yes	0.728	0.191	0.92	Yes	0.724	0.275	1.00	Yes	1.00	**5.85**
		L_{25} - L_{26}			-----	-603.25	102	660	-1005	339	37	120	150	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.156	0.97	Yes	0.804	0.194	1.00	Yes	1.00	**4.59**
		L_{26} - L_{27}			-----	-758.55	331	384	-1229	703	169	59	-427	136	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.076	0.88	Yes	0.797	0.197	1.00	Yes	1.00	**5.05**
		L_{27} - L_{28}			-----	-1098.07	217	1120	-1459	946	273	556	168	-467	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.185	1.00	Yes	0.800	0.180	0.98	Yes	1.00	**7.30**
		L_{28} - L_{29}			-----	-1335.45	385	-604	-1421	-629	410	-129	-391	167	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.193	1.00	Yes	0.799	0.141	0.95	Yes	1.00	**6.67**
		L_{29} - L_{30}			-----	-1188.11	-229	1313	-3266	4536	-462	-1002	423	45	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.282	0.89	Yes	0.598	0.396	1.00	Yes	1.00	**10.95**
		L_{30} - L_{31}			-----	-1215.62	4430	-1627	784	-327	-269	-170	-116	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.617	0.268	0.89	Yes	0.612	0.387	1.00	Yes	1.00	**7.78**
		L_{31} - L_{32}			-----	-1295.56	228	-183	-1867	-254	-261	219	411	133	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.202	1.00	Yes	0.782	0.188	0.97	Yes	1.00	**6.39**
		L_{32} - L_{33}			147.60	-917.72	1734	-1754	108	-294	225	-56	182	-23	0.103	0.260	0.37	Yes	0.068	0.154	0.23	Yes	0.759	0.127	0.89	Yes	0.753	0.239	1.00	Yes	1.00	**10.41**
		L_{33} - L_{34}			159.83	-441.33	2262	-2699	-761	-787	-668	-572	705	87	0.160	0.567	0.73	Yes	0.094	0.355	0.45	Yes	0.522	0.200	0.73	Yes	0.518	0.472	1.00	Yes	1.00	**19.79**
		L_{34} - L_{35}			623.24	-809.41	787	117	-411	-861	-69	55	195	341	0.556	0.179	0.74	Yes	0.324	0.110	0.44	Yes	0.856	0.140	1.00	Yes	0.850	0.138	0.99	Yes	1.00	**6.94**
		L_{35} - L_{36}			1059.80	-----	656	-1428	-409	-1224	59	-107	632	153	0.741	0.252	1.00	Yes	0.499	0.159	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_{36} - L_{37}			1375.45	-205.36	389	109	-1065	-1607	-119	-4	34	360	0.789	0.207	1.00	Yes	0.518	0.122	0.65	Yes	0.140	0.211	0.36	Yes	0.139	0.177	0.32	Yes	1.00	**5.07**
		L_{37} - L_{38}			1853.86	-----	220	-291	-2239	-2010	18	-47	208	-81	0.785	0.210	1.00	Yes	0.521	0.122	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.17**
		L_{38} - L_{39}			1762.42	-----	-186	-143	-2525	-884	-53	3	-152	161	0.756	0.234	1.00	Yes	0.508	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_{39} - L_{40}			1710.05	-----	-111	-383	-1791	-1294	-21	-35	15	-362	0.797	0.194	1.00	Yes	0.528	0.115	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		L_{40} - L_{41}			1269.54	-----	-289	-54	-1823	-79	-52	-13	-421	207	0.746	0.247	1.00	Yes	0.502	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		L_{41} - L_{42}			987.01	-----	-107	-139	-1391	108	-30	-39	176	-40	0.778	0.220	1.00	Yes	0.510	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_{42} - L_{43}			457.21	-----	-183	-9	-1536	467	-73	-80	-415	282	0.585	0.406	1.00	Yes	0.349	0.235	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_{43} - L_{44}			242.47	-280.32	-40	-28	-2581	751	-171	-50	1062	310	0.294	0.700	1.00	Yes	0.175	0.445	0.63	Yes	0.403	0.447	0.85	Yes	0.401	0.525	0.93	Yes	1.00	**11.72**
	Structure 3	L_0 - L_1			141.82	-325.63	753	-1277	3	-101	-30	-134	-8	-38	0.226	0.415	0.65	Yes	0.138	0.279	0.42	Yes	0.614	0.216	0.84	Yes	0.609	0.385	1.00	Yes	1.00	**8.18**
		L_1 - L_2			305.92	-----	1068	-1584	41	-477	-72	32	-6	250	0.468	0.527	1.00	Yes	0.317	0.328	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.95**
		L_2 - L_3			816.59	-----	466	-1040	-301	-625	-20	96	361	639	0.711	0.282	1.00	Yes	0.455	0.171	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		L_3 - L_4			1197.72	-----	416	-1478	-418	-1019	-184	-21	276	139	0.757	0.242	1.00	Yes	0.491	0.149	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_4 - L_5			1637.28	-----	-316	-204	-1517	-1159	73	98	71	239	0.800	0.200	1.00	Yes	0.513	0.117	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.07**
		L_5 - L_6			1574.04	-----	25	-1762	-915	-1399	-109	-60	252	17	0.769	0.230	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		L_6 - L_7			1243.99	-----	-392	256	-1776	222	-184	18	-88	252	0.732	0.266	1.00	Yes	0.474	0.162	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		L_7 - L_8			1062.12	-----	-77	130	-820	-359	-27	41	134	-9	0.838	0.161	1.00	Yes	0.536	0.096	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		L_8 - L_9			535.10	-168.14	-156	361	-926	316	-10	43	-207	336	0.693	0.304	1.00	Yes	0.416	0.198	0.62	Yes	0.258	0.142	0.41	Yes	0.256	0.245	0.51	Yes	1.00	**3.50**
		L_9 - L_{10}			33.64	-506.59	-6	476	-854	245	64	130	286	125	0.044	0.276	0.32	Yes	0.025	0.166	0.20	Yes	0.779	0.153	0.94	Yes	0.772	0.226	1.00	Yes	1.00	**4.47**
		L_{10} - L_{11}			-----	-1000.59	212	88	-1211	523	144	-146	-174	428	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.093	0.91	Yes	0.805	0.190	1.00	Yes	1.00	**6.92**
		L_{11} - L_{12}			-----	-1239.54	54	903	-525	1565	-103	-65	117	-369	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.203	1.00	Yes	0.785	0.207	1.00	Yes	1.00	**5.33**
		L_{12} - L_{13}			-----	-1136.95	1785	-111	465	-21	-478	-404	-246	-221	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.263	1.00	Yes	0.720	0.236	0.96	Yes	1.00	**5.29**
		L_{13} - L_{14}			-----	-1073.31	755	-513	-691	4	-481	-304	282	224	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.118	1.00	Yes	0.864	0.119	0.99	Yes	1.00	**7.59**
		L_{14} - L_{15}			-----	-748.99	575	168	154	-203	147	-10	176	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.123	1.00	Yes	0.864	0.127	1.00	Yes	1.00	**2.76**
		L_{15} - L_{16}			78.75	-569.85	435	206	78	-376	19	-58	89	14	0.102	0.131	0.24	Yes	0.061	0.086	0.15	Yes	0.876	0.121	1.00	Yes	0.868	0.115	0.99	Yes	1.00	**2.62**
		L_{16} - L_{17}			671.86	-429.92	522	81	-789	-328	91	-69	197	90	0.773	0.222	1.00	Yes	0.459	0.143	0.61	Yes	0.587	0.168	0.76	Yes	0.582	0.191	0.78	Yes	1.00	**4.52**
		L_{17} - L_{18}			656.73	-191.75	149	22	-869	-532	-2	14	177	-21	0.756	0.238	1.00	Yes	0.437	0.143	0.59	Yes	0.262	0.257	0.52	Yes	0.260	0.210	0.47	Yes	1.00	**3.63**
		L_{18} - L_{19}			422.97	-51.18	94	-14	-924	115	38	-134	-129	308	0.647	0.343	1.00	Yes	0.395	0.229	0.63	Yes	0.093	0.197	0.29	Yes	0.092	0.277	0.37	Yes	1.00	**3.51**
		L_{19} - L_{20}			64.81	-81.19	160	-275	-2470	551	-5	-1	730	199	0.099	0.898	1.00	Yes	0.058	0.547	0.61	Yes	0.147	0.658	0.81	Yes	0.146	0.741	0.89	Yes	1.00	**15.84**

Moment (Start) AI Operating

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-272.02	-54	83	-170	206	-41	-13	-570	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.318	1.00	Yes	0.636	0.307	0.95	Yes	1.00	**1.54**
		$U_1 - L_1$			40.21	-322.23	40	-29	-248	248	1	-11	-125	-15	0.072	0.354	0.43	Yes	0.040	0.195	0.24	Yes	0.704	0.113	0.82	Yes	0.682	0.318	1.00	Yes	1.00	**3.70**
		$U_2 - L_2$			130.47	-285.98	112	-125	-267	308	122	43	-169	19	0.235	0.442	0.68	Yes	0.129	0.243	0.38	Yes	0.625	0.154	0.78	Yes	0.605	0.393	1.00	Yes	1.00	**5.46**
		$U_3 - L_3$			209.71	-246.08	371	-332	-303	332	359	252	-227	-22	0.377	0.579	0.96	Yes	0.207	0.318	0.53	Yes	0.539	0.204	0.75	Yes	0.521	0.474	1.00	Yes	1.00	**11.60**
		$U_4 - L_4$			-----	-232.56	393	-383	-32	8	-218	-72	12	199	-----	-----	-----	-----	-----	-----	-----	-----	0.511	0.192	0.71	Yes	0.492	0.502	1.00	Yes	1.00	**8.94**
		$U_5 - L_5$			-----	-424.00	231	-264	75	-91	32	-101	-17	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.107	0.88	Yes	0.732	0.268	1.00	Yes	1.00	**3.00**
		$U_6 - L_6$			-----	-489.79	243	-260	84	-79	174	-15	-224	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.125	0.91	Yes	0.740	0.253	1.00	Yes	1.00	**2.45**
		$U_7 - L_7$			-----	-411.85	273	-291	129	-143	185	32	-148	20	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.144	0.88	Yes	0.672	0.322	1.00	Yes	1.00	**1.61**
		$U_8 - L_8$			-----	-1188.56	403	-482	-337	394	1064	319	40	29	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.136	1.00	Yes	0.824	0.090	0.92	Yes	1.00	**3.91**
		$U_9 - L_9$			-----	-644.83	-172	201	-390	431	-343	-108	-432	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.165	0.96	Yes	0.746	0.251	1.00	Yes	1.00	**2.69**
		$U_{10} - L_{10}$			-----	-676.21	-123	105	-343	340	-840	-455	-1028	-672	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.268	1.00	Yes	0.695	0.191	0.89	Yes	1.00	**3.21**
		$U_{11} - L_{11}$			-----	-654.15	-144	204	-391	499	-318	-244	-610	-487	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.187	0.98	Yes	0.761	0.232	1.00	Yes	1.00	**3.39**
		$U_{12} - L_{12}$			-----	-514.70	-106	108	-343	338	-299	-189	-310	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.156	0.90	Yes	0.706	0.293	1.00	Yes	1.00	**3.49**
		$U_{13} - L_{13}$			-----	-359.64	-48	68	-244	269	-184	-1	-73	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.727	0.132	0.86	Yes	0.689	0.307	1.00	Yes	1.00	**2.82**
		$U_{14} - L_{14}$			-----	-172.80	206	-219	-470	491	3	-40	435	332	-----	-----	-----	-----	-----	-----	-----	-----	0.386	0.296	0.69	Yes	0.366	0.627	1.00	Yes	1.00	**11.48**
		$U_{15} - L_{15}$			113.73	-309.45	242	-265	-85	72	247	-107	29	69	0.205	0.411	0.62	Yes	0.113	0.226	0.34	Yes	0.694	0.160	0.86	Yes	0.655	0.339	1.00	Yes	1.00	**4.36**
		$U_{16} - L_{16}$			-----	-320.18	236	-246	26	-41	314	-139	34	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.134	0.86	Yes	0.677	0.314	1.00	Yes	1.00	**2.99**
		$U_{17} - L_{17}$			-----	-434.27	221	-241	60	-75	137	-169	-122	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.116	0.93	Yes	0.749	0.245	1.00	Yes	1.00	**2.21**
		$U_{18} - L_{18}$			-----	-535.94	426	-439	144	-151	208	-209	-134	-122	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.092	0.88	Yes	0.745	0.249	1.00	Yes	1.00	**2.32**
		$U_{19} - L_{19}$			-----	-639.79	536	-526	172	-171	245	-98	-117	-46	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.110	0.91	Yes	0.745	0.249	1.00	Yes	1.00	**2.62**
		$U_{20} - L_{20}$			-----	-568.46	332	-499	157	-285	430	56	-129	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.204	1.00	Yes	0.696	0.240	0.94	Yes	1.00	**1.84**
	Structure 2	$U_0 - L_0$			-----	-662.55	-156	203	-431	553	-51	-9	-306	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.163	1.00	Yes	0.743	0.249	1.00	Yes	1.00	**2.82**
		$U_1 - L_1$			-----	-716.39	-107	116	-527	536	-112	-14	-168	17	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.081	0.91	Yes	0.768	0.227	1.00	Yes	1.00	**3.90**
		$U_2 - L_2$			-----	-584.61	-97	107	-495	495	-102	-40	-237	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.101	0.89	Yes	0.745	0.253	1.00	Yes	1.00	**3.36**
		$U_3 - L_3$			-----	-492.29	-50	58	-237	249	88	-45	-83	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.090	0.93	Yes	0.772	0.227	1.00	Yes	1.00	**2.88**
		$U_4 - L_4$			-----	-336.83	-4	13	-223	222	270	82	-203	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.160	0.93	Yes	0.713	0.285	1.00	Yes	1.00	**3.23**
		$U_5 - L_5$			92.00	-319.25	71	-59	-228	246	-67	105	-84	-46	0.165	0.345	0.52	Yes	0.091	0.190	0.29	Yes	0.721	0.142	0.87	Yes	0.676	0.315	1.00	Yes	1.00	**4.14**
		$U_6 - L_6$			322.00	-293.86	197	-202	-268	276	165	138	220	-5	0.579	0.416	1.00	Yes	0.319	0.229	0.55	Yes	0.661	0.167	0.83	Yes	0.622	0.353	0.98	Yes	1.00	**6.84**
		$U_7 - L_7$			-----	-265.68	307	-338	-81	85	421	58	-60	160	-----	-----	-----	-----	-----	-----	-----	-----	0.600	0.235	0.84	Yes	0.562	0.432	1.00	Yes	1.00	**7.61**
		$U_8 - L_8$			-----	-469.72	351	-368	68	-91	206	-127	0	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.109	0.80	Yes	0.677	0.322	1.00	Yes	1.00	**3.21**
		$U_9 - L_9$			-----	-688.25	591	-599	173	-187	273	-132	-15	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.766	0.088	0.86	Yes	0.738	0.254	1.00	Yes	1.00	**3.63**
		$U_{10} - L_{10}$			-----	-795.87	544	-572	174	-201	355	-170	4	0	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.106	0.90	Yes	0.744	0.252	1.00	Yes	1.00	**3.67**
		$U_{11} - L_{11}$			-----	-816.33	516	-530	185	-186	134	-184	-176	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.100	0.93	Yes	0.763	0.234	1.00	Yes	1.00	**3.31**
		$U_{12} - L_{12}$			-----	-882.33	522	-531	154	-131	299	-33	-150	10	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.117	0.97	Yes	0.765	0.228	1.00	Yes	1.00	**3.27**
		$U_{13} - L_{13}$			-----	-736.17	567	-548	209	-206	358	43	-166	21	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.179	1.00	Yes	0.710	0.272	0.99	Yes	1.00	**2.72**
		$U_{14} - L_{14}$			-----	-1194.26	749	-716	-524	485	667	409	-88	199	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.120	1.00	Yes	0.792	0.133	0.93	Yes	1.00	**5.15**
		$U_{15} - L_{15}$			-----	-698.95	-108	116	-611	575	-385	1	-581	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.215	1.00	Yes	0.674	0.292	0.97	Yes	1.00	**4.80**
		$U_{16} - L_{16}$			-----	-645.75	-84	56	-502	467	-836	-263	-1230	-525	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.248	1.00	Yes	0.692	0.213	0.91	Yes	1.00	**3.93**
		$U_{17} - L_{17}$			-----	-631.22	-117	116	-556	542	-275	-181	-663	-462	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.194	0.98	Yes	0.735	0.258	1.00	Yes	1.00	**3.74**
		$U_{18} - L_{18}$			-----	-578.30	-87	87	-493	503	-115	-125	-262	-318	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.126	0.90	Yes	0.737	0.257	1.00	Yes	1.00	**3.36**
		$U_{19} - L_{19}$			-----	-469.64	-46	51	-308	301	-67	-30	-227	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.707	0.122	0.83	Yes	0.701	0.296	1.00	Yes	1.00	**3.28**
		$U_{20} - L_{20}$			-----	-375.69	-12	13	-243	245	-69	-8	-90	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.103	0.88	Yes	0.720	0.279	1.00	Yes	1.00	**3.20**
	Structure 3	$U_{21} - L_{21}$			39.49	-318.95	18	-13	-236	249	-106	38	34	-32	0.071	0.350	0.43	Yes	0.039	0.192	0.24	Yes	0.721	0.114	0.84	Yes	0.675	0.319	1.00	Yes	1.00	**3.49**
		$U_{22} - L_{22}$			-----	-288.23	249	-257	-279	299	620	156	9	181	-----	-----	-----	-----	-----	-----	-----	-----	0.649	0.250	0.90	Yes	0.610	0.382	1.00	Yes	1.00	**9.04**
		$U_{23} - L_{23}$			71.57	-316.96	238	-253	-51	39	252	-37	49	115	0.129	0.397	0.53	Yes	0.071	0.218	0.29	Yes	0.716	0.116	0.84	Yes	0.671	0.324	1.00	Yes	1.00	**3.71**
		$U_{24} - L_{24}$			-----	-371.87	233	-245	14	-20	308	-41	-64	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.125	0.89	Yes	0.712	0.280	1.00	Yes	1.00	**2.89**
		$U_{25} - L_{25}$			-----	-471.37	303	-299	35	-35	322	-64	-92	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.709	0.100	0.81	Yes	0.704	0.292	1.00	Yes	1.00	**2.81**
		$U_{26} - L_{26}$			-----	-570.51	505	-528	61	-64	342	-72	-128	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.124	0.89	Yes	0.727	0.270	1.00	Yes	1.00	**3.18**
		$U_{27} - L_{27}$			-----	-630.07	558	-563	81	-82	404	-39	-140	3	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.119	0.90	Yes	0.733	0.262	1.00	Yes	1.00	**3.25**
		$U_{28} - L_{28}$			-----	-712.71	546	-540	73	-70	500	-8	-159	16	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.120	0.95	Yes	0.764	0.232	1.00	Yes	1.00	**3.42**
		$U_{29} - L_{29}$			-----	-693.95	615	-592	117	-122	532	51	-121	27	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.220	1.00	Yes	0.669	0.294	0.97	Yes	1.00	**3.76**
		$U_{30} - L_{30}$			-----	-1168.42	746	-736	-650	583	920	14	173	356	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.124	1.00	Yes	0.790	0.134	0.93	Yes	1.00	**5.98**
		$U_{31} - L_{31}$			-----	-745.62	-102	102	-524	499	-326	-41	-216	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.161	1.00	Yes	0.719	0.251	0.97	Yes	1.00	**4.24**
		$U_{32} - L_{32}$			-----	-776.93	-78	54	-459	439	-696	-275	-1020	-475	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.245	1.00	Yes	0.673	0.197	0.88	Yes	1.00	**4.05**
		$U_{33} - L_{33}$			-----	-812.52	-116	103	-483	479	-478	-360	-522	-503	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.172	1.00	Yes	0.766	0.217	0.99	Yes	1.00	**4.12**
		$U_{34} - L_{34}$			-----	-802.86	-115	123	-543	552	-178	-145	-464	-425	-----	-----	-----	-----	-----	-----	-----	-----	0.793	0.144	0.94	Yes	0.751	0.244	1.00	Yes	1.00	**4.78**
		$U_{35} - L_{35}$			-----	-695.08	-112	128	-586	579	-161	6	-196	-183	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.088	0.87	Yes	0.745	0.249	1.00	Yes	1.00	**4.24**
		$U_{36} - L_{36}$			-----	-481.12	-54	67	-334	347	-53	60	98	3	-----	-----	-----	-----	-----	-----	-----	-----	0.698	0.097	0.80	Yes	0.693	0.303	1.00	Yes	1.00	**3.37**
		$U_{37} - L_{37}$			-----	-110.33	121	-132	-527	594	-265	62	-198	232	-----	-----	-----	-----	-----	-----	-----	-----	0.249	0.300	0.55	Yes	0.233	0.759	1.00	Yes	1.00	**12.90**
		$U_{38} - L_{38}$			347.79	-213.37	179	-188	-245	246	195	-110	106	147	0.626	0.371	1.00	Yes	0.344	0.204	0.55	Yes	0.480	0.103	0.59	Yes	0.451	0.315	0.77	Yes	1.00	**5.81**
		$U_{39} - L_{39}$			68.94	-327.79	214	-236	-99	75	287	-90	191	116	0.124	0.384	0.51	Yes	0.068	0.211	0.28	Yes	0.740	0.134	0.88	Yes	0.694	0.301	1.00	Yes	1.00	**4.36**
		$U_{40} - L_{40}$			9.63	-341.15	208	-210	-13	7	239	-112	17	-31	0.017	0.338	0.36	Yes	0.010	0.186	0.20	Yes	0.774	0.094	0.87	Yes	0.722	0.268	1.00	Yes	1.00	**3.02**
		$U_{41} - L_{41}$			-----	-488.47	242	-255	23	-27	219	-120	11	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.092	0.93	Yes	0.766	0.233	1.00	Yes	1.00	**2.95**
		$U_{42} - L_{42}$			-----	-584.86	477	-487	55	-64	294	-147	13	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.077	0.87	Yes	0.745	0.249	1.00	Yes	1.00	**3.04**
		$U_{43} - L_{43}$			-----	-709.05	558	-559	74	-88	380	-23	-51	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.098	0.91	Yes	0.760	0.237	1.00	Yes	1.00	**3.26**
		$U_{44} - L_{44}$			-----	-640.86	368	-509	115	-130	891	151	-139	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.226	1.00	Yes	0.687	0.216	0.91	Yes	1.00	**2.72**
	Structure 4	$U_0 - L_0$			-----	-579.23	-144	193	-418	480	-58	-8	-614	-81	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.208	1.00	Yes	0.696	0.230	0.93	Yes	1.00	**2.34**
		$U_1 - L_1$			-----	-657.91	-113	124	-479	489	-121	-4	133	134	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.082	0.91	Yes	0.766	0.227	1.00	Yes	1.00	**3.58**
		$U_2 - L_2$			-----	-535.23	-107	113	-441	444	-145	-45	-278	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.110	0.90	Yes	0.744	0.252	1.00	Yes	1.00	**3.39**
		$U_3 - L_3$			-----	-442.83	-44	57	-218	232	46	-63	-131	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.114	0.95	Yes	0.764	0.235	1.00	Yes	1.00	**2.86**
		$U_4 - L_4$			-----	-325.59	-19	24	-236	242	222	47	-42	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.144	0.88	Yes	0.689	0.309	1.00	Yes	1.00	**3.23**
		$U_5 - L_5$			106.42	-304.79	77	-71	-256	274	-85	108	-138	-27	0.191	0.390	0.59	Yes	0.105	0.215	0.32	Yes	0.683	0.161	0.85	Yes	0.645	0.350	1.00	Yes	1.00	**4.98**
		$U_6 - L_6$			-----	-226.08	380	-405	-274	279	62	-28	-18	201	-----	-----	-----	-----	-----	-----	-----	-----	0.504	0.194	0.70	Yes	0.478	0.518	1.00	Yes	1.00	**11.21**
		$U_7 - L_7$			-----	-364.08	240	-261	28	-48	70	-141	91	2	-----	-----	-----	-----	-----	-----	-----	-----	0.736	0.113	0.85	Yes	0.697	0.297	1.00	Yes	1.00	**2.89**
		$U_8 - L_8$			-----	-515.03	332	-336	88	-92	203	-132	6	-69	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.104	0.85	Yes	0.707	0.287	1.00	Yes	1.00	**3.24**
		$U_9 - L_9$			-----	-652.74	399	-510	126	-194	139	-169	29	12	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.101	0.89	Yes	0.760	0.236	1.00	Yes	1.00	**3.37**
		$U_{10} - L_{10}$			-----	-777.63	395	-432	119	-117	326	-6	-202	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.126	0.94	Yes	0.767	0.224	1.00	Yes	1.00	**3.44**
		$U_{11} - L_{11}$			-----	-647.87	424	-469	169	-194	372	76	-140	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.137	0.91	Yes	0.732	0.261	1.00	Yes	1.00	**2.39**
		$U_{12} - L_{12}$			-----	-1174.08	514	-669	-399	431	827	407	35	90	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.147	1.00	Yes	0.814	0.125	0.94	Yes	1.00	**4.79**
		$U_{13} - L_{13}$			-----	-457.02	-63	73	-289	299	-321	-21	-445	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.196	0.96	Yes	0.705	0.294	1.00	Yes	1.00	**3.09**
		$U_{14} - L_{14}$			-----	-503.12	-43	25	-228	241	-796	-370	-580	-416	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.233	1.00	Yes	0.722	0.210	0.94	Yes	1.00	**3.45**
		$U_{15} - L_{15}$			-----	-430.40	-46	50	-236	251	-255	-177	-527	-366	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.217	1.00	Yes	0.743	0.255	1.00	Yes	1.00	**4.31**
		$U_{16} - L_{16}$			-----	-247.60	12	19	-366	351	-313	-188	-1005	-363	-----	-----	-----	-----	-----	-----	-----	-----	0.544	0.409	0.96	Yes	0.524	0.468	1.00	Yes	1.00	**8.54**
		$U_{17} - L_{17}$			286.91	-270.56	201	-231	-308	315	-79	-162	-277	58	0.516	0.483	1.00	Yes	0.284	0.266	0.55	Yes	0.593	0.160	0.76	Yes	0.572	0.403	0.98	Yes	1.00	**8.21**
		$U_{18} - L_{18}$			143.43	-300.58	232	-279	-133	149	243	-59	-135	24	0.258	0.427	0.69	Yes	0.142	0.235	0.38	Yes	0.657	0.157	0.82	Yes	0.636	0.357	1.00	Yes	1.00	**5.03**
		$U_{19} - L_{19}$			57.34	-315.93	255	-240	-65	52	126	-35	-90	1	0.103	0.363	0.47	Yes	0.057	0.200	0.26	Yes	0.690	0.110	0.81	Yes	0.668	0.326	1.00	Yes	1.00	**3.00**
		$U_{20} - L_{20}$			-----	-320.36	99	-183	-11	-61	604	194	-585	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.279	1.00	Yes	0.678	0.233	0.92	Yes	1.00	**1.63**

Operating Loads - 5C1

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	$U_0 - L_1$	442.39	-28.06	-10	-6	-174	78	7	34	-834	-123	0.580	0.414	1.00	Yes	0.350	0.228	0.58	Yes	0.048	0.292	0.34	Yes	0.043	0.203	0.25	Yes	1.00	**4.13**
		$U_1 - L_2$	393.17	-123.39	23	-22	-102	-3	13	0	-539	-276	0.707	0.287	1.00	Yes	0.389	0.158	0.55	Yes	0.283	0.276	0.56	Yes	0.261	0.130	0.40	Yes	1.00	**4.34**
		$U_2 - L_3$	-----	-299.99	60	-33	-143	-47	56	36	283	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.305	1.00	Yes	0.635	0.183	0.82	Yes	1.00	**7.28**
		$U_3 - L_4$	-----	-364.50	49	-8	-65	-86	102	103	303	-265	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.163	1.00	Yes	0.771	0.110	0.89	Yes	1.00	**5.33**
		$U_4 - L_4$	534.49	-----	-7	68	-113	4	52	7	-341	-401	0.791	0.208	1.00	Yes	0.435	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_5 - L_5$	667.97	-----	-23	165	-229	200	243	105	-428	-363	0.790	0.208	1.00	Yes	0.434	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_6 - L_6$	630.06	-----	-77	125	-315	236	382	185	-367	-313	0.745	0.249	1.00	Yes	0.410	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.65**
		$U_6 - L_7$	623.25	-----	26	163	-97	303	458	211	-173	-126	0.737	0.256	1.00	Yes	0.405	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.49**
		$U_8 - L_8$	973.44	-----	103	238	-96	350	452	56	430	460	0.778	0.215	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_9 - L_{10}$	957.52	-----	-73	88	-327	244	121	108	551	630	0.765	0.226	1.00	Yes	0.474	0.128	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{10} - L_{11}$	986.02	-----	-55	157	-240	180	127	190	-21	401	0.833	0.164	1.00	Yes	0.516	0.092	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{11} - L_{12}$	826.71	-----	-71	54	-262	82	36	130	84	345	0.818	0.173	1.00	Yes	0.450	0.095	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.49**
		$U_{12} - L_{13}$	633.11	-----	-78	57	-227	137	-95	-74	117	136	0.772	0.225	1.00	Yes	0.486	0.125	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{13} - L_{14}$	455.60	-----	-20	-11	-98	28	-167	-170	-59	30	0.819	0.175	1.00	Yes	0.451	0.096	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.93**
		$U_{15} - L_{14}$	245.55	-280.42	49	-106	-114	-27	-276	-141	-562	-417	0.442	0.309	0.76	Yes	0.243	0.170	0.42	Yes	0.657	0.342	1.00	Yes	0.593	0.146	0.74	Yes	1.00	**5.51**
		$U_{16} - L_{15}$	373.02	-44.46	-9	-25	-137	83	-305	-152	-506	-326	0.671	0.322	1.00	Yes	0.369	0.177	0.55	Yes	0.105	0.236	0.35	Yes	0.094	0.176	0.27	Yes	1.00	**3.75**
		$U_{17} - L_{16}$	489.40	-----	-34	13	-144	81	-107	-128	-550	-450	0.718	0.274	1.00	Yes	0.395	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.48**
		$U_{18} - L_{17}$	587.26	-----	-112	76	-322	237	-111	-118	-656	-528	0.694	0.301	1.00	Yes	0.382	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{19} - L_{18}$	663.06	-----	-132	87	-353	252	-66	-107	-610	-504	0.718	0.281	1.00	Yes	0.395	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.43**
		$U_{20} - L_{19}$	633.26	-----	-77	101	-266	252	33	-90	-1070	-117	0.686	0.312	1.00	Yes	0.377	0.172	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.72**
	Structure 2	$U_0 - L_1$	804.47	-----	-110	95	-387	367	-59	-44	-163	-110	0.796	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_1 - L_2$	796.41	-----	-89	66	-395	309	-95	-23	-173	34	0.788	0.209	1.00	Yes	0.433	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		$U_2 - L_3$	647.53	-----	-79	60	-338	255	-18	94	-186	113	0.766	0.225	1.00	Yes	0.421	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_3 - L_4$	594.63	-----	-32	11	-195	125	117	67	-109	55	0.793	0.202	1.00	Yes	0.436	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.31**
		$U_4 - L_5$	421.67	-39.31	3	-13	-133	92	84	-92	-217	70	0.758	0.233	1.00	Yes	0.417	0.128	0.55	Yes	0.097	0.096	0.20	Yes	0.083	0.170	0.26	Yes	1.00	**3.43**
		$U_5 - L_6$	421.03	-174.16	50	-77	-130	53	-260	-182	-174	165	0.757	0.241	1.00	Yes	0.416	0.132	0.55	Yes	0.411	0.213	0.63	Yes	0.369	0.166	0.54	Yes	1.00	**4.82**
		$U_6 - L_7$	26.03	-381.79	49	-102	-59	-20	-23	-306	-66	-72	0.042	0.196	0.24	Yes	0.023	0.108	0.14	Yes	0.817	0.178	1.00	Yes	0.731	0.116	0.85	Yes	1.00	**3.27**
		$U_8 - L_7$	538.80	-----	-28	-23	-227	102	-309	-215	-530	-514	0.687	0.311	1.00	Yes	0.432	0.177	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.50**
		$U_8 - L_8$	667.99	-----	-121	108	-343	197	-40	-83	-602	-531	0.724	0.275	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{10} - L_9$	763.24	-----	-92	128	-321	208	8	-56	-586	-515	0.755	0.237	1.00	Yes	0.415	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{11} - L_{10}$	839.40	-----	-97	149	-343	272	171	34	-602	-529	0.765	0.228	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		$U_{12} - L_{11}$	842.65	-----	-106	165	-374	335	309	134	-519	-474	0.768	0.230	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.99**
		$U_{13} - L_{12}$	744.05	-----	-149	152	-445	380	350	136	-349	-246	0.736	0.259	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		$U_{14} - L_{13}$	759.82	-----	3	173	-275	429	239	153	-285	-170	0.752	0.242	1.00	Yes	0.413	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.08**
		$U_{14} - L_{15}$	639.83	-----	74	129	-220	345	133	-89	131	220	0.756	0.235	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{15} - L_{16}$	614.43	-----	-56	64	-378	340	-59	13	-60	285	0.726	0.266	1.00	Yes	0.400	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**
		$U_{16} - L_{17}$	714.13	-----	-56	99	-320	339	-176	117	-270	320	0.773	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{17} - L_{18}$	643.29	-----	-64	77	-289	271	-29	100	-31	384	0.761	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.10**
		$U_{18} - L_{19}$	652.73	-----	-45	63	-289	250	26	15	144	304	0.772	0.219	1.00	Yes	0.424	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		$U_{19} - L_{20}$	604.85	-----	-14	21	-192	162	-38	-35	67	251	0.771	0.223	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{20} - L_{21}$	437.75	-----	-3	5	-127	100	-71	-49	-2	149	0.787	0.205	1.00	Yes	0.433	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{21} - L_{22}$	420.25	-149.05	25	-55	-139	38	-189	-197	96	218	0.756	0.241	1.00	Yes	0.416	0.132	0.55	Yes	0.352	0.185	0.54	Yes	0.315	0.178	0.50	Yes	1.00	**5.01**
		$U_{23} - L_{22}$	293.80	-263.94	51	-90	-132	11	-216	-45	-540	-423	0.528	0.324	0.86	Yes	0.291	0.178	0.47	Yes	0.629	0.365	1.00	Yes	0.558	0.168	0.73	Yes	1.00	**5.30**
		$U_{24} - L_{23}$	393.66	-16.38	6	-3	-130	87	41	13	-414	-306	0.708	0.287	1.00	Yes	0.389	0.158	0.55	Yes	0.039	0.183	0.23	Yes	0.035	0.167	0.21	Yes	1.00	**3.57**
		$U_{25} - L_{24}$	550.57	-----	-8	23	-202	157	88	19	-575	-432	0.702	0.298	1.00	Yes	0.386	0.170	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**
		$U_{26} - L_{25}$	628.74	-----	-24	35	-285	254	127	52	-490	-394	0.743	0.250	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		$U_{27} - L_{26}$	624.07	-----	-42	54	-299	264	186	76	-464	-407	0.738	0.254	1.00	Yes	0.406	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_{28} - L_{27}$	689.66	-----	-44	62	-352	349	210	118	-432	-341	0.747	0.251	1.00	Yes	0.411	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.45**
		$U_{29} - L_{28}$	616.49	-----	-70	82	-373	343	272	137	-310	-196	0.729	0.267	1.00	Yes	0.401	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.15**
		$U_{30} - L_{29}$	611.23	-----	38	102	-213	346	421	160	-253	-150	0.723	0.272	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{30} - L_{31}$	759.77	-----	78	151	-298	432	207	-5	293	263	0.752	0.244	1.00	Yes	0.413	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.93**
		$U_{31} - L_{32}$	705.87	-----	-58	65	-449	384	-12	38	169	233	0.733	0.260	1.00	Yes	0.403	0.133	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		$U_{32} - L_{33}$	873.40	-----	-56	95	-359	332	-157	138	-308	374	0.796	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{33} - L_{34}$	853.03	-----	-63	92	-352	266	26	208	98	494	0.777	0.217	1.00	Yes	0.427	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{34} - L_{35}$	820.69	-----	-60	82	-304	229	83	95	52	265	0.812	0.180	1.00	Yes	0.447	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.74**
		$U_{35} - L_{36}$	728.39	-----	-85	86	-339	222	-10	7	19	196	0.789	0.206	1.00	Yes	0.434	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{36} - L_{37}$	594.20	-----	-31	7	-217	136	-178	-199	-7	107	0.758	0.234	1.00	Yes	0.477	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{38} - L_{37}$	-----	-373.58	66	-97	-44	-19	-213	-86	-276	-248	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.185	1.00	Yes	0.716	0.111	0.83	Yes	1.00	**3.32**
		$U_{39} - L_{38}$	378.30	-294.41	77	-113	-120	59	-385	-119	-465	-329	0.680	0.288	0.97	Yes	0.374	0.158	0.54	Yes	0.701	0.291	1.00	Yes	0.623	0.153	0.78	Yes	1.00	**5.48**
		$U_{40} - L_{39}$	372.11	-86.03	19	-22	-144	86	-55	-49	-490	-367	0.669	0.326	1.00	Yes	0.368	0.179	0.55	Yes	0.206	0.248	0.46	Yes	0.182	0.184	0.37	Yes	1.00	**4.19**
		$U_{41} - L_{40}$	537.30	-----	-14	-1	-177	120	-87	-73	-540	-410	0.716	0.274	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		$U_{42} - L_{41}$	592.82	-----	-43	27	-333	241	-60	-57	-593	-526	0.701	0.296	1.00	Yes	0.385	0.163	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		$U_{43} - L_{42}$	717.14	-----	-61	41	-398	289	-1	-42	-665	-548	0.709	0.284	1.00	Yes	0.390	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.23**
		$U_{44} - L_{43}$	736.65	-----	-90	84	-285	317	-9	-12	-781	-395	0.729	0.264	1.00	Yes	0.401	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**
	Structure 3	$U_0 - L_1$	593.87	-----	-114	95	-418	316	-61	-51	-824	51	0.643	0.350	1.00	Yes	0.354	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		$U_1 - L_2$	725.69	-----	-97	66	-364	252	-123	-44	-79	29	0.786	0.207	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_2 - L_3$	646.53	-----	-96	62	-330	244	-48	78	-243	87	0.764	0.231	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.25**
		$U_3 - L_4$	551.99	-----	-28	10	-155	96	74	48	-132	61	0.809	0.188	1.00	Yes	0.445	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		$U_4 - L_5$	417.56	-31.35	-7	-9	-147	82	50	-104	-181	70	0.751	0.240	1.00	Yes	0.413	0.132	0.55	Yes	0.074	0.108	0.19	Yes	0.066	0.188	0.26	Yes	1.00	**4.13**
		$U_5 - L_6$	277.74	-313.03	44	-110	-143	-15	-324	-348	152	18	0.500	0.283	0.79	Yes	0.275	0.156	0.44	Yes	0.733	0.264	1.00	Yes	0.662	0.183	0.85	Yes	1.00	**6.83**
		$U_7 - L_6$	409.25	-22.12	-9	-36	-108	12	-338	-216	-381	-415	0.736	0.258	1.00	Yes	0.405	0.142	0.55	Yes	0.051	0.211	0.27	Yes	0.047	0.138	0.19	Yes	1.00	**3.75**
		$U_8 - L_7$	577.13	-----	-64	27	-209	123	-333	-223	-557	-465	0.704	0.292	1.00	Yes	0.443	0.166	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.53**
		$U_8 - L_8$	753.76	-----	-62	79	-278	47	-94	-140	-787	-741	0.746	0.247	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		$U_{10} - L_9$	920.41	-----	-47	126	-271	145	77	-16	-700	-704	0.777	0.218	1.00	Yes	0.481	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{11} - L_{10}$	956.10	-----	-77	120	-323	237	328	169	-719	-579	0.764	0.235	1.00	Yes	0.473	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		$U_{12} - L_{11}$	967.61	-----	75	177	-109	359	313	214	-513	-341	0.774	0.225	1.00	Yes	0.479	0.127	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.71**
		$U_{12} - L_{13}$	670.51	-----	77	155	-109	285	-10	-136	170	242	0.793	0.206	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{13} - L_{14}$	640.85	-----	-18	57	-302	233	-52	31	61	348	0.758	0.235	1.00	Yes	0.417	0.129	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{14} - L_{15}$	679.29	-----	14	170	-245	189	-13	130	125	285	0.803	0.191	1.00	Yes	0.442	0.105	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		$U_{15} - L_{16}$	491.19	-----	16	109	-164	26	233	297	464	306	0.720	0.274	1.00	Yes	0.396	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		$U_{17} - L_{16}$	-----	-361.14	69	2	-80	-80	239	226	-236	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.165	1.00	Yes	0.764	0.102	0.87	Yes	1.00	**7.02**
		$U_{18} - L_{17}$	197.41	-284.69	61	-31	-109	-56	298	195	-488	-331	0.355	0.281	0.64	Yes	0.195	0.155	0.35	Yes	0.655	0.336	1.00	Yes	0.602	0.140	0.75	Yes	1.00	**5.90**
		$U_{19} - L_{18}$	389.77	-154.66	31	-22	-108	1	197	153	-534	-458	0.701	0.292	1.00	Yes	0.386	0.161	0.55	Yes	0.355	0.297	0.66	Yes	0.327	0.137	0.47	Yes	1.00	**3.59**
		$U_{20} - L_{19}$	363.90	-----	133	-10	-157	82	926	32	-1315	-491	0.477	0.515	1.00	Yes	0.288	0.284	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.96**

Operating Loads - 5C1

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			-----	-444.63	665	-637	-1454	-99	121	-186	614	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.388	1	Yes	0.600	0.346	0.95	Yes	1.00	**5.94**
		U_1 - U_2			-----	-558.23	19	-397	-730	-292	247	-89	96	256	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1	Yes	0.753	0.174	0.93	Yes	1.00	**4.65**
		U_2 - U_3			232.91	-580.87	-53	342	-873	-262	-45	-89	157	-72	0.267	0.234	0.51	Yes	0.180	0.152	0.34	Yes	0.790	0.184	0.98	Yes	0.783	0.208	1.00	Yes	1.00	**4.40**
		U_3 - U_4			493.93	-548.39	176	373	-1090	173	-161	-99	30	-230	0.566	0.298	0.87	Yes	0.389	0.204	0.60	Yes	0.746	0.177	0.93	Yes	0.739	0.259	1.00	Yes	1.00	**5.84**
		U_4 - U_5			391.96	-549.03	140	298	-1073	-165	-210	-10	-125	-128	0.449	0.291	0.74	Yes	0.308	0.199	0.51	Yes	0.747	0.240	0.99	Yes	0.740	0.255	1.00	Yes	1.00	**4.47**
		U_5 - U_6			605.11	-354.13	242	389	-1007	170	-353	-14	-134	-313	0.694	0.299	1.00	Yes	0.468	0.195	0.67	Yes	0.482	0.320	0.81	Yes	0.478	0.239	0.72	Yes	1.00	**4.89**
		U_6 - U_7			648.00	-----	609	-1037	-1389	59	-480	-79	-554	-199	0.620	0.371	1.00	Yes	0.433	0.255	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.14**
		U_7 - U_8			890.11	-----	36	975	-1574	2161	-162	465	-305	91	0.617	0.375	1.00	Yes	0.430	0.255	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.28**
		U_8 - U_9			618.36	-----	2571	-1258	604	-115	-35	486	-2	145	0.507	0.491	1.00	Yes	0.347	0.334	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.10**
		U_9 - U_{10}			-----	-310.17	1594	-507	-2083	-980	1104	1080	222	1125	-----	-----	-----	-----	-----	-----	-----	-----	0.399	0.594	1	Yes	0.396	0.467	0.87	Yes	1.00	**34.88**
		U_{10} - U_{11}			-----	-618.22	484	-928	-244	-671	533	-21	336	221	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.188	0.99	Yes	0.789	0.208	1.00	Yes	1.00	**7.52**
		U_{11} - U_{12}			-----	-895.29	261	-289	-441	-676	307	-117	323	158	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.147	1	Yes	0.840	0.112	0.96	Yes	1.00	**4.90**
		U_{12} - U_{13}			-----	-1167.26	98	-146	-882	-653	270	-356	469	56	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.780	0.122	0.91	Yes	1.00	**4.85**
		U_{13} - U_{14}			-----	-1398.32	-92	-340	-1118	-846	150	80	239	27	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.184	1	Yes	0.802	0.123	0.93	Yes	1.00	**4.26**
		U_{14} - U_{15}			-----	-1312.35	-216	-863	-1789	-456	141	-197	234	-115	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.236	1	Yes	0.752	0.197	0.95	Yes	1.00	**3.78**
		U_{15} - U_{16}			-----	-1409.41	38	-1405	-1485	-804	-49	-294	192	-143	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.808	0.164	0.98	Yes	1.00	**3.71**
		U_{16} - U_{17}			-----	-1271.51	-301	-170	-1982	-590	147	-228	-118	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.263	1	Yes	0.729	0.219	0.95	Yes	1.00	**4.70**
		U_{17} - U_{18}			-----	-993.61	-168	-102	-1049	-81	-157	-233	-139	-362	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.207	1	Yes	0.777	0.171	0.95	Yes	1.00	**3.14**
		U_{18} - U_{19}			-----	-688.99	-190	-252	-854	-37	-214	-303	-49	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1	Yes	0.775	0.172	0.95	Yes	1.00	**3.00**
		U_{19} - U_{20}			-----	-571.11	13	-1351	-1594	279	-147	-638	430	-137	-----	-----	-----	-----	-----	-----	-----	-----	0.648	0.345	1	Yes	0.643	0.321	0.97	Yes	1.00	**6.77**
	Structure 2	U_0 - U_1			-----	-598.13	1328	-1399	-1720	-618	172	114	815	77	-----	-----	-----	-----	-----	-----	-----	-----	0.711	0.264	0.98	Yes	0.706	0.292	1.00	Yes	1.00	**9.01**
		U_1 - U_2			-----	-839.64	241	-427	-706	-728	206	274	358	325	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.180	1	Yes	0.810	0.110	0.93	Yes	1.00	**5.85**
		U_2 - U_3			-----	-1128.38	306	-738	-871	-1097	953	22	411	83	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.189	1	Yes	0.801	0.112	0.92	Yes	1.00	**4.93**
		U_3 - U_4			-----	-1319.62	-334	-226	-1863	-1257	97	-349	288	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.240	1	Yes	0.751	0.166	0.92	Yes	1.00	**4.66**
		U_4 - U_5			-----	-1410.92	-296	-719	-2043	-1377	-25	-638	243	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.730	0.263	1	Yes	0.724	0.169	0.90	Yes	1.00	**4.42**
		U_5 - U_6			-----	-1483.41	-344	75	-2276	-654	-141	-319	78	-315	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.225	1	Yes	0.762	0.189	0.96	Yes	1.00	**4.10**
		U_6 - U_7			-----	-1358.29	-187	-6	-1927	-774	-132	-287	-82	-339	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.218	1	Yes	0.773	0.172	0.95	Yes	1.00	**4.17**
		U_7 - U_8			-----	-1296.97	-142	-179	-2134	-788	-196	-224	-128	-245	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.255	1	Yes	0.739	0.190	0.93	Yes	1.00	**3.33**
		U_8 - U_9			-----	-1157.06	-265	129	-1745	-421	-246	-188	-51	-210	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1	Yes	0.785	0.186	0.98	Yes	1.00	**3.57**
		U_9 - U_{10}			192.39	-907.04	-49	329	-1711	-182	-305	-133	-131	-161	0.141	0.241	0.39	Yes	0.096	0.164	0.26	Yes	0.787	0.210	1	Yes	0.783	0.208	1.00	Yes	1.00	**3.95**
		U_{10} - U_{11}			599.99	-760.74	167	430	-1694	-310	-150	-41	-137	-243	0.507	0.269	0.78	Yes	0.345	0.173	0.52	Yes	0.761	0.232	1	Yes	0.756	0.239	1.00	Yes	1.00	**5.64**
		U_{11} - U_{12}			825.83	-280.31	197	526	-1718	229	-337	-153	-201	-484	0.698	0.301	1.00	Yes	0.469	0.201	0.67	Yes	0.280	0.196	0.48	Yes	0.279	0.242	0.53	Yes	1.00	**5.58**
		U_{12} - U_{13}			1106.18	-----	340	68	-1373	-711	-448	-54	-750	-521	0.747	0.244	1.00	Yes	0.532	0.167	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		U_{13} - U_{14}			1160.66	-----	-81	1879	-2727	4172	-197	414	-537	-165	0.571	0.423	1.00	Yes	0.404	0.277	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		U_{14} - U_{15}			858.31	-----	5616	-1067	1284	-95	-256	716	-259	138	0.422	0.569	1.00	Yes	0.299	0.373	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.03**
		U_{15} - U_{16}			1094.30	-----	349	191	-2241	-430	710	899	362	973	0.662	0.337	1.00	Yes	0.471	0.227	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.75**
		U_{16} - U_{17}			-----	-609.07	3223	-1197	-2875	-2093	1190	667	1311	750	-----	-----	-----	-----	-----	-----	-----	-----	0.531	0.466	1	Yes	0.528	0.405	0.94	Yes	1.00	**26.12**
		U_{17} - U_{18}			-----	-609.57	1030	-760	-1598	-764	323	-329	209	343	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.262	0.99	Yes	0.720	0.271	1.00	Yes	1.00	**13.01**
		U_{18} - U_{19}			-----	-718.80	770	-276	-858	-884	137	-239	272	10	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.140	1	Yes	0.849	0.150	1.00	Yes	1.00	**7.74**
		U_{19} - U_{20}			355.00	-662.74	379	217	-1061	-603	-25	167	218	97	0.333	0.199	0.54	Yes	0.221	0.131	0.36	Yes	0.736	0.256	1	Yes	0.731	0.170	0.91	Yes	1.00	**5.38**
		U_{20} - U_{21}			208.73	-830.84	226	-11	-1277	-499	1	-16	226	-29	0.162	0.210	0.38	Yes	0.113	0.135	0.25	Yes	0.764	0.227	1	Yes	0.758	0.185	0.95	Yes	1.00	**5.57**
		U_{21} - U_{22}			126.16	-829.66	32	65	-1442	-208	-42	-65	119	-42	0.098	0.222	0.32	Yes	0.069	0.148	0.22	Yes	0.763	0.229	1	Yes	0.757	0.209	0.97	Yes	1.00	**4.83**
		U_{22} - U_{23}			-----	-780.80	62	-1115	-1487	-630	10	-206	67	-97	-----	-----	-----	-----	-----	-----	-----	-----	0.718	0.275	1	Yes	0.713	0.215	0.93	Yes	1.00	**3.90**
		U_{23} - U_{24}			31.69	-798.37	146	-93	-1492	-357	-109	-32	-11	-193	0.025	0.237	0.27	Yes	0.017	0.152	0.17	Yes	0.734	0.263	1	Yes	0.729	0.216	0.95	Yes	1.00	**4.08**
		U_{24} - U_{25}			278.37	-671.41	160	297	-1460	-316	-277	-22	-131	-180	0.261	0.271	0.54	Yes	0.173	0.178	0.36	Yes	0.745	0.249	1	Yes	0.741	0.234	0.98	Yes	1.00	**4.58**
		U_{25} - U_{26}			457.51	-616.54	205	441	-1551	61	-295	45	-78	-117	0.459	0.306	0.77	Yes	0.301	0.195	0.50	Yes	0.733	0.193	0.93	Yes	0.728	0.263	1.00	Yes	1.00	**5.13**
		U_{26} - U_{27}			695.92	-394.72	265	453	-1558	125	-184	45	-142	-161	0.699	0.292	1.00	Yes	0.465	0.193	0.66	Yes	0.469	0.158	0.63	Yes	0.466	0.265	0.74	Yes	1.00	**6.00**
		U_{27} - U_{28}			941.39	-78.20	243	583	-1988	419	-292	3	-323	-461	0.694	0.298	1.00	Yes	0.462	0.196	0.66	Yes	0.068	0.272	0.35	Yes	0.068	0.250	0.32	Yes	1.00	**6.83**
		U_{28} - U_{29}			858.17	-----	784	-3313	-3422	-1268	-924	-181	-1034	-661	0.519	0.476	1.00	Yes	0.369	0.320	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**12.86**
		U_{29} - U_{30}			1100.00	-----	28	1953	-2812	4414	30	668	-422	104	0.541	0.454	1.00	Yes	0.383	0.298	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.68**
		U_{30} - U_{31}			800.58	-----	5861	-1485	1346	-348	-75	808	294	395	0.394	0.598	1.00	Yes	0.279	0.392	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.79**
		U_{31} - U_{32}			1052.96	-----	172	519	-1646	-122	-111	158	393	832	0.711	0.287	1.00	Yes	0.507	0.196	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		U_{32} - U_{33}			-----	-752.56	1771	-1330	-1303	-1303	986	132	853	620	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.246	1	Yes	0.748	0.250	1.00	Yes	1.00	**17.89**
		U_{33} - U_{34}			966.51	-746.80	618	417	-1022	-918	80	275	285	186	0.816	0.179	1.00	Yes	0.556	0.116	0.68	Yes	0.747	0.174	0.93	Yes	0.742	0.144	0.89	Yes	1.00	**8.27**
		U_{34} - U_{35}			518.05	-979.37	562	147	-907	-1093	76	41	314	3	0.380	0.167	0.55	Yes	0.257	0.113	0.38	Yes	0.850	0.142	1	Yes	0.845	0.133	0.98	Yes	1.00	**6.48**
		U_{35} - U_{36}			202.89	-1189.30	300	-156	-1231	-869	80	158	295	57	0.117	0.155	0.28	Yes	0.082	0.102	0.19	Yes	0.812	0.179	1	Yes	0.807	0.131	0.94	Yes	1.00	**5.56**
		U_{36} - U_{37}			-----	-1423.95	-43	5	-1550	-598	123	-63	340	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.177	1	Yes	0.811	0.138	0.95	Yes	1.00	**4.67**
		U_{37} - U_{38}			-----	-1279.63	84	-207	-2074	-971	19	26	203	-2	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.729	0.185	0.92	Yes	1.00	**3.64**
		U_{38} - U_{39}			-----	-1496.34	206	-585	-1854	-1455	109	-367	233	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.225	1	Yes	0.768	0.154	0.93	Yes	1.00	**3.95**
		U_{39} - U_{40}			-----	-1413.77	-305	-461	-2390	-1077	-115	-131	-79	-243	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.268	1	Yes	0.726	0.198	0.93	Yes	1.00	**3.46**
		U_{40} - U_{41}			-----	-1294.19	-389	-426	-1982	-1067	-89	-126	-147	-305	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1	Yes	0.737	0.177	0.92	Yes	1.00	**3.25**
		U_{41} - U_{42}			-----	-1121.56	-260	-180	-1859	-309	-91	50	-81	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.199	1	Yes	0.796	0.189	0.99	Yes	1.00	**3.49**
		U_{42} - U_{43}			-----	-803.49	-259	-56	-1373	-171	128	-47	80	-165	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1	Yes	0.775	0.208	0.99	Yes	1.00	**3.78**
		U_{43} - U_{44}			-----	-540.61	-10	-1303	-1735	181	-102	-544	290	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.642	0.352	1	Yes	0.638	0.295	0.94	Yes	1.00	**6.24**
	Structure 3	U_0 - U_1			-----	-591.20	1255	-1406	-1642	-509	53	-302	808	2	-----	-----	-----	-----	-----	-----	-----	-----	0.671	0.262	0.94	Yes	0.665	0.330	1.00	Yes	1.00	**8.70**
		U_1 - U_2			-----	-744.08	217	-569	-420	-456	250	30	352	292	-----	-----	-----	-----	-----	-----	-----	-----	0.845	0.153	1	Yes	0.837	0.114	0.96	Yes	1.00	**4.56**
		U_2 - U_3			-----	-984.69	175	-1031	-434	-528	830	22	441	4	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.211	1	Yes	0.770	0.168	0.94	Yes	1.00	**3.88**
		U_3 - U_4			-----	-1344.01	-59	-205	-1293	-984	290	-459	239	6	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.218	1	Yes	0.770	0.143	0.92	Yes	1.00	**5.86**
		U_4 - U_5			-----	-1352.29	-253	-183	-1481	-484	21	-617	282	-240	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.212	1	Yes	0.775	0.163	0.94	Yes	1.00	**4.37**
		U_5 - U_6			-----	-1341.10	-132	-199	-1395	-306	-68	-223	-25	-272	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.213	1	Yes	0.769	0.154	0.93	Yes	1.00	**4.48**
		U_6 - U_7			-----	-1304.01	-253	-582	-1794	-469	-34	-344	1	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.235	1	Yes	0.748	0.198	0.95	Yes	1.00	**3.58**
		U_7 - U_8			-----	-1150.70	-124	-133	-1295	-299	89	-188	-101	-242	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.221	1	Yes	0.769	0.179	0.95	Yes	1.00	**3.44**
		U_8 - U_9			-----	-872.92	-108	154	-994	-74	-194	-122	-94	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.170	1	Yes	0.819	0.165	0.99	Yes	1.00	**3.36**
		U_9 - U_{10}			120.64	-589.19	-79	198	-1075	109	-274	-142	-136	-245	0.131	0.285	0.42	Yes	0.087	0.183	0.27	Yes	0.759	0.226	0.99	Yes	0.752	0.241	1.00	Yes	1.00	**3.89**
		U_{10} - U_{11}			482.79	-513.50	365	-392	-1516	-43	-442	-66	-583	-315	0.524	0.433	0.96	Yes	0.355	0.291	0.65	Yes	0.661	0.322	0.99	Yes	0.655	0.340	1.00	Yes	1.00	**10.17**
		U_{11} - U_{12}			735.80	-----	-95	905	-1785	2011	-247	151	-450	-79	0.603	0.392	1.00	Yes	0.412	0.267	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.82**
		U_{12} - U_{13}			602.41	-----	3558	-2594	640	-36	-146	417	-139	56	0.417	0.582	1.00	Yes	0.291	0.396	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.13**
		U_{13} - U_{14}			839.41	-----	239	384	-626	-32	-172	287	114	454	0.803	0.195	1.00	Yes	0.561	0.134	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		U_{14} - U_{15}			-----	-546.34	780	-216	-458	-615	518	-162	535	198	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.254	1	Yes	0.737	0.185	0.93	Yes	1.00	**10.27**
		U_{15} - U_{16}			509.92	-580.39	393	218	-682	-246	-56	189	183	122	0.584	0.194	0.78	Yes	0.401	0.133	0.54	Yes	0.790	0.208	1	Yes	0.783	0.162	0.95	Yes	1.00	**6.22**
		U_{16} - U_{17}			-----	-559.42	448	-798	-1007	-179	29	-78	185	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.092	0.86	Yes	0.754	0.240	1.00	Yes	1.00	**5.17**
		U_{17} - U_{18}			149.86	-559.34	272	-120	-758	-411	-73	179	0	-146	0.172	0.210	0.39	Yes	0.116	0.137	0.26	Yes	0.761	0.238	1	Yes	0.754	0.180	0.94	Yes	1.00	**3.31**
		U_{18} - U_{19}			43.16	-554.12	69	-26	-885	-252	181	37	59	-10	0.049	0.241	0.30	Yes	0.034	0.165	0.20	Yes	0.754	0.245	1	Yes	0.747	0.210	0.96	Yes	1.00	**3.22**
		U_{19} - U_{20}			16.90	-490.04	172	-403	-1423	192	-38	41	367	93	0.019	0.400	0.42	Yes	0.013	0.275	0.29	Yes	0.667	0.289	0.96	Yes	0.661	0.338	1.00	Yes	1.00	**6.00**

Moment (Start) AI Operating

Operating Loads - 5C1

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			165.09	-74.27	1197	-1664	-276	172	-311	-1141	44	162	0.253	0.744	1.00	Yes	0.149	0.449	0.60	Yes	0.135	0.492	0.63	Yes	0.134	0.499	0.64	Yes	1.00	**17.71**
		L_1 - L_2			432.96	-----	317	-860	-428	-590	96	-18	-342	30	0.663	0.331	1.00	Yes	0.404	0.221	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.87**
		L_2 - L_3			654.92	-139.43	1	119	-943	-490	1	-15	-76	25	0.753	0.240	1.00	Yes	0.436	0.144	0.59	Yes	0.190	0.242	0.44	Yes	0.189	0.228	0.42	Yes	1.00	**4.96**
		L_3 - L_4			645.07	-----	118	-789	-951	-443	-132	45	-127	174	0.742	0.257	1.00	Yes	0.441	0.167	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		L_4 - L_5			126.94	-502.24	108	456	-868	393	139	-126	-96	19	0.164	0.254	0.42	Yes	0.099	0.167	0.27	Yes	0.772	0.177	0.95	Yes	0.765	0.230	1.00	Yes	1.00	**3.96**
		L_5 - L_6			-----	-749.81	144	582	-584	272	5	55	-45	89	-----	-----	-----	-----	-----	-----	-----	-----	0.875	0.119	1	Yes	0.865	0.129	1.00	Yes	1.00	**4.43**
		L_6 - L_7			-----	-1067.10	182	77	-856	196	165	20	69	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.076	0.95	Yes	0.859	0.135	1.00	Yes	1.00	**5.59**
		L_7 - L_8			-----	-1180.00	48	955	-720	1884	230	346	78	124	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.240	1	Yes	0.747	0.249	1.00	Yes	1.00	**6.07**
		L_8 - L_9			-----	-1181.74	1835	-298	547	-30	38	-26	53	0	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.222	0.98	Yes	0.748	0.243	1.00	Yes	1.00	**5.84**
		L_9 - L_{10}			-----	-976.33	1157	-1312	-808	-274	273	17	154	-54	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.083	0.88	Yes	0.786	0.206	1.00	Yes	1.00	**11.82**
		L_{10} - L_{11}			485.53	-361.78	798	-685	-161	-944	39	80	-278	-638	0.629	0.362	1.00	Yes	0.366	0.216	0.59	Yes	0.556	0.216	0.78	Yes	0.551	0.250	0.81	Yes	1.00	**10.90**
		L_{11} - L_{12}			590.51	-----	556	-791	-112	-672	-96	12	90	114	0.765	0.229	1.00	Yes	0.459	0.151	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.69**
		L_{12} - L_{13}			1070.68	-----	118	-185	-600	-751	-166	-101	-16	37	0.845	0.153	1.00	Yes	0.540	0.091	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		L_{13} - L_{14}			1280.88	-----	618	-1595	-530	-1262	-268	50	-135	222	0.753	0.242	1.00	Yes	0.488	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**
		L_{14} - L_{15}			1538.88	-----	-333	-80	-1946	-515	-63	-51	-148	111	0.752	0.245	1.00	Yes	0.489	0.148	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.20**
		L_{15} - L_{16}			1595.07	-----	-181	-381	-1708	-944	-77	12	-51	100	0.779	0.213	1.00	Yes	0.500	0.124	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{16} - L_{17}			1215.98	-----	-390	36	-1493	121	-33	-63	-114	40	0.769	0.229	1.00	Yes	0.499	0.141	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_{17} - L_{18}			913.03	-----	-172	-58	-994	59	-72	-11	-73	-76	0.795	0.201	1.00	Yes	0.509	0.120	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.79**
		L_{18} - L_{19}			436.28	-----	-245	173	-956	401	-3	-31	-185	140	0.668	0.325	1.00	Yes	0.452	0.203	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.92**
		L_{19} - L_{20}			69.61	-179.13	-93	19	-2236	1076	-36	-8	931	208	0.107	0.864	0.98	Yes	0.065	0.576	0.65	Yes	0.325	0.503	0.83	Yes	0.323	0.671	1.00	Yes	1.00	**15.09**
	Structure 2	L_0 - L_1			70.78	-----	995	-2545	-158	88	-379	-1317	13	45	0.107	0.893	1.00	Yes	0.065	0.445	0.51	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.74**
		L_1 - L_2			533.28	-----	726	-1454	-57	-777	108	212	-339	298	0.648	0.351	1.00	Yes	0.385	0.225	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.24**
		L_2 - L_3			980.38	-----	441	-1271	-534	-836	130	237	401	12	0.773	0.226	1.00	Yes	0.507	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.62**
		L_3 - L_4			1353.29	-----	519	-1531	-935	-1162	-17	118	9	290	0.795	0.202	1.00	Yes	0.535	0.125	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		L_4 - L_5			1755.55	-----	43	-1512	-1724	-1439	-195	-99	211	-112	0.818	0.177	1.00	Yes	0.542	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.95**
		L_5 - L_6			1852.20	-----	-4	-242	-1831	-2166	-91	57	0	173	0.795	0.203	1.00	Yes	0.533	0.123	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_6 - L_7			1838.81	-----	-329	-37	-2347	-1629	54	-25	63	178	0.778	0.217	1.00	Yes	0.517	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		L_7 - L_8			1305.19	-122.04	-129	330	-2153	-108	-59	79	-150	158	0.748	0.251	1.00	Yes	0.492	0.146	0.64	Yes	0.083	0.211	0.3	Yes	0.082	0.238	0.33	Yes	1.00	**5.31**
		L_8 - L_9			1083.51	-430.06	-33	565	-1658	460	55	-150	-27	167	0.758	0.239	1.00	Yes	0.510	0.149	0.66	Yes	0.357	0.125	0.49	Yes	0.354	0.224	0.58	Yes	1.00	**6.24**
		L_9 - L_{10}			665.19	-698.35	-41	674	-1633	262	-37	26	-29	92	0.594	0.272	0.87	Yes	0.346	0.170	0.52	Yes	0.738	0.154	0.9	Yes	0.733	0.261	1.00	Yes	1.00	**6.61**
		L_{10} - L_{11}			64.57	-687.30	14	561	-1087	544	123	-58	-46	-4	0.064	0.207	0.28	Yes	0.038	0.131	0.17	Yes	0.813	0.059	0.88	Yes	0.807	0.190	1.00	Yes	1.00	**4.49**
		L_{11} - L_{12}			-----	-1019.57	8	969	-1182	820	15	56	69	75	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.113	0.96	Yes	0.836	0.161	1.00	Yes	1.00	**5.44**
		L_{12} - L_{13}			-----	-1304.42	173	-316	-1637	-774	91	49	-31	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.206	1	Yes	0.780	0.163	0.95	Yes	1.00	**6.84**
		L_{13} - L_{14}			-----	-1263.38	-300	1477	-2517	4113	-430	-410	8	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.641	0.248	0.89	Yes	0.636	0.359	1.00	Yes	1.00	**7.12**
		L_{14} - L_{15}			-----	-1254.60	4196	-1587	1236	-547	-123	-98	-256	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.250	0.89	Yes	0.631	0.366	1.00	Yes	1.00	**6.20**
		L_{15} - L_{16}			-----	-1275.59	-132	183	-2296	-390	183	156	-57	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.220	0.99	Yes	0.763	0.228	1.00	Yes	1.00	**7.10**
		L_{16} - L_{17}			-----	-1005.24	2170	-1660	260	-492	-126	-102	361	28	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.203	0.95	Yes	0.732	0.268	1.00	Yes	1.00	**10.57**
		L_{17} - L_{18}			99.31	-537.49	2225	-2673	-1110	-718	-161	-32	111	292	0.089	0.463	0.56	Yes	0.052	0.289	0.35	Yes	0.568	0.265	0.84	Yes	0.564	0.428	1.00	Yes	1.00	**17.82**
		L_{18} - L_{19}			650.18	-99.02	1075	-1087	-637	-1025	-139	-117	101	-306	0.737	0.257	1.00	Yes	0.425	0.152	0.58	Yes	0.133	0.128	0.27	Yes	0.132	0.210	0.35	Yes	1.00	**9.20**
		L_{19} - L_{20}			664.58	-----	730	-1102	-466	-1098	-212	4	-95	179	0.753	0.245	1.00	Yes	0.445	0.156	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.73**
		L_{20} - L_{21}			990.66	-482.65	496	45	-1148	-1338	-6	-60	59	84	0.790	0.204	1.00	Yes	0.518	0.121	0.64	Yes	0.456	0.197	0.66	Yes	0.453	0.195	0.65	Yes	1.00	**7.18**
		L_{21} - L_{22}			904.42	-----	292	-1708	-1295	-1050	-210	24	-165	127	0.721	0.272	1.00	Yes	0.482	0.170	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_{22} - L_{23}			843.92	-100.56	-20	53	-2129	-326	4	-50	-49	91	0.673	0.321	1.00	Yes	0.450	0.200	0.66	Yes	0.095	0.257	0.36	Yes	0.094	0.311	0.41	Yes	1.00	**5.62**
		L_{23} - L_{24}			875.58	-481.18	56	438	-1919	-186	5	75	91	154	0.698	0.297	1.00	Yes	0.458	0.176	0.64	Yes	0.455	0.238	0.7	Yes	0.451	0.280	0.74	Yes	1.00	**7.13**
		L_{24} - L_{25}			505.20	-550.20	157	499	-1350	246	109	-100	-2	50	0.572	0.277	0.85	Yes	0.339	0.178	0.52	Yes	0.738	0.099	0.84	Yes	0.733	0.261	1.00	Yes	1.00	**6.01**
		L_{25} - L_{26}			102.18	-612.74	68	575	-944	299	11	78	52	46	0.116	0.194	0.31	Yes	0.067	0.116	0.19	Yes	0.822	0.130	0.96	Yes	0.817	0.182	1.00	Yes	1.00	**4.88**
		L_{26} - L_{27}			-----	-779.09	153	494	-1080	653	132	-20	0	32	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.076	0.91	Yes	0.818	0.173	1.00	Yes	1.00	**5.00**
		L_{27} - L_{28}			-----	-1121.72	84	1084	-1417	1108	86	155	19	61	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.112	0.94	Yes	0.817	0.175	1.00	Yes	1.00	**6.92**
		L_{28} - L_{29}			-----	-1299.72	226	-597	-1642	-1007	215	190	-20	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.214	1	Yes	0.777	0.163	0.95	Yes	1.00	**7.74**
		L_{29} - L_{30}			-----	-1253.44	-244	1269	-2966	4198	-329	-413	-28	0	-----	-----	-----	-----	-----	-----	-----	-----	0.636	0.238	0.88	Yes	0.631	0.367	1.00	Yes	1.00	**7.98**
		L_{30} - L_{31}			-----	-1227.67	4282	-1617	1183	-302	-40	-22	-310	-223	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.264	0.89	Yes	0.618	0.374	1.00	Yes	1.00	**6.62**
		L_{31} - L_{32}			-----	-1167.00	-36	-539	-2505	-497	357	471	130	31	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.290	1	Yes	0.698	0.249	0.95	Yes	1.00	**8.53**
		L_{32} - L_{33}			-----	-820.86	2236	-2374	2	-1194	-47	165	501	-215	-----	-----	-----	-----	-----	-----	-----	-----	0.679	0.221	0.9	Yes	0.673	0.323	1.00	Yes	1.00	**15.57**
		L_{33} - L_{34}			351.44	-----	2440	-3329	-1224	-716	-161	177	290	434	0.351	0.641	1.00	Yes	0.206	0.404	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**25.59**
		L_{34} - L_{35}			814.10	-799.09	784	21	-408	-998	-15	-57	148	-239	0.727	0.188	0.92	Yes	0.423	0.117	0.54	Yes	0.845	0.101	0.95	Yes	0.839	0.160	1.00	Yes	1.00	**7.21**
		L_{35} - L_{36}			1060.43	-----	957	-1643	-637	-897	-332	-31	-78	296	0.742	0.253	1.00	Yes	0.500	0.158	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.18**
		L_{36} - L_{37}			1431.72	-179.53	426	-11	-1003	-1510	34	-25	57	-97	0.821	0.175	1.00	Yes	0.539	0.102	0.65	Yes	0.122	0.174	0.3	Yes	0.121	0.167	0.29	Yes	1.00	**5.66**
		L_{37} - L_{38}			1791.38	-----	152	-344	-2585	-1622	-60	36	-140	212	0.758	0.240	1.00	Yes	0.504	0.140	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.51**
		L_{38} - L_{39}			1759.56	-----	-289	-51	-2567	-770	-5	-69	53	249	0.755	0.243	1.00	Yes	0.507	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.09**
		L_{39} - L_{40}			1671.99	-----	-207	-370	-2217	-788	-68	-5	-6	95	0.779	0.216	1.00	Yes	0.516	0.127	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.90**
		L_{40} - L_{41}			1312.84	-----	-390	17	-1828	-51	-5	-7	-97	77	0.771	0.222	1.00	Yes	0.519	0.136	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		L_{41} - L_{42}			1000.10	-----	-165	-104	-1363	62	24	79	103	64	0.788	0.208	1.00	Yes	0.517	0.123	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		L_{42} - L_{43}			541.30	-----	-274	160	-1476	411	60	16	-79	214	0.657	0.335	1.00	Yes	0.391	0.216	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		L_{43} - L_{44}			22.59	-52.47	0	-87	-3344	887	-64	-19	1749	510	0.027	0.968	1.00	Yes	0.016	0.613	0.63	Yes	0.075	0.667	0.75	Yes	0.075	0.680	0.76	Yes	1.00	**18.74**
	Structure 3	L_0 - L_1			30.21	-----	1356	-2215	-61	1	-297	-1346	1	3	0.046	0.944	1.00	Yes	0.028	0.624	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.80**
		L_1 - L_2			434.25	-----	503	-916	34	-377	-50	281	-10	93	0.665	0.333	1.00	Yes	0.450	0.209	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		L_2 - L_3			869.47	-----	376	-794	-360	-461	99	232	651	267	0.757	0.236	1.00	Yes	0.485	0.144	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.08**
		L_3 - L_4			1187.64	-----	474	-1477	-629	-958	3	158	-12	285	0.751	0.242	1.00	Yes	0.487	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.52**
		L_4 - L_5			1649.13	-----	-235	-289	-1446	-976	-139	-102	5	-180	0.806	0.187	1.00	Yes	0.517	0.109	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_5 - L_6			1584.23	-----	158	-1622	-1123	-1515	-254	122	-74	334	0.774	0.219	1.00	Yes	0.503	0.133	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.12**
		L_6 - L_7			1241.59	-----	-326	172	-1815	281	-15	-52	-4	197	0.730	0.267	1.00	Yes	0.473	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		L_7 - L_8			1008.47	-----	-79	72	-1011	-202	-19	73	7	205	0.796	0.203	1.00	Yes	0.509	0.121	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_8 - L_9			562.40	-139.76	-174	326	-922	308	63	-123	-5	34	0.728	0.266	1.00	Yes	0.437	0.175	0.62	Yes	0.215	0.127	0.35	Yes	0.213	0.244	0.46	Yes	1.00	**4.65**
		L_9 - L_{10}			89.10	-499.93	-35	463	-871	262	-38	-2	92	112	0.115	0.250	0.37	Yes	0.067	0.152	0.22	Yes	0.769	0.124	0.9	Yes	0.762	0.231	1.00	Yes	1.00	**5.85**
		L_{10} - L_{11}			-----	-975.83	83	43	-1264	467	83	-28	81	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.099	0.9	Yes	0.790	0.200	1.00	Yes	1.00	**8.24**
		L_{11} - L_{12}			-----	-1188.51	29	852	-736	1800	-12	6	0	-147	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.212	0.98	Yes	0.753	0.238	1.00	Yes	1.00	**7.02**
		L_{12} - L_{13}			-----	-1157.15	1993	-208	554	-32	-115	-128	-127	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.256	1	Yes	0.733	0.264	1.00	Yes	1.00	**5.66**
		L_{13} - L_{14}			-----	-1027.17	886	-878	-1051	-249	99	53	-128	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.087	0.93	Yes	0.827	0.165	1.00	Yes	1.00	**10.75**
		L_{14} - L_{15}			-----	-746.76	579	137	28	-301	-6	-67	20	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.123	1	Yes	0.862	0.128	0.99	Yes	1.00	**4.44**
		L_{15} - L_{16}			454.83	-----	810	-1355	-322	-736	-145	172	-132	241	0.589	0.402	1.00	Yes	0.353	0.264	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.55**
		L_{16} - L_{17}			660.86	-249.85	358	28	-934	-452	46	-86	-38	38	0.760	0.239	1.00	Yes	0.452	0.156	0.61	Yes	0.341	0.266	0.61	Yes	0.338	0.226	0.57	Yes	1.00	**5.33**
		L_{17} - L_{18}			636.07	-94.72	89	-53	-1009	-465	33	109	33	151	0.732	0.268	1.00	Yes	0.423	0.161	0.59	Yes	0.129	0.287	0.42	Yes	0.128	0.244	0.38	Yes	1.00	**4.95**
		L_{18} - L_{19}			445.78	-15.82	7	25	-953	77	54	-76	33	125	0.682	0.313	1.00	Yes	0.416	0.211	0.63	Yes	0.029	0.194	0.23	Yes	0.028	0.286	0.32	Yes	1.00	**4.55**
		L_{19} - L_{20}			-----	-52.60	156	-236	-3013	1295	-190	-52	1098	299	-----	-----	-----	-----	-----	-----	-----	-----	0.096	0.744	0.84	Yes	0.095	0.904	1.00	Yes	1.00	**22.04**

Moment (Start) AI Operating

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-294.08	-12	35	-184	205	-75	-24	-893	-286	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.334	1	Yes	0.622	0.262	0.89	Yes	1.00	**2.17**
		$U_1 - L_1$			50.76	-301.95	39	-35	-275	277	80	36	496	223	0.091	0.497	0.59	Yes	0.050	0.273	0.33	Yes	0.660	0.230	0.89	Yes	0.639	0.354	1.00	Yes	1.00	**4.89**
		$U_2 - L_2$			-----	-276.58	113	-87	-291	323	-217	-65	274	177	-----	-----	-----	-----	-----	-----	-----	-----	0.604	0.178	0.79	Yes	0.585	0.413	1.00	Yes	1.00	**7.09**
		$U_3 - L_3$			243.27	-231.49	375	-347	-361	362	247	174	69	260	0.438	0.554	1.00	Yes	0.241	0.305	0.55	Yes	0.507	0.156	0.67	Yes	0.490	0.479	0.97	Yes	1.00	**11.10**
		$U_4 - L_4$			26.15	-239.92	379	-357	-95	65	-98	-90	-65	79	0.047	0.512	0.56	Yes	0.026	0.282	0.31	Yes	0.528	0.139	0.67	Yes	0.508	0.484	1.00	Yes	1.00	**9.19**
		$U_5 - L_5$			-----	-426.96	230	-252	42	-67	-126	-105	-103	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.103	0.88	Yes	0.737	0.255	1.00	Yes	1.00	**3.94**
		$U_6 - L_6$			-----	-519.28	272	-289	55	-69	71	57	-83	57	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.084	0.88	Yes	0.745	0.252	1.00	Yes	1.00	**3.89**
		$U_7 - L_7$			-----	-443.97	294	-316	118	-132	-30	80	-129	46	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.122	0.87	Yes	0.685	0.311	1.00	Yes	1.00	**2.51**
		$U_8 - L_8$			-----	-1291.58	442	-527	-397	469	-218	-50	-157	-67	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.050	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.33**
		$U_9 - L_9$			-----	-658.93	-167	191	-407	452	-226	-159	-538	-355	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.182	0.97	Yes	0.744	0.251	1.00	Yes	1.00	**3.35**
		$U_{10} - L_{10}$			-----	-798.11	-114	110	-400	405	-203	-146	-242	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.102	0.93	Yes	0.787	0.210	1.00	Yes	1.00	**5.29**
		$U_{11} - L_{11}$			-----	-659.62	-91	196	-397	484	-191	-56	1	92	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.099	0.9	Yes	0.768	0.224	1.00	Yes	1.00	**4.82**
		$U_{12} - L_{12}$			-----	-500.06	-55	76	-359	347	-29	78	-34	124	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.099	0.83	Yes	0.686	0.307	1.00	Yes	1.00	**4.51**
		$U_{13} - L_{13}$			-----	-360.03	-7	25	-254	270	-100	76	-19	147	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.112	0.84	Yes	0.690	0.309	1.00	Yes	1.00	**3.78**
		$U_{14} - L_{14}$			-----	-227.98	205	-198	-390	403	-143	-52	45	102	-----	-----	-----	-----	-----	-----	-----	-----	0.509	0.176	0.69	Yes	0.482	0.515	1.00	Yes	1.00	**9.70**
		$U_{15} - L_{15}$			186.49	-315.74	239	-253	-155	143	11	-176	-152	-140	0.335	0.375	0.72	Yes	0.184	0.206	0.40	Yes	0.708	0.162	0.88	Yes	0.668	0.324	1.00	Yes	1.00	**5.43**
		$U_{16} - L_{16}$			70.39	-319.60	244	-249	-32	14	-126	-204	-108	-86	0.127	0.378	0.51	Yes	0.070	0.208	0.28	Yes	0.720	0.164	0.89	Yes	0.676	0.319	1.00	Yes	1.00	**4.16**
		$U_{17} - L_{17}$			-----	-440.41	215	-232	38	-58	-162	-157	-119	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.131	0.96	Yes	0.760	0.235	1.00	Yes	1.00	**3.28**
		$U_{18} - L_{18}$			-----	-532.29	435	-445	122	-141	92	-53	-109	67	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.081	0.87	Yes	0.740	0.252	1.00	Yes	1.00	**3.54**
		$U_{19} - L_{19}$			-----	-647.12	502	-517	128	-181	242	16	-14	303	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.097	0.91	Yes	0.753	0.240	1.00	Yes	1.00	**3.98**
		$U_{20} - L_{20}$			-----	-579.13	416	-486	155	-228	769	101	215	28	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.230	1	Yes	0.674	0.226	0.90	Yes	1.00	**2.79**
	Structure 2	$U_0 - L_0$			-----	-615.49	-108	173	-440	524	-262	-44	-1119	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.257	1	Yes	0.660	0.222	0.89	Yes	1.00	**2.88**
		$U_1 - L_1$			-----	-707.91	-95	101	-558	549	60	-63	60	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.071	0.89	Yes	0.759	0.237	1.00	Yes	1.00	**4.82**
		$U_2 - L_2$			-----	-585.38	-69	78	-496	494	109	47	-61	54	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.085	0.87	Yes	0.746	0.254	1.00	Yes	1.00	**4.36**
		$U_3 - L_3$			-----	-487.92	-36	42	-245	252	27	135	80	194	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.111	0.95	Yes	0.765	0.230	1.00	Yes	1.00	**4.00**
		$U_4 - L_4$			40.41	-326.27	14	1	-235	229	-101	63	-41	149	0.073	0.343	0.42	Yes	0.040	0.189	0.23	Yes	0.740	0.103	0.85	Yes	0.690	0.300	1.00	Yes	1.00	**4.16**
		$U_5 - L_5$			166.25	-315.76	115	-106	-243	254	-109	96	-45	170	0.299	0.375	0.68	Yes	0.164	0.206	0.38	Yes	0.713	0.124	0.84	Yes	0.668	0.325	1.00	Yes	1.00	**5.57**
		$U_6 - L_6$			325.82	-290.33	260	-249	-280	280	-111	112	34	189	0.586	0.413	1.00	Yes	0.322	0.227	0.55	Yes	0.653	0.124	0.78	Yes	0.614	0.358	0.98	Yes	1.00	**7.96**
		$U_7 - L_7$			-----	-229.64	355	-397	-139	139	-135	-82	-123	8	-----	-----	-----	-----	-----	-----	-----	-----	0.519	0.185	0.71	Yes	0.486	0.508	1.00	Yes	1.00	**10.17**
		$U_8 - L_8$			-----	-464.50	360	-370	33	-54	-198	-186	-140	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.125	0.8	Yes	0.669	0.323	1.00	Yes	1.00	**3.76**
		$U_9 - L_9$			-----	-694.68	579	-590	122	-149	-226	-207	-162	-108	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.093	0.87	Yes	0.744	0.250	1.00	Yes	1.00	**4.58**
		$U_{10} - L_{10}$			-----	-796.82	542	-565	128	-166	-4	-72	-95	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.084	0.88	Yes	0.745	0.249	1.00	Yes	1.00	**4.82**
		$U_{11} - L_{11}$			-----	-821.97	512	-520	172	-183	-111	-41	-53	-66	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.079	0.91	Yes	0.769	0.230	1.00	Yes	1.00	**4.37**
		$U_{12} - L_{12}$			-----	-886.83	527	-535	156	-165	144	113	-34	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.090	0.95	Yes	0.769	0.230	1.00	Yes	1.00	**4.35**
		$U_{13} - L_{13}$			-----	-745.40	573	-560	242	-240	66	91	-90	42	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.113	0.95	Yes	0.719	0.274	1.00	Yes	1.00	**3.29**
		$U_{14} - L_{14}$			-----	-1301.20	598	-572	-492	453	40	87	-129	26	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.042	1	Yes	0.863	0.106	0.97	Yes	1.00	**5.30**
		$U_{15} - L_{15}$			-----	-714.89	-153	155	-646	624	-66	-35	-300	-203	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.183	0.99	Yes	0.689	0.309	1.00	Yes	1.00	**4.79**
		$U_{16} - L_{16}$			-----	-708.69	-102	92	-566	531	-148	-82	-269	-155	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.119	0.94	Yes	0.760	0.240	1.00	Yes	1.00	**4.89**
		$U_{17} - L_{17}$			-----	-637.86	-119	116	-544	533	-93	-30	-139	-38	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.088	0.88	Yes	0.742	0.253	1.00	Yes	1.00	**4.44**
		$U_{18} - L_{18}$			-----	-577.54	-90	91	-503	508	-78	-9	-31	50	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.074	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.41**
		$U_{19} - L_{19}$			-----	-467.94	-40	47	-312	297	-156	-16	-106	44	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.099	0.81	Yes	0.699	0.300	1.00	Yes	1.00	**4.18**
		$U_{20} - L_{20}$			16.30	-369.41	4	1	-251	251	-156	12	-73	80	0.027	0.327	0.36	Yes	0.015	0.180	0.20	Yes	0.757	0.111	0.87	Yes	0.708	0.287	1.00	Yes	1.00	**4.17**
		$U_{21} - L_{21}$			75.48	-319.87	52	-48	-240	248	-148	31	-43	87	0.136	0.360	0.50	Yes	0.075	0.198	0.28	Yes	0.723	0.123	0.85	Yes	0.677	0.317	1.00	Yes	1.00	**4.45**
		$U_{22} - L_{22}$			22.42	-271.15	276	-280	-325	329	83	19	-53	17	0.040	0.445	0.49	Yes	0.022	0.245	0.27	Yes	0.610	0.130	0.75	Yes	0.574	0.421	1.00	Yes	1.00	**10.70**
		$U_{23} - L_{23}$			119.20	-320.05	238	-248	-90	78	-128	-124	-98	-51	0.214	0.354	0.57	Yes	0.118	0.194	0.32	Yes	0.723	0.132	0.86	Yes	0.677	0.317	1.00	Yes	1.00	**4.50**
		$U_{24} - L_{24}$			-----	-377.18	230	-237	-16	0	-117	-102	-42	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.109	0.89	Yes	0.723	0.271	1.00	Yes	1.00	**3.80**
		$U_{25} - L_{25}$			-----	-473.91	296	-294	35	-51	-13	-37	-98	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.084	0.8	Yes	0.708	0.285	1.00	Yes	1.00	**3.66**
		$U_{26} - L_{26}$			-----	-567.42	505	-530	99	-135	-125	-48	-96	30	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.089	0.85	Yes	0.723	0.271	1.00	Yes	1.00	**3.96**
		$U_{27} - L_{27}$			-----	-630.85	550	-556	139	-140	4	37	-151	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.083	0.87	Yes	0.734	0.258	1.00	Yes	1.00	**3.85**
		$U_{28} - L_{28}$			-----	-712.41	551	-547	135	-149	108	100	-49	83	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.072	0.9	Yes	0.763	0.234	1.00	Yes	1.00	**3.90**
		$U_{29} - L_{29}$			-----	-710.81	639	-627	202	-208	52	82	-118	24	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.121	0.92	Yes	0.685	0.306	1.00	Yes	1.00	**4.02**
		$U_{30} - L_{30}$			-----	-1280.32	583	-578	-533	473	-100	-48	-183	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.936	0.055	1	Yes	0.849	0.103	0.96	Yes	1.00	**5.44**
		$U_{31} - L_{31}$			-----	-727.02	-176	172	-552	536	-112	-56	-396	-178	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.188	1	Yes	0.701	0.264	0.97	Yes	1.00	**3.92**
		$U_{32} - L_{32}$			-----	-890.47	-122	92	-519	502	-187	-98	-281	-130	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.129	0.99	Yes	0.772	0.222	1.00	Yes	1.00	**5.24**
		$U_{33} - L_{33}$			-----	-826.03	-157	156	-502	494	-155	-69	-25	50	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.086	0.92	Yes	0.772	0.222	1.00	Yes	1.00	**5.25**
		$U_{34} - L_{34}$			-----	-791.44	-114	129	-567	564	-182	-36	-76	101	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.086	0.87	Yes	0.740	0.250	1.00	Yes	1.00	**5.85**
		$U_{35} - L_{35}$			-----	-694.61	-106	127	-590	584	-175	45	-73	141	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.073	0.85	Yes	0.744	0.250	1.00	Yes	1.00	**5.25**
		$U_{36} - L_{36}$			-----	-471.30	-42	59	-353	359	-142	71	12	160	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.096	0.78	Yes	0.679	0.314	1.00	Yes	1.00	**4.09**
		$U_{37} - L_{37}$			-----	-221.78	107	-109	-379	414	-169	-24	-87	62	-----	-----	-----	-----	-----	-----	-----	-----	0.501	0.195	0.7	Yes	0.469	0.529	1.00	Yes	1.00	**9.99**
		$U_{38} - L_{38}$			350.48	-173.60	168	-166	-240	241	-153	-184	-101	-105	0.630	0.362	1.00	Yes	0.347	0.199	0.55	Yes	0.391	0.138	0.53	Yes	0.367	0.309	0.68	Yes	1.00	**5.49**
		$U_{39} - L_{39}$			128.78	-328.78	214	-232	-137	114	-132	-170	-83	-64	0.232	0.346	0.58	Yes	0.127	0.190	0.32	Yes	0.743	0.160	0.91	Yes	0.696	0.297	1.00	Yes	1.00	**5.13**
		$U_{40} - L_{40}$			52.87	-339.18	219	-220	-31	8	-36	-110	-107	-78	0.095	0.313	0.41	Yes	0.052	0.172	0.23	Yes	0.769	0.120	0.89	Yes	0.718	0.281	1.00	Yes	1.00	**3.95**
		$U_{41} - L_{41}$			-----	-486.01	247	-259	39	-46	-114	-101	-105	-42	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.105	0.94	Yes	0.762	0.235	1.00	Yes	1.00	**3.73**
		$U_{42} - L_{42}$			-----	-579.17	495	-501	96	-106	143	-12	-85	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.090	0.87	Yes	0.738	0.256	1.00	Yes	1.00	**3.88**
		$U_{43} - L_{43}$			-----	-709.70	537	-556	132	-149	434	57	-43	-22	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.127	0.94	Yes	0.761	0.236	1.00	Yes	1.00	**3.96**
		$U_{44} - L_{44}$			-----	-647.62	464	-567	190	-235	797	135	-39	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.216	1	Yes	0.694	0.240	0.94	Yes	1.00	**2.93**
	Structure 3	$U_0 - L_0$			-----	-555.28	-102	166	-426	482	-251	-33	-945	-124	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.261	1	Yes	0.646	0.224	0.88	Yes	1.00	**3.00**
		$U_1 - L_1$			-----	-651.94	-107	114	-501	502	8	-73	44	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.076	0.89	Yes	0.759	0.233	1.00	Yes	1.00	**4.80**
		$U_2 - L_2$			-----	-531.80	-86	91	-457	454	88	34	-9	63	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.081	0.86	Yes	0.740	0.259	1.00	Yes	1.00	**4.61**
		$U_3 - L_3$			-----	-441.86	-31	43	-217	230	3	121	-8	176	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.114	0.95	Yes	0.762	0.234	1.00	Yes	1.00	**3.90**
		$U_4 - L_4$			56.80	-321.28	24	-14	-246	247	-163	81	-20	224	0.102	0.381	0.49	Yes	0.056	0.209	0.27	Yes	0.724	0.116	0.85	Yes	0.680	0.316	1.00	Yes	1.00	**4.54**
		$U_5 - L_5$			209.58	-299.74	140	-138	-275	284	-150	72	-122	160	0.377	0.409	0.79	Yes	0.207	0.225	0.44	Yes	0.672	0.136	0.81	Yes	0.634	0.362	1.00	Yes	1.00	**6.33**
		$U_6 - L_6$			6.18	-224.93	397	-403	-250	247	-234	-95	-89	72	0.011	0.582	0.60	Yes	0.006	0.320	0.33	Yes	0.502	0.192	0.7	Yes	0.476	0.515	1.00	Yes	1.00	**10.38**
		$U_7 - L_7$			-----	-366.12	241	-259	-7	-12	-126	-166	-145	-111	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.139	0.88	Yes	0.701	0.295	1.00	Yes	1.00	**3.56**
		$U_8 - L_8$			-----	-511.16	343	-341	44	-51	-239	-220	-174	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.135	0.88	Yes	0.701	0.293	1.00	Yes	1.00	**4.26**
		$U_9 - L_9$			-----	-654.57	396	-496	93	-161	-195	-135	-98	-10	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.106	0.9	Yes	0.762	0.230	1.00	Yes	1.00	**4.39**
		$U_{10} - L_{10}$			-----	-780.96	392	-424	105	-115	102	123	-85	13	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.077	0.89	Yes	0.771	0.220	1.00	Yes	1.00	**4.62**
		$U_{11} - L_{11}$			-----	-648.18	416	-470	183	-213	82	137	-45	65	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.103	0.88	Yes	0.732	0.261	1.00	Yes	1.00	**2.88**
		$U_{12} - L_{12}$			-----	-1287.90	403	-535	-378	399	70	80	-114	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.046	0.98	Yes	0.893	0.100	1.00	Yes	1.00	**5.04**
		$U_{13} - L_{13}$			-----	-439.41	-105	116	-301	324	-141	-95	-157	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.150	0.89	Yes	0.678	0.319	1.00	Yes	1.00	**2.97**
		$U_{14} - L_{14}$			-----	-512.64	-62	58	-295	290	-161	-134	-238	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.132	0.91	Yes	0.735	0.258	1.00	Yes	1.00	**5.10**
		$U_{15} - L_{15}$			-----	-429.10	-43	49	-240	252	-179	-95	-159	7	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.114	0.9	Yes	0.740	0.256	1.00	Yes	1.00	**4.88**
		$U_{16} - L_{16}$			-----	-247.95	71	-42	-365	346	-267	-166	-42	74	-----	-----	-----	-----	-----	-----	-----	-----	0.545	0.186	0.74	Yes	0.525	0.467	1.00	Yes	1.00	**8.89**
		$U_{17} - L_{17}$			294.29	-233.11	193	-216	-313	319	-100	-190	-219	-94	0.529	0.471	1.00	Yes	0.291	0.259	0.55	Yes	0.511	0.154	0.67	Yes	0.493	0.407	0.91	Yes	1.00	**7.45**
		$U_{18} - L_{18}$			70.40	-287.34	268	-304	-134	128	-209	-157	18	-1	0.127	0.449	0.58	Yes	0.070	0.247	0.32	Yes	0.628	0.170	0.8	Yes	0.608	0.389	1.00	Yes	1.00	**6.07**
		$U_{19} - L_{19}$			29.70	-322.74	245	-245	-41	29	-6	-52	-171	-94	0.053	0.362	0.42	Yes	0.029	0.199	0.23	Yes	0.705	0.135	0.85	Yes	0.683	0.313	1.00	Yes	1.00	**4.14**
		$U_{20} - L_{20}$			-----	-340.94	170	-214	43	-50	478	153	-189	-61	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.229	1	Yes	0.721	0.273	1.00	Yes	1.00	**2.03**

Moment (Start) AI Operating

Operating Loads - 5C1

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	$U_0 - L_1$	400.97	-64.39	16	-14	-223	103	-36	-11	-817	-174	0.526	0.467	1.00	Yes	0.318	0.257	0.58	Yes	0.110	0.321	0.44	Yes	0.099	0.261	0.37	Yes	1.00	**5.25**
		$U_1 - L_2$	179.37	-224.88	39	-20	-187	14	105	90	-816	-307	0.323	0.475	0.80	Yes	0.177	0.261	0.44	Yes	0.516	0.477	1	Yes	0.476	0.238	0.72	Yes	1.00	**9.94**
		$U_2 - L_3$	421.55	-227.07	48	-22	-112	-35	103	78	-265	-333	0.758	0.240	1.00	Yes	0.417	0.132	0.55	Yes	0.523	0.294	0.82	Yes	0.480	0.144	0.63	Yes	1.00	**8.05**
		$U_3 - L_4$	-----	-364.61	43	-12	-66	-71	48	180	-145	-245	-----	-----	-----		-----	-----	-----		0.834	0.165	1	Yes	0.771	0.091	0.87	Yes	1.00	**6.32**
		$U_4 - L_4$	556.65	-----	5	24	-122	8	249	154	-108	-178	0.816	0.181	1.00	Yes	0.449	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		$U_5 - L_5$	685.22	-----	12	89	-236	175	277	189	-16	-131	0.810	0.185	1.00	Yes	0.446	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		$U_7 - L_6$	633.27	-----	-73	106	-325	230	346	223	343	143	0.749	0.248	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.96**
		$U_8 - L_7$	645.68	-----	31	180	-110	296	321	250	311	199	0.763	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_9 - L_9$	1003.90	-----	89	232	-107	357	232	228	284	278	0.803	0.195	1.00	Yes	0.497	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_9 - L_{10}$	985.66	-----	-68	113	-401	266	98	119	245	178	0.788	0.210	1.00	Yes	0.488	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		$U_{10} - L_{11}$	1009.51	-----	-46	120	-263	160	12	4	-100	-165	0.853	0.143	1.00	Yes	0.528	0.080	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.36**
		$U_{11} - L_{12}$	818.57	-----	-61	75	-292	72	-104	-75	-340	-356	0.810	0.189	1.00	Yes	0.445	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.51**
		$U_{12} - L_{13}$	620.38	-----	-56	27	-190	121	-266	-221	-357	-328	0.756	0.236	1.00	Yes	0.476	0.134	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{13} - L_{14}$	440.48	-----	-9	-14	-93	31	-247	-261	-305	-298	0.792	0.207	1.00	Yes	0.436	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.33**
		$U_{15} - L_{14}$	206.16	-318.51	72	-107	-102	-19	-191	-311	-371	-420	0.371	0.258	0.63	Yes	0.204	0.142	0.35	Yes	0.746	0.250	1	Yes	0.674	0.136	0.82	Yes	1.00	**5.81**
		$U_{16} - L_{15}$	390.99	-166.86	32	-64	-154	63	-177	-179	-319	-305	0.703	0.289	1.00	Yes	0.387	0.159	0.55	Yes	0.396	0.230	0.63	Yes	0.353	0.196	0.55	Yes	1.00	**5.99**
		$U_{17} - L_{16}$	527.89	-----	-16	-17	-164	89	-143	-135	-183	-251	0.774	0.225	1.00	Yes	0.426	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{18} - L_{17}$	629.56	-----	-96	58	-363	237	7	-44	-236	-206	0.744	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_{19} - L_{18}$	702.82	-----	-88	63	-374	258	-87	-12	-241	-163	0.761	0.231	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{20} - L_{19}$	557.78	-----	-114	117	-450	329	-75	202	-993	-65	0.604	0.393	1.00	Yes	0.332	0.216	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
	Structure 2	$U_0 - L_1$	682.15	-----	-62	71	-428	357	-120	54	-806	-79	0.675	0.319	1.00	Yes	0.371	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_1 - L_2$	795.20	-----	-77	51	-415	301	54	15	-42	-134	0.787	0.213	1.00	Yes	0.433	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.55**
		$U_2 - L_3$	644.50	-----	-56	41	-341	243	-71	-180	-214	-249	0.762	0.238	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
		$U_3 - L_4$	561.97	-----	-25	9	-186	117	-236	-217	-350	-306	0.749	0.243	1.00	Yes	0.412	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		$U_4 - L_5$	412.51	-52.26	9	-28	-125	78	-250	-185	-321	-279	0.742	0.253	1.00	Yes	0.408	0.139	0.55	Yes	0.129	0.177	0.31	Yes	0.111	0.160	0.28	Yes	1.00	**4.14**
		$U_5 - L_6$	393.61	-299.01	66	-107	-118	51	-371	-255	-470	-271	0.708	0.287	1.00	Yes	0.389	0.158	0.55	Yes	0.706	0.284	0.99	Yes	0.633	0.151	0.79	Yes	1.00	**5.52**
		$U_6 - L_7$	31.53	-373.13	56	-94	-49	-17	-297	-264	-321	-247	0.051	0.191	0.25	Yes	0.028	0.105	0.14	Yes	0.799	0.197	1	Yes	0.715	0.107	0.83	Yes	1.00	**3.23**
		$U_8 - L_7$	574.34	-13.34	-4	-30	-227	111	-167	-250	-181	-301	0.732	0.265	1.00	Yes	0.461	0.149	0.62	Yes	0.022	0.133	0.16	Yes	0.020	0.203	0.23	Yes	1.00	**5.21**
		$U_9 - L_8$	706.98	-----	-86	31	-368	224	-57	-118	-182	-232	0.766	0.226	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{10} - L_9$	811.99	-----	-83	56	-346	222	31	-25	-107	-191	0.803	0.189	1.00	Yes	0.442	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.70**
		$U_{11} - L_{10}$	864.34	-----	-97	113	-380	267	316	180	25	-77	0.787	0.204	1.00	Yes	0.433	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{12} - L_{11}$	844.79	-----	-104	145	-376	323	466	267	127	30	0.770	0.223	1.00	Yes	0.423	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{13} - L_{12}$	749.72	-----	-177	173	-461	384	277	158	247	127	0.742	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_{14} - L_{13}$	753.88	-----	-5	217	-280	443	268	184	260	145	0.746	0.246	1.00	Yes	0.410	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.84**
		$U_{14} - L_{15}$	638.18	-----	28	161	-221	361	205	132	164	98	0.754	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{15} - L_{16}$	625.96	-----	-95	102	-368	325	46	65	245	63	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{16} - L_{17}$	753.83	-----	-68	92	-350	348	4	1	6	-10	0.816	0.181	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{17} - L_{18}$	675.71	-----	-58	74	-316	283	-63	-37	-98	-88	0.799	0.197	1.00	Yes	0.439	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.28**
		$U_{18} - L_{19}$	669.17	-----	-36	55	-295	241	-98	-73	-202	-143	0.791	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		$U_{19} - L_{20}$	607.27	-----	-14	26	-196	156	-120	-70	-228	-196	0.774	0.222	1.00	Yes	0.426	0.125	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		$U_{20} - L_{21}$	428.75	-1.89	0	-6	-119	91	-173	-127	-237	-146	0.771	0.221	1.00	Yes	0.424	0.121	0.55	Yes	0.004	0.112	0.12	Yes	0.004	0.152	0.16	Yes	1.00	**3.74**
		$U_{21} - L_{22}$	409.28	-223.02	37	-64	-135	43	-292	-255	-294	-234	0.736	0.257	1.00	Yes	0.405	0.142	0.55	Yes	0.527	0.213	0.74	Yes	0.472	0.172	0.65	Yes	1.00	**5.82**
		$U_{23} - L_{22}$	340.99	-318.65	75	-97	-149	28	-162	-262	-175	-274	0.613	0.270	0.89	Yes	0.337	0.149	0.49	Yes	0.759	0.235	1	Yes	0.674	0.191	0.87	Yes	1.00	**6.82**
		$U_{24} - L_{23}$	430.56	-117.28	23	-40	-142	94	-109	-96	-104	-144	0.774	0.223	1.00	Yes	0.426	0.123	0.55	Yes	0.281	0.086	0.37	Yes	0.248	0.182	0.43	Yes	1.00	**5.09**
		$U_{25} - L_{24}$	593.44	-----	7	-14	-229	159	21	-37	-70	-144	0.757	0.234	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{26} - L_{25}$	671.64	-----	-31	37	-329	241	82	42	31	-46	0.794	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{27} - L_{26}$	643.25	-----	-62	91	-322	278	299	151	128	22	0.760	0.236	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		$U_{28} - L_{27}$	704.26	-----	-73	122	-364	350	252	174	154	73	0.763	0.228	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**
		$U_{29} - L_{28}$	621.97	-----	-122	116	-378	340	215	108	236	126	0.735	0.257	1.00	Yes	0.404	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.31**
		$U_{30} - L_{29}$	629.21	-----	10	161	-214	364	245	156	227	124	0.744	0.251	1.00	Yes	0.409	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{30} - L_{31}$	758.09	-----	20	197	-279	445	220	144	261	-43	0.750	0.245	1.00	Yes	0.412	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.32**
		$U_{31} - L_{32}$	771.10	-----	-123	127	-458	382	37	48	104	-2	0.763	0.228	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{32} - L_{33}$	894.06	-----	-81	133	-378	333	-16	11	-134	-106	0.814	0.178	1.00	Yes	0.448	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{33} - L_{34}$	881.71	-----	-76	133	-363	266	-53	-15	-289	-222	0.803	0.194	1.00	Yes	0.442	0.107	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_{34} - L_{35}$	816.26	-----	-81	119	-298	211	-87	-62	-301	-303	0.808	0.184	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{35} - L_{36}$	697.20	-----	-87	44	-338	209	-309	-226	-410	-331	0.755	0.240	1.00	Yes	0.415	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		$U_{36} - L_{37}$	579.59	-----	-27	-1	-205	126	-322	-304	-335	-325	0.739	0.251	1.00	Yes	0.465	0.142	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		$U_{38} - L_{37}$	-----	-385.57	81	-104	-49	-28	-158	-244	-183	-255	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.161	1	Yes	0.739	0.118	0.86	Yes	1.00	**3.76**
		$U_{39} - L_{38}$	267.51	-334.19	91	-120	-113	31	-192	-198	-262	-271	0.481	0.231	0.72	Yes	0.265	0.127	0.40	Yes	0.796	0.194	1	Yes	0.707	0.153	0.87	Yes	1.00	**5.94**
		$U_{40} - L_{39}$	414.01	-133.34	36	-56	-143	89	-68	-101	-167	-221	0.745	0.247	1.00	Yes	0.410	0.136	0.55	Yes	0.319	0.160	0.48	Yes	0.282	0.183	0.47	Yes	1.00	**5.30**
		$U_{41} - L_{40}$	573.89	-----	-17	-1	-207	115	24	-10	-143	-185	0.765	0.227	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.89**
		$U_{42} - L_{41}$	640.47	-----	-64	41	-366	246	-2	0	-177	-145	0.757	0.240	1.00	Yes	0.416	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		$U_{43} - L_{42}$	762.23	-----	-89	59	-415	293	-6	-32	-343	-164	0.754	0.244	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{44} - L_{43}$	727.46	-----	-134	117	-415	370	37	3	-579	-90	0.720	0.279	1.00	Yes	0.396	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
	Structure 3	$U_0 - L_1$	603.61	-----	-70	73	-424	311	-133	49	-745	-144	0.654	0.339	1.00	Yes	0.360	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		$U_1 - L_2$	719.04	-----	-86	53	-392	253	38	12	-41	-73	0.779	0.213	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_2 - L_3$	639.17	-----	-76	47	-329	224	-73	-167	-210	-284	0.756	0.238	1.00	Yes	0.416	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.20**
		$U_3 - L_4$	519.04	-----	-19	5	-153	84	-214	-201	-352	-340	0.761	0.237	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_4 - L_5$	387.27	-118.23	9	-38	-133	69	-313	-219	-435	-297	0.697	0.296	1.00	Yes	0.383	0.163	0.55	Yes	0.280	0.232	0.52	Yes	0.250	0.170	0.43	Yes	1.00	**4.92**
		$U_5 - L_6$	372.28	-297.28	58	-99	-108	-6	-374	-332	-492	-414	0.670	0.281	0.96	Yes	0.368	0.154	0.53	Yes	0.696	0.301	1	Yes	0.629	0.138	0.77	Yes	1.00	**6.27**
		$U_7 - L_6$	425.79	-27.49	7	-30	-109	28	-84	-229	-146	-306	0.766	0.229	1.00	Yes	0.421	0.126	0.55	Yes	0.064	0.149	0.22	Yes	0.058	0.140	0.20	Yes	1.00	**4.49**
		$U_8 - L_7$	614.61	-----	-37	3	-216	124	-85	-133	-236	-292	0.749	0.246	1.00	Yes	0.471	0.138	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.84**
		$U_9 - L_8$	829.46	-----	-45	22	-308	65	219	106	-86	-227	0.821	0.177	1.00	Yes	0.451	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.38**
		$U_{10} - L_9$	947.87	-----	-38	81	-280	141	465	267	74	-69	0.801	0.191	1.00	Yes	0.496	0.107	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**
		$U_{11} - L_{10}$	986.85	-----	-93	120	-353	245	350	239	365	220	0.789	0.204	1.00	Yes	0.489	0.114	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_{12} - L_{11}$	973.12	-----	80	203	-105	369	315	279	398	284	0.778	0.215	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{12} - L_{13}$	665.08	-----	41	182	-111	290	243	198	187	116	0.786	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.07**
		$U_{13} - L_{14}$	660.65	-----	-55	103	-314	219	140	176	207	160	0.781	0.217	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		$U_{14} - L_{15}$	709.72	-----	-11	105	-221	175	166	132	-38	-29	0.839	0.156	1.00	Yes	0.461	0.086	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.50**
		$U_{15} - L_{16}$	474.80	-----	6	25	-201	-18	49	74	-389	-335	0.696	0.295	1.00	Yes	0.383	0.162	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.40**
		$U_{17} - L_{16}$	-----	-380.31	53	-60	-56	-67	-26	-106	-152	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.870	0.124	1	Yes	0.805	0.086	0.90	Yes	1.00	**5.41**
		$U_{18} - L_{17}$	393.22	-276.52	54	-33	-143	-61	119	219	-254	-369	0.707	0.290	1.00	Yes	0.389	0.160	0.55	Yes	0.636	0.318	0.96	Yes	0.585	0.183	0.77	Yes	1.00	**9.45**
		$U_{19} - L_{18}$	440.56	-34.80	29	-42	-118	1	-78	-91	-131	-162	0.792	0.198	1.00	Yes	0.436	0.109	0.55	Yes	0.080	0.150	0.23	Yes	0.074	0.151	0.23	Yes	1.00	**5.91**
		$U_{20} - L_{19}$	314.27	-----	24	4	-270	125	-63	56	-1064	-76	0.412	0.583	1.00	Yes	0.249	0.321	0.58	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.28**

Moment (Start) AI Operating

Operating Loads - 5C1

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
			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	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.122	0.91	Yes	0.773	0.223	1.00	Yes	1.00	**9.07**
South Truss - Upper Chord	Structure 1	U_0 - U_1	-----	-573.20	820	-833	-936	121	486	-707	-7	196	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.122	0.91	Yes	0.773	0.223	1.00	Yes	1.00	**9.07**
		U_1 - U_2	-----	-571.25	-42	-179	-539	-500	51	206	559	-480	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.215	1	Yes	0.770	0.128	0.90	Yes	1.00	**4.87**
		U_2 - U_3	294.26	-565.99	-49	416	-803	-233	-132	188	396	-569	0.337	0.287	0.63	Yes	0.227	0.189	0.42	Yes	0.770	0.228	1	Yes	0.763	0.191	0.96	Yes	1.00	**5.23**
		U_3 - U_4	635.93	-536.90	219	515	-766	-254	-246	7	468	-381	0.729	0.261	1.00	Yes	0.500	0.179	0.68	Yes	0.731	0.197	0.93	Yes	0.724	0.182	0.91	Yes	1.00	**6.72**
		U_4 - U_5	585.55	-580.01	251	461	-912	-199	-99	-4	-294	-30	0.671	0.267	0.94	Yes	0.461	0.183	0.65	Yes	0.789	0.205	1	Yes	0.782	0.217	1.00	Yes	1.00	**6.09**
		U_5 - U_6	696.66	-142.35	287	499	-603	292	99	134	-326	-302	0.799	0.198	1.00	Yes	0.539	0.130	0.67	Yes	0.194	0.191	0.39	Yes	0.192	0.143	0.34	Yes	1.00	**5.07**
		U_6 - U_7	892.00	-----	422	220	-189	39	301	291	-412	63	0.853	0.146	1.00	Yes	0.596	0.101	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		U_7 - U_8	881.28	-----	235	729	-912	1803	1063	941	-318	360	0.611	0.381	1.00	Yes	0.426	0.261	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.18**
		U_8 - U_9	670.24	-----	2081	-1221	705	-204	451	-416	341	792	0.549	0.446	1.00	Yes	0.376	0.304	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.87**
		U_9 - U_{10}	-----	-381.80	756	-1075	-328	-624	709	-462	2604	-1279	-----	-----	-----	-----	-----	-----	-----	-----	0.492	0.501	1	Yes	0.487	0.241	0.73	Yes	1.00	**20.72**
		U_{10} - U_{11}	239.31	-630.21	333	-96	-9	-798	34	149	741	-657	0.260	0.298	0.56	Yes	0.173	0.193	0.37	Yes	0.811	0.187	1	Yes	0.804	0.179	0.99	Yes	1.00	**6.29**
		U_{11} - U_{12}	-----	-888.88	193	-180	-196	-678	11	119	680	-246	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.156	1	Yes	0.834	0.112	0.95	Yes	1.00	**3.84**
		U_{12} - U_{13}	-----	-1254.12	-20	-257	-598	-655	85	17	684	-418	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.144	1	Yes	0.838	0.090	0.93	Yes	1.00	**4.17**
		U_{13} - U_{14}	-----	-1425.90	-186	-497	-732	-1185	-41	-3	303	-209	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.169	1	Yes	0.817	0.131	0.95	Yes	1.00	**3.49**
		U_{14} - U_{15}	-----	-1376.65	-409	-293	-1326	-669	42	-277	-78	-268	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.197	1	Yes	0.789	0.146	0.94	Yes	1.00	**2.97**
		U_{15} - U_{16}	-----	-1429.28	-205	-468	-918	-781	-115	-435	-345	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.170	1	Yes	0.819	0.101	0.93	Yes	1.00	**3.26**
		U_{16} - U_{17}	-----	-1400.17	-389	-197	-1271	-506	-54	-253	-222	-153	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.184	1	Yes	0.803	0.140	0.95	Yes	1.00	**3.91**
		U_{17} - U_{18}	-----	-1064.29	-255	-60	-886	-5	-119	73	-217	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.150	1	Yes	0.833	0.144	0.98	Yes	1.00	**3.89**
		U_{18} - U_{19}	-----	-735.92	-241	13	-820	100	366	-141	19	-239	-----	-----	-----	-----	-----	-----	-----	-----	0.836	0.164	1	Yes	0.828	0.165	1.00	Yes	1.00	**4.39**
		U_{19} - U_{20}	-----	-655.86	-180	-114	-1284	497	-59	-110	-187	-73	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.236	0.99	Yes	0.738	0.258	1.00	Yes	1.00	**11.89**
	Structure 2	U_0 - U_1	-----	-573.91	1887	-1650	-1006	-250	911	-318	-298	656	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.203	0.89	Yes	0.678	0.320	1.00	Yes	1.00	**9.13**
		U_1 - U_2	-----	-841.91	-56	-458	-392	-874	207	417	626	-332	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.179	1	Yes	0.813	0.133	0.95	Yes	1.00	**4.09**
		U_2 - U_3	-----	-1195.29	45	-932	-503	-1108	-36	-529	563	-559	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.139	1	Yes	0.848	0.113	0.97	Yes	1.00	**4.42**
		U_3 - U_4	-----	-1379.00	-513	-482	-1343	-1413	-132	-21	439	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.200	1	Yes	0.785	0.126	0.92	Yes	1.00	**4.24**
		U_4 - U_5	-----	-1502.00	-561	-490	-1589	-1405	-137	-65	246	-595	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.221	1	Yes	0.771	0.132	0.91	Yes	1.00	**4.03**
		U_5 - U_6	-----	-1548.86	-550	43	-1702	-786	-200	-41	113	-457	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.189	1	Yes	0.795	0.141	0.94	Yes	1.00	**3.59**
		U_6 - U_7	-----	-1404.80	-271	-169	-1430	-913	-175	-81	234	-295	-----	-----	-----	-----	-----	-----	-----	-----	0.806	0.184	1	Yes	0.800	0.127	0.93	Yes	1.00	**3.73**
		U_7 - U_8	-----	-1353.63	-282	-111	-1679	-865	-66	-158	-322	-400	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.223	1	Yes	0.771	0.150	0.93	Yes	1.00	**4.33**
		U_8 - U_9	-----	-1155.29	-345	216	-1603	-351	-21	-198	-480	-311	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1	Yes	0.784	0.170	0.96	Yes	1.00	**3.61**
		U_9 - U_{10}	341.53	-910.41	-52	569	-1512	-31	-121	-235	-628	-532	0.251	0.252	0.51	Yes	0.170	0.170	0.35	Yes	0.790	0.205	1	Yes	0.786	0.184	0.97	Yes	1.00	**4.88**
		U_{10} - U_{11}	816.75	-539.86	342	602	-1294	-64	-204	-110	-996	-346	0.690	0.304	1.00	Yes	0.469	0.200	0.67	Yes	0.540	0.249	0.79	Yes	0.536	0.182	0.72	Yes	1.00	**6.43**
		U_{11} - U_{12}	933.43	-----	200	651	-988	440	32	35	-561	-464	0.788	0.208	1.00	Yes	0.530	0.139	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.19**
		U_{12} - U_{13}	1267.28	-----	470	53	-547	-276	292	428	-786	73	0.856	0.144	1.00	Yes	0.610	0.100	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		U_{13} - U_{14}	1112.98	-----	95	1640	-1681	3822	1059	1343	148	870	0.547	0.446	1.00	Yes	0.387	0.293	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.06**
		U_{14} - U_{15}	1155.46	-----	3885	-1149	1648	-198	863	192	700	1000	0.568	0.428	1.00	Yes	0.402	0.281	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		U_{15} - U_{16}	1281.79	-----	308	-78	-1134	-663	537	136	1086	-109	0.775	0.221	1.00	Yes	0.551	0.151	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.69**
		U_{16} - U_{17}	113.44	-526.71	2718	-2321	-1279	-2213	380	-1794	3241	-2610	0.084	0.682	0.77	Yes	0.056	0.448	0.51	Yes	0.459	0.537	1	Yes	0.457	0.341	0.80	Yes	1.00	**33.50**
		U_{17} - U_{18}	810.65	-156.08	516	292	-104	-600	-62	303	567	-257	0.814	0.185	1.00	Yes	0.542	0.122	0.67	Yes	0.185	0.139	0.33	Yes	0.184	0.102	0.29	Yes	1.00	**5.45**
		U_{18} - U_{19}	732.21	-643.31	698	240	-425	-761	2	192	893	-617	0.735	0.260	1.00	Yes	0.482	0.167	0.65	Yes	0.764	0.169	0.94	Yes	0.760	0.129	0.89	Yes	1.00	**7.02**
		U_{19} - U_{20}	367.64	-747.30	366	187	-617	-832	-52	167	496	-318	0.345	0.200	0.55	Yes	0.229	0.131	0.36	Yes	0.830	0.164	1	Yes	0.825	0.133	0.96	Yes	1.00	**5.31**
		U_{20} - U_{21}	153.27	-864.11	161	-125	-866	-511	-2	28	435	-479	0.119	0.178	0.30	Yes	0.083	0.116	0.20	Yes	0.794	0.198	1	Yes	0.789	0.125	0.92	Yes	1.00	**4.54**
		U_{21} - U_{22}	51.91	-842.87	-81	-33	-878	-828	-205	-115	293	-191	0.040	0.159	0.20	Yes	0.029	0.107	0.14	Yes	0.775	0.217	1	Yes	0.769	0.127	0.90	Yes	1.00	**4.23**
		U_{22} - U_{23}	83.03	-829.46	-14	-81	-1131	-664	-38	-156	-161	-147	0.064	0.181	0.25	Yes	0.046	0.121	0.17	Yes	0.763	0.231	1	Yes	0.757	0.164	0.93	Yes	1.00	**3.77**
		U_{23} - U_{24}	90.15	-827.65	58	-67	-1101	-377	1	-84	-485	-189	0.070	0.212	0.29	Yes	0.049	0.139	0.19	Yes	0.761	0.230	1	Yes	0.755	0.160	0.92	Yes	1.00	**4.28**
		U_{24} - U_{25}	354.75	-721.87	218	360	-1021	-185	-13	-73	-463	-146	0.333	0.226	0.56	Yes	0.221	0.148	0.37	Yes	0.801	0.195	1	Yes	0.796	0.163	0.96	Yes	1.00	**5.00**
		U_{25} - U_{26}	693.26	-542.27	228	667	-1158	289	17	-46	-666	-285	0.696	0.294	1.00	Yes	0.457	0.188	0.65	Yes	0.644	0.252	0.9	Yes	0.640	0.197	0.84	Yes	1.00	**6.77**
		U_{26} - U_{27}	749.11	-12.51	288	468	-796	271	-53	6	-727	-150	0.752	0.242	1.00	Yes	0.501	0.159	0.67	Yes	0.015	0.226	0.25	Yes	0.015	0.135	0.15	Yes	1.00	**5.03**
		U_{27} - U_{28}	1093.25	-----	228	705	-1047	711	236	256	-541	-389	0.806	0.188	1.00	Yes	0.536	0.124	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.75**
		U_{28} - U_{29}	1129.29	-----	1281	417	-1549	-235	1137	1589	-1142	222	0.683	0.310	1.00	Yes	0.486	0.212	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.78**
		U_{29} - U_{30}	1095.93	-----	372	1217	-1555	3713	1400	1697	97	1014	0.539	0.459	1.00	Yes	0.382	0.303	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.53**
		U_{30} - U_{31}	1057.77	-----	4362	-1873	1717	-469	938	-197	999	1102	0.520	0.479	1.00	Yes	0.368	0.315	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		U_{31} - U_{32}	1236.26	-----	109	378	-638	-471	190	389	846	-272	0.835	0.161	1.00	Yes	0.595	0.111	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		U_{32} - U_{33}	-----	-733.41	1389	-1902	-562	-1722	412	-1273	2230	-1946	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.266	1	Yes	0.729	0.268	1.00	Yes	1.00	**19.69**
		U_{33} - U_{34}	865.72	-710.00	612	315	-416	-1002	-39	272	1018	-335	0.731	0.265	1.00	Yes	0.498	0.176	0.68	Yes	0.710	0.199	0.91	Yes	0.706	0.141	0.85	Yes	1.00	**7.48**
		U_{34} - U_{35}	306.56	-988.46	526	-76	-411	-1079	42	87	685	-504	0.225	0.206	0.44	Yes	0.152	0.139	0.30	Yes	0.858	0.133	1	Yes	0.853	0.131	0.99	Yes	1.00	**5.42**
		U_{35} - U_{36}	-----	-1236.11	152	-430	-599	-1141	-18	109	559	-264	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.153	1	Yes	0.838	0.121	0.96	Yes	1.00	**3.74**
		U_{36} - U_{37}	-----	-1441.41	-246	-274	-1172	-1117	-19	-110	537	-253	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.170	1	Yes	0.821	0.104	0.93	Yes	1.00	**3.58**
		U_{37} - U_{38}	-----	-1431.66	-175	-403	-1266	-1185	-93	-192	-202	-227	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.175	1	Yes	0.815	0.113	0.93	Yes	1.00	**3.20**
		U_{38} - U_{39}	-----	-1581.15	-146	-625	-1380	-1351	10	-206	-424	-340	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.179	1	Yes	0.812	0.114	0.93	Yes	1.00	**3.17**
		U_{39} - U_{40}	-----	-1516.37	-601	-563	-1744	-1008	17	-78	-307	-104	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.207	1	Yes	0.779	0.145	0.93	Yes	1.00	**3.12**
		U_{40} - U_{41}	-----	-1408.89	-511	-491	-1473	-918	84	-162	49	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.185	1	Yes	0.802	0.131	0.94	Yes	1.00	**3.36**
		U_{41} - U_{42}	-----	-1166.91	-412	-131	-1487	-176	64	-27	-193	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.160	1	Yes	0.828	0.151	0.98	Yes	1.00	**4.22**
		U_{42} - U_{43}	-----	-842.71	-267	-27	-1179	-11	204	-196	-214	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.175	1	Yes	0.813	0.179	1.00	Yes	1.00	**5.16**
		U_{43} - U_{44}	-----	-637.35	-163	-229	-1409	537	-122	-128	-203	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.225	0.99	Yes	0.753	0.239	1.00	Yes	1.00	**9.89**
	Structure 3	U_0 - U_1	-----	-563.47	1782	-1349	-1069	-669	943	-448	1532	-766	-----	-----	-----	-----	-----	-----	-----	-----	0.640	0.307	0.95	Yes	0.634	0.358	1.00	Yes	1.00	**10.36**
		U_1 - U_2	-----	-737.60	110	-647	-236	-555	71	-146	583	-280	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.155	1	Yes	0.830	0.130	0.97	Yes	1.00	**4.56**
		U_2 - U_3	-----	-1068.84	120	-698	-203	-592	-113	-671	466	-502	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.153	1	Yes	0.836	0.114	0.95	Yes	1.00	**4.17**
		U_3 - U_4	-----	-1401.74	-206	-382	-772	-1132	-183	-176	498	-445	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.179	1	Yes	0.804	0.125	0.93	Yes	1.00	**4.76**
		U_4 - U_5	-----	-1407.64	-430	-157	-1171	-480	-104	-59	437	-576	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1	Yes	0.807	0.129	0.94	Yes	1.00	**3.92**
		U_5 - U_6	-----	-1417.82	-234	-344	-973	-1003	-183	-137	297	-416	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.178	1	Yes	0.813	0.111	0.93	Yes	1.00	**4.32**
		U_6 - U_7	-----	-1363.87	-501	-159	-1500	-510	-120	-302	-185	-320	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.208	1	Yes	0.782	0.165	0.95	Yes	1.00	**3.21**
		U_7 - U_8	-----	-1206.32	-241	21	-918	-227	-115	-327	-523	-479	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.181	1	Yes	0.806	0.127	0.94	Yes	1.00	**3.52**
		U_8 - U_9	-----	-871.90	-139	244	-793	57	-224	-197	-510	-179	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.166	1	Yes	0.818	0.132	0.95	Yes	1.00	**3.63**
		U_9 - U_{10}	275.48	-596.40	-68	367	-1048	234	-13	-25	-369	-362	0.299	0.294	0.60	Yes	0.199	0.189	0.39	Yes	0.768	0.200	0.97	Yes	0.761	0.235	1.00	Yes	1.00	**5.84**
		U_{10} - U_{11}	683.75	-62.45	319	228	-520	152	46	139	-845	-65	0.742	0.252	1.00	Yes	0.502	0.169	0.68	Yes	0.080	0.258	0.34	Yes	0.080	0.117	0.20	Yes	1.00	**7.48**
		U_{11} - U_{12}	715.03	-----	5	795	-1147	1876	693	754	-158	386	0.586	0.407	1.00	Yes	0.401	0.277	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.47**
		U_{12} - U_{13}	781.10	-----	2412	-1099	811	-100	244	-428	492	883	0.541	0.455	1.00	Yes	0.378	0.311	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.04**
		U_{13} - U_{14}	854.30	-----	225	368	-198	-68	-107	383	732	-142	0.817	0.179	1.00	Yes	0.571	0.124	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		U_{14} - U_{15}	654.99	-256.36	467	234	48	-414	-61	269	761	-468	0.751	0.240	1.00	Yes	0.506	0.159	0.67	Yes	0.349	0.177	0.53	Yes	0.346	0.111	0.46	Yes	1.00	**5.56**
		U_{15} - U_{16}	430.97	-599.90	352	193	-393	-609	-73	250	698	-57	0.494	0.263	0.76	Yes	0.339	0.179	0.52	Yes	0.816	0.180	1	Yes	0.809	0.145	0.96	Yes	1.00	**5.56**
		U_{16} - U_{17}	369.03	-605.37	374	65	-623	-472	198	-54	166	23	0.423	0.182	0.61	Yes	0.290	0.125	0.42	Yes	0.824	0.173	1	Yes	0.816	0.148	0.97	Yes	1.00	**4.86**
		U_{17} - U_{18}	117.92	-614.69	250	-166	-504	-507	75	37	-83	-148	0.135	0.146	0.29	Yes	0.091	0.095	0.19	Yes	0.836	0.157	1	Yes	0.829	0.121	0.95	Yes	1.00	**3.96**
		U_{18} - U_{19}	14.64	-566.80	41	-68	-829	-160	203	-195	-234	26	0.017	0.237	0.26	Yes	0.012	0.162	0.18	Yes	0.771	0.223	1	Yes	0.764	0.197	0.97	Yes	1.00	**4.37**
		U_{19} - U_{20}	18.84	-541.94	101	-301	-767	-388	-147	-111	520	-225	0.022	0.270	0.30	Yes	0.015	0.185	0.20	Yes	0.737	0.255	1	Yes	0.731	0.182	0.92	Yes	1.00	**7.22**

Moment (Start) AI Operating

Operating Loads - 5C1

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	25.83	-105.15	806	-1013	-239	107	-703	-2582	57	209	0.040	0.858	0.90	Yes	0.023	0.508	0.54	Yes	0.191	0.803	1	Yes	0.189	0.304	0.50	Yes	1.00	**15.39**
		L_1 - L_2	346.97	-----	184	-709	-314	-513	-181	305	-1171	305	0.531	0.464	1.00	Yes	0.324	0.299	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.00**
		L_2 - L_3	633.27	-168.55	-11	113	-739	-544	-192	137	80	-562	0.729	0.269	1.00	Yes	0.422	0.159	0.59	Yes	0.230	0.240	0.48	Yes	0.228	0.179	0.41	Yes	1.00	**4.85**
		L_3 - L_4	582.42	-297.00	19	348	-623	-354	313	-250	-1067	-70	0.670	0.322	1.00	Yes	0.398	0.200	0.60	Yes	0.406	0.179	0.59	Yes	0.402	0.150	0.56	Yes	1.00	**4.47**
		L_4 - L_5	23.89	-563.44	107	465	-504	342	-80	210	-6	-117	0.031	0.171	0.21	Yes	0.019	0.111	0.13	Yes	0.866	0.117	0.99	Yes	0.858	0.133	1.00	Yes	1.00	**3.13**
		L_5 - L_6	-----	-744.85	125	587	-219	381	173	-229	-65	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.121	1	Yes	0.859	0.130	0.99	Yes	1.00	**2.97**
		L_6 - L_7	-----	-1174.62	289	-71	-316	231	-245	360	62	152	-----	-----	-----	-----	-----	-----	-----	-----	0.956	0.041	1	Yes	0.945	0.050	1.00	Yes	1.00	**4.75**
		L_7 - L_8	-----	-1207.54	-3	638	-242	1420	532	295	8	334	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.219	1	Yes	0.765	0.188	0.96	Yes	1.00	**3.69**
		L_8 - L_9	-----	-1269.19	1116	-81	662	-32	477	360	198	335	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.181	1	Yes	0.804	0.148	0.96	Yes	1.00	**2.91**
		L_9 - L_{10}	-----	-1062.21	886	-812	-10	-86	636	701	-22	-138	-----	-----	-----	-----	-----	-----	-----	-----	0.864	0.093	0.96	Yes	0.855	0.139	1.00	Yes	1.00	**8.26**
		L_{10} - L_{11}	33.49	-564.70	521	-45	107	-498	-284	39	35	-573	0.043	0.238	0.29	Yes	0.025	0.142	0.17	Yes	0.868	0.103	0.98	Yes	0.860	0.138	1.00	Yes	1.00	**6.89**
		L_{11} - L_{12}	477.27	-----	418	-801	116	-637	-191	318	-943	234	0.618	0.377	1.00	Yes	0.371	0.240	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.56**
		L_{12} - L_{13}	1055.15	-----	76	-147	-479	-596	-160	120	-22	-484	0.833	0.162	1.00	Yes	0.533	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		L_{13} - L_{14}	1290.87	-----	269	-1294	-285	-1100	-41	183	-664	346	0.759	0.234	1.00	Yes	0.492	0.144	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		L_{14} - L_{15}	1552.06	-----	-498	-170	-1747	-374	-180	94	-121	-341	0.758	0.235	1.00	Yes	0.493	0.142	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		L_{15} - L_{16}	1657.70	-----	-282	-439	-1183	-1005	-2	-186	-660	49	0.810	0.189	1.00	Yes	0.520	0.112	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.12**
		L_{16} - L_{17}	1221.79	-----	-424	54	-1306	85	-129	172	53	-300	0.773	0.218	1.00	Yes	0.501	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		L_{17} - L_{18}	869.28	-----	-226	-16	-830	119	82	-117	-605	-82	0.757	0.238	1.00	Yes	0.485	0.144	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.26**
		L_{18} - L_{19}	424.75	-----	-253	228	-996	521	-166	112	211	-49	0.650	0.343	1.00	Yes	0.440	0.214	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.92**
		L_{19} - L_{20}	26.77	-276.71	-191	75	-1179	692	135	30	106	24	0.045	0.416	0.47	Yes	0.028	0.250	0.28	Yes	0.555	0.445	1	Yes	0.550	0.385	0.94	Yes	1.00	**10.81**
	Structure 2	L_0 - L_1	55.73	-299.77	686	-2075	-84	-83	-635	-2207	38	134	0.068	0.785	0.86	Yes	0.040	0.490	0.53	Yes	0.431	0.565	1	Yes	0.428	0.422	0.86	Yes	1.00	**14.66**
		L_1 - L_2	474.54	-----	675	-1561	46	-699	-437	643	-624	309	0.576	0.423	1.00	Yes	0.343	0.269	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.82**
		L_2 - L_3	986.77	-----	281	-866	-386	-693	-28	118	896	254	0.778	0.220	1.00	Yes	0.510	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.24**
		L_3 - L_4	1283.83	-----	182	-1538	-325	-1293	-43	619	-733	429	0.754	0.239	1.00	Yes	0.508	0.150	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.55**
		L_4 - L_5	1750.08	-----	-419	-386	-1558	-1371	-68	171	400	-426	0.816	0.176	1.00	Yes	0.540	0.105	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.60**
		L_5 - L_6	1815.21	-----	-211	-457	-1055	-1876	196	-96	-773	19	0.779	0.215	1.00	Yes	0.523	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_6 - L_7	1823.68	-----	-549	-189	-2125	-1148	-163	221	-20	-564	0.772	0.222	1.00	Yes	0.513	0.131	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.37**
		L_7 - L_8	1364.23	-106.27	-262	456	-1477	-306	238	-143	-657	150	0.782	0.217	1.00	Yes	0.514	0.130	0.65	Yes	0.072	0.152	0.23	Yes	0.072	0.163	0.24	Yes	1.00	**4.90**
		L_8 - L_9	1078.48	-467.63	-49	623	-1370	430	-85	192	152	-610	0.754	0.242	1.00	Yes	0.508	0.153	0.67	Yes	0.388	0.108	0.5	Yes	0.385	0.185	0.57	Yes	1.00	**5.57**
		L_9 - L_{10}	521.87	-766.95	-122	837	-1170	332	145	-163	-756	-78	0.466	0.278	0.75	Yes	0.271	0.170	0.45	Yes	0.811	0.129	0.94	Yes	0.805	0.187	1.00	Yes	1.00	**5.63**
		L_{10} - L_{11}	-----	-745.47	20	562	-704	608	-86	87	126	32	-----	-----	-----	-----	-----	-----	-----	-----	0.881	0.050	0.94	Yes	0.876	0.123	1.00	Yes	1.00	**3.45**
		L_{11} - L_{12}	-----	-1036.20	-72	1100	-600	905	60	-373	-47	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.122	0.98	Yes	0.850	0.150	1.00	Yes	1.00	**3.69**
		L_{12} - L_{13}	-----	-1494.64	230	-825	-659	-391	-382	141	118	142	-----	-----	-----	-----	-----	-----	-----	-----	0.909	0.088	1	Yes	0.902	0.083	0.99	Yes	1.00	**5.38**
		L_{13} - L_{14}	-----	-1457.12	-432	1345	-1445	3031	723	615	-238	96	-----	-----	-----	-----	-----	-----	-----	-----	0.740	0.224	0.97	Yes	0.733	0.265	1.00	Yes	1.00	**4.61**
		L_{14} - L_{15}	-----	-1480.45	2895	-995	1417	-431	315	198	412	361	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.194	0.95	Yes	0.745	0.253	1.00	Yes	1.00	**4.47**
		L_{15} - L_{16}	-----	-1331.85	-65	-66	-1415	-220	448	-377	-261	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.188	1	Yes	0.797	0.141	0.94	Yes	1.00	**7.18**
		L_{16} - L_{17}	-----	-1145.00	1267	-535	622	-129	-268	-239	-183	74	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.125	0.97	Yes	0.834	0.156	1.00	Yes	1.00	**5.44**
		L_{17} - L_{18}	-----	-789.64	1032	-1001	173	-478	-29	775	-831	184	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.154	0.99	Yes	0.829	0.165	1.00	Yes	1.00	**7.73**
		L_{18} - L_{19}	142.10	-642.86	720	35	-2	-554	-211	60	40	-461	0.161	0.209	0.38	Yes	0.093	0.123	0.22	Yes	0.862	0.117	0.98	Yes	0.857	0.139	1.00	Yes	1.00	**4.67**
		L_{19} - L_{20}	589.79	-560.98	563	190	-137	-906	151	-190	-995	368	0.668	0.327	1.00	Yes	0.395	0.202	0.60	Yes	0.752	0.149	0.91	Yes	0.748	0.175	0.93	Yes	1.00	**6.45**
		L_{20} - L_{21}	1014.09	-381.77	502	-39	-990	-1002	-196	66	384	-378	0.809	0.188	1.00	Yes	0.530	0.113	0.65	Yes	0.361	0.160	0.53	Yes	0.358	0.146	0.51	Yes	1.00	**6.80**
		L_{21} - L_{22}	879.61	-75.82	127	-275	-707	-1346	137	-105	-876	19	0.701	0.291	1.00	Yes	0.469	0.185	0.66	Yes	0.072	0.217	0.29	Yes	0.071	0.196	0.27	Yes	1.00	**4.52**
		L_{22} - L_{23}	858.69	-30.56	-164	-42	-1997	-379	-122	155	45	-154	0.685	0.308	1.00	Yes	0.458	0.192	0.66	Yes	0.029	0.335	0.37	Yes	0.029	0.291	0.33	Yes	1.00	**5.28**
		L_{23} - L_{24}	907.78	-438.31	-11	560	-1399	-364	177	-144	-628	255	0.724	0.272	1.00	Yes	0.475	0.165	0.64	Yes	0.414	0.173	0.59	Yes	0.411	0.204	0.62	Yes	1.00	**7.30**
		L_{24} - L_{25}	446.62	-586.81	223	542	-1109	386	-105	150	307	-426	0.506	0.279	0.79	Yes	0.299	0.176	0.48	Yes	0.787	0.159	0.95	Yes	0.782	0.214	1.00	Yes	1.00	**6.57**
		L_{25} - L_{26}	-----	-640.18	28	726	-612	472	101	-170	-354	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.117	0.98	Yes	0.853	0.140	1.00	Yes	1.00	**4.58**
		L_{26} - L_{27}	-----	-843.49	200	495	-680	638	-50	228	122	-55	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.073	0.97	Yes	0.886	0.109	1.00	Yes	1.00	**4.68**
		L_{27} - L_{28}	-----	-1148.04	55	1298	-697	1282	251	-40	-236	123	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.133	0.98	Yes	0.836	0.160	1.00	Yes	1.00	**6.13**
		L_{28} - L_{29}	-----	-1479.34	523	-608	-600	-834	-36	1001	-47	12	-----	-----	-----	-----	-----	-----	-----	-----	0.892	0.107	1	Yes	0.885	0.083	0.97	Yes	1.00	**7.56**
		L_{29} - L_{30}	-----	-1426.04	-556	1344	-1646	3159	800	880	-141	147	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.233	0.96	Yes	0.718	0.276	1.00	Yes	1.00	**4.93**
		L_{30} - L_{31}	-----	-1491.91	2772	-913	1629	-484	354	301	591	468	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.202	0.96	Yes	0.751	0.242	1.00	Yes	1.00	**3.47**
		L_{31} - L_{32}	-----	-1365.46	-4	-384	-1229	-429	574	-420	-267	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.172	1	Yes	0.817	0.122	0.94	Yes	1.00	**6.93**
		L_{32} - L_{33}	-----	-1037.90	1011	-478	575	-311	-151	106	-526	47	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.133	1	Yes	0.851	0.138	0.99	Yes	1.00	**3.84**
		L_{33} - L_{34}	-----	-629.69	1114	-1441	258	-753	-109	1150	-999	475	-----	-----	-----	-----	-----	-----	-----	-----	0.745	0.193	0.94	Yes	0.740	0.252	1.00	Yes	1.00	**9.41**
		L_{34} - L_{35}	580.31	-784.06	861	-88	-133	-1049	-221	93	260	-827	0.518	0.267	0.79	Yes	0.302	0.163	0.47	Yes	0.829	0.119	0.95	Yes	0.823	0.168	1.00	Yes	1.00	**7.08**
		L_{35} - L_{36}	1043.40	-547.82	706	-19	-172	-1097	182	-164	-1288	377	0.730	0.269	1.00	Yes	0.492	0.173	0.67	Yes	0.454	0.140	0.6	Yes	0.451	0.148	0.60	Yes	1.00	**7.92**
		L_{36} - L_{37}	1367.46	-----	350	-225	-838	-1458	-211	147	82	-592	0.784	0.210	1.00	Yes	0.515	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_{37} - L_{38}	1797.66	-----	-85	-606	-1833	-1948	67	-207	-1062	343	0.761	0.237	1.00	Yes	0.506	0.143	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.75**
		L_{38} - L_{39}	1810.92	-----	-539	-223	-2279	-800	-123	183	221	-291	0.777	0.220	1.00	Yes	0.522	0.134	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**
		L_{39} - L_{40}	1717.67	-----	-379	-425	-1721	-925	121	-160	-454	326	0.801	0.193	1.00	Yes	0.530	0.116	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_{40} - L_{41}	1328.50	-----	-451	31	-1552	-67	-41	277	160	-312	0.788	0.210	1.00	Yes	0.532	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.74**
		L_{41} - L_{42}	947.49	-----	-237	-66	-1177	95	144	-67	-570	77	0.757	0.235	1.00	Yes	0.497	0.138	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.52**
		L_{42} - L_{43}	527.96	-----	-257	209	-1364	547	149	355	456	126	0.641	0.352	1.00	Yes	0.381	0.225	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.98**
		L_{43} - L_{44}	-----	-332.34	-152	-1	-2004	729	525	153	-160	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.478	0.516	1	Yes	0.475	0.408	0.89	Yes	1.00	**16.33**
	Structure 3	L_0 - L_1	-----	-404.35	428	-853	37	-169	-121	-547	27	123	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.265	1	Yes	0.728	0.256	0.99	Yes	1.00	**5.76**
		L_1 - L_2	202.85	-----	899	-1446	73	-426	-162	1185	-404	233	0.310	0.680	1.00	Yes	0.210	0.435	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.35**
		L_2 - L_3	828.97	-----	330	-706	-242	-561	180	-238	1073	295	0.722	0.273	1.00	Yes	0.462	0.168	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.98**
		L_3 - L_4	1164.95	-----	312	-1297	-288	-1058	-58	799	-784	471	0.737	0.262	1.00	Yes	0.478	0.162	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.89**
		L_4 - L_5	1613.80	-----	-373	-259	-1339	-965	-31	230	86	-650	0.788	0.207	1.00	Yes	0.506	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**
		L_5 - L_6	1550.62	-----	-139	-485	-687	-1477	253	-52	-874	157	0.758	0.239	1.00	Yes	0.492	0.147	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.78**
		L_6 - L_7	1255.76	-----	-498	239	-1579	184	-54	253	-37	-443	0.739	0.255	1.00	Yes	0.478	0.156	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		L_7 - L_8	1002.29	-14.59	-104	160	-703	-172	138	-173	-639	-52	0.791	0.199	1.00	Yes	0.506	0.121	0.63	Yes	0.014	0.146	0.16	Yes	0.014	0.125	0.14	Yes	1.00	**5.45**
		L_8 - L_9	544.39	-320.65	-158	439	-911	413	-111	158	288	-163	0.705	0.292	1.00	Yes	0.423	0.191	0.62	Yes	0.493	0.120	0.62	Yes	0.489	0.241	0.73	Yes	1.00	**6.07**
		L_9 - L_{10}	-----	-553.43	-67	518	-569	331	145	-154	-160	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.079	0.93	Yes	0.843	0.151	1.00	Yes	1.00	**5.13**
		L_{10} - L_{11}	-----	-1100.32	185	-122	-701	516	-330	-49	360	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.046	0.95	Yes	0.886	0.110	1.00	Yes	1.00	**8.55**
		L_{11} - L_{12}	-----	-1224.00	2	750	-301	1429	605	246	-398	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.213	1	Yes	0.775	0.189	0.97	Yes	1.00	**5.87**
		L_{12} - L_{13}	-----	-1229.58	1404	-103	691	-4	445	239	49	327	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.206	1	Yes	0.779	0.186	0.97	Yes	1.00	**4.23**
		L_{13} - L_{14}	-----	-1099.85	553	-708	-278	-6	-122	311	-573	-123	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.089	0.99	Yes	0.885	0.111	1.00	Yes	1.00	**8.16**
		L_{14} - L_{15}	-----	-723.85	567	106	190	-250	-256	85	-68	-460	-----	-----	-----	-----	-----	-----	-----	-----	0.858	0.135	1	Yes	0.849	0.128	0.98	Yes	1.00	**3.84**
		L_{15} - L_{16}	151.07	-551.97	478	136	112	-459	264	-218	-1039	185	0.196	0.311	0.51	Yes	0.117	0.195	0.32	Yes	0.849	0.149	1	Yes	0.841	0.127	0.97	Yes	1.00	**4.38**
		L_{16} - L_{17}	687.62	-203.85	337	-50	-726	-436	-176	185	55	-199	0.791	0.207	1.00	Yes	0.470	0.134	0.61	Yes	0.278	0.217	0.5	Yes	0.276	0.175	0.46	Yes	1.00	**4.97**
		L_{17} - L_{18}	654.43	-63.25	36	-99	-718	-511	110	-112	-437	86	0.753	0.244	1.00	Yes	0.436	0.145	0.59	Yes	0.086	0.230	0.32	Yes	0.086	0.173	0.26	Yes	1.00	**5.03**
		L_{18} - L_{19}	442.56	-19.38	-4	-27	-846	63	-104	202	101	-310	0.677	0.320	1.00	Yes	0.413	0.214	0.63	Yes	0.035	0.203	0.24	Yes	0.035	0.254	0.29	Yes	1.00	**6.02**
		L_{19} - L_{20}	82.02	-75.03	175	-288	-1796	1313	134	36	-1530	-416	0.126	0.867	1.00	Yes	0.074	0.522	0.60	Yes	0.136	0.783	0.92	Yes	0.135	0.539	0.68	Yes	1.00	**26.92**

Operating Loads - 5C1

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 - Verticals	Structure 1	U_0 - L_0	-----	-280.57	-5	52	-100	158	173	56	-1005	-322	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.369	1	Yes	0.594	0.202	0.80	Yes	1.00	**1.72**
		U_1 - L_1	59.08	-320.11	58	-48	-251	249	632	208	-723	-261	0.106	0.530	0.64	Yes	0.058	0.291	0.35	Yes	0.699	0.275	0.98	Yes	0.677	0.320	1.00	Yes	1.00	**5.47**
		U_2 - L_2	131.14	-214.75	116	-130	-140	178	883	247	-1809	-597	0.236	0.751	0.99	Yes	0.130	0.413	0.55	Yes	0.469	0.530	1	Yes	0.454	0.227	0.69	Yes	1.00	**6.71**
		U_3 - L_3	132.60	-60.05	201	-189	-63	69	-1717	-823	-170	17	0.238	0.754	1.00	Yes	0.131	0.415	0.55	Yes	0.132	0.492	0.63	Yes	0.127	0.257	0.39	Yes	1.00	**8.66**
		U_4 - L_4	-----	-185.61	264	-259	56	-64	-1861	-850	1060	336	-----	-----	-----	-----	-----	-----	-----	-----	0.408	0.587	1	Yes	0.393	0.337	0.74	Yes	1.00	**8.42**
		U_5 - L_5	-----	-363.40	181	-205	78	-84	-68	141	1080	614	-----	-----	-----	-----	-----	-----	-----	-----	0.657	0.336	1	Yes	0.627	0.208	0.84	Yes	1.00	**3.60**
		U_6 - L_6	-----	-399.70	199	-207	75	-64	635	365	1644	770	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.390	1	Yes	0.573	0.181	0.76	Yes	1.00	**3.24**
		U_7 - L_7	-----	-387.00	261	-280	99	-112	472	183	1197	295	-----	-----	-----	-----	-----	-----	-----	-----	0.647	0.347	1	Yes	0.597	0.276	0.88	Yes	1.00	**3.11**
		U_8 - L_8	-----	-1222.27	223	-273	-422	500	-250	-160	-1021	-615	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.109	1	Yes	0.850	0.093	0.95	Yes	1.00	**5.96**
		U_9 - L_9	-----	-657.79	-229	260	-412	452	604	231	-272	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.178	0.97	Yes	0.743	0.251	1.00	Yes	1.00	**2.89**
		U_{10} - L_{10}	-----	-757.99	-158	155	-344	373	620	285	-854	-247	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.205	1	Yes	0.748	0.193	0.95	Yes	1.00	**4.17**
		U_{11} - L_{11}	-----	-658.54	-165	221	-388	491	614	382	12	252	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.177	0.97	Yes	0.766	0.228	1.00	Yes	1.00	**4.76**
		U_{12} - L_{12}	-----	-523.04	-135	148	-320	327	-111	96	-421	7	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.171	0.93	Yes	0.718	0.279	1.00	Yes	1.00	**4.90**
		U_{13} - L_{13}	-----	-372.64	-68	90	-214	241	18	59	-526	86	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.240	1	Yes	0.714	0.275	0.99	Yes	1.00	**4.51**
		U_{14} - L_{14}	-----	-192.11	121	-123	-241	255	-1935	-677	-43	-586	-----	-----	-----	-----	-----	-----	-----	-----	0.429	0.569	1	Yes	0.406	0.326	0.74	Yes	1.00	**12.62**
		U_{15} - L_{15}	2.85	-281.36	209	-229	-24	8	-1181	-241	26	-359	0.005	0.635	0.65	Yes	0.003	0.349	0.36	Yes	0.631	0.367	1	Yes	0.595	0.293	0.89	Yes	1.00	**6.08**
		U_{16} - L_{16}	-----	-321.45	239	-249	46	-51	-559	-100	474	107	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.243	0.97	Yes	0.680	0.318	1.00	Yes	1.00	**4.47**
		U_{17} - L_{17}	-----	-420.31	204	-222	80	-93	110	106	506	201	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.725	0.225	0.96	Yes	1.00	**3.10**
		U_{18} - L_{18}	-----	-533.77	434	-448	175	-182	-71	-19	683	174	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.184	0.97	Yes	0.742	0.254	1.00	Yes	1.00	**4.04**
		U_{19} - L_{19}	-----	-647.69	488	-509	181	-195	-157	-3	590	117	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.158	0.97	Yes	0.754	0.236	1.00	Yes	1.00	**4.96**
		U_{20} - L_{20}	-----	-521.72	374	-450	231	-294	275	36	609	80	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.234	1	Yes	0.668	0.238	0.91	Yes	1.00	**2.83**
	Structure 2	U_0 - L_0	-----	-625.16	-155	274	-310	460	-16	-3	-1039	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1	Yes	0.670	0.195	0.87	Yes	1.00	**2.08**
		U_1 - L_1	-----	-712.84	-203	210	-548	548	629	159	-289	27	-----	-----	-----	-----	-----	-----	-----	-----	0.815	0.147	0.97	Yes	0.764	0.232	1.00	Yes	1.00	**3.74**
		U_2 - L_2	-----	-594.36	-150	165	-433	456	626	283	-560	156	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.177	0.98	Yes	0.757	0.233	1.00	Yes	1.00	**3.42**
		U_3 - L_3	-----	-459.29	-70	81	-219	234	551	262	145	264	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1	Yes	0.720	0.213	0.94	Yes	1.00	**3.15**
		U_4 - L_4	-----	-323.66	-12	23	-195	204	570	231	-254	126	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.263	1	Yes	0.685	0.260	0.95	Yes	1.00	**4.08**
		U_5 - L_5	82.82	-262.18	68	-61	-147	172	564	178	-1063	26	0.149	0.528	0.68	Yes	0.082	0.290	0.38	Yes	0.592	0.398	1	Yes	0.555	0.220	0.78	Yes	1.00	**5.70**
		U_6 - L_6	294.41	-76.99	182	-183	-108	113	-798	-338	-247	31	0.530	0.465	1.00	Yes	0.291	0.256	0.55	Yes	0.173	0.267	0.45	Yes	0.163	0.234	0.40	Yes	1.00	**7.97**
		U_7 - L_7	-----	-200.77	277	-309	28	-40	-1719	-573	-442	-376	-----	-----	-----	-----	-----	-----	-----	-----	0.454	0.542	1	Yes	0.425	0.395	0.82	Yes	1.00	**8.81**
		U_8 - L_8	-----	-473.65	331	-355	155	-174	-487	-99	539	56	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.173	0.86	Yes	0.682	0.310	1.00	Yes	1.00	**3.55**
		U_9 - L_9	-----	-690.41	580	-591	268	-289	-176	80	733	42	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.155	0.93	Yes	0.740	0.251	1.00	Yes	1.00	**4.54**
		U_{10} - L_{10}	-----	-750.84	506	-530	234	-234	-224	166	1190	708	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.258	1	Yes	0.702	0.234	0.94	Yes	1.00	**4.42**
		U_{11} - L_{11}	-----	-730.67	453	-457	227	-220	399	474	1193	676	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.683	0.202	0.89	Yes	1.00	**3.54**
		U_{12} - L_{12}	-----	-720.08	413	-406	186	-168	930	495	1506	652	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.307	1	Yes	0.624	0.177	0.81	Yes	1.00	**3.48**
		U_{13} - L_{13}	-----	-608.63	481	-469	224	-222	409	180	1283	294	-----	-----	-----	-----	-----	-----	-----	-----	0.678	0.314	1	Yes	0.587	0.230	0.82	Yes	1.00	**3.47**
		U_{14} - L_{14}	-----	-1224.04	480	-461	-608	564	776	-68	-668	-539	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.101	1	Yes	0.812	0.108	0.92	Yes	1.00	**7.48**
		U_{15} - L_{15}	-----	-675.53	-259	255	-602	575	773	106	-102	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.243	1	Yes	0.651	0.288	0.94	Yes	1.00	**4.30**
		U_{16} - L_{16}	-----	-721.70	-184	172	-519	502	671	192	-293	30	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.161	1	Yes	0.773	0.220	1.00	Yes	1.00	**4.07**
		U_{17} - L_{17}	-----	-647.80	-193	194	-521	525	594	193	-671	90	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.168	0.97	Yes	0.754	0.244	1.00	Yes	1.00	**3.90**
		U_{18} - L_{18}	-----	-579.81	-151	157	-482	500	619	211	6	134	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.167	0.94	Yes	0.739	0.256	1.00	Yes	1.00	**4.08**
		U_{19} - L_{19}	-----	-479.68	-82	84	-289	287	518	192	-284	118	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.168	0.89	Yes	0.716	0.278	1.00	Yes	1.00	**3.87**
		U_{20} - L_{20}	-----	-362.79	-36	40	-195	207	518	179	-660	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.253	1	Yes	0.695	0.236	0.94	Yes	1.00	**3.99**
	Structure 3	U_{21} - L_{21}	39.01	-318.12	29	-19	-234	250	-119	-172	-123	111	0.070	0.370	0.44	Yes	0.039	0.203	0.25	Yes	0.719	0.146	0.87	Yes	0.673	0.320	1.00	Yes	1.00	**6.45**
		U_{22} - L_{22}	-----	-191.75	304	-337	-196	203	-108	-222	-1657	-963	-----	-----	-----	-----	-----	-----	-----	-----	0.432	0.559	1	Yes	0.406	0.431	0.84	Yes	1.00	**14.76**
		U_{23} - L_{23}	-----	-321.38	224	-242	8	-11	-603	-43	524	165	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.268	1	Yes	0.680	0.309	0.99	Yes	1.00	**4.46**
		U_{24} - L_{24}	-----	-369.39	224	-232	49	-54	50	84	584	203	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.236	1	Yes	0.708	0.265	0.98	Yes	1.00	**3.61**
		U_{25} - L_{25}	-----	-475.40	298	-297	96	-98	-78	120	588	223	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.183	0.9	Yes	0.710	0.287	1.00	Yes	1.00	**3.54**
		U_{26} - L_{26}	-----	-575.28	496	-520	165	-173	48	240	708	300	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.189	0.96	Yes	0.733	0.266	1.00	Yes	1.00	**3.96**
		U_{27} - L_{27}	-----	-635.42	553	-558	197	-201	398	430	770	313	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.193	0.98	Yes	0.740	0.259	1.00	Yes	1.00	**4.39**
		U_{28} - L_{28}	-----	-608.49	454	-438	154	-128	720	372	1676	561	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.291	1	Yes	0.652	0.193	0.85	Yes	1.00	**3.90**
		U_{29} - L_{29}	-----	-606.38	560	-545	146	-151	286	153	1322	185	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.321	1	Yes	0.585	0.268	0.86	Yes	1.00	**5.26**
		U_{30} - L_{30}	-----	-1184.83	282	-295	-574	507	470	-180	-552	-361	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.091	1	Yes	0.815	0.106	0.93	Yes	1.00	**6.04**
		U_{31} - L_{31}	-----	-715.54	-304	298	-544	523	520	95	-248	34	-----	-----	-----	-----	-----	-----	-----	-----	0.798	0.200	1	Yes	0.690	0.260	0.96	Yes	1.00	**3.19**
		U_{32} - L_{32}	-----	-846.79	-218	190	-455	450	612	186	-691	4	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.734	0.195	0.93	Yes	1.00	**3.64**
		U_{33} - L_{33}	-----	-826.04	-246	233	-510	504	441	199	-162	182	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.140	0.98	Yes	0.772	0.225	1.00	Yes	1.00	**4.30**
		U_{34} - L_{34}	-----	-810.32	-236	251	-527	547	552	340	-716	-18	-----	-----	-----	-----	-----	-----	-----	-----	0.801	0.185	0.99	Yes	0.758	0.241	1.00	Yes	1.00	**4.90**
		U_{35} - L_{35}	-----	-685.84	-254	269	-541	563	631	379	-1174	-110	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.228	1	Yes	0.735	0.239	0.98	Yes	1.00	**4.59**
		U_{36} - L_{36}	-----	-478.13	-134	157	-332	354	203	154	-38	139	-----	-----	-----	-----	-----	-----	-----	-----	0.693	0.122	0.82	Yes	0.689	0.310	1.00	Yes	1.00	**4.59**
		U_{37} - L_{37}	-----	-171.96	0	6	-262	296	-752	-249	-201	-250	-----	-----	-----	-----	-----	-----	-----	-----	0.388	0.611	1	Yes	0.364	0.379	0.75	Yes	1.00	**8.93**
		U_{38} - L_{38}	222.83	-164.90	161	-172	-137	139	-1298	-347	29	-352	0.401	0.595	1.00	Yes	0.220	0.327	0.55	Yes	0.371	0.362	0.74	Yes	0.349	0.219	0.57	Yes	1.00	**8.16**
		U_{39} - L_{39}	65.03	-323.01	218	-240	-59	53	-565	-63	533	157	0.117	0.471	0.59	Yes	0.064	0.259	0.33	Yes	0.730	0.264	1	Yes	0.683	0.307	1.00	Yes	1.00	**6.23**
		U_{40} - L_{40}	-----	-325.68	213	-218	32	-40	-171	-20	599	172	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.689	0.278	0.97	Yes	1.00	**3.80**
		U_{41} - L_{41}	-----	-461.06	233	-246	85	-94	97	104	579	192	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.224	0.95	Yes	1.00	**3.15**
		U_{42} - L_{42}	-----	-577.40	492	-499	166	-176	219	118	668	170	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.172	0.95	Yes	0.736	0.255	1.00	Yes	1.00	**4.10**
		U_{43} - L_{43}	-----	-706.63	534	-554	185	-203	414	216	618	184	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.153	0.97	Yes	0.757	0.235	1.00	Yes	1.00	**4.93**
		U_{44} - L_{44}	-----	-655.96	461	-590	245	-312	579	98	733	124	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.214	1	Yes	0.703	0.250	0.96	Yes	1.00	**4.00**
	Structure 4	U_0 - L_0	-----	-528.90	-134	232	-253	366	105	14	-683	-90	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.239	1	Yes	0.663	0.188	0.86	Yes	1.00	**1.70**
		U_1 - L_1	-----	-648.52	-204	226	-523	510	741	142	-58	128	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.182	1	Yes	0.755	0.243	1.00	Yes	1.00	**3.88**
		U_2 - L_2	-----	-544.17	-157	169	-399	417	662	307	-273	189	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.195	1	Yes	0.757	0.236	1.00	Yes	1.00	**3.49**
		U_3 - L_3	-----	-407.41	-69	84	-177	199	565	271	-379	186	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1	Yes	0.703	0.202	0.91	Yes	1.00	**2.75**
		U_4 - L_4	-----	-319.00	-26	32	-227	236	628	223	-262	129	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.279	1	Yes	0.675	0.302	0.98	Yes	1.00	**5.29**
		U_5 - L_5	79.43	-279.83	63	-52	-213	233	-220	-158	-920	14	0.143	0.564	0.71	Yes	0.079	0.310	0.39	Yes	0.627	0.369	1	Yes	0.592	0.298	0.89	Yes	1.00	**7.91**
		U_6 - L_6	-----	-176.99	229	-243	-29	27	-2074	-674	288	-188	-----	-----	-----	-----	-----	-----	-----	-----	0.395	0.604	1	Yes	0.374	0.311	0.69	Yes	1.00	**8.06**
		U_7 - L_7	-----	-369.14	230	-255	82	-101	-535	-122	529	13	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.220	0.97	Yes	0.707	0.291	1.00	Yes	1.00	**3.62**
		U_8 - L_8	-----	-516.60	335	-337	146	-151	-592	-160	468	180	-----	-----	-----	-----	-----	-----	-----	-----	0.746	0.199	0.95	Yes	0.709	0.288	1.00	Yes	1.00	**4.30**
		U_9 - L_9	-----	-628.87	379	-478	180	-229	264	361	1056	614	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.242	1	Yes	0.732	0.222	0.96	Yes	1.00	**4.28**
		U_{10} - L_{10}	-----	-605.67	304	-316	153	-141	977	628	1862	956	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.365	1	Yes	0.598	0.164	0.77	Yes	1.00	**3.43**
		U_{11} - L_{11}	-----	-588.81	384	-432	190	-221	575	392	1291	575	-----	-----	-----	-----	-----	-----	-----	-----	0.702	0.291	1	Yes	0.665	0.240	0.91	Yes	1.00	**3.35**
		U_{12} - L_{12}	-----	-1137.56	305	-412	-342	359	684	182	-1594	-552	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1	Yes	0.789	0.077	0.87	Yes	1.00	**6.26**
		U_{13} - L_{13}	-----	-451.13	-153	167	-287	303	683	107	-407	-14	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.696	0.298	1.00	Yes	1.00	**2.85**
		U_{14} - L_{14}	-----	-509.67	-95	85	-243	256	795	224	-562	-230	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.226	1	Yes	0.731	0.224	0.96	Yes	1.00	**4.59**
		U_{15} - L_{15}	-----	-406.00	-79	84	-198	225	785	256	-686	-126	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.700	0.228	0.93	Yes	1.00	**4.74**
		U_{16} - L_{16}	-----	-165.62	-46	56	-234	232	-827	-371	1111	212	-----	-----	-----	-----	-----	-----	-----	-----	0.364	0.636	1	Yes	0.350	0.299	0.65	Yes	1.00	**7.14**
		U_{17} - L_{17}	134.30	-181.08	135	-156	-188	184	-1771	-652	160	-264	0.242	0.753	1.00	Yes	0.133	0.414	0.55	Yes	0.397	0.497	0.9	Yes	0.383	0.240	0.63	Yes	1.00	**9.42**
		U_{18} - L_{18}	121.83	-294.63	245	-287	-128	138	-662	-362	448	142	0.219	0.559	0.78	Yes	0.121	0.307	0.43	Yes	0.644	0.289	0.94	Yes	0.623	0.367	1.00	Yes	1.00	**8.26**
		U_{19} - L_{19}	7.89	-326.88	226	-234	-38	21	135	87	419	216	0.014	0.421	0.44	Yes	0.008	0.231	0.24	Yes	0.714	0.208	0.93	Yes	0.692	0.300	1.00	Yes	1.00	**5.51**
		U_{20} - L_{20}	-----	-322.27	194	-242	75	-85	289	93	602	193	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.273	1	Yes	0.682	0.309	1.00	Yes	1.00	**3.19**

Moment (Start) AI Operating

			Operating Loads - 5C1										Calc: BKC	Date: 10/28/2009																					
			Axial Force		ZZ Axis Bending				YY Axis Bending				Check: NRF	Date: 11/2/2009																					
	Vehicle	Pedestrian			Max. Pos. Mom.		Max. Neg. Mom.		Max. Pos. Mom.		Max. Neg. Mom.		Tension								Compression														
DL Factor:	1.300	1.300	Max. Tension	Max. Comp.	Start	End	Start	End	Start	End	Start	End	Yield			Pass	Fracture			Pass	Buckle			Pass	Yield			Pass	Controlling Bi-Axial Moment & Axial Value	Rating				
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		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total		Axial Portion	Moment Portion	Total								
South Truss - Diagonals	Structure 1	U_0 - L_1	439.01	-----	22	-11	-104	59	-114	-21	-1201	-445	0.576	0.424	1.00	Yes	0.348	0.233	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.66**					
		U_1 - L_2	300.64	-138.70	20	-18	-87	-3	444	252	-1177	-671	0.541	0.452	1.00	Yes	0.297	0.249	0.55	Yes	0.318	0.407	0.73	Yes	0.293	0.112	0.41	Yes	1.00	**5.09**					
		U_2 - L_3	99.89	-271.46	56	-31	-83	-39	577	310	-816	-640	0.180	0.343	0.53	Yes	0.099	0.189	0.29	Yes	0.625	0.368	1	Yes	0.574	0.107	0.69	Yes	1.00	**7.55**					
		U_3 - L_4	-----	-275.18	45	-10	-23	-69	520	286	-955	-338	-----	-----	-----	-----	-----	-----	-----	-----	0.629	0.365	1	Yes	0.582	0.088	0.68	Yes	1.00	**5.40**					
		U_4 - L_4	517.85	-----	-1	82	-123	22	-134	135	175	488	0.759	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.86**					
		U_4 - L_5	671.69	-----	-3	132	-236	221	71	94	-320	378	0.794	0.203	1.00	Yes	0.437	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.02**					
		U_5 - L_6	598.29	-----	-28	82	-276	238	-708	-51	-70	278	0.707	0.286	1.00	Yes	0.389	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**					
		U_6 - L_7	650.53	-----	76	197	-97	310	260	-149	136	278	0.769	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**					
		U_8 - L_9	953.61	-----	39	207	-87	356	538	285	-91	-554	0.762	0.229	1.00	Yes	0.472	0.129	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.52**					
		U_9 - L_{10}	957.40	-----	-113	139	-298	235	607	275	-574	-767	0.765	0.231	1.00	Yes	0.474	0.131	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**					
		U_{10} - L_{11}	887.34	-----	-70	132	-269	175	295	37	-746	-923	0.750	0.246	1.00	Yes	0.464	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**					
		U_{11} - L_{12}	681.66	-----	-91	77	-245	64	194	-26	-1388	-927	0.674	0.321	1.00	Yes	0.371	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**					
		U_{12} - L_{13}	530.11	-----	-85	62	-197	116	108	-29	-903	-708	0.646	0.349	1.00	Yes	0.407	0.200	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**					
		U_{13} - L_{14}	337.49	-----	-32	-16	-90	12	-354	-224	-943	-531	0.607	0.388	1.00	Yes	0.334	0.214	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**					
		U_{15} - L_{14}	302.19	-230.63	26	-99	-137	-44	258	-180	793	542	0.544	0.405	0.95	Yes	0.299	0.223	0.53	Yes	0.540	0.457	1	Yes	0.488	0.175	0.67	Yes	1.00	**10.34**					
		U_{16} - L_{15}	396.48	-3.00	-17	-3	-151	83	-290	-128	-104	206	0.713	0.277	1.00	Yes	0.392	0.152	0.55	Yes	0.007	0.162	0.17	Yes	0.006	0.193	0.20	Yes	1.00	**6.17**					
		U_{17} - L_{16}	524.21	-----	-46	23	-149	95	-305	-104	-165	15	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.83**					
		U_{18} - L_{17}	612.67	-----	-131	89	-340	243	-402	-111	-176	175	0.724	0.266	1.00	Yes	0.398	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**					
		U_{19} - L_{18}	691.66	-----	-133	97	-335	253	-460	-204	-360	-92	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**					
		U_{20} - L_{19}	697.76	-----	-179	142	-385	326	-274	-140	-181	-2	0.756	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**					
	Structure 2	U_0 - L_1	668.01	-----	-89	136	-278	319	-324	-90	-1222	-356	0.661	0.331	1.00	Yes	0.363	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.14**					
		U_1 - L_2	710.63	-----	-162	115	-384	282	147	-28	-537	-736	0.703	0.288	1.00	Yes	0.387	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.18**					
		U_2 - L_3	577.42	-----	-111	82	-319	243	141	-14	-747	-674	0.683	0.316	1.00	Yes	0.375	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**					
		U_3 - L_4	530.71	-----	-49	23	-170	109	179	16	-312	-613	0.707	0.283	1.00	Yes	0.389	0.156	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**					
		U_4 - L_5	345.73	-58.75	8	-21	-130	73	255	48	-402	-720	0.622	0.375	1.00	Yes	0.342	0.206	0.55	Yes	0.145	0.231	0.38	Yes	0.124	0.166	0.30	Yes	1.00	**5.19**					
		U_5 - L_6	348.98	-235.68	67	-69	-109	31	401	125	-427	-790	0.628	0.367	1.00	Yes	0.345	0.202	0.55	Yes	0.557	0.282	0.84	Yes	0.499	0.139	0.64	Yes	1.00	**8.69**					
		U_6 - L_7	-----	-400.15	50	-106	-22	-46	-412	-40	30	-450	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.142	1	Yes	0.767	0.121	0.89	Yes	1.00	**4.22**					
		U_8 - L_7	585.12	-----	-79	46	-213	135	-153	-154	242	285	0.746	0.249	1.00	Yes	0.470	0.140	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**					
		U_8 - L_9	715.72	-----	-161	157	-340	241	-296	-84	-3	115	0.775	0.223	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**					
		U_{10} - L_9	798.93	-----	-123	158	-343	251	-176	28	9	301	0.790	0.204	1.00	Yes	0.435	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**					
		U_{11} - L_{10}	868.56	-----	-128	195	-347	294	-247	62	40	442	0.791	0.208	1.00	Yes	0.435	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.04**					
		U_{12} - L_{11}	838.57	-----	-130	175	-337	342	-600	65	-350	329	0.764	0.227	1.00	Yes	0.420	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**					
		U_{13} - L_{12}	711.11	-----	-158	162	-407	372	-691	-56	-316	131	0.704	0.292	1.00	Yes	0.387	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**					
		U_{14} - L_{13}	758.30	-----	43	207	-260	439	289	-112	-20	136	0.750	0.247	1.00	Yes	0.413	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**					
		U_{14} - L_{15}	596.94	-----	-14	171	-192	344	499	231	105	-287	0.706	0.285	1.00	Yes	0.388	0.157	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**					
		U_{15} - L_{16}	586.21	-----	-170	167	-345	316	598	184	198	-296	0.693	0.304	1.00	Yes	0.381	0.167	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.74**					
		U_{16} - L_{17}	682.65	-----	-126	152	-331	344	374	111	-79	-499	0.739	0.258	1.00	Yes	0.407	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.61**					
		U_{17} - L_{18}	623.68	-----	-108	123	-291	274	361	92	-517	-481	0.737	0.258	1.00	Yes	0.406	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.58**					
		U_{18} - L_{19}	620.42	-----	-79	93	-273	244	294	81	-63	-610	0.734	0.265	1.00	Yes	0.403	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**					
		U_{19} - L_{20}	543.26	-----	-38	43	-186	143	300	88	-413	-657	0.693	0.301	1.00	Yes	0.381	0.172	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**					
		U_{20} - L_{21}	358.51	-----	-7	7	-127	88	256	84	-649	-515	0.645	0.351	1.00	Yes	0.355	0.193	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.24**					
		U_{21} - L_{22}	343.76	-112.70	19	-24	-110	21	335	198	-191	-803	0.618	0.373	1.00	Yes	0.340	0.205	0.55	Yes	0.266	0.310	0.58	Yes	0.238	0.140	0.38	Yes	1.00	**7.09**					
		U_{23} - L_{22}	374.11	-101.90	16	-21	-134	35	-293	-105	515	365	0.673	0.320	1.00	Yes	0.370	0.176	0.55	Yes	0.243	0.239	0.49	Yes	0.216	0.171	0.39	Yes	1.00	**6.76**					
		U_{24} - L_{23}	421.17	-----	-15	15	-128	104	-257	-64	-42	155	0.757	0.238	1.00	Yes	0.417	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**					
		U_{25} - L_{24}	592.31	-----	-39	47	-196	173	-302	-83	126	166	0.755	0.237	1.00	Yes	0.415	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**					
		U_{26} - L_{25}	649.66	-----	-77	95	-288	264	-255	-58	87	339	0.768	0.224	1.00	Yes	0.422	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**					
		U_{27} - L_{26}	643.28	-----	-100	143	-289	290	-401	127	-93	290	0.761	0.237	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.78**					
		U_{28} - L_{27}	672.04	-----	-93	148	-304	342	-570	46	-385	251	0.728	0.269	1.00	Yes	0.400	0.148	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**					
		U_{29} - L_{28}	565.46	-----	-89	104	-339	317	-743	-36	-146	221	0.669	0.326	1.00	Yes	0.368	0.180	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.19**					
		U_{30} - L_{29}	622.30	-----	55	163	-192	359	309	-127	-133	77	0.736	0.260	1.00	Yes	0.405	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**					
		U_{30} - L_{31}	728.56	-----	-54	235	-257	430	462	202	26	-487	0.721	0.272	1.00	Yes	0.396	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**					
		U_{31} - L_{32}	731.56	-----	-230	217	-425	371	512	146	-137	-408	0.724	0.274	1.00	Yes	0.398	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.80**					
		U_{32} - L_{33}	826.93	-----	-155	200	-347	334	448	131	-725	-655	0.753	0.247	1.00	Yes	0.414	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**					
		U_{33} - L_{34}	834.87	-----	-144	177	-319	267	351	85	-400	-748	0.761	0.238	1.00	Yes	0.418	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.47**					
		U_{34} - L_{35}	747.92	-----	-132	140	-312	228	143	-7	-383	-709	0.740	0.251	1.00	Yes	0.407	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**					
		U_{35} - L_{36}	640.83	-----	-156	137	-315	202	171	30	-856	-689	0.694	0.302	1.00	Yes	0.382	0.166	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**					
		U_{36} - L_{37}	524.29	-----	-77	31	-192	121	-316	-227	-666	-772	0.669	0.329	1.00	Yes	0.421	0.189	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**					
		U_{38} - L_{37}	-----	-379.43	54	-103	-64	-39	-40	-227	76	107	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.178	1	Yes	0.727	0.118	0.85	Yes	1.00	**6.94**					
		U_{39} - L_{38}	406.46	-181.18	50	-59	-124	54	-376	-89	-108	95	0.731	0.267	1.00	Yes	0.402	0.147	0.55	Yes	0.432	0.229	0.67	Yes	0.383	0.158	0.55	Yes	1.00	**7.71**					
		U_{40} - L_{39}	391.70	-22.36	-3	-12	-136	90	-384	-103	-49	138	0.704	0.286	1.00	Yes	0.387	0.157	0.55	Yes	0.054	0.167	0.23	Yes	0.047	0.174	0.23	Yes	1.00	**5.08**					
		U_{41} - L_{40}	557.18	-----	-53	27	-182	120	-418	-183	-136	89	0.743	0.253	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.79**					
		U_{42} - L_{41}	624.20	-----	-117	87	-332	261	-404	-173	-260	82	0.738	0.261	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**					
		U_{43} - L_{42}	769.03	-----	-132	100	-382	307	-375	-195	-217	42	0.761	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**					
		U_{44} - L_{43}	803.70	-----	-159	151	-373	372	-171	12	-106	62	0.795	0.199	1.00	Yes	0.437	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.22**					
	Structure 3	U_0 - L_1	564.94	-----	-73	108	-285	281	-230	-56	-1445	-202	0.612	0.384	1.00	Yes	0.337	0.211	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.22**					
		U_1 - L_2	653.98	-----	-159	109	-341	240	161	-43	-396	-704	0.708	0.290	1.00	Yes	0.390	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**					
		U_2 - L_3	570.89	-----	-124	85	-311	229	132	-28	-557	-795	0.675	0.320	1.00	Yes	0.371	0.176	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.59**					
		U_3 - L_4	455.59	-----	-41	19	-136	79	159	-22	-826	-597	0.668	0.330	1.00	Yes	0.367	0.182	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**					
		U_4 - L_5	322.49	-20.05	-11	-7	-130	69	209	16	-846	-660	0.580	0.411	1.00	Yes	0.319	0.226	0.55	Yes	0.048	0.307	0.36	Yes	0.042	0.166	0.21	Yes	1.00	**5.89**					
		U_5 - L_6	238.34	-270.35	32	-114	-100	-38	-675	-267	-890	-1076	0.429	0.457	0.89	Yes	0.236	0.251	0.49	Yes	0.633	0.363	1	Yes	0.572	0.146	0.72	Yes	1.00	**9.49**					
		U_7 - L_6	420.26	-----	-28	-8	-107	19	-148	-112	344	236	0.756	0.237	1.00	Yes	0.416	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**					
		U_8 - L_7	615.73	-----	-84	76	-214	140	-290	-103	50	263	0.751	0.244	1.00	Yes	0.472	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.72**					
		U_8 - L_9	828.25	-----	-76	95	-306	113	-200	14	-129	246	0.819	0.179	1.00	Yes	0.451	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**					
		U_{10} - L_9	979.50	-----	-49	124	-246	192	88	151	-121	418	0.827	0.168	1.00	Yes	0.512	0.095	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**					
		U_{11} - L_{10}	951.95	-----	-63	100	-307	255	-760	-188	378	633	0.761	0.234	1.00	Yes	0.471	0.132	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**					
		U_{12} - L_{11}	977.13	-----	103	233	-84	373	405	4	84	362	0.781	0.218	1.00	Yes	0.484	0.122	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**					
		U_{13} - L_{12}	598.34	-----	22	171	-85	287	658	336	-105	-354	0.707	0.283	1.00	Yes	0.389	0.155	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**					
		U_{13} - L_{14}	545.56	-----	-93	135	-278	221	766	329	-1075	-346	0.645	0.353	1.00	Yes	0.355	0.194	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.72**					
		U_{14} - L_{15}	630.03	-----	-24	163	-199	176	653	308	-356	-761	0.745	0.252	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**					
		U_{15} - L_{16}	492.22	-----	-10	76	-99	3	500	255	-724	-743	0.722	0.273	1.00	Yes	0.397	0.150	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.46**					
		U_{17} - L_{16}	-----	-358.87	59	-7	-75	-94	-230	19	217	240	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.173	1	Yes	0.759	0.121	0.89	Yes	1.00	**9.10**					
		U_{18} - L_{17}	310.43	-344.70	68	-42	-145	-33	-178	-68	-157	46	0.558	0.237	0.80	Yes	0.307	0.130	0.44	Yes	0.793	0.203	1	Yes	0.729	0.186	0.92	Yes	1.00	**11.31**					
		U_{19} - L_{18}	452.15	-132.93	24	-23	-94	8	-199	-113	-167	-132	0.813	0.178	1.00	Yes	0.447	0.098	0.55	Yes	0.305	0.158	0.47	Yes	0.281	0.120	0.41	Yes	1.00	**6.71**					
		U_{20} - L_{19}	576.11	-----	-24	10	-141	91	172	27	-291	-44	0.756	0.237	1.00	Yes	0.456	0.131	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.42**					

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: 5C1 — 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 — 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
North Truss - Upper Chord	Structure 1	U_1 - U_2	-71.60	19.48	-75.16			0.90	1.24	21.68	-83.68	0.00	0.00	Vehicle	Vehicle	-----	-201.87	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	-----	-----	5.90	5.90
		U_2 - U_3	-90.76	39.30	-128.82			0.90	1.24	43.75	-143.42	0.00	0.00	Vehicle	Vehicle	-----	-304.43	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	-----	-----	3.31	3.31
		U_3 - U_4	-61.05	58.35	-137.98			0.90	1.24	64.96	-153.61	0.00	0.00	Vehicle	Vehicle	5.08	-279.05	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	11.27	11.27	3.28	3.28
		U_4 - U_5	10.82	76.42	-127.70			0.90	1.24	85.08	-142.17	0.00	0.00	Vehicle	Vehicle	124.67	-170.76	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	7.76	7.76	4.05	4.05
		U_5 - U_6	12.98	76.83	-119.45			0.90	1.24	85.54	-132.99	0.00	0.00	Vehicle	Vehicle	128.08	-156.01	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	7.69	7.69	4.35	4.35
		U_6 - U_7	121.44	88.84	-25.60			0.90	1.24	98.91	-28.50	0.00	0.00	Vehicle	Vehicle	286.46	-----	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	-----	-----	5.56	5.56	-----	-----
		U_7 - U_8	249.52	96.27	-31.12			0.90	1.24	107.18	-34.64	0.00	0.00	Vehicle	Vehicle	463.71	-----	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	-----	-----	5.18	5.18	-----	-----
		U_8 - U_9	376.85	20.14	0.09			0.90	1.24	22.42	0.10	0.00	0.00	Vehicle	Vehicle	519.04	-----	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	-----	-----	32.71	32.71	-----	-----
		U_9 - U_{10}	319.70	8.86	11.95			0.90	1.20	12.89	9.55	0.00	0.00	Vehicle	Vehicle	432.36	-----	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	-----	-----	48.04	48.04	-----	-----
		U_{10} - U_{11}	128.80	84.67	-37.14			0.90	1.20	91.29	-40.05	0.00	0.00	Vehicle	Vehicle	286.11	-----	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	-----	-----	6.36	6.36	-----	-----
		U_{10} - U_{11}	-70.81	76.65	-101.58			0.90	1.20	82.64	-109.53	0.00	0.00	Vehicle	Vehicle	15.37	-234.44	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	9.44	9.44	4.81	4.81
		U_{11} - U_{12}	-252.85	68.51	-155.72			0.90	1.20	73.87	-167.90	0.00	0.00	Vehicle	Vehicle	-----	-546.97	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	-----	-----	3.33	3.33
		U_{12} - U_{13}	-391.81	59.19	-192.39			0.90	1.20	63.81	-207.43	0.00	0.00	Vehicle	Vehicle	-----	-779.01	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	-----	-----	3.60	3.60
		U_{13} - U_{14}	-482.83	48.97	-200.25			0.90	1.20	52.80	-215.91	0.00	0.00	Vehicle	Vehicle	-----	-908.37	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	-----	-----	3.91	3.91
		U_{14} - U_{15}	-484.28	49.57	-206.62			0.90	1.20	53.44	-224.93	0.00	0.00	Vehicle	Vehicle	-----	-921.98	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	-----	-----	3.75	3.75
		U_{15} - U_{16}	-501.86	21.87	-213.48			0.90	1.20	23.58	-230.18	0.00	0.00	Vehicle	Vehicle	-----	-951.64	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	-----	-----	3.59	3.59
		U_{16} - U_{17}	-467.82	-97.01	-97.69			0.90	1.20	-104.60	-105.33	0.00	0.00	Vehicle	Vehicle	-----	-745.10	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	-----	-----	8.16	8.16
		U_{17} - U_{18}	-368.70	-126.76	-74.27			0.90	1.20	-80.07	-136.67	0.00	0.00	Vehicle	Vehicle	-----	-656.99	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	-----	-----	4.41	4.41
		U_{18} - U_{19}	-251.42	-101.10	-49.73			0.90	1.20	-53.61	-109.00	0.00	0.00	Vehicle	Vehicle	-----	-468.55	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	-----	-----	3.91	3.91
		U_{19} - U_{20}	-117.77	-42.29	-6.32			0.90	1.20	-6.81	-45.60	0.00	0.00	Vehicle	Vehicle	-----	-212.37	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	-----	-----	12.28	12.28
	Structure 2	U_1 - U_2	-118.16	7.84	-50.62			0.90	1.18	8.35	-53.89	0.00	0.00	Vehicle	Vehicle	-----	-223.67	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	-----	-----	9.82	9.82
		U_1 - U_2	-239.45	17.95	-114.33			0.90	1.18	19.12	-121.73	0.00	0.00	Vehicle	Vehicle	-----	-469.53	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	-----	-----	4.53	4.53
		U_2 - U_3	-350.29	29.93	-165.70			0.90	1.18	31.87	-176.42	0.00	0.00	Vehicle	Vehicle	-----	-684.72	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	0.69	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	-----	-----	4.12	4.12
		U_3 - U_4	-448.96	27.88	-205.95			0.90	1.18	29.68	-219.28	0.00	0.00	Vehicle	Vehicle	-----	-868.71	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	-----	-----	4.07	4.07
		U_4 - U_5	-483.05	58.27	-209.37			0.90	1.18	63.21	-222.91	0.00	0.00	Vehicle	Vehicle	-----	-917.75	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	-----	-----	4.50	4.50
		U_5 - U_6	-485.65	75.04	-224.49			0.90	1.18	79.89	-239.01	0.00	0.00	Vehicle	Vehicle	-----	-942.05	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	-----	-----	4.19	4.19
		U_6 - U_7	-428.66	88.81	-212.07			0.90	1.18	94.55	-225.79	0.00	0.00	Vehicle	Vehicle	-----	-850.79	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	-----	-----	4.04	4.04
		U_7 - U_8	-428.18	89.02	-231.23			0.90	1.18	94.78	-246.19	0.00	0.00	Vehicle	Vehicle	-----	-876.67	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	-----	-----	3.71	3.71
		U_8 - U_9	-335.25	101.97	-130.14			0.90	1.18	108.57	-138.56	0.00	0.00	Vehicle	Vehicle	-----	-615.96	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	-----	-----	5.71	5.71
		U_9 - U_{10}	-200.15	110.18	-101.88			0.90	1.18	117.31	-108.47	0.00	0.00	Vehicle	Vehicle	-----	-401.21	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	-----	-----	6.32	6.32
		U_{10} - U_{11}	-52.03	116.82	-118.73			0.90	1.18	124.38	-126.41	0.00	0.00	Vehicle	Vehicle	94.05	-231.97	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	7.74	7.74	5.67	5.67
		U_{11} - U_{12}	107.09	-33.23	-6.76			0.90	1.18	-7.19	-35.38	0.00	0.00	Vehicle	Vehicle	129.86	-----	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	109.33	21.11			0.90	1.18	116.40	22.47	0.00	0.00	Vehicle	Vehicle	488.51	-----	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	-----	-----	7.56	7.56	-----	-----
		U_{13} - U_{14}	391.99	36.67	-22.30			0.90	1.18	39.05	-23.74	0.00	0.00	Vehicle	Vehicle	560.34	-----	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	-----	-----	30.02	30.02	-----	-----
		U_{14} - U_{15}	439.40	8.86	33.18			0.90	1.17	9.30	9.32	0.00	0.00	Vehicle	Vehicle	616.60	-----	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	-----	-----	32.23	32.23	-----	-----
		U_{15} - U_{16}	369.68	107.29	3.34			0.90	1.17	112.87	3.51	0.00	0.00	Vehicle	Vehicle	627.32	-----	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	-----	-----	8.00	8.00	-----	-----
		U_{16} - U_{17}	271.42	104.96	-41.58			0.90	1.17	110.43	-43.75	0.00	0.00	Vehicle	Vehicle	496.40	-----	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	-----	-----	7.00	7.00	-----	-----
		U_{17} - U_{18}	171.80	99.06	-69.40			0.90	1.17	104.22	-73.01	0.00	0.00	Vehicle	Vehicle	358.82	-----	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	-----	-----	5.70	5.70	-----	-----
		U_{18} - U_{19}	72.84	91.29	-111.48			0.90	1.17	96.05	-117.28	0.00	0.00	Vehicle	Vehicle	219.55	-57.78	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	7.22	7.22	6.14	6.14
		U_{19} - U_{20}	-8.04	80.87	-148.04			0.90	1.17	85.08	-155.75	0.00	0.00	Vehicle	Vehicle	100.15	-212.93	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	9.74	9.74	4.40	4.40
		U_{20} - U_{21}	-60.07	38.01	-163.77			0.90	1.17	39.99	-172.30	0.00	0.00	Vehicle	Vehicle	-----	-302.09	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	-----	-----	4.51	4.51
		U_{21} - U_{22}	-82.15	52.80	-174.56			0.90	1.17	55.55	-183.66	0.00	0.00	Vehicle	Vehicle	-----	-345.56	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	-----	-----	4.11	4.11
		U_{22} - U_{23}	-82.37	54.31	-181.12			0.90	1.17	57.14	-190.56	0.00	0.00	Vehicle	Vehicle	-----	-354.81	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	-----	-----	3.96	3.96
		U_{23} - U_{24}	-65.94	67.53	-123.12			0.90	1.17	71.05	-129.53	0.00	0.00	Vehicle	Vehicle	6.65	-254.10	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	14.88	14.88	5.95	5.95
		U_{24} - U_{25}	-117.08	80.53	-112.40			0.90	1.17	84.72	-118.25	0.00	0.00	Vehicle	Vehicle	86.76	-177.11	5.50	32.31	26.8125	1066.31	131.71	10.6328	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	9.89	9.89	5.71	5.71
		U_{25} - U_{26}	54.95	-81.85	-63.63			0.90	1.17	-66.94	-86.11	0.00	0.00	Vehicle	Vehicle	-----	-40.51	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	-----	-----	8.16	8.16
		U_{26} - U_{27}	135.89	-39.62	-40.15			0.90	1.17	-41.88	-42.24	0.00	0.00	Vehicle	Vehicle	122.47	-----	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	-----	-----	-----	-----	-----	-----
		U_{27} - U_{28}	216.69	-12.92	-12.92			0.90	1.17	-13.59	-13.60	0.00	0.00	Vehicle	Vehicle	264.03	-----	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	61.37	-7.62			0.90	1.17	64.57	-8.02	0.00	0.00	Vehicle	Vehicle	465.53	-----	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	-----	-----	15.16	15.16	-----	-----
		U_{29} - U_{30}	357.86	52.67	-26.70			0.90	1.17	55.41	-28.09	0.00	0.00	Vehicle	Vehicle	537.25	-----	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	-----	-----	21.77	21.77	-----	-----
		U_{30} - U_{31}	339.12	27.02	28.83			0.90	1.18	30.69	28.77	0.00	0.00	Vehicle	Vehicle	480.76	-----	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	-----	-----	39.92	39.92	-----	-----
		U_{31} - U_{32}	251.34	116.97	-6.73			0.90	1.18	124.54	-7.16	0.00	0.00	Vehicle	Vehicle	488.63	-----	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 — 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

Vehicle Load Factors

Pedestrian Load Factors

(+) 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
Structure 1	L_0- L_1	4.73	-2.71	-0.84			0.90	1.24	-0.93	-3.02	0.00	0.00	Vehicle	Vehicle	4.93	-----	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	-22.59	63.91			0.90	1.24	71.15	-25.15	0.00	0.00	Vehicle	Vehicle	188.95	-----	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	-----	-----	**6.02**	**6.02**	-----	-----
	L_2 - L_3	97.64	-42.58	96.89			0.90	1.24	107.87	-47.41	0.00	0.00	Vehicle	Vehicle	267.15	-----	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	-----	-----	**5.29**	**5.29**	-----	-----
	L_3 - L_4	66.79	-61.53	111.27			0.90	1.24	123.88	-68.50	0.00	0.00	Vehicle	Vehicle	247.87	-2.23	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	**4.86**	**4.86**	**9.19**	**9.19**
	L_4 - L_5	-108.59	-92.41	59.82			0.90	1.24	66.60	-102.88	0.00	0.00	Vehicle	Vehicle	-----	-274.91	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	-----	-----	**3.81**	**3.81**
	L_5 - L_6	-237.42	-101.99	44.70			0.90	1.24	49.77	-113.55	0.00	0.00	Vehicle	Vehicle	-----	-456.26	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	-----	-----	**3.72**	**3.72**
	L_6 - L_7	-362.38	-42.46	-46.23			0.90	1.24	-47.27	-51.47	0.00	0.00	Vehicle	Vehicle	-----	-538.01	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	-----	-----	**11.32**	**11.32**
	L_7 - L_8	478.62	-81.96	-0.16			0.90	1.24	-0.17	-91.25	0.00	0.00	Vehicle	Vehicle	-----	-740.83	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	-----	-----	**7.90**	**7.90**
	L_8 - L_9	-476.97	-66.69	-82.82			0.90	1.20	-71.90	-89.29	0.00	0.00	Vehicle	Vehicle	-----	-736.14	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	-----	-----	**8.09**	**8.09**
	L_9 - L_{10}	-301.47	-86.80	-40.11			0.90	1.20	-43.24	-93.58	0.00	0.00	Vehicle	Vehicle	-----	-513.57	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	-----	-----	**6.88**	**6.88**
	L_{10} - L_{11}	-104.56	-77.28	-7.70			0.90	1.20	-8.30	-83.32	0.00	0.00	Vehicle	Vehicle	-----	-244.24	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	-----	-----	**4.75**	**4.75**
	L_{11} - L_{12}	96.98	-69.20	53.97			0.90	1.20	58.19	-74.61	0.00	0.00	Vehicle	Vehicle	201.72	-----	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	-----	-----	**8.54**	**8.54**	-----	-----
	L_{12} - L_{13}	268.60	-60.06	102.35			0.90	1.20	110.36	-64.76	0.00	0.00	Vehicle	Vehicle	492.65	-----	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	-----	-----	**6.40**	**6.40**	-----	-----
	L_{13} - L_{14}	405.49	-50.78	115.67			0.90	1.20	124.72	-54.75	0.00	0.00	Vehicle	Vehicle	689.27	-----	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	-----	-----	**7.24**	**7.24**	-----	-----
	L_{14} - L_{15}	502.59	71.91	178.68			0.90	1.20	192.65	77.54	0.00	0.00	Vehicle	Vehicle	903.82	-----	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	-----	-----	**5.56**	**5.56**	-----	-----
	L_{15} - L_{16}	469.06	-21.85	163.50			0.90	1.20	176.28	-23.56	0.00	0.00	Vehicle	Vehicle	838.95	-----	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	-----	-----	**6.27**	**6.27**	-----	-----
	L_{16} - L_{17}	365.26	55.58	80.82			0.90	1.20	87.14	59.93	0.00	0.00	Vehicle	Vehicle	588.12	-----	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	-----	-----	**9.77**	**9.77**	-----	-----
	L_{17} - L_{18}	248.52	17.01	37.93			0.90	1.20	40.90	18.34	0.00	0.00	Vehicle	Vehicle	376.24	-----	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	-----	-----	**15.52**	**15.52**	-----	-----
	L_{18} - L_{19}	112.87	-21.84	16.78			0.90	1.20	18.10	-23.54	0.00	0.00	Vehicle	Vehicle	170.25	-----	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	-----	-----	**21.54**	**21.54**	-----	-----
	L_{19} - L_{20}	-14.36	-62.22	15.32			0.90	1.20	16.51	-67.09	0.00	0.00	Vehicle	Vehicle	2.80	-105.88	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	**31.31**	**31.31**	**6.10**	**6.10**
	L_0- L_1	15.25	0.40	-10.41			0.90	1.18	0.42	-11.09	0.00	0.00	Vehicle	Vehicle	20.37	-----	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	-----	-----	**1454.98**	**1454.98**	-----	-----
	L_1 - L_2	136.09	-7.73	44.17			0.90	1.18	47.02	-8.23	0.00	0.00	Vehicle	Vehicle	238.05	-----	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	-----	-----	**10.57**	**10.57**	-----	-----
	L_2 - L_3	262.77	-16.19	81.36			0.90	1.18	86.63	-17.24	0.00	0.00	Vehicle	Vehicle	454.22	-----	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	-----	-----	**8.09**	**8.09**	-----	-----
	L_3 - L_4	373.14	-20.38	126.95			0.90	1.18	135.16	-21.70	0.00	0.00	Vehicle	Vehicle	660.80	-----	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	-----	-----	**6.83**	**6.83**	-----	-----
	L_4 - L_5	456.12	-42.45	165.61			0.90	1.18	176.33	-45.20	0.00	0.00	Vehicle	Vehicle	822.77	-----	11.88	65.00	54.5000	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	-----	-----	**6.77**	**6.77**	-----	-----
	L_5 - L_6	489.37	-57.26	197.73			0.90	1.18	210.52	-60.96	0.00	0.00	Vehicle	Vehicle	909.86	-----	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	-----	-----	**6.19**	**6.19**	-----	-----
	L_6 - L_7	479.01	-72.55	171.59			0.90	1.18	182.69	-77.24	0.00	0.00	Vehicle	Vehicle	860.20	-----	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	-----	-----	**7.33**	**7.33**	-----	-----
	L_7 - L_8	330.07	-98.92	151.53			0.90	1.18	161.34	-105.32	0.00	0.00	Vehicle	Vehicle	638.83	-----	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	-----	-----	**6.27**	**6.27**	-----	-----
	L_8 - L_9	188.98	86.62	121.15			0.90	1.18	128.99	92.22	0.00	0.00	Vehicle	Vehicle	413.35	-----	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	-----	-----	**7.06**	**7.06**	-----	-----
	L_9 - L_{10}	39.77	-113.72	85.82			0.90	1.18	91.38	-121.07	0.00	0.00	Vehicle	Vehicle	170.49	-105.69	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	**9.00**	**9.00**	**6.34**	**6.34**
	L_{10} - L_{11}	-127.39	6.20	28.67			0.90	1.18	30.52	6.60	0.00	0.00	Vehicle	Vehicle	-----	-157.02	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	-46.09	-1.66			0.90	1.18	-1.77	-49.08	0.00	0.00	Vehicle	Vehicle	-----	-431.23	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	-----	-----	**13.21**	**13.21**
	L_{12} - L_{13}	-426.73	-101.56	-33.25			0.90	1.18	-35.40	-108.13	0.00	0.00	Vehicle	Vehicle	-----	-695.32	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	-----	-----	**7.85**	**7.85**
	L_{13} - L_{14}	-536.42	-114.87	14.14			0.90	1.18	15.06	-122.30	0.00	0.00	Vehicle	Vehicle	-----	-856.34	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	-----	-----	**8.00**	**8.00**
	L_{14} - L_{15}	-537.75	-92.25	-60.55			0.90	1.17	-63.71	-97.06	0.00	0.00	Vehicle	Vehicle	-----	-825.25	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	-----	-----	**10.07**	**10.07**
	L_{15} - L_{16}	-475.65	-116.75	-32.72			0.90	1.17	-34.42	-122.83	0.00	0.00	Vehicle	Vehicle	-----	-778.03	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	-----	-----	**6.51**	**6.51**
	L_{16} - L_{17}	-384.35	-108.63	-38.09			0.90	1.17	-40.07	-114.29	0.00	0.00	Vehicle	Vehicle	-----	-648.23	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	-----	-----	**5.80**	**5.80**
	L_{17} - L_{18}	-281.86	-104.43	-17.25			0.90	1.17	-18.15	-109.87	0.00	0.00	Vehicle	Vehicle	-----	-509.24	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	-----	-----	**4.06**	**4.06**
	L_{18} - L_{19}	-175.17	-95.35	19.04			0.90	1.17	20.03	-100.32	0.00	0.00	Vehicle	Vehicle	-----	-358.12	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	-----	-----	**3.97**	**3.97**
	L_{19} - L_{20}	-76.53	-86.26	85.39			0.90	1.17	89.84	-90.76	0.00	0.00	Vehicle	Vehicle	17.30	-217.48	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	**8.41**	**8.41**	**5.48**	**5.48**
	L_{20} - L_{21}	4.38	-73.67	68.92			0.90	1.17	72.51	-77.51	0.00	0.00	Vehicle	Vehicle	99.95	-95.07	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	**13.07**	**13.07**	**10.42**	**10.42**
	L_{21} - L_{22}	55.94	-14.61	95.15			0.90	1.17	100.11	-15.38	0.00	0.00	Vehicle	Vehicle	202.87	-----	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	-----	-----	**8.95**	**8.95**	-----	-----
	L_{22} - L_{23}	62.99	-38.94	135.39			0.90	1.17	142.44	-40.97	0.00	0.00	Vehicle	Vehicle	267.06	-----	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	-----	-----	**6.24**	**6.24**	-----	-----
	L_{23} - L_{24}	15.54	-51.90	101.71			0.90	1.17	107.01	-54.60	0.00	0.00	Vehicle	Vehicle	159.32	-50.78	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	**8.75**	**8.75**	**15.00**	**15.00**
	L_{24} - L_{25}	-56.00	8.24	75.44			0.90	1.17	79.37	8.67	0.00	0.00	Vehicle	Vehicle	30.38	-61.53	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	**9.26**	**9.26**	-----	-----
	L_{25} - L_{26}	-136.37	-19.26	45.37			0.90	1.17	47.73	-20.26	0.00	0.00	Vehicle	Vehicle	-----	-203.62	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	-----	-----	**21.58**	**21.58**
	L_{26} - L_{27}	-217.73	-73.45	21.55			0.90	1.17	22.67	-77.27	0.00	0.00	Vehicle	Vehicle	-----	-383.50	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	-----	-----	**6.60**	**6.60**
	L_{27} - L_{28}	-296.25	-116.19	39.21			0.90	1.17	41.25	-122.24	0.00	0.00	Vehicle	Vehicle	-----	-544.04	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	-----	-----	**6.15**	**6.15**
	L_{28} - L_{29}	-364.18	-173.34	-24.93			0.90	1.17	-26.23	-182.37	0.00	0.00	Vehicle	Vehicle	-----	-710.51	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	-----	-----	**5.00**	**5.00**
	L_{29} - L_{30}	-418.23	-64.80	50.62			0.90	1.17	53.26	-68.18	0.00	0.00	Vehicle	Vehicle	-----	-632.33	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	-----	-----	**16.09**	**16.09**
	L_{30} - L_{31}	-350.38	-80.41	-63.55			0.90	1.18	-67.66	-85.61	0.00	0.00	Vehicle	Vehicle	-----	-566.78	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	-----	-----	**13.60**	**13.60**
	L_{31} - L_{32}	-275.46	-54.57	-41.27			0.90	1.18	-43.94	-58.10	0.00	0.00	Vehicle	Vehicle	-----	-433.62	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	-----	-----	**17.02**	**17.02**
	L_{32} - L_{33}

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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
North Truss - Verticals	Structure 1	U$_1$ - L$_0$	-77.19	-79.25	17.55			0.90	1.24	19.53	-88.23	0.00	0.00	Vehicle	Vehicle	------	-215.04	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	------	------	------	------	------	2.65	2.65
		U$_1$ - L$_1$	-33.88	-51.96	15.74			0.90	1.24	17.52	-57.85	0.00	0.00	Vehicle	Vehicle	------	-119.24	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	-37.88	14.78			0.90	1.24	16.46	-42.17	0.00	0.00	Vehicle	Vehicle	34.96	-41.26	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	------	------	------	25.35	25.35	8.59	8.59
		U$_2$ - L$_3$	44.39	-27.83	9.06			0.90	1.24	10.08	-30.99	0.00	0.00	Vehicle	Vehicle	70.81	------	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	------	------	------	------	------	38.02	38.02	------	------
		U$_3$ - L$_4$	-16.67	-2.13	-16.31			0.90	1.24	-2.37	-18.15	0.00	0.00	Vehicle	Vehicle	------	-45.27	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	------	------	------	------	------	18.35	18.35
		U$_4$ - L$_5$	-109.51	-1.92	-64.85			0.90	1.24	-2.14	-72.20	0.00	0.00	Vehicle	Vehicle	------	-236.21	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	------	------	------	------	------	4.37	4.37
		U$_5$ - L$_6$	-143.60	-0.51	-85.38			0.90	1.24	-0.57	-95.05	0.00	0.00	Vehicle	Vehicle	------	-310.25	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	------	------	------	------	------	3.55	3.55
		U$_6$ - L$_7$	-142.61	2.64	-97.07			0.90	1.24	2.94	-108.06	0.00	0.00	Vehicle	Vehicle	------	-325.88	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	------	------	------	------	------	2.68	2.68
		U$_7$ - L$_8$	-391.97	-97.82	-119.89			0.90	1.24	-108.90	-133.47	0.00	0.00	Vehicle	Vehicle	------	-683.07	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	------	------	------	------	------	5.05	5.05
		U$_8$ - L$_9$	-223.13	-93.99	9.58			0.90	1.20	10.33	-101.34	0.00	0.00	Vehicle	Vehicle	------	-421.81	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	------	------	------	------	------	4.00	4.00
		U$_9$ - L$_{10}$	-225.77	-85.14	6.76			0.90	1.20	7.29	-91.80	0.00	0.00	Vehicle	Vehicle	------	-412.84	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	------	------	------	------	------	5.29	5.29
		U$_{10}$ - L$_{11}$	-198.79	-83.17	4.04			0.90	1.20	4.36	-89.67	0.00	0.00	Vehicle	Vehicle	------	-375.00	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	------	------	------	------	------	4.94	4.94
		U$_{11}$ - L$_{12}$	-154.77	-75.00	3.60			0.90	1.20	3.88	-80.86	0.00	0.00	Vehicle	Vehicle	------	-306.32	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	------	------	------	------	------	4.67	4.67
		U$_{12}$ - L$_{13}$	-109.04	-55.20	13.30			0.90	1.20	14.34	-59.51	0.00	0.00	Vehicle	Vehicle	------	-219.12	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	------	------	------	------	------	4.56	4.56
		U$_{13}$ - L$_{14}$	-12.30	-9.46	9.75			0.90	1.20	-10.20	-10.51	0.00	0.00	Vehicle	Vehicle	------	-29.65	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	------	------	------	------	------	31.64	31.64
		U$_{14}$ - L$_{15}$	-5.62	19.79	-49.41			0.90	1.20	21.34	-53.27	0.00	0.00	Vehicle	Vehicle	20.44	-76.56	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	------	------	------	20.30	20.30	6.34	6.34
		U$_{15}$ - L$_{16}$	-51.74	10.96	-60.34			0.90	1.20	11.82	-65.05	0.00	0.00	Vehicle	Vehicle	------	-151.82	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	------	------	------	------	------	4.45	4.45
		U$_{16}$ - L$_{17}$	-127.31	11.45	-86.82			0.90	1.20	12.35	-93.61	0.00	0.00	Vehicle	Vehicle	------	-287.19	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	------	------	------	------	------	3.03	3.03
		U$_{17}$ - L$_{18}$	-159.89	10.57	-100.78			0.90	1.20	11.40	-108.67	0.00	0.00	Vehicle	Vehicle	------	-349.12	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	------	------	------	------	------	3.36	3.36
		U$_{18}$ - L$_{19}$	-191.17	8.98	-106.46			0.90	1.20	9.69	-114.79	0.00	0.00	Vehicle	Vehicle	------	-397.74	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	------	------	------	------	------	3.70	3.70
		U$_{19}$ - L$_{20}$	-211.94	9.04	-113.77			0.90	1.20	9.74	-122.67	0.00	0.00	Vehicle	Vehicle	------	-435.00	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	------	------	------	------	------	2.80	2.80
	Structure 2	U$_1$ - L$_0$	-206.53	-100.93	13.35			0.90	1.18	14.21	-107.46	0.00	0.00	Vehicle	Vehicle	------	-408.19	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	------	------	------	------	------	3.78	3.78
		U$_1$ - L$_1$	-188.72	-93.77	13.71			0.90	1.18	14.59	-99.84	0.00	0.00	Vehicle	Vehicle	------	-375.13	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	------	------	------	------	------	4.85	4.85
		U$_2$ - L$_2$	-155.84	-82.18	14.42			0.90	1.18	15.35	-87.50	0.00	0.00	Vehicle	Vehicle	------	-316.34	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	------	------	------	------	------	4.78	4.78
		U$_3$ - L$_3$	-134.53	-79.60	16.32			0.90	1.18	17.37	-84.75	0.00	0.00	Vehicle	Vehicle	------	-285.06	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	------	------	------	------	------	3.74	3.74
		U$_4$ - L$_4$	-64.47	-56.60	15.53			0.90	1.18	16.53	-60.26	0.00	0.00	Vehicle	Vehicle	------	-162.14	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	------	------	------	------	------	4.56	4.56
		U$_5$ - L$_5$	-19.94	-51.15	20.56			0.90	1.18	21.89	-54.46	0.00	0.00	Vehicle	Vehicle	2.54	-96.72	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	------	------	------	20.45	20.45	5.89	5.89
		U$_6$ - L$_6$	40.07	-36.52	28.49			0.90	1.18	30.34	-38.88	0.00	0.00	Vehicle	Vehicle	91.53	------	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	------	------	------	------	------	12.78	12.78	------	------
		U$_7$ - L$_7$	-26.03	-1.63	-22.00			0.90	1.18	-1.74	-23.42	0.00	0.00	Vehicle	Vehicle	------	-64.29	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	------	------	------	------	------	13.43	13.43
		U$_8$ - L$_8$	-125.22	14.24	-69.08			0.90	1.18	15.17	-73.55	0.00	0.00	Vehicle	Vehicle	------	-258.40	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	------	------	------	------	------	5.51	5.51
		U$_9$ - L$_9$	-174.50	4.08	-91.78			0.90	1.18	4.34	-97.72	0.00	0.00	Vehicle	Vehicle	------	-353.88	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	------	------	------	------	------	5.29	5.29
		U$_{10}$ - L$_{10}$	-202.62	-1.00	-104.86			0.90	1.18	-1.07	-111.64	0.00	0.00	Vehicle	Vehicle	------	-408.54	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	------	------	------	------	------	5.16	5.16
		U$_{11}$ - L$_{11}$	-229.48	2.96	-113.50			0.90	1.18	3.15	-120.85	0.00	0.00	Vehicle	Vehicle	------	-455.42	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	------	------	------	------	------	4.43	4.43
		U$_{12}$ - L$_{12}$	-250.80	2.32	-122.78			0.90	1.18	2.47	-130.72	0.00	0.00	Vehicle	Vehicle	------	-495.98	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	------	------	------	------	------	4.21	4.21
		U$_{13}$ - L$_{13}$	-223.27	12.58	-118.45			0.90	1.18	13.39	-126.11	0.00	0.00	Vehicle	Vehicle	------	-454.19	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	------	------	------	------	------	3.70	3.70
		U$_{14}$ - L$_{14}$	-343.24	-73.52	-104.86			0.90	1.18	-78.27	-111.65	0.00	0.00	Vehicle	Vehicle	------	-591.36	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	------	------	------	------	------	6.35	6.35
		U$_{15}$ - L$_{15}$	-123.12	-82.03	13.57			0.90	1.17	14.28	-86.30	0.00	0.00	Vehicle	Vehicle	------	-272.24	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	------	------	------	------	------	6.57	6.57
		U$_{16}$ - L$_{16}$	-156.68	-93.59	9.72			0.90	1.17	10.23	-98.47	0.00	0.00	Vehicle	Vehicle	------	-331.69	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	------	------	------	------	------	5.17	5.17
		U$_{17}$ - L$_{17}$	-147.89	-85.71	10.04			0.90	1.17	10.56	-90.17	0.00	0.00	Vehicle	Vehicle	------	-309.48	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	------	------	------	------	------	5.27	5.27
		U$_{18}$ - L$_{18}$	-142.21	-85.51	12.59			0.90	1.17	13.24	-89.97	0.00	0.00	Vehicle	Vehicle	------	-301.83	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	------	------	------	------	------	4.84	4.84
		U$_{19}$ - L$_{19}$	-111.47	-83.37	14.07			0.90	1.17	14.80	-87.71	0.00	0.00	Vehicle	Vehicle	------	-258.94	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	------	------	------	------	------	4.56	4.56
		U$_{20}$ - L$_{20}$	-76.56	-63.02	14.94			0.90	1.17	15.72	-66.30	0.00	0.00	Vehicle	Vehicle	------	-185.73	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	------	------	------	------	------	4.50	4.50
		U$_{21}$ - L$_{21}$	-44.33	-54.68	20.32			0.90	1.17	21.38	-57.52	0.00	0.00	Vehicle	Vehicle	------	-132.41	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	------	------	------	------	------	5.15	5.15
		U$_{22}$ - L$_{22}$	-21.25	-0.42	-3.80			0.90	1.17	-0.44	-4.00	0.00	0.00	Vehicle	Vehicle	------	-32.82	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	------	------	------	------	------	80.20	80.20
		U$_{23}$ - L$_{23}$	-39.04	24.14	-53.21			0.90	1.17	25.39	-55.98	0.00	0.00	Vehicle	Vehicle	------	-123.53	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	------	------	------	------	------	5.39	5.39
		U$_{24}$ - L$_{24}$	-74.80	17.32	-59.45			0.90	1.17	18.22	-73.07	0.00	0.00	Vehicle	Vehicle	------	-192.23	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	------	------	------	------	------	4.11	4.11
		U$_{25}$ - L$_{25}$	-103.21	17.24	-87.86			0.90	1.17	18.13	-92.44	0.00	0.00	Vehicle	Vehicle	------	-254.35	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	------	------	------	------	------	4.41	4.41
		U$_{26}$ - L$_{26}$	-120.15	16.26	-95.31			0.90	1.17	17.11	-100.27	0.00	0.00	Vehicle	Vehicle	------	-286.54	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	------	------	------	------	------	4.56	4.56
		U$_{27}$ - L$_{27}$	-123.87	13.45	-105.63			0.90	1.17	14.15	-111.14	0.00	0.00	Vehicle	Vehicle	------	-305.50	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	6.06	12.00	Pass	------	------	------	------	------	4.49	4.49
		U$_{28}$ - L$_{28}$	-135.49	12.22	-114.85			0.90	1.17	12.86	-120.83	0.00	0.00	Vehicle	Vehicle	------	-333.21	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	------	------	------	------	------	4.39	4.39
		U$_{29}$ - L$_{29}$	-116.90	7.19	-105.40			0.90	1.17	7.57	-110.89	0.00	0.00	Vehicle	Vehicle	------	-296.12	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	------	------	------	------	------	5.17	5.17
		U$_{30}$ - L$_{30}$	-261.40	-89.05	-100.08			0.90	1.18	-94.81	-106.55	0.00	0.00	Vehicle	Vehicle	------	-478.34	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	------	------	------	------	------	7.24	7.24
		U$_{31}$ - L$_{31}$	-156.06	-92.56	16.58			0.90	1.18	17.65	-98.55	0.00	0.00	Vehicle	Vehicle	------	-330.98	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	------	------	------	------	------	5.42	5.42
		U$_{32}$ - L$_{32}$	-185.16	-95.78	11.36			0.90	1.18	12.09	-101.97	0.00	0.00	Vehicle	Vehicle	------	-373.27	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

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: 5C1 **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 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	55.07	-24.30			0.90	1.24	61.31	-27.06	0.00	0.00	Vehicle	Vehicle	193.30	-----	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	-----	-----	-----	-----	-----	8.14	8.14	-----	-----
	U_1 - L_2	23.29	63.33	2.40			0.90	1.24	70.51	2.67	0.00	0.00	Vehicle	Vehicle	121.94	-----	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	-----	-----	-----	-----	-----	5.74	5.74	-----	-----
	U_2 - L_3	-37.87	30.67	-16.68			0.90	1.24	34.14	-18.57	0.00	0.00	Vehicle	-----	-----	-73.37	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	-----	-----	-----	-----	-----	15.96	15.96
	U_3 - L_4	-92.23	-23.04	12.98			0.90	1.24	14.45	-25.65	0.00	0.00	Vehicle	Vehicle	-----	-153.25	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	-----	-----	-----	-----	-----	9.52	9.52
	U_3 - L_4	143.29	15.84	34.46			0.90	1.24	38.36	17.63	0.00	0.00	Vehicle	Vehicle	236.15	-----	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	-----	-----	-----	-----	-----	9.82	9.82	-----	-----
	U_4 - L_5	177.89	87.27	-0.20			0.90	1.24	97.16	-0.22	0.00	0.00	Vehicle	Vehicle	357.56	-----	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	-----	-----	-----	-----	-----	4.87	4.87	-----	-----
	U_5 - L_6	184.40	105.32	0.00			0.90	1.24	117.25	0.00	0.00	0.00	Vehicle	Vehicle	392.15	-----	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	107.90	-2.69			0.90	1.24	120.13	-2.99	0.00	0.00	Vehicle	Vehicle	390.14	-----	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	-----	-----	-----	-----	-----	3.92	3.92	-----	-----
	U_8 - L_9	268.90	103.55	-11.28			0.90	1.20	111.65	-12.17	0.00	0.00	Vehicle	Vehicle	494.71	-----	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	-----	-----	-----	-----	-----	6.21	6.21	-----	-----
	U_9 - L_{10}	278.76	97.43	-11.20			0.90	1.20	105.05	-12.08	0.00	0.00	Vehicle	Vehicle	498.95	-----	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	-----	-----	-----	-----	-----	6.51	6.51	-----	-----
	U_{10} - L_{11}	284.98	105.99	-0.23			0.90	1.20	114.27	-0.25	0.00	0.00	Vehicle	Vehicle	519.03	-----	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	-----	-----	-----	-----	-----	5.48	5.48	-----	-----
	U_{11} - L_{12}	250.55	87.43	-4.42			0.90	1.20	94.27	-4.77	0.00	0.00	Vehicle	Vehicle	448.26	-----	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	-----	-----	-----	-----	-----	5.59	5.59	-----	-----
	U_{12} - L_{13}	189.62	78.60	-18.30			0.90	1.20	84.74	-19.73	0.00	0.00	Vehicle	Vehicle	356.67	-----	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	-----	-----	-----	-----	-----	5.21	5.21	-----	-----
	U_{13} - L_{14}	123.30	49.78	-22.16			0.90	1.20	53.68	-23.90	0.00	0.00	Vehicle	Vehicle	230.06	-----	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	-----	-----	-----	-----	-----	5.67	5.67	-----	-----
	U_{13} - L_{14}	-24.40	42.75	-42.44			0.90	1.20	46.13	-45.76	0.00	0.00	Vehicle	Vehicle	28.25	-91.21	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	-----	-----	-----	-----	-----	6.64	6.64
	U_{15} - L_{15}	48.54	67.52	-20.46			0.90	1.20	72.79	-22.06	0.00	0.00	Vehicle	Vehicle	157.73	-----	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	-----	-----	-----	-----	-----	5.21	5.21	-----	-----
	U_{15} - L_{16}	146.57	91.09	-6.64			0.90	1.20	98.21	-7.16	0.00	0.00	Vehicle	Vehicle	318.22	-----	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	-----	-----	-----	-----	-----	3.85	3.85	-----	-----
	U_{16} - L_{17}	182.43	103.47	-13.49			0.90	1.20	111.57	-14.55	0.00	0.00	Vehicle	Vehicle	382.20	-----	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	-----	-----	-----	-----	-----	4.20	4.20	-----	-----
	U_{18} - L_{18}	223.79	113.84	-11.36			0.90	1.20	122.74	-12.25	0.00	0.00	Vehicle	Vehicle	450.49	-----	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	-----	-----	-----	-----	-----	3.96	3.96	-----	-----
	U_{20} - L_{19}	232.63	103.39	-9.49			0.90	1.20	111.47	-10.23	0.00	0.00	Vehicle	Vehicle	447.33	-----	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	-----	-----	-----	-----	-----	4.28	4.28	-----	-----
Structure 2	U_1 - L_1	213.47	102.20	-14.24			0.90	1.18	108.81	-15.16	0.00	0.00	Vehicle	Vehicle	418.96	-----	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	-----	-----	-----	-----	-----	5.18	5.18	-----	-----
	U_1 - L_2	200.39	94.64	-16.71			0.90	1.18	100.76	-17.79	0.00	0.00	Vehicle	Vehicle	391.50	-----	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	-----	-----	-----	-----	-----	5.73	5.73	-----	-----
	U_3 - L_3	172.76	92.40	-18.65			0.90	1.18	98.38	-19.85	0.00	0.00	Vehicle	Vehicle	352.48	-----	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	-----	-----	-----	-----	-----	4.86	4.86	-----	-----
	U_3 - L_4	147.11	91.12	-21.92			0.90	1.18	97.02	-23.34	0.00	0.00	Vehicle	Vehicle	317.37	-----	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	-----	-----	-----	-----	-----	4.43	4.43	-----	-----
	U_5 - L_5	49.07	67.65	-24.83			0.90	1.18	72.03	-26.44	0.00	0.00	Vehicle	Vehicle	157.43	-----	0.00	16.85	16.8486	556.00	131.71	13.3992	1.9682	61.41	28.23	-405.09	15.86	0.41	8.46	0.65	-----	-----	15.86	-----	-----	38.97	-----	-----	6.56	-----	-----	-----	-----	-----	5.26	5.26	-----	-----
	U_6 - L_6	2.97	59.78	-29.75			0.90	1.18	63.65	-31.68	0.00	0.00	Vehicle	Vehicle	86.60	-37.32	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	-----	-----	-----	-----	-----	6.67	6.67	10.38	10.38
	U_7 - L_7	-85.72	34.47	-59.65			0.90	1.18	36.70	-63.51	0.00	0.00	Vehicle	Vehicle	-----	-194.00	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	-----	-----	-----	-----	-----	-----	-----	4.31	4.31
	U_7 - L_7	140.27	66.43	-25.66			0.90	1.18	70.73	-27.32	0.00	0.00	Vehicle	Vehicle	274.29	-----	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	-----	-----	-----	-----	-----	6.55	6.55	-----	-----
	U_8 - L_8	204.17	97.21	-11.04			0.90	1.18	103.50	-11.75	0.00	0.00	Vehicle	Vehicle	399.97	-----	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	-----	-----	-----	-----	-----	4.89	4.89	-----	-----
	U_{10} - L_9	234.82	112.34	-2.65			0.90	1.18	119.61	-2.82	0.00	0.00	Vehicle	Vehicle	460.76	-----	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	-----	-----	-----	-----	-----	4.54	4.54	-----	-----
	U_{11} - L_{10}	263.04	126.36	-0.10			0.90	1.18	134.53	-0.11	0.00	0.00	Vehicle	Vehicle	516.84	-----	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	-----	-----	-----	-----	-----	4.32	4.32	-----	-----
	U_{11} - L_{11}	273.97	124.35	0.09			0.90	1.18	132.39	0.10	0.00	0.00	Vehicle	Vehicle	528.26	-----	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	-----	-----	-----	-----	-----	4.31	4.31	-----	-----
	U_{13} - L_{12}	254.88	123.89	-13.29			0.90	1.18	131.91	-14.14	0.00	0.00	Vehicle	Vehicle	502.82	-----	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	-----	-----	-----	-----	-----	3.96	3.96	-----	-----
	U_{13} - L_{13}	217.66	111.83	-14.70			0.90	1.18	119.07	-15.65	0.00	0.00	Vehicle	Vehicle	437.74	-----	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	-----	-----	-----	-----	-----	4.70	4.70	-----	-----
	U_{14} - L_{15}	110.03	84.13	-14.14			0.90	1.17	88.52	-14.87	0.00	0.00	Vehicle	Vehicle	258.11	-----	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	-----	-----	-----	-----	-----	6.11	6.11	-----	-----
	U_{15} - L_{16}	132.26	84.62	-14.54			0.90	1.17	89.03	-15.30	0.00	0.00	Vehicle	Vehicle	287.68	-----	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	-----	-----	-----	-----	-----	5.82	5.82	-----	-----
	U_{17} - L_{17}	172.87	102.99	-10.53			0.90	1.17	108.36	-11.08	0.00	0.00	Vehicle	Vehicle	365.60	-----	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	-----	-----	-----	-----	-----	4.96	4.96	-----	-----
	U_{17} - L_{18}	160.16	94.15	-12.54			0.90	1.17	99.06	-13.19	0.00	0.00	Vehicle	Vehicle	336.99	-----	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	-----	-----	-----	-----	-----	4.95	4.95	-----	-----
	U_{19} - L_{19}	152.33	98.20	-16.39			0.90	1.17	103.31	-17.24	0.00	0.00	Vehicle	Vehicle	332.33	-----	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	-----	-----	-----	-----	-----	4.82	4.82	-----	-----
	U_{20} - L_{20}	120.67	83.29	-16.76			0.90	1.17	87.63	-17.64	0.00	0.00	Vehicle	Vehicle	270.78	-----	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	-----	-----	-----	-----	-----	5.51	5.51	-----	-----
	U_{20} - L_{21}	76.10	72.30	-25.08			0.90	1.17	76.07	-26.39	0.00	0.00	Vehicle	Vehicle	197.82	-----	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	-----	-----	-----	-----	-----	4.62	4.62	-----	-----
	U_{21} - L_{22}	31.50	52.82	-39.02			0.90	1.17	55.57	-41.05	0.00	0.00	Vehicle	Vehicle	113.18	-12.42	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	-----	-----	-----	-----	-----	7.13	7.13	8.70	8.70
	U_{23} - L_{23}	24.27	49.94	-40.79			0.90	1.17	52.54	-42.92	0.00	0.00	Vehicle	Vehicle	99.85	-24.25	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	-----	-----	-----	-----	-----	7.68	7.68	8.09	8.09
	U_{24} - L_{23}	72.21	71.58	-28.32			0.90	1.17	75.31	-29.80	0.00	0.00	Vehicle	Vehicle	191.78	-----	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	-----	-----	-----	-----	-----	4.72	4.72	-----	-----
	U_{24} - L_{24}	112.05	94.66	-22.96			0.90	1.17	99.59	-24.16	0.00	0.00	Vehicle	Vehicle	275.14	-----	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	-----	-----	-----	-----	-----	4.93	4.93	-----	-----
	U_{25} - L_{25}	127.76	106.75	-20.76			0.90	1.17	112.31	-21.84	0.00	0.00	Vehicle	Vehicle	312.09	-----	0.00	25.63	25.6315	845.84	131.71	15.0104	2.8057	45.64	31.02	-675.79	16.16	0.50	11.50	0.80	-----	-----	16.16	-----	-----	32.06	-----	-----	7.23	-----	-----	-----	-----	-----	4.66	4.66	-----	-----
	U_{26} - L_{26}	132.58	108.95	-16.83			0.90	1.17	114.63	-17.71	0.00	0.00	Vehicle	Vehicle	321.37	-----	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	-----	-----	-----	-----	-----	4.52	4.52	-----	-----
	U_{26} - L_{27}	137.86	115.49	-14.50			0.90	1.17	121.51	-15.26	0.00	0.00	Vehicle	Vehicle	337.18	-----	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	-----	-----	-----	-----	-----	4.71	4.71	-----	-----
	U_{28} - L_{29}	102.60	98.32	-6.74			0.90	1.17	103.44	-7.09	0.00	0.00	Vehicle	Vehicle	267.84	-----	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	-----	-----	-----	-----	-----	5.30	5.30	-----	-----
	U_{30} - L_{31}	139.84	85.53	-17.19			0.90	1.18	91.07	-18.31	0.00	0.00	Vehicle	Vehicle	300.17	-----	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	-----	-----	-----	-----	-----	7.00	7.00	-----	-----
	U_{31} - L_{32}	166.63	96.61	-18.78			0.90	1.18	102.86	-20.00	0.00	0.00	Vehicle	Vehicle	350.35	-----	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	-----	-----	-----	-----	-----	5.58	5.58	-----	-----
	U_{32} - L_{33}	202.12	106.70	-10.60			0.90	1.18	113.60	-11.29	0.00	0.00	Vehicle	Vehicle	410.44	-----	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	-----	-----	-----	-----	-----	5.65	5.65	-----	-----
	U_{33} - L_{34}	201.72	111.89	-0.24			0.90	1.18	119.13	-0.25	0.00	0.00	Vehicle	Vehicle	417.10	-----	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	-----	-----	-----	-----	-----	5.40	5.40	-----	-----
	U_{35} - L_{35}	180.72	101.84	-7.70			0.90	1.18	108.42	-8.19	0.00	0.00	Vehicle	Vehicle	375.88	-----	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	-----	-----	-----	-----	-----	5.50	5.50	-----	-----
	U_{35} - L_{36}	162.90	98.52	-11.24			0.90	1.18	104.89	-11.97	0.00	0.00	Vehicle	Vehicle	348.13	-----	0.00	27.98	27.9777	923.26	131.71

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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 (I+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	14.36	-73.01			0.75	1.24	13.32	-67.73	0.00	0.00	Vehicle	Vehicle	-----	-156.57	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	-----	-----	7.57	7.57
		U$_1$ - U$_2$	-61.66	36.61	-110.54			0.75	1.24	33.96	-102.55	0.00	0.00	Vehicle	Vehicle	-----	-213.47	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	-----	-----	4.91	4.91
		U$_2$ - U$_3$	-27.05	50.55	-115.30			0.75	1.24	46.90	-106.97	0.00	0.00	Vehicle	Vehicle	25.80	-174.23	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	14.89	14.89	5.03	5.03
		U$_3$ - U$_4$	32.90	64.10	-89.28			0.75	1.24	59.47	-82.83	0.00	0.00	Vehicle	Vehicle	120.08	-64.91	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	10.73	10.73	7.22	7.22
		U$_4$ - U$_5$	34.76	61.59	-85.06			0.75	1.24	57.14	-78.91	0.00	0.00	Vehicle	Vehicle	119.47	-57.40	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	11.14	11.14	7.60	7.60
		U$_5$ - U$_6$	124.19	-61.96	-21.82			0.75	1.24	-20.24	-57.48	0.00	0.00	Vehicle	Vehicle	135.13	-----	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	87.54	32.44			0.75	1.24	81.21	30.09	0.00	0.00	Vehicle	Vehicle	395.88	-----	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	-----	-----	7.15	7.15	-----	-----
		U$_7$ - U$_8$	331.92	31.78	1.35			0.75	1.24	29.49	1.25	0.00	0.00	Vehicle	Vehicle	469.83	-----	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	-----	-----	26.39	26.39	-----	-----
		U$_8$ - U$_9$	267.71	42.01	14.73			0.75	1.20	37.75	13.23	0.00	0.00	Vehicle	Vehicle	397.10	-----	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	0.44	16.00	110.22	224.00	32.00	-----	-----	32.00	-----	-----	7.11	-----	-----	17.78	17.78	-----	-----
		U$_9$ - U$_{10}$	89.12	57.63	-38.14			0.75	1.20	51.78	-34.27	0.00	0.00	Vehicle	Vehicle	183.17	-----	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	-----	-----	11.98	11.98	-----	-----
		U$_{10}$ - U$_{11}$	-76.89	50.96	-90.88			0.75	1.20	45.78	-81.66	0.00	0.00	Vehicle	Vehicle	-----	-206.11	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	-----	-----	6.37	6.37
		U$_{11}$ - U$_{12}$	-230.86	44.49	-130.31			0.75	1.20	39.98	-117.09	0.00	0.00	Vehicle	Vehicle	-----	-452.33	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	-----	-----	4.97	4.97
		U$_{12}$ - U$_{13}$	-342.15	-146.51	-160.52			0.75	1.20	-131.64	-144.23	0.00	0.00	Vehicle	Vehicle	-----	-632.29	10.88	53.38	42.4950	1761.38	131.71	10.6328	5.4393	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	-----	-----	5.51	5.51
		U$_{13}$ - U$_{14}$	-421.98	-71.36	-172.45			0.75	1.20	-64.12	-154.94	0.00	0.00	Vehicle	Vehicle	-----	-750.01	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	-----	-----	5.84	5.84
		U$_{14}$ - U$_{15}$	-422.87	-74.00	-172.24			0.75	1.20	-66.49	-154.76	0.00	0.00	Vehicle	Vehicle	-----	-750.91	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	-----	-----	5.85	5.85
		U$_{15}$ - U$_{16}$	-440.39	-98.32	-104.30			0.75	1.20	-88.34	-93.71	0.00	0.00	Vehicle	Vehicle	-----	-694.33	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	-----	-----	9.47	9.47
		U$_{16}$ - U$_{17}$	-422.93	-91.43	-94.77			0.75	1.20	-82.15	-85.15	0.00	0.00	Vehicle	Vehicle	-----	-660.50	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	-----	-----	10.62	10.62
		U$_{17}$ - U$_{18}$	-341.45	-130.35	-72.38			0.75	1.20	-65.04	-117.12	0.00	0.00	Vehicle	Vehicle	-----	-596.14	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	-----	-----	5.37	5.37
		U$_{18}$ - U$_{19}$	-247.63	-60.36	-24.81			0.75	1.20	-22.29	-54.24	0.00	0.00	Vehicle	Vehicle	-----	-392.42	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	-----	-----	7.93	7.93
		U$_{19}$ - U$_{20}$	-132.06	-34.98	4.09			0.75	1.20	-3.67	-31.43	0.00	0.00	Vehicle	Vehicle	-----	-212.53	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	-----	-----	17.36	17.36
	Structure 2	U$_0$ - U$_1$	-131.63	10.92	-64.36			0.75	1.18	9.69	-57.11	0.00	0.00	Vehicle	Vehicle	-----	-245.36	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	-----	-----	9.03	9.03
		U$_1$ - U$_2$	-247.12	23.09	-111.57			0.75	1.18	20.49	-98.99	0.00	0.00	Vehicle	Vehicle	-----	-449.93	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	-----	-----	5.50	5.50
		U$_2$ - U$_3$	-347.28	36.23	-152.74			0.75	1.18	32.14	-135.51	0.00	0.00	Vehicle	Vehicle	-----	-627.63	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	-----	-----	5.39	5.39
		U$_3$ - U$_4$	-437.20	-133.83	-173.60			0.75	1.18	-118.74	-154.03	0.00	0.00	Vehicle	Vehicle	-----	-768.60	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	-----	-----	5.87	5.87
		U$_4$ - U$_5$	-468.83	62.31	-184.43			0.75	1.18	55.28	-163.63	0.00	0.00	Vehicle	Vehicle	-----	-822.20	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	-----	-----	6.22	6.22
		U$_5$ - U$_6$	-471.14	-189.18	-184.90			0.75	1.18	-164.06	-167.85	0.00	0.00	Vehicle	Vehicle	-----	-830.69	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	-----	-----	6.05	6.05
		U$_6$ - U$_7$	-414.50	82.08	-169.75			0.75	1.18	72.82	-150.61	0.00	0.00	Vehicle	Vehicle	-----	-734.64	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	-----	-----	6.15	6.15
		U$_7$ - U$_8$	-413.54	82.19	-183.40			0.75	1.18	72.92	-162.72	0.00	0.00	Vehicle	Vehicle	-----	-749.14	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	-----	-----	5.70	5.70
		U$_8$ - U$_9$	-322.06	85.36	-104.96			0.75	1.18	75.73	-93.13	0.00	0.00	Vehicle	Vehicle	-----	-539.74	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	-----	-----	8.63	8.63
		U$_9$ - U$_{10}$	-182.16	91.85	-82.96			0.75	1.18	81.49	-73.60	0.00	0.00	Vehicle	Vehicle	-----	-332.49	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	-----	-----	9.56	9.56
		U$_{10}$ - U$_{11}$	-32.61	99.48	-34.50			0.75	1.18	88.26	-30.61	0.00	0.00	Vehicle	Vehicle	72.34	-82.19	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	10.69	10.69	24.07	24.07
		U$_{11}$ - U$_{12}$	133.57	-46.82	-10.58			0.75	1.18	-9.39	-41.54	0.00	0.00	Vehicle	Vehicle	161.44	-----	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$_{13}$	289.98	31.46	19.87			0.75	1.18	27.91	17.63	0.00	0.00	Vehicle	Vehicle	413.26	-----	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	-----	-----	30.43	30.43	-----	-----
		U$_{13}$ - U$_{14}$	434.77	31.08	-27.97			0.75	1.18	27.57	-24.82	0.00	0.00	Vehicle	Vehicle	601.05	-----	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	-----	-----	40.96	40.96	-----	-----
		U$_{14}$ - U$_{15}$	474.48	63.96	31.76			0.75	1.17	56.07	27.84	0.00	0.00	Vehicle	Vehicle	689.72	-----	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	-----	-----	19.44	19.44	-----	-----
		U$_{15}$ - U$_{16}$	383.31	76.18	-17.97			0.75	1.17	66.79	-15.76	0.00	0.00	Vehicle	Vehicle	585.13	-----	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	-----	-----	13.31	13.31	-----	-----
		U$_{16}$ - U$_{17}$	279.61	75.40	-29.99			0.75	1.17	66.11	-26.29	0.00	0.00	Vehicle	Vehicle	449.43	-----	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	-----	-----	11.56	11.56	-----	-----
		U$_{17}$ - U$_{18}$	172.67	72.81	-63.12			0.75	1.17	63.84	-55.34	0.00	0.00	Vehicle	Vehicle	307.45	-----	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	-----	-----	9.30	9.30	-----	-----
		U$_{18}$ - U$_{19}$	74.40	69.08	-90.68			0.75	1.17	60.57	-79.51	0.00	0.00	Vehicle	Vehicle	175.46	-6.64	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	11.42	11.42	9.08	9.08
		U$_{19}$ - U$_{20}$	-9.98	60.55	-128.67			0.75	1.17	53.09	-112.81	0.00	0.00	Vehicle	Vehicle	56.04	-159.63	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	15.64	15.64	6.05	6.05
	Structure 3	U$_{20}$ - U$_{21}$	-62.02	32.00	-133.80			0.75	1.17	28.05	-117.31	0.00	0.00	Vehicle	Vehicle	-----	-233.13	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	-----	-----	6.60	6.60
		U$_{21}$ - U$_{22}$	-88.69	43.82	-136.44			0.75	1.17	38.42	-119.63	0.00	0.00	Vehicle	Vehicle	-----	-270.80	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	-----	-----	6.25	6.25
		U$_{22}$ - U$_{23}$	-88.87	44.01	-137.57			0.75	1.17	38.59	-120.61	0.00	0.00	Vehicle	Vehicle	-----	-272.32	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	-----	-----	6.20	6.20
		U$_{23}$ - U$_{24}$	-76.60	53.87	-92.97			0.75	1.17	47.23	-81.51	0.00	0.00	Vehicle	Vehicle	-----	-205.53	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	-----	-----	9.33	9.33
		U$_{24}$ - U$_{25}$	-37.55	62.67	-88.25			0.75	1.17	54.95	-77.37	0.00	0.00	Vehicle	Vehicle	22.61	-149.40	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	15.61	15.61	8.47	8.47
		U$_{25}$ - U$_{26}$	37.36	-83.47	-55.41			0.75	1.17	-48.58	-73.18	0.00	0.00	Vehicle	Vehicle	-----	-46.57	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	-----	-----	9.36	9.36
		U$_{26}$ - U$_{27}$	128.18	-42.98	-39.13			0.75	1.17	-34.31	-37.69	0.00	0.00	Vehicle	Vehicle	122.03	-----	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$_{28}$	233.91	-21.37	-12.21			0.75	1.17	-10.71	-18.74	0.00	0.00	Vehicle	Vehicle	290.16	-----	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$_{29}$	337.95	51.90	28.57			0.75	1.17	45.50	25.05	0.00	0.00	Vehicle	Vehicle	498.48	-----	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	-----	-----	20.54	20.54	-----	-----
		U$_{29}$ - U$_{30}$	437.48	31.32	-21.98			0.75	1.17	27.46	-19.27	0.00	0.00	Vehicle	Vehicle	604.42	-----	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	-----	-----	41.04	41.04	-----	-----
		U$_{30}$ - U$_{31}$	420.86	73.50	19.29			0.75	1.18	65.21	17.12	0.00	0.00	Vehicle	Vehicle	631.90	-----	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	-----	-----	17.53	17.53	-----	-----
		U$_{31}$ - U$_{32}$	300.88	87.62	-14.79			0.75	1.18	77.74	-13.12	0.00	0.00	Vehicle	Vehicle	492.21	-----	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.

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 **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 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$_1$	8.48	-3.99	-7.30			0.75	1.24	-3.70	-6.77	0.00	0.00	Vehicle	Vehicle	6.21	-----	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	-21.54	52.83			0.75	1.24	49.01	-19.99	0.00	0.00	Vehicle	Vehicle	129.80	-----	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	-----	-----	**9.22**	**9.22**	-----	-----
		L$_2$ - L$_3$	61.27	-36.65	74.69			0.75	1.24	69.29	-34.00	0.00	0.00	Vehicle	Vehicle	169.73	-----	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	-----	-----	**8.77**	**8.77**	-----	-----
		L$_3$ - L$_4$	25.72	-50.49	83.31			0.75	1.24	77.29	-46.84	0.00	0.00	Vehicle	Vehicle	133.91	-27.46	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	**8.32**	**8.32**	**12.57**	**12.57**
		L$_4$ - L$_5$	-118.55	13.23	56.02			0.75	1.24	51.97	12.27	0.00	0.00	Vehicle	Vehicle	-----	-138.17	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	-88.09	35.42			0.75	1.24	32.86	-81.72	0.00	0.00	Vehicle	Vehicle	-----	-389.60	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	-----	-----	**5.40**	**5.40**
		L$_6$ - L$_7$	-320.57	-36.86	-37.64			0.75	1.24	-34.19	-34.92	0.00	0.00	Vehicle	Vehicle	-----	-462.14	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	-----	-----	**17.88**	**17.88**
		L$_7$ - L$_8$	-417.42	-87.21	-0.19			0.75	1.24	-0.18	-80.91	0.00	0.00	Vehicle	Vehicle	-----	-647.83	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	-----	-----	**9.67**	**9.67**
		L$_8$ - L$_9$	-411.08	-48.69	-86.39			0.75	1.20	-43.75	-77.62	0.00	0.00	Vehicle	Vehicle	-----	-635.31	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	-----	-----	**10.16**	**10.16**
		L$_9$ - L$_{10}$	-247.97	-60.05	-36.24			0.75	1.20	-32.56	-53.95	0.00	0.00	Vehicle	Vehicle	-----	-392.50	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	-----	-----	**12.92**	**12.92**
		L$_{10}$ - L$_{11}$	-65.37	-60.04	1.26			0.75	1.20	1.13	-53.95	0.00	0.00	Vehicle	Vehicle	-----	-155.11	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	-----	-----	**8.06**	**8.06**
		L$_{11}$ - L$_{12}$	101.81	-53.28	48.78			0.75	1.20	43.83	-47.87	0.00	0.00	Vehicle	Vehicle	189.33	-----	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	-----	-----	**11.23**	**11.23**	-----	-----
		L$_{12}$ - L$_{13}$	264.06	-46.42	92.43			0.75	1.20	83.05	-41.71	0.00	0.00	Vehicle	Vehicle	451.25	-----	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	-----	-----	**8.56**	**8.56**	-----	-----
		L$_{13}$ - L$_{14}$	373.80	-40.01	107.80			0.75	1.20	96.85	-35.94	0.00	0.00	Vehicle	Vehicle	611.85	-----	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	-----	-----	**9.64**	**9.64**	-----	-----
		L$_{14}$ - L$_{15}$	476.54	88.53	173.34			0.75	1.20	155.75	79.54	0.00	0.00	Vehicle	Vehicle	821.98	-----	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	-----	-----	**7.05**	**7.05**	-----	-----
		L$_{15}$ - L$_{16}$	460.23	54.49	164.95			0.75	1.20	148.21	48.96	0.00	0.00	Vehicle	Vehicle	790.97	-----	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	-----	-----	**7.52**	**7.52**	-----	-----
		L$_{16}$ - L$_{17}$	381.61	70.25	94.70			0.75	1.20	85.09	63.12	0.00	0.00	Vehicle	Vehicle	606.71	-----	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	-----	-----	**9.81**	**9.81**	-----	-----
		L$_{17}$ - L$_{18}$	289.18	49.66	64.53			0.75	1.20	57.98	44.62	0.00	0.00	Vehicle	Vehicle	451.31	-----	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	-----	-----	**10.25**	**10.25**	-----	-----
		L$_{18}$ - L$_{19}$	176.31	22.83	23.47			0.75	1.20	21.09	20.51	0.00	0.00	Vehicle	Vehicle	256.61	-----	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	-----	-----	**15.48**	**15.48**	-----	-----
		L$_{19}$ - L$_{20}$	69.72	-16.08	0.41			0.75	1.20	0.37	-14.45	0.00	0.00	Vehicle	Vehicle	91.11	-----	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	-----	-----	**1183.78**	**1183.78**	-----	-----
		L$_0$' - L$_1$	24.42	-1.64	0.16			0.75	1.18	0.14	-1.46	0.00	0.00	Vehicle	Vehicle	31.93	-----	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	-----	-----	**3418.60**	**3418.60**	-----	-----
		L$_1$ - L$_2$	138.42	-12.10	56.15			0.75	1.18	49.81	-10.73	0.00	0.00	Vehicle	Vehicle	244.71	-----	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	-----	-----	**9.94**	**9.94**	-----	-----
		L$_2$ - L$_3$	252.76	-25.15	80.68			0.75	1.18	71.58	-22.32	0.00	0.00	Vehicle	Vehicle	421.65	-----	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	-----	-----	**10.10**	**10.10**	-----	-----
		L$_3$ - L$_4$	352.26	-38.06	124.14			0.75	1.18	110.14	-33.77	0.00	0.00	Vehicle	Vehicle	601.12	-----	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	-----	-----	**8.69**	**8.69**	-----	-----
		L$_4$ - L$_5$	447.15	-52.70	136.27			0.75	1.18	120.91	-46.76	0.00	0.00	Vehicle	Vehicle	738.48	-----	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	-----	-----	**9.95**	**9.95**	-----	-----
		L$_5$ - L$_6$	477.91	-64.19	136.30			0.75	1.18	120.93	-56.95	0.00	0.00	Vehicle	Vehicle	778.50	-----	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	-----	-----	**10.87**	**10.87**	-----	-----
		L$_6$ - L$_7$	482.67	-75.55	132.09			0.75	1.18	117.20	-67.03	0.00	0.00	Vehicle	Vehicle	779.82	-----	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	-----	-----	**11.39**	**11.39**	-----	-----
		L$_7$ - L$_8$	336.57	-91.39	130.12			0.75	1.18	115.45	-81.09	0.00	0.00	Vehicle	Vehicle	587.62	-----	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	-----	-----	**8.71**	**8.71**	-----	-----
		L$_8$ - L$_9$	196.00	67.70	107.00			0.75	1.18	94.94	60.07	0.00	0.00	Vehicle	Vehicle	378.22	-----	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	-----	-----	**9.52**	**9.52**	-----	-----
		L$_9$ - L$_{10}$	45.53	-98.07	78.64			0.75	1.18	69.77	-87.01	0.00	0.00	Vehicle	Vehicle	149.89	-53.92	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	**11.70**	**11.70**	**8.89**	**8.89**
		L$_{10}$ - L$_{11}$	-126.32	10.05	33.63			0.75	1.18	29.84	8.91	0.00	0.00	Vehicle	Vehicle	-----	-152.63	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$_{12}$	-284.95	-37.07	15.94			0.75	1.18	14.14	-32.89	0.00	0.00	Vehicle	Vehicle	-----	-413.19	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	-----	-----	**19.63**	**19.63**
		L$_{12}$ - L$_{13}$	-433.89	-46.21	-46.08			0.75	1.18	-40.88	-41.00	0.00	0.00	Vehicle	Vehicle	-----	-617.35	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	-----	-----	**20.53**	**20.53**
		L$_{13}$ - L$_{14}$	-552.76	-65.74	29.22			0.75	1.18	25.93	-58.33	0.00	0.00	Vehicle	Vehicle	-----	-794.42	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	-----	-----	**16.50**	**16.50**
		L$_{14}$ - L$_{15}$	-573.53	-62.43	-67.42			0.75	1.17	-54.73	-59.11	0.00	0.00	Vehicle	Vehicle	-----	-822.43	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	-----	-----	**15.93**	**15.93**
		L$_{15}$ - L$_{16}$	-493.00	-66.77	-23.33			0.75	1.17	-20.45	-58.54	0.00	0.00	Vehicle	Vehicle	-----	-716.99	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	-----	-----	**13.37**	**13.37**
		L$_{16}$ - L$_{17}$	-395.34	-81.47	-40.78			0.75	1.17	-35.75	-71.43	0.00	0.00	Vehicle	Vehicle	-----	-606.80	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	-----	-----	**9.13**	**9.13**
		L$_{17}$ - L$_{18}$	-288.08	-80.43	-1.37			0.75	1.17	-1.20	-70.51	0.00	0.00	Vehicle	Vehicle	-----	-466.17	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	-----	-----	**6.23**	**6.23**
		L$_{18}$ - L$_{19}$	-175.85	-76.99	26.02			0.75	1.17	22.82	-67.50	0.00	0.00	Vehicle	Vehicle	-----	-316.35	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	-----	-----	**5.89**	**5.89**
		L$_{19}$ - L$_{20}$	-78.08	-70.70	89.12			0.75	1.17	78.14	-61.99	0.00	0.00	Vehicle	Vehicle	0.08	-182.08	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	**9.69**	**9.69**	**7.99**	**7.99**
	Structure 2	L$_0$' - L$_1$	7.59	-62.24	77.56			0.75	1.17	68.00	-54.57	0.00	0.00	Vehicle	Vehicle	98.27	-61.07	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	45.00	Pass	6.40	12.00	Pass	6.40	12.00	Pass	**14.07**	**14.07**	**15.06**	**15.06**
		L$_1$ - L$_2$	59.10	-33.82	123.42			0.75	1.17	108.21	-29.65	0.00	0.00	Vehicle	Vehicle	217.50	-----	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	-----	-----	**8.37**	**8.37**	-----	-----
		L$_2$ - L$_3$	72.03	-55.77	117.08			0.75	1.17	102.65	-48.90	0.00	0.00	Vehicle	Vehicle	227.08	-----	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$_3$ - L$_4$	33.57	-64.60	106.32			0.75	1.17	93.22	-56.64	0.00	0.00	Vehicle	Vehicle	164.82	-29.99	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	**9.99**	**9.99**	**14.97**	**14.97**
		L$_4$ - L$_5$	-45.06	44.07	99.79			0.75	1.17	87.49	38.64	0.00	0.00	Vehicle	Vehicle	55.17	-8.35	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	**8.28**	**8.28**	-----	-----
		L$_5$ - L$_6$	-134.95	11.46	54.37			0.75	1.17	47.67	10.05	0.00	0.00	Vehicle	Vehicle	-----	-162.37	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$_6$ - L$_7$	-245.92	-23.54	30.64			0.75	1.17	26.86	-20.64	0.00	0.00	Vehicle	Vehicle	-----	-346.53	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	-----	-----	**23.34**	**23.34**
		L$_7$ - L$_8$	-351.86	-52.43	-5.13			0.75	1.17	-4.50	-45.97	0.00	0.00	Vehicle	Vehicle	-----	-517.18	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	-----	-----	**15.14**	**15.14**
		L$_8$ - L$_9$	-458.41	-49.41	-31.16			0.75	1.17	-27.32	-43.32	0.00	0.00	Vehicle	Vehicle	-----	-652.24	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	-----	-----	**18.86**	**18.86**
		L$_9$ - L$_{10}$	-542.36	-64.40	22.71			0.75	1.17	19.91	-56.46	0.00	0.00	Vehicle	Vehicle	-----	-778.47	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	-----	-----	**17.23**	**17.23**
		L$_{10}$ - L$_{11}$	-514.21	-68.16	-65.73			0.75	1.18	-58.31	-60.47	0.00	0.00	Vehicle	Vehicle	-----	-747.09	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	-----	-----	**16.54**	**16.54**
		L$_{11}$ - L$_{12}$	-411.27	-89.89	-51.91			0.75	1.18	-46.06	-79.75	0.00	0.00	Vehicle	Vehicle	-----	-638.33	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	-----	-----	**10.83**	**10.83**

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1 — 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 - Verticals	Structure 1	U$_0$ - L$_0$	-67.68	-125.47	14.37			0.75	1.24	13.33	-116.41	0.00	0.00	Vehicle	Vehicle	-----	-239.32	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	-----	-----	-----	-----	-----	2.38	2.38
		U$_1$ - L$_1$	-24.09	-45.86	13.94			0.75	1.24	12.93	-42.54	0.00	0.00	Vehicle	Vehicle	-----	-86.62	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	-----	-----	-----	-----	-----	7.71	7.71
		U$_2$ - L$_2$	12.87	-34.30	11.57			0.75	1.24	10.73	-31.83	0.00	0.00	Vehicle	Vehicle	30.69	-24.64	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	-----	-----	-----	-----	-----	38.65	38.65	11.46	11.46
		U$_3$ - L$_3$	37.37	-20.92	14.54			0.75	1.24	13.49	-19.41	0.00	0.00	Vehicle	Vehicle	66.12	-----	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	-----	-----	-----	-----	-----	-----	28.93	28.93	-----	-----
		U$_4$ - L$_4$	-15.55	4.18	-19.82			0.75	1.24	3.88	-18.39	0.00	0.00	Vehicle	Vehicle	-----	-44.12	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	-----	-----	-----	-----	-----	18.18	18.18
		U$_5$ - L$_5$	-92.59	3.65	-64.60			0.75	1.24	3.39	-59.93	0.00	0.00	Vehicle	Vehicle	-----	-198.28	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	-----	-----	-----	-----	-----	5.55	5.55
		U$_6$ - L$_6$	-117.07	-8.08	-78.20			0.75	1.24	-7.50	-72.55	0.00	0.00	Vehicle	Vehicle	-----	-246.49	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	-----	-----	-----	-----	-----	5.39	5.39
		U$_7$ - L$_7$	-127.52	0.25	-91.73			0.75	1.24	0.23	-85.10	0.00	0.00	Vehicle	Vehicle	-----	-276.40	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$_8$	-368.71	-121.28	-126.30			0.75	1.24	-112.52	-117.18	0.00	0.00	Vehicle	Vehicle	-----	-631.66	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	-----	-----	-----	-----	-----	5.95	5.95
		U$_9$ - L$_9$	-214.56	-89.93	4.28			0.75	1.20	3.84	-80.80	0.00	0.00	Vehicle	Vehicle	-----	-383.97	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	-----	-----	-----	-----	-----	5.33	5.33
		U$_{10}$ - L$_{10}$	-198.68	-87.42	-6.40			0.75	1.20	-5.75	-78.55	0.00	0.00	Vehicle	Vehicle	-----	-360.39	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	-----	-----	-----	-----	-----	6.93	6.93
		U$_{11}$ - L$_{11}$	-171.40	-77.63	2.95			0.75	1.20	2.65	-69.75	0.00	0.00	Vehicle	Vehicle	-----	-313.49	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	-----	-----	-----	-----	-----	6.74	6.74
		U$_{12}$ - L$_{12}$	-128.37	-63.18	13.31			0.75	1.20	11.96	-56.77	0.00	0.00	Vehicle	Vehicle	-----	-240.67	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	-----	-----	-----	-----	-----	7.12	7.12
		U$_{13}$ - L$_{13}$	-96.65	-53.13	20.88			0.75	1.20	18.76	-47.73	0.00	0.00	Vehicle	Vehicle	-----	-187.69	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	-----	-----	-----	-----	-----	5.95	5.95
		U$_{14}$ - L$_{14}$	-11.04	-4.86	-18.86			0.75	1.20	-4.37	-16.94	0.00	0.00	Vehicle	Vehicle	-----	-36.38	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	-----	-----	-----	-----	-----	19.69	19.69
		U$_{15}$ - L$_{15}$	-2.47	29.91	-49.27			0.75	1.20	26.87	-44.27	0.00	0.00	Vehicle	Vehicle	31.72	-60.77	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	-----	-----	-----	-----	-----	16.01	16.01	7.70	7.70
		U$_{16}$ - L$_{16}$	-31.27	22.86	-57.42			0.75	1.20	20.54	-51.59	0.00	0.00	Vehicle	Vehicle	-----	-107.72	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	-----	-----	-----	-----	-----	6.01	6.01
		U$_{17}$ - L$_{17}$	-105.05	7.09	-77.76			0.75	1.20	6.37	-69.87	0.00	0.00	Vehicle	Vehicle	-----	-227.40	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	-----	-----	-----	-----	-----	4.38	4.38
		U$_{18}$ - L$_{18}$	-126.74	5.84	-88.92			0.75	1.20	5.24	-79.90	0.00	0.00	Vehicle	Vehicle	-----	-268.63	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	-----	-----	-----	-----	-----	4.99	4.99
		U$_{19}$ - L$_{19}$	-166.77	5.47	-95.23			0.75	1.20	4.92	-85.56	0.00	0.00	Vehicle	Vehicle	-----	-328.03	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	-----	-----	-----	-----	-----	5.25	5.25
		U$_{20}$ - L$_{20}$	-184.59	5.08	-114.81			0.75	1.20	4.56	-103.16	0.00	0.00	Vehicle	Vehicle	-----	-374.07	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	-----	-----	-----	-----	-----	3.85	3.85
	Structure 2	U$_0$ - L$_0$	-203.59	-105.73	16.08			0.75	1.18	14.27	-93.81	0.00	0.00	Vehicle	Vehicle	-----	-386.62	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	-----	-----	-----	-----	-----	4.68	4.68
		U$_1$ - L$_1$	-176.11	-97.01	17.57			0.75	1.18	15.59	-86.07	0.00	0.00	Vehicle	Vehicle	-----	-340.83	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	-----	-----	-----	-----	-----	5.77	5.77
		U$_2$ - L$_2$	-137.55	-80.86	16.69			0.75	1.18	14.81	-71.74	0.00	0.00	Vehicle	Vehicle	-----	-272.08	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	-----	-----	-----	-----	-----	6.09	6.09
		U$_3$ - L$_3$	-117.62	-72.67	17.37			0.75	1.18	15.41	-64.48	0.00	0.00	Vehicle	Vehicle	-----	-236.72	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	-----	-----	-----	-----	-----	5.18	5.18
		U$_4$ - L$_4$	-50.97	-54.16	22.22			0.75	1.18	19.72	-48.05	0.00	0.00	Vehicle	Vehicle	-----	-128.73	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	-----	-----	-----	-----	-----	6.00	6.00
		U$_5$ - L$_5$	-13.78	-46.36	28.66			0.75	1.18	25.43	-41.13	0.00	0.00	Vehicle	Vehicle	15.15	-71.38	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	-----	-----	-----	-----	-----	17.36	17.36	7.94	7.94
		U$_6$ - L$_6$	45.47	-38.07	38.75			0.75	1.18	34.38	-33.78	0.00	0.00	Vehicle	Vehicle	103.81	-----	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	-----	-----	6.56	-----	-----	-----	-----	-----	-----	11.12	11.12	-----	-----
		U$_7$ - L$_7$	-22.33	0.76	-17.10			0.75	1.18	0.68	-15.17	0.00	0.00	Vehicle	Vehicle	-----	-48.76	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	-----	-----	-----	-----	-----	20.97	20.97
		U$_8$ - L$_8$	-120.08	25.26	-71.04			0.75	1.18	22.41	-63.03	0.00	0.00	Vehicle	Vehicle	-----	-238.04	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	-----	-----	-----	-----	-----	6.51	6.51
		U$_9$ - L$_9$	-177.03	16.14	-88.00			0.75	1.18	14.32	-78.08	0.00	0.00	Vehicle	Vehicle	-----	-331.64	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	-----	-----	-----	-----	-----	6.59	6.59
		U$_{10}$ - L$_{10}$	-205.88	7.96	-95.22			0.75	1.18	7.06	-84.49	0.00	0.00	Vehicle	Vehicle	-----	-377.47	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	-----	-----	-----	-----	-----	6.78	6.78
		U$_{11}$ - L$_{11}$	-239.23	6.82	-101.32			0.75	1.18	6.05	-89.90	0.00	0.00	Vehicle	Vehicle	-----	-427.87	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	-----	-----	-----	-----	-----	5.85	5.85
		U$_{12}$ - L$_{12}$	-257.95	-1.91	-109.92			0.75	1.18	-1.70	-97.53	0.00	0.00	Vehicle	Vehicle	-----	-462.13	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	-----	-----	-----	-----	-----	5.58	5.58
		U$_{13}$ - L$_{13}$	-243.82	7.93	-112.98			0.75	1.18	7.04	-100.24	0.00	0.00	Vehicle	Vehicle	-----	-447.29	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	-----	-----	-----	-----	-----	4.45	4.45
		U$_{14}$ - L$_{14}$	-420.85	-107.95	-123.44			0.75	1.18	-95.78	-109.52	0.00	0.00	Vehicle	Vehicle	-----	-689.49	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	-----	-----	-----	-----	-----	5.76	5.76
		U$_{15}$ - L$_{15}$	-158.83	-107.31	13.17			0.75	1.17	11.55	-94.09	0.00	0.00	Vehicle	Vehicle	-----	-328.80	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	-----	-----	-----	-----	-----	5.65	5.65
		U$_{16}$ - L$_{16}$	-174.02	-92.90	3.86			0.75	1.17	3.38	-81.45	0.00	0.00	Vehicle	Vehicle	-----	-332.11	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	-----	-----	-----	-----	-----	6.04	6.04
		U$_{17}$ - L$_{17}$	-156.46	-85.89	12.34			0.75	1.17	10.82	-75.30	0.00	0.00	Vehicle	Vehicle	-----	-301.29	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	-----	-----	-----	-----	-----	6.20	6.20
		U$_{18}$ - L$_{18}$	-142.21	-78.06	13.05			0.75	1.17	11.44	-68.44	0.00	0.00	Vehicle	Vehicle	-----	-273.83	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	-----	-----	-----	-----	-----	6.36	6.36
		U$_{19}$ - L$_{19}$	-113.66	-67.23	17.27			0.75	1.17	15.14	-58.95	0.00	0.00	Vehicle	Vehicle	-----	-224.39	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	-----	-----	-----	-----	-----	6.75	6.75
		U$_{20}$ - L$_{20}$	-76.51	-56.83	24.37			0.75	1.17	21.37	-49.83	0.00	0.00	Vehicle	Vehicle	-----	-164.24	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	-----	-----	-----	-----	-----	5.99	5.99
		U$_{21}$ - L$_{21}$	-45.77	-51.29	26.59			0.75	1.17	23.31	-44.97	0.00	0.00	Vehicle	Vehicle	-----	-117.96	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	-----	-----	-----	-----	-----	6.55	6.55
		U$_{22}$ - L$_{22}$	-17.72	3.73	-13.43			0.75	1.17	3.27	-11.77	0.00	0.00	Vehicle	Vehicle	-----	-38.34	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	-----	-----	-----	-----	-----	27.52	27.52
		U$_{23}$ - L$_{23}$	-30.69	31.01	-54.60			0.75	1.17	27.18	-47.87	0.00	0.00	Vehicle	Vehicle	-----	-102.12	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	-----	-----	-----	-----	-----	6.47	6.47
		U$_{24}$ - L$_{24}$	-62.06	24.34	-68.37			0.75	1.17	21.34	-59.95	0.00	0.00	Vehicle	Vehicle	-----	-158.61	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	-----	-----	-----	-----	-----	5.22	5.22
		U$_{25}$ - L$_{25}$	-103.15	16.69	-81.46			0.75	1.17	14.63	-71.42	0.00	0.00	Vehicle	Vehicle	-----	-226.93	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	-----	-----	-----	-----	-----	5.72	5.72
		U$_{26}$ - L$_{26}$	-134.38	11.69	-86.93			0.75	1.17	10.24	-76.22	0.00	0.00	Vehicle	Vehicle	-----	-273.78	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	-----	-----	-----	-----	-----	5.81	5.81
		U$_{27}$ - L$_{27}$	-156.03	10.72	-97.61			0.75	1.17	9.40	-85.58	0.00	0.00	Vehicle	Vehicle	-----	-314.09	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	-----	-----	-----	-----	-----	5.46	5.46
		U$_{28}$ - L$_{28}$	-179.40	9.21	-107.83			0.75	1.17	8.08	-94.54	0.00	0.00	Vehicle	Vehicle	-----	-356.13	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	-----	-----	-----	-----	-----	5.15	5.15
		U$_{29}$ - L$_{29}$	-171.60	6.51	-106.36			0.75	1.17	5.71	-93.25	0.00	0.00	Vehicle	Vehicle	-----	-344.31	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	-----	-----	-----	-----	-----	5.56	5.56
		U$_{30}$ - L$_{30}$	-393.29	-100.57	-122.64			0.75	1.18	-89.23	-108.81	0.00	0.00	Vehicle	Vehicle	-----	-652.73	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	-----	-----	-----	-----	-----	6.05	6.05
		U$_{31}$ - L$_{31}$	-203.49	-102.29	13.49			0.75	1.18	11.97	-90.76	0.00	0.00	Vehicle	Vehicle	-----	-382.52	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	-----	-----	-----	-----	-----	5.36	5.36
		U$_{32}$ - L$_{32}$	-222.61	-99.41	4.43			0.75	1.18	3.93	-88.20	0.00	0.00	Vehicle	Vehicle	-----	-404.05	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

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: 5C1
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 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	53.29	52.40	-21.70			0.75	1.24	48.61	-20.13	0.00	0.00	Vehicle	Vehicle	132.47	-----	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	-----	-----	-----	-----	-----	**10.97**	**10.97**	-----	-----
		U_1 - L_2	10.80	52.49	6.53			0.75	1.24	48.69	6.06	0.00	0.00	Vehicle	Vehicle	77.34	-----	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	-----	-----	-----	-----	-----	**8.56**	**8.56**	-----	-----
		U_2 - L_3	-44.05	35.97	-25.72			0.75	1.24	33.37	-23.86	0.00	0.00	Vehicle	Vehicle	-----	-88.29	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	-----	-----	-----	-----	-----	**12.16**	**12.16**
		U_3 - L_4	-76.77	0.03	-54.36			0.75	1.24	0.03	-50.43	0.00	0.00	Vehicle	Vehicle	-----	-165.36	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	-----	-----	-----	-----	-----	**5.15**	**5.15**
		U_4 - L_4	118.48	19.63	46.04			0.75	1.24	42.72	18.21	0.00	0.00	Vehicle	Vehicle	209.56	-----	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	-----	-----	-----	-----	-----	**9.51**	**9.51**	-----	-----
		U_5 - L_5	137.62	86.48	-0.04			0.75	1.24	80.23	-0.04	0.00	0.00	Vehicle	Vehicle	283.20	-----	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	-----	-----	-----	-----	-----	**6.39**	**6.39**	-----	-----
		U_6 - L_6	157.39	89.12	-0.09			0.75	1.24	82.68	-0.09	0.00	0.00	Vehicle	Vehicle	312.09	-----	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	-----	-----	-----	-----	-----	**5.97**	**5.97**	-----	-----
		U_7 - L_7	149.33	101.22	-0.26			0.75	1.24	93.91	-0.24	0.00	0.00	Vehicle	Vehicle	316.21	-----	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	-----	-----	-----	-----	-----	**5.34**	**5.34**	-----	-----
		U_8 - L_9	249.21	121.37	-4.23			0.75	1.20	109.05	-3.80	0.00	0.00	Vehicle	Vehicle	465.74	-----	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	-----	-----	-----	-----	-----	**6.54**	**6.54**	-----	-----
		U_9 - L_{10}	260.39	99.60	0.00			0.75	1.20	89.49	0.00	0.00	0.00	Vehicle	Vehicle	454.84	-----	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	-----	-----	-----	-----	-----	**7.84**	**7.84**	-----	-----
		U_{10} - L_{11}	236.43	99.05	1.93			0.75	1.20	89.00	1.73	0.00	0.00	Vehicle	Vehicle	423.06	-----	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	-----	-----	-----	-----	-----	**7.58**	**7.58**	-----	-----
		U_{11} - L_{12}	212.05	82.94	-13.73			0.75	1.20	74.52	-12.34	0.00	0.00	Vehicle	Vehicle	372.54	-----	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	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U_{12} - L_{13}	151.78	76.17	-28.96			0.75	1.20	68.44	-26.02	0.00	0.00	Vehicle	Vehicle	286.28	-----	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	-----	-----	-----	-----	-----	**7.00**	**7.00**	-----	-----
		U_{13} - L_{14}	108.73	65.74	-38.66			0.75	1.20	59.06	-34.73	0.00	0.00	Vehicle	Vehicle	218.13	-----	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	-----	-----	-----	-----	-----	**5.40**	**5.40**	-----	-----
		U_{14} - L_{15}	-24.56	43.50	-42.25			0.75	1.20	39.08	-37.96	0.00	0.00	Vehicle	Vehicle	18.88	-81.27	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	-----	-----	-----	-----	-----	**11.57**	**11.57**	**8.00**	**8.00**
		U_{15} - L_{15}	23.90	67.02	-28.28			0.75	1.20	60.21	-25.41	0.00	0.00	Vehicle	Vehicle	109.35	-1.95	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	-----	-----	-----	-----	-----	**6.71**	**6.71**	**13.71**	**13.71**
		U_{17} - L_{16}	120.04	81.60	-17.45			0.75	1.20	73.32	-15.68	0.00	0.00	Vehicle	Vehicle	251.36	-----	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	-----	-----	-----	-----	-----	**5.52**	**5.52**	-----	-----
		U_{18} - L_{17}	144.84	92.84	-4.83			0.75	1.20	83.42	-4.34	0.00	0.00	Vehicle	Vehicle	296.74	-----	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	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U_{19} - L_{18}	193.27	97.48	1.71			0.75	1.20	87.59	1.54	0.00	0.00	Vehicle	Vehicle	365.12	-----	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	-----	-----	-----	-----	-----	**5.90**	**5.90**	-----	-----
		U_{20} - L_{19}	193.75	92.15	-5.78			0.75	1.20	82.80	-5.19	0.00	0.00	Vehicle	Vehicle	359.51	-----	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	-----	-----	-----	-----	-----	**6.24**	**6.24**	-----	-----
	Structure 2	U_0 - L_1	202.60	92.96	-18.22			0.75	1.18	82.48	-16.17	0.00	0.00	Vehicle	Vehicle	370.60	-----	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	-----	-----	-----	-----	-----	**6.97**	**6.97**	-----	-----
		U_1 - L_2	190.84	89.06	-20.53			0.75	1.18	79.02	-18.22	0.00	0.00	Vehicle	Vehicle	350.81	-----	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	-----	-----	-----	-----	-----	**7.43**	**7.43**	-----	-----
		U_2 - L_3	155.90	91.12	-20.06			0.75	1.18	80.84	-17.80	0.00	0.00	Vehicle	Vehicle	307.76	-----	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	-----	-----	-----	-----	-----	**6.12**	**6.12**	-----	-----
		U_3 - L_4	134.06	74.59	-23.58			0.75	1.18	66.18	-20.92	0.00	0.00	Vehicle	Vehicle	260.31	-----	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	-----	-----	-----	-----	-----	**6.69**	**6.69**	-----	-----
		U_4 - L_5	46.01	64.70	-35.21			0.75	1.18	57.41	-31.24	0.00	0.00	Vehicle	Vehicle	134.44	-----	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	-----	-----	-----	-----	-----	**6.65**	**6.65**	-----	-----
		U_5 - L_6	3.43	55.89	-47.65			0.75	1.18	49.59	-42.28	0.00	0.00	Vehicle	Vehicle	68.92	-50.51	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	-----	-----	-----	-----	-----	**8.56**	**8.56**	**7.79**	**7.79**
		U_6 - L_7	-84.31	38.61	-70.69			0.75	1.18	34.25	-62.72	0.00	0.00	Vehicle	Vehicle	-----	-191.14	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	-----	-----	-----	-----	-----	-----	-----	**4.38**	**4.38**
		U_7 - L_7	137.33	82.34	-31.90			0.75	1.18	73.05	-28.31	0.00	0.00	Vehicle	Vehicle	273.49	-----	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	-----	-----	-----	-----	-----	**6.38**	**6.38**	-----	-----
		U_8 - L_8	210.92	94.41	-24.31			0.75	1.18	83.77	-21.57	0.00	0.00	Vehicle	Vehicle	383.09	-----	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	-----	-----	-----	-----	-----	**5.96**	**5.96**	-----	-----
		U_9 - L_9	236.39	106.92	-12.81			0.75	1.18	94.87	-11.36	0.00	0.00	Vehicle	Vehicle	430.63	-----	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	-----	-----	-----	-----	-----	**5.70**	**5.70**	-----	-----
		U_{10} - L_{10}	274.65	109.66	-9.43			0.75	1.18	97.30	-8.37	0.00	0.00	Vehicle	Vehicle	483.53	-----	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	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
		U_{11} - L_{11}	281.09	109.80	-4.81			0.75	1.18	97.42	-4.26	0.00	0.00	Vehicle	Vehicle	492.06	-----	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	-----	-----	-----	-----	-----	**5.78**	**5.78**	-----	-----
		U_{12} - L_{12}	278.14	108.19	-8.60			0.75	1.18	95.99	-7.63	0.00	0.00	Vehicle	Vehicle	486.37	-----	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	-----	-----	-----	-----	-----	**5.20**	**5.20**	-----	-----
		U_{14} - L_{13}	235.47	106.03	-8.31			0.75	1.18	94.07	-7.37	0.00	0.00	Vehicle	Vehicle	428.41	-----	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	-----	-----	-----	-----	-----	**5.76**	**5.76**	-----	-----
		U_{14} - L_{15}	143.01	96.67	-13.47			0.75	1.17	84.75	-11.81	0.00	0.00	Vehicle	Vehicle	296.10	-----	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	-----	-----	-----	-----	-----	**5.99**	**5.99**	-----	-----
		U_{16} - L_{16}	171.90	103.45	-9.19			0.75	1.17	90.70	-8.06	0.00	0.00	Vehicle	Vehicle	341.38	-----	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	-----	-----	-----	-----	-----	**5.28**	**5.28**	-----	-----
		U_{16} - L_{17}	181.04	107.15	-13.06			0.75	1.17	93.94	-11.45	0.00	0.00	Vehicle	Vehicle	357.47	-----	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	-----	-----	-----	-----	-----	**5.63**	**5.63**	-----	-----
		U_{17} - L_{18}	171.16	90.32	-14.74			0.75	1.17	79.18	-12.93	0.00	0.00	Vehicle	Vehicle	325.45	-----	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	-----	-----	-----	-----	-----	**6.06**	**6.06**	-----	-----
		U_{18} - L_{19}	150.64	90.57	-19.92			0.75	1.17	79.41	-17.46	0.00	0.00	Vehicle	Vehicle	299.07	-----	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	-----	-----	-----	-----	-----	**6.30**	**6.30**	-----	-----
		U_{19} - L_{20}	125.86	76.73	-30.99			0.75	1.17	67.27	-27.17	0.00	0.00	Vehicle	Vehicle	251.08	-----	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	-----	-----	-----	-----	-----	**7.10**	**7.10**	-----	-----
		U_{20} - L_{21}	76.04	67.90	-33.72			0.75	1.17	59.53	-29.57	0.00	0.00	Vehicle	Vehicle	176.24	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
		U_{21} - L_{22}	38.33	49.63	-54.34			0.75	1.17	43.51	-47.64	0.00	0.00	Vehicle	Vehicle	106.40	-12.10	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	-----	-----	-----	-----	-----	**8.95**	**8.95**	**7.64**	**7.64**
		U_{23} - L_{22}	18.05	47.29	-43.98			0.75	1.17	41.46	-38.56	0.00	0.00	Vehicle	Vehicle	77.37	-26.66	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	-----	-----	-----	-----	-----	**9.88**	**9.88**	**8.84**	**8.84**
		U_{24} - L_{23}	58.57	73.20	-33.33			0.75	1.17	64.18	-29.22	0.00	0.00	Vehicle	Vehicle	159.58	-----	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	-----	-----	-----	-----	-----	**5.75**	**5.75**	-----	-----
		U_{25} - L_{24}	114.98	87.77	-22.25			0.75	1.17	76.95	-19.51	0.00	0.00	Vehicle	Vehicle	249.51	-----	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	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
		U_{26} - L_{25}	143.00	98.78	-14.67			0.75	1.17	86.60	-12.87	0.00	0.00	Vehicle	Vehicle	298.48	-----	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	-----	-----	-----	-----	-----	**5.86**	**5.86**	-----	-----
		U_{27} - L_{26}	173.82	95.57	-13.39			0.75	1.17	83.79	-11.74	0.00	0.00	Vehicle	Vehicle	334.89	-----	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	-----	-----	-----	-----	-----	**5.69**	**5.69**	-----	-----
		U_{28} - L_{27}	186.60	106.68	-11.67			0.75	1.17	93.53	-10.24	0.00	0.00	Vehicle	Vehicle	364.17	-----	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	-----	-----	-----	-----	-----	**5.60**	**5.60**	-----	-----
		U_{29} - L_{28}	190.75	99.25	-7.89			0.75	1.17	87.01	-6.92	0.00	0.00	Vehicle	Vehicle	361.09	-----	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	-----	-----	-----	-----	-----	**5.29**	**5.29**	-----	-----
		U_{30} - L_{29}	161.86	98.42	-6.22			0.75	1.17	86.29	-5.46	0.00	0.00	Vehicle	Vehicle	322.60	-----	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	-----	-----	-----	-----	-----	**5.66**	**5.66**	-----	-----
		U_{30} - L_{31}	191.72	102.18	-13.53			0.75	1.18	90.66	-12.01	0.00	0.00	Vehicle	Vehicle	367.09	-----	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	-----	-----	-----	-----	-----	**6.46**	**6.46**	-----	-----
		U_{31} - L_{32}	226.45	106.51	-14.82			0.75	1.18	94.50	-13.15	0.00	0.00	Vehicle	Vehicle	417.23	-----	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	-----	-----	-----	-----	-----	**5.83**	**5.83**	-----	-----
		U_{32} - L_{33}	243.42	105.26	-0.06			0.75	1.18	93.39	-0.06	0.00	0.00	Vehicle	Vehicle	437.86	-----	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	-----	-----	-----	-----	-----	**6.44**	**6.44**	-----	-----
		U_{33} - L_{34}	239.13	89.87	-11.86			0.75	1.18	79.74	-10.52	0.00	0.00	Vehicle	Vehicle	414.53	-----	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	-----	-----	-----	-----	-----	**7.59**	**7.59**	-----	-----
		U_{34} - L_{35}	222.16	92.90	-18.37			0.75	1.18	82.43	-16.30	0.00	0.00	Vehicle	Vehicle	395.96	-----	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

Columbia Parkway (HAM-471-0025)

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

Load Rating Analysis - Truss Spans

Loading: 5C1

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 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 - Upper Chord	Structure 1	U_0 - U_1	-66.70	13.39	-46.03	2.21	-8.83	0.90	1.24	14.90	-51.25	2.21	-8.83	Vehicle	Vehicle	-----	-153.34	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	-----	-----	9.73	9.73
		U_1 - U_2	-86.55	31.98	-71.04	6.01	-16.34	0.90	1.24	35.60	-79.09	6.01	-16.34	Vehicle	Vehicle	-----	-215.33	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	-----	-----	6.05	6.05
		U_2 - U_3	-48.14	47.13	-59.32	9.46	-19.05	0.90	1.24	52.47	-66.04	9.46	-19.05	Vehicle	Vehicle	5.62	-148.44	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	13.71	13.71	7.83	7.83
		U_3 - U_4	36.58	60.46	-71.89	12.74	-17.47	0.90	1.24	67.31	-80.04	12.74	-17.47	Vehicle	Vehicle	135.06	-56.49	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	9.43	9.43	7.52	7.52
		U_4 - U_5	38.93	60.64	-61.71	12.80	-17.38	0.90	1.24	67.51	-68.70	12.80	-17.38	Vehicle	Vehicle	138.38	-38.69	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	9.36	9.36	8.80	8.80
		U_5 - U_6	154.60	67.79	-36.71	3.13	0.00	0.90	1.24	75.47	-40.87	3.13	0.00	Vehicle	Vehicle	299.09	-----	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	-----	-----	6.84	6.84	-----	-----
		U_6 - U_7	288.38	73.74	34.88	17.14	-4.31	0.90	1.24	82.09	38.83	17.14	-4.31	Vehicle	Vehicle	481.61	-----	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	-----	-----	6.29	6.29	-----	-----
		U_7 - U_8	410.94	17.64	14.00	22.63	0.00	0.90	1.24	19.64	15.59	22.63	0.00	Pedestrian	Vehicle	589.17	-----	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	-----	-----	16.54	16.54	-----	-----
		U_8 - U_9	311.57	48.79	14.55	12.90	6.19	0.90	1.20	52.61	15.69	12.90	6.19	Vehicle	Pedestrian	473.43	-----	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	-----	-----	11.92	11.92	-----	-----
		U_9 - U_{10}	78.52	51.03	-34.12	12.28	-6.79	0.90	1.20	55.02	-36.79	12.28	-6.79	Vehicle	Vehicle	173.60	-----	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	-----	-----	11.46	11.46	-----	-----
		U_{10} - U_{11}	-141.43	48.01	-76.54	11.10	-18.41	0.90	1.20	51.76	-82.52	11.10	-18.41	Vehicle	Vehicle	-----	-291.14	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	-----	-----	5.53	5.53
		U_{11} - U_{12}	-338.03	44.13	-108.72	9.77	-27.93	0.90	1.20	47.59	-117.22	9.77	-27.93	Vehicle	Vehicle	-----	-591.83	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	-----	-----	4.05	4.05
		U_{12} - U_{13}	-480.08	38.60	-125.56	8.23	-34.32	0.90	1.20	41.62	-135.38	8.23	-34.32	Vehicle	Vehicle	-----	-800.10	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	-----	-----	4.86	4.86
		U_{13} - U_{14}	-570.65	32.76	-152.56	6.68	-37.21	0.90	1.20	35.32	-164.49	6.68	-37.21	Vehicle	Vehicle	-----	-955.68	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	-----	-----	4.60	4.60
		U_{14} - U_{15}	-571.07	32.60	-150.00	6.65	-37.22	0.90	1.20	35.15	-161.73	6.65	-37.22	Vehicle	Vehicle	-----	-952.63	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	-----	-----	4.68	4.68
		U_{15} - U_{16}	-581.88	12.47	-133.21	0.00	-31.14	0.90	1.20	13.44	-143.62	0.00	-31.14	Vehicle	Vehicle	-----	-943.15	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	-----	-----	5.19	5.19
		U_{16} - U_{17}	-539.46	11.16	-112.33	0.00	-28.33	0.90	1.20	12.03	-121.11	0.00	-28.33	Vehicle	Vehicle	-----	-858.74	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	-----	-----	6.51	6.51
		U_{17} - U_{18}	-422.33	-91.32	-24.34	-25.05	2.26	0.90	1.20	-26.25	-98.46	2.26	-25.05	Vehicle	Vehicle	-----	-677.02	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	-----	-----	5.57	5.57
		U_{18} - U_{19}	-286.19	-60.05	-17.24	-16.96	1.28	0.90	1.20	-18.58	-64.75	1.28	-16.96	Vehicle	Vehicle	-----	-456.22	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	-----	-----	6.04	6.04
		U_{19} - U_{20}	-140.84	-26.18	-3.81	0.00	-8.13	0.90	1.20	-4.11	-28.22	0.00	-8.13	Vehicle	Vehicle	-----	-219.78	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	-----	-----	19.02	19.02
	Structure 2	U_0 - U_1	-147.44	4.30	-39.48	0.36	-4.88	0.90	1.18	4.57	-42.04	0.36	-4.88	Vehicle	Vehicle	-----	-246.32	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	-----	-----	11.89	11.89
		U_1 - U_2	-319.06	14.89	-82.12	1.96	-13.36	0.90	1.18	15.86	-87.44	1.96	-13.36	Vehicle	Vehicle	-----	-528.45	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	-----	-----	5.40	5.40
		U_2 - U_3	-460.91	26.71	-116.16	3.77	-20.95	0.90	1.18	28.43	-123.67	3.77	-20.95	Vehicle	Vehicle	-----	-759.96	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	-----	-----	4.99	4.99
		U_3 - U_4	-580.03	40.62	-140.49	5.92	-27.68	0.90	1.18	43.24	-149.58	5.92	-27.68	Vehicle	Vehicle	-----	-948.49	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	-----	-----	5.09	5.09
		U_4 - U_5	-616.49	52.67	-149.41	7.86	-31.35	0.90	1.18	56.08	-159.07	7.86	-31.35	Vehicle	Vehicle	-----	-1008.23	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	-----	-----	5.47	5.47
		U_5 - U_6	-604.71	64.81	-147.31	9.87	-32.88	0.90	1.18	69.00	-156.85	9.87	-32.88	Vehicle	Vehicle	-----	-990.02	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	-----	-----	5.63	5.63
		U_6 - U_7	-514.78	74.07	-114.74	11.56	-31.23	0.90	1.18	78.86	-122.16	11.56	-31.23	Vehicle	Vehicle	-----	-828.02	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	-----	-----	6.77	6.77
		U_7 - U_8	-512.83	74.02	-146.21	11.57	-31.18	0.90	1.18	78.80	-155.66	11.57	-31.18	Vehicle	Vehicle	-----	-869.04	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	-----	-----	5.32	5.32
		U_8 - U_9	-373.51	82.43	-123.96	13.16	-27.41	0.90	1.18	87.76	-131.98	13.16	-27.41	Vehicle	Vehicle	-----	-657.13	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	-----	-----	5.70	5.70
		U_9 - U_{10}	-181.05	86.24	-91.67	14.25	-21.42	0.90	1.18	91.82	-97.60	14.25	-21.42	Vehicle	Vehicle	-----	-362.24	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	-----	-----	7.22	7.22
		U_{10} - U_{11}	26.18	89.11	-51.20	15.21	-14.40	0.90	1.18	94.88	-54.51	15.21	-14.40	Vehicle	Vehicle	157.38	-36.83	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	9.32	9.32	14.60	14.60
		U_{11} - U_{12}	237.39	-11.70	8.36	10.86	0.00	0.90	1.18	8.90	-12.45	10.86	0.00	Pedestrian	Vehicle	334.29	-----	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	-----	-----	34.08	34.08	-----	-----
		U_{12} - U_{13}	435.89	20.27	36.31	15.82	0.56	0.90	1.18	38.66	21.58	15.82	0.56	Pedestrian	Vehicle	637.48	-----	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	-----	-----	12.91	12.91	-----	-----
		U_{13} - U_{14}	595.84	24.80	7.65	24.32	0.00	0.90	1.18	26.41	8.14	24.32	0.00	Pedestrian	Vehicle	840.53	-----	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	-----	-----	19.09	19.09	-----	-----
		U_{14} - U_{15}	615.53	73.15	23.75	13.42	8.77	0.90	1.17	76.96	24.98	13.42	8.77	Vehicle	Pedestrian	900.25	-----	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	-----	-----	12.33	12.33	-----	-----
		U_{15} - U_{16}	486.15	77.44	1.66	14.17	3.08	0.90	1.17	81.48	1.74	14.17	3.08	Vehicle	Pedestrian	737.91	-----	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	-----	-----	9.65	9.65	-----	-----
		U_{16} - U_{17}	339.27	76.98	-28.25	14.66	-2.95	0.90	1.17	80.99	-29.72	14.66	-2.95	Vehicle	Vehicle	546.34	-----	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	-----	-----	8.70	8.70	-----	-----
		U_{17} - U_{18}	192.13	75.24	-64.32	15.12	-9.49	0.90	1.17	79.16	-67.68	15.12	-9.49	Vehicle	Vehicle	352.69	-----	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	-----	-----	7.25	7.25	-----	-----
		U_{18} - U_{19}	53.83	68.93	-79.70	15.12	-15.34	0.90	1.17	72.52	-83.85	15.12	-15.34	Vehicle	Vehicle	164.26	-39.02	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	9.82	9.82	8.36	8.36
		U_{19} - U_{20}	-58.94	61.12	-114.00	15.07	-19.84	0.90	1.17	64.30	-119.94	15.07	-19.84	Vehicle	Vehicle	6.97	-232.54	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	13.67	13.67	5.29	5.29
	Structure 3	U_{20} - U_{21}	-125.32	31.15	-110.84	14.77	-22.39	0.90	1.17	32.77	-116.62	14.77	-22.39	Pedestrian	Vehicle	-----	-314.52	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	-----	-----	6.10	6.10
		U_{21} - U_{22}	-146.72	41.93	-102.54	14.37	-22.74	0.90	1.17	44.11	-107.88	14.37	-22.74	Vehicle	Vehicle	-----	-330.98	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	-----	-----	6.40	6.40
		U_{22} - U_{23}	-146.49	39.34	-120.13	14.36	-22.72	0.90	1.17	41.39	-126.39	14.36	-22.72	Pedestrian	Vehicle	-----	-354.74	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	-----	-----	5.46	5.46
		U_{23} - U_{24}	-112.53	51.04	-109.57	13.88	-16.65	0.90	1.17	53.70	-115.28	13.88	-16.65	Vehicle	Vehicle	-----	-296.16	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	-----	-----	6.28	6.28
		U_{24} - U_{25}	-36.03	59.17	-44.82	13.40	-15.01	0.90	1.17	62.25	-47.15	13.40	-15.01	Vehicle	Vehicle	34.10	-108.13	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	13.75	13.75	13.93	13.93
		U_{25} - U_{26}	80.94	64.25	-29.98	0.38	0.00	0.90	1.17	67.60	-31.55	0.38	0.00	Vehicle	Vehicle	193.09	-----	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	-----	-----	10.14	10.14	-----	-----
		U_{26} - U_{27}	220.82	-18.00	-14.88	7.92	0.00	0.90	1.17	-15.65	-18.93	7.92	0.00	Vehicle	Vehicle	266.72	-----	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	2.31	14.07	14.90	0.00	0.90	1.17	14.81	2.43	14.90	0.00	Pedestrian	Vehicle	511.15	-----	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	-----	-----	22.91	22.91	-----	-----
		U_{28} - U_{29}	503.92	47.89	24.56	21.74	3.11	0.90	1.17	50.39	25.83	21.74	3.11	Pedestrian	Vehicle	748.86	-----	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	-----	-----	10.65	10.65	-----	-----
		U_{29} - U_{30}	616.62	21.96	-3.50	27.08	0.00	0.90	1.17	23.10	-3.68	27.08	0.00	Pedestrian	Vehicle	866.85	-----	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

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: 5C1 **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)

			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}	Impact & Pedestrian $Load_{MAX}$	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	-1.94	1.27	-3.59	0.37	-2.06	0.90	1.24	1.42	-4.00	0.37	-2.06	Vehicle	Pedestrian	-----	-10.40	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	-----	-----	**69.62**	**69.62**
		L_1 - L_2	67.93	-17.88	36.96	-3.35	9.23	0.90	1.24	41.15	-19.90	9.23	-3.35	Vehicle	Vehicle	141.81	-----	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	-----	-----	**10.56**	**10.56**	-----	-----
		L_2 - L_3	78.83	-38.62	70.52	-7.39	15.48	0.90	1.24	78.51	-43.00	15.48	-7.39	Vehicle	Vehicle	204.53	-----	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	-----	-----	**7.51**	**7.51**	-----	-----
		L_3 - L_4	39.11	-53.72	75.58	-10.83	18.09	0.90	1.24	84.14	-59.81	18.09	-10.83	Vehicle	Vehicle	160.22	-26.91	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	**7.48**	**7.48**	**10.07**	**10.07**
		L_4 - L_5	-166.44	-76.37	54.29	-16.91	10.96	0.90	1.24	60.44	-85.02	10.96	-16.91	Vehicle	Vehicle	-----	-326.90	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	-----	-----	**3.93**	**3.93**
		L_5 - L_6	-301.30	-82.54	22.07	-15.71	0.00	0.90	1.24	24.57	-91.90	0.00	-15.71	Vehicle	Vehicle	-----	-511.15	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	44.32	Pass	5.42	12.00	Pass	5.42	12.00	Pass	-----	-----	**3.90**	**3.90**
		L_6 - L_7	-439.01	-13.36	-43.87	-4.99	-21.52	0.90	1.24	-14.87	-48.84	-4.99	-21.52	Pedestrian	Pedestrian	-----	-662.17	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	-----	-----	**7.19**	**7.19**
		L_7 - L_8	-551.71	-53.77	-0.69	-35.56	0.00	0.90	1.24	-0.76	-59.87	0.00	-35.56	Vehicle	Pedestrian	-----	-841.27	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	-----	-----	**6.79**	**6.79**
		L_8 - L_9	-570.55	-34.45	-43.98	-11.71	-25.77	0.90	1.20	-37.14	-47.41	-11.71	-25.77	Vehicle	Pedestrian	-----	-836.85	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	-----	-----	**8.59**	**8.59**
		L_9 - L_{10}	-355.55	-41.46	-43.75	-11.67	-13.03	0.90	1.20	-44.70	-47.17	-11.67	-13.03	Vehicle	Vehicle	-----	-523.53	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	-----	-----	**12.50**	**12.50**
		L_{10} - L_{11}	-118.56	-42.50	10.31	-10.69	-1.73	0.90	1.20	11.11	-45.83	-1.73	-10.69	Vehicle	Vehicle	-----	-213.70	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	-----	-----	**8.33**	**8.33**
		L_{11} - L_{12}	103.33	-39.35	53.69	-9.47	9.97	0.90	1.20	57.89	-42.42	9.97	-9.47	Vehicle	Vehicle	209.58	-----	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	-----	-----	**8.48**	**8.48**	-----	-----
		L_{12} - L_{13}	300.47	-36.48	103.97	-8.15	17.86	0.90	1.20	112.10	-39.34	17.86	-8.15	Vehicle	Vehicle	536.33	-----	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	-----	-----	**6.02**	**6.02**	-----	-----
		L_{13} - L_{14}	441.01	-31.01	125.55	-6.62	24.18	0.90	1.20	135.37	-33.43	24.18	-6.62	Vehicle	Vehicle	749.30	-----	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	-----	-----	**6.40**	**6.40**	-----	-----
		L_{14} - L_{15}	546.80	-19.13	140.71	0.00	21.12	0.90	1.20	151.71	-20.62	21.12	0.00	Vehicle	Vehicle	908.06	-----	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	-----	-----	**6.77**	**6.77**	-----	-----
		L_{15} - L_{16}	505.90	-17.88	116.29	0.00	18.34	0.90	1.20	125.38	-19.28	18.34	0.00	Vehicle	Vehicle	820.66	-----	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	-----	-----	**8.52**	**8.52**	-----	-----
		L_{16} - L_{17}	398.64	80.18	34.47	0.00	11.94	0.90	1.20	86.45	37.17	11.94	0.00	Vehicle	Vehicle	630.62	-----	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	-----	-----	**9.46**	**9.46**	-----	-----
		L_{17} - L_{18}	263.76	49.77	18.78	4.73	0.15	0.90	1.20	53.66	20.25	4.73	0.15	Vehicle	Vehicle	412.64	-----	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	-----	-----	**11.55**	**11.55**	-----	-----
		L_{18} - L_{19}	118.86	21.21	4.73	-3.28	0.70	0.90	1.20	22.87	5.10	0.70	-3.28	Vehicle	Vehicle	184.24	-----	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	-----	-----	**16.78**	**16.78**	-----	-----
		L_{19} - L_{20}	-23.25	-5.14	3.76	-12.00	1.27	0.90	1.20	4.06	-5.54	1.27	-12.00	Vehicle	Pedestrian	-----	-53.02	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	-----	-----	**20.54**	**20.54**
		L_0- L_1	-35.95	5.05	-7.65	1.19	-5.13	0.90	1.18	5.38	-8.15	1.19	-5.13	Vehicle	Pedestrian	-----	-64.00	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	-----	-----	**37.57**	**37.57**
		L_1 - L_2	132.83	-3.25	27.88	-0.07	2.94	0.90	1.18	29.69	-3.46	2.94	-0.07	Vehicle	Vehicle	211.26	-----	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	-----	-----	**16.86**	**16.86**	-----	-----
		L_2 - L_3	304.11	-15.22	73.12	-1.80	10.53	0.90	1.18	77.86	-16.20	10.53	-1.80	Vehicle	Vehicle	496.55	-----	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	-----	-----	**8.63**	**8.63**	-----	-----
		L_3 - L_4	445.92	-27.15	106.07	-3.63	18.16	0.90	1.18	112.93	-28.91	18.16	-3.63	Vehicle	Vehicle	726.51	-----	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	-----	-----	**7.64**	**7.64**	-----	-----
		L_4 - L_5	567.84	-43.44	121.70	-6.10	24.82	0.90	1.18	129.57	-46.25	24.82	-6.10	Vehicle	Vehicle	906.63	-----	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	-----	-----	**8.35**	**8.35**	-----	-----
		L_5 - L_6	603.64	-55.56	160.34	-8.06	28.47	0.90	1.18	170.72	-59.16	28.47	-8.06	Vehicle	Vehicle	1006.66	-----	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	-----	-----	**6.97**	**6.97**	-----	-----
		L_6 - L_7	599.48	-70.30	171.56	-10.41	30.26	0.90	1.18	182.66	-74.85	30.26	-10.41	Vehicle	Vehicle	1016.79	-----	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	-----	-----	**6.67**	**6.67**	-----	-----
		L_7 - L_8	373.94	-87.55	138.60	-13.66	24.93	0.90	1.18	147.56	-93.22	24.93	-13.66	Vehicle	Vehicle	677.95	-----	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	-----	-----	**6.56**	**6.56**	-----	-----
		L_8 - L_9	195.71	-94.17	51.37	-15.12	19.52	0.90	1.18	54.69	-100.26	19.52	-15.12	Pedestrian	Vehicle	350.90	-----	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	-----	-----	**12.18**	**12.18**	-----	-----
		L_9 - L_{10}	-13.21	-97.23	28.51	-7.60	12.45	0.90	1.18	30.36	-103.52	12.45	-7.60	Pedestrian	Vehicle	38.47	-151.75	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	**20.44**	**20.44**	**6.90**	**6.90**
		L_{10} - L_{11}	-217.32	20.51	5.42	-15.65	0.00	0.90	1.18	21.84	5.77	0.00	-15.65	Vehicle	Pedestrian	-----	-295.35	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}	-419.93	-94.54	26.78	-23.34	0.00	0.90	1.18	28.51	-100.66	0.00	-23.34	Vehicle	Vehicle	-----	-676.76	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	-----	-----	**5.07**	**5.07**
		L_{12} - L_{13}	-591.41	-39.22	-41.42	-7.09	-18.75	0.90	1.18	-41.75	-44.10	-7.09	-18.75	Vehicle	Pedestrian	-----	-850.52	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	-----	-----	**10.71**	**10.71**
		L_{13} - L_{14}	-724.23	-35.99	1.20	-35.12	0.00	0.90	1.18	1.27	-38.32	0.00	-35.12	Vehicle	Pedestrian	-----	-1036.97	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	-----	-----	**10.77**	**10.77**
		L_{14} - L_{15}	-747.05	13.83	-33.98	0.00	-36.29	0.90	1.17	14.55	-35.75	0.00	-36.29	Vehicle	Pedestrian	-----	-1064.80	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	-----	-----	**10.66**	**10.66**
		L_{15} - L_{16}	-632.15	-60.22	-51.79	-9.38	-12.11	0.90	1.17	-54.49	-63.36	-9.38	-12.11	Vehicle	Vehicle	-----	-904.17	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	-----	-----	**10.15**	**10.15**
		L_{16} - L_{17}	-488.62	-64.88	-32.59	-9.25	-11.44	0.90	1.17	-34.29	-68.26	-9.25	-11.44	Vehicle	Vehicle	-----	-723.95	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	-----	-----	**8.19**	**8.19**
		L_{17} - L_{18}	-336.98	-64.29	-3.08	-9.73	-4.53	0.90	1.17	-3.24	-67.64	-4.53	-9.73	Pedestrian	Vehicle	-----	-526.01	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	-63.26	35.01	-9.59	1.37	0.90	1.17	36.83	-66.55	1.37	-9.59	Vehicle	Vehicle	-----	-325.21	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	-----	-----	**5.86**	**5.86**
		L_{19} - L_{20}	-45.77	-56.88	74.07	-9.58	7.21	0.90	1.17	77.93	-59.84	7.21	-9.58	Vehicle	Vehicle	41.81	-137.29	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	**9.30**	**9.30**	**8.82**	**8.82**
	Structure 2	L_{20} - L_{21}	68.00	-50.54	100.85	-9.12	11.07	0.90	1.17	106.10	-53.17	11.07	-9.12	Vehicle	Vehicle	226.33	-----	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	-----	-----	**8.45**	**8.45**	-----	-----
		L_{21} - L_{22}	133.90	-21.91	110.65	-8.82	13.61	0.90	1.17	116.42	-23.06	13.61	-8.82	Vehicle	Pedestrian	325.42	-----	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	-----	-----	**7.14**	**7.14**	-----	-----
		L_{22} - L_{23}	122.50	-42.27	108.72	-7.58	8.54	0.90	1.17	114.39	-44.47	8.54	-7.58	Vehicle	Vehicle	307.96	-----	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	-----	-----	**7.36**	**7.36**	-----	-----
		L_{23} - L_{24}	46.70	-50.01	90.16	-7.09	6.92	0.90	1.17	94.86	-52.61	6.92	-7.09	Vehicle	Vehicle	184.02	-7.69	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	**9.68**	**9.68**	**16.36**	**16.36**
		L_{24} - L_{25}	-66.76	-54.61	37.35	-4.28	3.32	0.90	1.17	39.29	-57.45	3.32	-4.28	Vehicle	Vehicle	-----	-161.47	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	-----	-----	**8.82**	**8.82**
		L_{25} - L_{26}	-205.83	-59.10	55.90	-11.78	0.00	0.90	1.17	58.82	-62.18	0.00	-11.78	Vehicle	Vehicle	-----	-348.41	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	-----	-----	**5.92**	**5.92**
		L_{26} - L_{27}	-350.61	-10.14	-8.68	-18.88	0.00	0.90	1.17	-9.13	-10.67	0.00	-18.88	Vehicle	Pedestrian	-----	-494.20	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	-----	-----	**12.76**	**12.76**
		L_{27} - L_{28}	-494.76	-39.62	20.55	-25.89	0.00	0.90	1.17	21.62	-41.68	0.00	-25.89	Vehicle	Pedestrian	-----	-731.04	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	-----	-----	**8.18**	**8.18**
		L_{28} - L_{29}	-620.88	-67.46	-30.31	-21.97	-5.04	0.90	1.17	-31.89	-70.97	-5.04	-21.97	Vehicle	Vehicle	-----	-899.40	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	-----	-----	**9.22**	**9.22**
		L_{29} - L_{30}	-716.82	-37.80	-21.43	-36.30	0.00	0.90	1.17	-22.54	-39.77	0.00	-36.30	Vehicle	Pedestrian	-----	-1030.74	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

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: 5C1 — 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	-63.66	17.52	-12.32	3.44	0.90	1.24	19.50	-70.88	3.44	-12.32	Vehicle	Vehicle	-----	-213.85	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	-----	-----	-----	-----	-----	3.54	3.54
		U$_1$ - L$_1$	-46.50	-32.80	15.10	-9.05	2.93	0.90	1.24	16.81	-36.51	2.93	-9.05	Vehicle	Vehicle	-----	-107.92	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	-----	-----	-----	-----	-----	8.37	8.37
		U$_2$ - L$_2$	-0.07	-22.10	13.51	-5.68	2.84	0.90	1.24	15.04	-24.60	2.84	-5.68	Vehicle	Vehicle	19.47	-32.07	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	-----	-----	-----	-----	-----	28.44	28.44	14.30	14.30
		U$_3$ - L$_3$	39.61	-8.90	11.83	-2.12	2.70	0.90	1.24	13.17	-9.91	2.70	-2.12	Vehicle	Vehicle	68.62	-----	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	-----	-----	-----	-----	-----	-----	-----	29.46	29.46	-----	-----
		U$_4$ - L$_4$	-30.21	0.51	-12.01	0.00	-3.47	0.90	1.24	0.56	-13.37	0.00	-3.47	Vehicle	Vehicle	-----	-56.66	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	-----	-----	-----	-----	-----	23.90	23.90
		U$_5$ - L$_5$	-130.50	2.27	-37.24	0.00	-10.24	0.90	1.24	2.52	-41.45	0.00	-10.24	Vehicle	Vehicle	-----	-223.55	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	-----	-----	-----	-----	-----	7.11	7.11
		U$_6$ - L$_6$	-158.19	8.78	-41.39	0.00	-13.06	0.90	1.24	9.77	-46.08	0.00	-13.06	Vehicle	Vehicle	-----	-265.55	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	-----	-----	-----	-----	-----	7.59	7.59
		U$_7$ - L$_7$	-152.33	14.16	-41.99	0.00	-13.25	0.90	1.24	15.77	-46.75	0.00	-13.25	Vehicle	Vehicle	-----	-258.79	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	-----	-----	-----	-----	-----	6.59	6.59
		U$_8$ - L$_8$	-455.44	-73.10	-44.04	-18.98	-12.74	0.90	1.24	-49.03	-81.39	-12.74	-18.98	Vehicle	Vehicle	-----	-697.87	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	-----	-----	-----	-----	-----	7.45	7.45
		U$_9$ - L$_9$	-287.50	-70.12	0.49	-18.21	0.00	0.90	1.20	0.53	-75.60	0.00	-18.21	Vehicle	Vehicle	-----	-472.04	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$_{10}$	-276.27	-68.29	-2.69	-16.18	-1.37	0.90	1.20	-2.90	-73.63	-1.37	-16.18	Pedestrian	Vehicle	-----	-454.86	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	-----	-----	-----	-----	-----	6.34	6.34
		U$_{11}$ - L$_{11}$	-232.54	-60.50	1.66	-14.42	0.00	0.90	1.20	1.79	-65.23	0.00	-14.42	Vehicle	Vehicle	-----	-387.10	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	-----	-----	-----	-----	-----	6.27	6.27
		U$_{12}$ - L$_{12}$	-178.38	-42.40	1.00	-11.20	0.00	0.90	1.20	1.07	-45.72	0.00	-11.20	Vehicle	Vehicle	-----	-291.33	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	-----	-----	-----	-----	-----	7.75	7.75
		U$_{13}$ - L$_{13}$	-127.70	-32.70	1.81	-7.88	0.00	0.90	1.20	1.95	-35.25	0.00	-7.88	Vehicle	Vehicle	-----	-211.84	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	-----	-----	-----	-----	-----	7.17	7.17
		U$_{14}$ - L$_{14}$	-30.38	-2.03	-8.63	-3.03	0.00	0.90	1.20	-2.19	-9.30	0.00	-3.03	Vehicle	Vehicle	-----	-51.59	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	-----	-----	-----	-----	-----	33.80	33.80
		U$_{15}$ - L$_{15}$	-28.93	6.79	-28.59	1.55	-4.53	0.90	1.20	7.32	-30.82	1.55	-4.53	Vehicle	Vehicle	-----	-77.67	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	-----	-----	-----	-----	-----	10.20	10.20
		U$_{16}$ - L$_{16}$	-75.99	6.57	-35.56	1.39	-7.07	0.90	1.20	7.08	-38.34	1.39	-7.07	Vehicle	Vehicle	-----	-148.63	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	-----	-----	-----	-----	-----	6.92	6.92
		U$_{17}$ - L$_{17}$	-161.81	7.05	-48.29	1.30	-10.66	0.90	1.20	7.60	-52.06	1.30	-10.66	Vehicle	Vehicle	-----	-278.03	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	-----	-----	-----	-----	-----	4.79	4.79
		U$_{18}$ - L$_{18}$	-190.09	6.05	-50.59	1.12	-12.69	0.90	1.20	6.53	-54.54	1.12	-12.69	Vehicle	Vehicle	-----	-318.03	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	-----	-----	-----	-----	-----	6.15	6.15
		U$_{19}$ - L$_{19}$	-228.09	5.19	-50.47	0.97	-14.99	0.90	1.20	5.60	-54.41	0.97	-14.99	Vehicle	Vehicle	-----	-367.25	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	-----	-----	-----	-----	-----	7.14	7.14
		U$_{20}$ - L$_{20}$	-242.54	4.70	-52.09	0.95	-15.62	0.90	1.20	5.07	-56.16	0.95	-15.62	Vehicle	Vehicle	-----	-388.30	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	-----	-----	-----	-----	-----	5.06	5.06
		U$_0$ - L$_0$	-302.99	-80.26	13.74	-15.08	2.22	0.90	1.18	14.63	-85.46	2.22	-15.08	Vehicle	Vehicle	-----	-504.98	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	-----	-----	-----	-----	-----	3.97	3.97
		U$_1$ - L$_1$	-268.80	-70.13	14.00	-13.67	2.12	0.90	1.18	14.90	-74.67	2.12	-13.67	Vehicle	Vehicle	-----	-446.51	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	-----	-----	-----	-----	-----	5.41	5.41
		U$_2$ - L$_2$	-220.88	-64.98	15.05	-12.32	2.34	0.90	1.18	16.03	-69.19	2.34	-12.32	Vehicle	Vehicle	-----	-377.09	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	-----	-----	-----	-----	-----	5.11	5.11
		U$_3$ - L$_3$	-175.24	-53.16	16.13	-10.35	2.49	0.90	1.18	17.17	-56.60	2.49	-10.35	Vehicle	Vehicle	-----	-301.40	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	-----	-----	-----	-----	-----	4.89	4.89
		U$_4$ - L$_4$	-82.09	-38.41	13.96	-6.62	2.21	0.90	1.18	14.86	-40.89	2.21	-6.62	Vehicle	Vehicle	-----	-159.87	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	-----	-----	-----	-----	-----	6.29	6.29
		U$_5$ - L$_5$	-19.91	-29.97	13.79	-4.16	2.23	0.90	1.18	14.68	-31.91	2.23	-4.16	Vehicle	Vehicle	-----	-67.36	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	-----	-----	-----	-----	-----	10.05	10.05
		U$_6$ - L$_6$	60.32	-14.09	22.16	-0.47	1.75	0.90	1.18	23.59	-15.00	1.75	-0.47	Vehicle	Vehicle	109.09	-----	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	-----	-----	-----	-----	-----	-----	-----	15.57	15.57	-----	-----
		U$_7$ - L$_7$	-41.78	-1.09	-7.05	0.00	-2.49	0.90	1.18	-1.16	-7.51	0.00	-2.49	Vehicle	Vehicle	-----	-64.07	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	-----	-----	-----	-----	-----	39.79	39.79
		U$_8$ - L$_8$	-189.01	4.07	-46.43	0.00	-8.38	0.90	1.18	4.34	-49.44	0.00	-8.38	Vehicle	Vehicle	-----	-309.98	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	-----	-----	-----	-----	-----	6.91	6.91
		U$_9$ - L$_9$	-254.00	1.74	-58.15	0.00	-10.55	0.90	1.18	1.85	-61.91	0.00	-10.55	Vehicle	Vehicle	-----	-410.67	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	-----	-----	-----	-----	-----	7.06	7.06
		U$_{10}$ - L$_{10}$	-290.02	4.37	-61.07	0.00	-12.18	0.90	1.18	4.65	-65.02	0.00	-12.18	Vehicle	Vehicle	-----	-461.54	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	-----	-----	-----	-----	-----	7.51	7.51
		U$_{11}$ - L$_{11}$	-312.19	10.01	-66.32	0.00	-12.59	0.90	1.18	10.66	-70.61	0.00	-12.59	Vehicle	Vehicle	-----	-497.64	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	-----	-----	-----	-----	-----	6.41	6.41
		U$_{12}$ - L$_{12}$	-327.27	14.86	-61.23	-0.93	-13.01	0.90	1.18	15.83	-65.19	-0.93	-13.01	Vehicle	Vehicle	-----	-510.19	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	-----	-----	-----	-----	-----	7.28	7.28
		U$_{13}$ - L$_{13}$	-277.23	21.20	-51.63	0.00	-11.39	0.90	1.18	22.57	-54.97	0.00	-11.39	Vehicle	Vehicle	-----	-431.87	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	-----	-----	-----	-----	-----	7.51	7.51
		U$_{14}$ - L$_{14}$	-505.47	-54.78	-37.44	-11.35	-9.95	0.90	1.18	-39.86	-58.33	-9.95	-11.35	Vehicle	Vehicle	-----	-732.93	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	-----	-----	-----	-----	-----	9.37	9.37
		U$_{15}$ - L$_{15}$	-232.92	-63.42	2.52	-11.17	0.00	0.90	1.17	2.65	-66.72	0.00	-11.17	Vehicle	Vehicle	-----	-389.53	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	-----	-----	-----	-----	-----	6.85	6.85
		U$_{16}$ - L$_{16}$	-260.09	-68.94	0.34	-12.63	0.83	0.90	1.17	0.36	-72.53	0.83	-12.63	Pedestrian	Vehicle	-----	-432.40	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	-----	-----	-----	-----	-----	5.60	5.60
		U$_{17}$ - L$_{17}$	-228.20	-65.84	9.29	-11.76	0.66	0.90	1.17	9.78	-69.27	0.66	-11.76	Vehicle	Vehicle	-----	-386.71	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	-----	-----	-----	-----	-----	5.70	5.70
		U$_{18}$ - L$_{18}$	-209.23	-55.23	11.15	-11.28	-0.02	0.90	1.17	11.74	-58.10	-0.02	-11.28	Vehicle	Vehicle	-----	-347.53	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	-----	-----	-----	-----	-----	6.33	6.33
		U$_{19}$ - L$_{19}$	-166.51	-49.76	11.85	-9.53	-0.07	0.90	1.17	12.47	-52.35	-0.07	-9.53	Vehicle	Vehicle	-----	-284.51	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	-----	-----	-----	-----	-----	6.59	6.59
		U$_{20}$ - L$_{20}$	-113.91	-39.35	11.96	-7.50	-0.43	0.90	1.17	12.58	-41.40	-0.43	-7.50	Vehicle	Vehicle	-----	-201.90	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	-----	-----	-----	-----	-----	6.31	6.31
	Structure 2	U$_{21}$ - L$_{21}$	-62.73	-26.81	13.66	-5.22	-0.44	0.90	1.17	14.37	-28.21	-0.44	-5.22	Vehicle	Vehicle	-----	-118.22	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	-----	-----	-----	-----	-----	9.85	9.85
		U$_{22}$ - L$_{22}$	-38.93	-6.99	-5.70	-2.15	-2.04	0.90	1.17	-5.99	-7.36	-2.04	-2.15	Pedestrian	Vehicle	-----	-60.18	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	45.00	Pass	6.56	12.00	Pass	-----	-----	-----	-----	-----	41.17	41.17
		U$_{23}$ - L$_{23}$	-74.45	12.69	-36.84	0.48	-6.10	0.90	1.17	13.35	-38.76	0.48	-6.10	Vehicle	Vehicle	-----	-147.17	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	-----	-----	-----	-----	-----	6.87	6.87
		U$_{24}$ - L$_{24}$	-121.37	12.44	-42.84	0.37	-8.17	0.90	1.17	13.09	-45.07	0.37	-8.17	Vehicle	Vehicle	-----	-216.37	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	-----	-----	-----	-----	-----	5.63	5.63
		U$_{25}$ - L$_{25}$	-169.10	11.96	-52.80	0.43	-9.94	0.90	1.17	12.58	-55.56	0.43	-9.94	Vehicle	Vehicle	-----	-292.06	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	-----	-----	-----	-----	-----	6.16	6.16
		U$_{26}$ - L$_{26}$	-207.93	10.82	-56.35	0.14	-11.42	0.90	1.17	11.38	-59.29	0.14	-11.42	Vehicle	Vehicle	-----	-347.38	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	-----	-----	-----	-----	-----	6.23	6.23
		U$_{27}$ - L$_{27}$	-219.90	8.90	-58.25	0.16	-11.49	0.90	1.17	9.36	-61.28	0.16	-11.49	Vehicle	Vehicle	-----	-365.53	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	-----	-----	-----	-----	-----	6.58	6.58
		U$_{28}$ - L$_{28}$	-240.66	12.86	-55.41	-0.25	-11.17	0.90	1.17	13.53	-58.29	-0.25	-11.17	Vehicle	Vehicle	-----	-388.63	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	-----	-----	-----	-----	-----	7.30	7.30
		U$_{29}$ - L$_{29}$	-202.76	21.26	-47.67	0.00	-10.35	0.90	1.17	22.37	-50.15	0.00	-10.35	Vehicle	Vehicle	-----	-328.78	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	-----	-----	-----	-----	-----	9.72	9.72
		U$_{30}$ - L$_{30}$	-516.45	-61.41	-34.99	-13.75	-8.21	0.90	1.18	-37.25	-65.38	-8.21	-13.75	Vehicle	Vehicle	-----	-756.38	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	-----	-----	-----

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: 5C1 **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 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 - Diagonals	Structure 1	U_0 - L_1	87.61	48.24	-23.15	14.00	-4.60	0.90	1.24	53.70	-25.77	14.00	-4.60	Vehicle	Vehicle	183.70	-----	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	-----	-----	-----	-----	-----	**9.29**	**9.29**	-----	-----
		U_1 - L_2	23.84	28.69	3.24	9.20	-4.72	0.90	1.24	31.94	3.61	9.20	-4.72	Vehicle	Vehicle	72.52	-----	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	-----	-----	-----	-----	-----	**12.64**	**12.64**	-----	-----
		U_2 - L_3	-49.05	14.86	-10.22	0.00	-1.00	0.90	1.24	16.55	-11.38	0.00	-1.00	Vehicle	Vehicle	-----	-78.56	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	-----	-----	-----	-----	-----	**25.05**	**25.05**
		U_3 - L_4	-108.90	-5.66	1.02	-4.21	-2.10	0.90	1.24	1.13	-6.31	-2.10	-4.21	Vehicle	Pedestrian	-----	-155.23	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	-----	-----	-----	-----	-----	**21.64**	**21.64**
		U_4 - L_5	153.14	9.96	28.62	3.12	7.00	0.90	1.24	31.87	11.09	7.00	3.12	Vehicle	Vehicle	240.51	-----	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	-----	-----	-----	-----	-----	**11.66**	**11.66**	-----	-----
		U_5 - L_6	186.37	49.90	-0.03	13.44	0.00	0.90	1.24	55.55	-0.04	13.44	0.00	Vehicle	Vehicle	314.51	-----	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	-----	-----	-----	-----	-----	**8.36**	**8.36**	-----	-----
		U_6 - L_7	177.53	50.16	-15.21	14.14	0.00	0.90	1.24	55.84	-16.94	14.14	0.00	Vehicle	Vehicle	303.39	-----	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	-----	-----	-----	-----	-----	**8.47**	**8.47**	-----	-----
		U_7 - L_7	173.15	47.01	-15.80	13.87	0.00	0.90	1.24	52.34	-17.59	13.87	0.00	Vehicle	Vehicle	293.13	-----	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	-----	-----	-----	-----	-----	**9.12**	**9.12**	-----	-----
		U_8 - L_9	328.03	77.42	-1.16	19.31	0.00	0.90	1.20	83.48	-1.25	19.31	0.00	Vehicle	Vehicle	534.95	-----	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	-----	-----	-----	-----	-----	**7.60**	**7.60**	-----	-----
		U_9 - L_{10}	339.64	81.55	-2.54	19.75	0.00	0.90	1.20	87.93	-2.74	19.75	0.00	Vehicle	Vehicle	555.83	-----	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	-----	-----	-----	-----	-----	**7.08**	**7.08**	-----	-----
		U_{10} - L_{11}	313.15	68.12	-0.16	18.15	0.00	0.90	1.20	73.45	-0.17	18.15	0.00	Vehicle	Vehicle	502.58	-----	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	-----	-----	-----	-----	-----	**8.14**	**8.14**	-----	-----
		U_{11} - L_{12}	270.62	59.85	13.80	14.84	0.00	0.90	1.20	64.53	14.88	14.84	0.00	Vehicle	Vehicle	435.69	-----	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	-----	-----	-----	-----	-----	**7.86**	**7.86**	-----	-----
		U_{12} - L_{13}	194.11	45.51	-2.75	10.79	0.00	0.90	1.20	49.07	-2.96	10.79	0.00	Vehicle	Vehicle	316.13	-----	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	-----	-----	-----	-----	-----	**8.90**	**8.90**	-----	-----
		U_{13} - L_{14}	123.52	26.78	-11.71	2.11	3.86	0.90	1.20	28.87	-12.62	3.86	2.11	Vehicle	Vehicle	198.10	-----	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	-----	-----	-----	-----	-----	**10.54**	**10.54**	-----	-----
		U_{15} - L_{14}	-16.31	22.98	-14.46	0.00	-0.88	0.90	1.20	24.78	-15.59	0.00	-0.88	Vehicle	Vehicle	11.01	-41.47	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	-----	-----	-----	**17.92**	**17.92**	**20.02**	**20.02**
		U_{16} - L_{15}	59.11	39.33	-7.82	6.08	-2.09	0.90	1.20	42.41	-8.43	6.08	-2.09	Vehicle	Vehicle	131.97	-----	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	-----	-----	-----	-----	-----	**8.69**	**8.69**	-----	-----
		U_{17} - L_{16}	172.05	58.50	-9.83	9.93	-1.86	0.90	1.20	63.08	-10.60	9.93	-1.86	Vehicle	Vehicle	305.67	-----	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	-----	-----	-----	-----	-----	**5.59**	**5.59**	-----	-----
		U_{18} - L_{17}	210.69	58.10	-8.33	12.50	-1.53	0.90	1.20	62.64	-8.98	12.50	-1.53	Vehicle	Vehicle	355.33	-----	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	-----	-----	-----	-----	-----	**7.02**	**7.02**	-----	-----
		U_{19} - L_{18}	242.30	60.14	-6.67	13.72	-1.21	0.90	1.20	64.84	-7.19	13.72	-1.21	Vehicle	Vehicle	399.29	-----	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	-----	-----	-----	-----	-----	**7.22**	**7.22**	-----	-----
		U_{20} - L_{19}	257.77	53.26	-5.48	15.71	-1.03	0.90	1.20	57.42	-5.91	15.71	-1.03	Vehicle	Vehicle	409.75	-----	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	-----	-----	-----	-----	-----	**7.88**	**7.88**	-----	-----
		U_0 - L_1	299.01	64.26	-14.60	14.21	-2.21	0.90	1.18	68.42	-15.55	14.21	-2.21	Vehicle	Vehicle	477.65	-----	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	-----	-----	-----	-----	-----	**6.99**	**6.99**	-----	-----
		U_1 - L_2	284.23	76.37	-17.33	14.05	-2.66	0.90	1.18	81.31	-18.45	14.05	-2.66	Vehicle	Vehicle	475.20	-----	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	-----	-----	-----	-----	-----	**6.07**	**6.07**	-----	-----
		U_2 - L_3	221.45	67.80	-18.52	11.83	-2.85	0.90	1.18	72.19	-19.71	11.83	-2.85	Vehicle	Vehicle	381.72	-----	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	-----	-----	-----	-----	-----	**5.95**	**5.95**	-----	-----
		U_3 - L_4	178.33	58.98	-20.87	10.08	-3.23	0.90	1.18	62.80	-22.22	10.08	-3.23	Vehicle	Vehicle	313.47	-----	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	-----	-----	-----	-----	-----	**6.35**	**6.35**	-----	-----
		U_4 - L_5	53.52	39.17	-17.86	5.38	-2.87	0.90	1.18	41.70	-19.02	5.38	-2.87	Vehicle	Vehicle	123.79	-----	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	-----	-----	-----	-----	-----	**8.97**	**8.97**	-----	-----
		U_5 - L_6	-16.50	27.26	-20.50	2.23	-1.22	0.90	1.18	29.03	-21.82	2.23	-1.22	Vehicle	Vehicle	16.29	-49.82	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	-----	-----	-----	**15.30**	**15.30**	**14.17**	**14.17**
		U_6 - L_7	-133.20	11.12	-40.49	0.00	-5.36	0.90	1.18	11.84	-43.11	0.00	-5.36	Vehicle	Vehicle	-----	-229.20	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	-----	-----	-----	-----	-----	**5.24**	**5.24**
		U_7 - L_7	208.77	50.31	-9.14	8.33	0.00	0.90	1.18	53.56	-9.73	8.33	0.00	Vehicle	Vehicle	341.02	-----	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	-----	-----	-----	-----	-----	**7.37**	**7.37**	-----	-----
		U_8 - L_8	289.58	66.87	-2.22	10.70	0.00	0.90	1.18	71.20	-2.36	10.70	0.00	Vehicle	Vehicle	469.01	-----	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	-----	-----	-----	-----	-----	**5.91**	**5.91**	-----	-----
		U_{10} - L_9	327.97	71.07	-1.19	12.66	0.00	0.90	1.18	75.67	-1.27	12.66	0.00	Vehicle	Vehicle	524.74	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{11} - L_{10}	349.27	76.47	1.13	12.70	0.00	0.90	1.18	81.41	1.20	12.70	0.00	Vehicle	Vehicle	559.88	-----	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	-----	-----	-----	-----	-----	**6.08**	**6.08**	-----	-----
		U_{12} - L_{11}	358.20	72.69	-11.28	13.52	0.00	0.90	1.18	77.40	-12.01	13.52	0.00	Vehicle	Vehicle	566.27	-----	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	-----	-----	-----	-----	-----	**6.28**	**6.28**	-----	-----
		U_{13} - L_{12}	307.76	59.45	-21.52	12.26	-0.24	0.90	1.18	63.30	-22.91	12.26	-0.24	Vehicle	Vehicle	482.37	-----	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	-----	-----	-----	-----	-----	**7.42**	**7.42**	-----	-----
		U_{14} - L_{13}	260.25	49.11	-19.77	9.65	0.00	0.90	1.18	52.29	-21.04	9.65	0.00	Vehicle	Vehicle	406.30	-----	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	-----	-----	-----	-----	-----	**9.89**	**9.89**	-----	-----
		U_{14} - L_{15}	208.41	63.20	-8.80	11.04	-2.52	0.90	1.17	66.49	-9.26	11.04	-2.52	Vehicle	Vehicle	357.37	-----	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	-----	-----	-----	-----	-----	**6.65**	**6.65**	-----	-----
		U_{15} - L_{16}	243.53	71.87	-5.98	11.54	-1.48	0.90	1.17	75.61	-6.29	11.54	-1.48	Vehicle	Vehicle	414.89	-----	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	-----	-----	-----	-----	-----	**5.38**	**5.38**	-----	-----
		U_{16} - L_{17}	255.83	70.06	-9.79	12.23	0.00	0.90	1.17	73.71	-10.30	12.23	0.00	Vehicle	Vehicle	428.40	-----	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	-----	-----	-----	-----	-----	**6.16**	**6.16**	-----	-----
		U_{17} - L_{18}	235.25	69.97	-11.47	11.35	0.00	0.90	1.17	73.61	-12.07	11.35	0.00	Vehicle	Vehicle	401.52	-----	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	-----	-----	-----	-----	-----	**5.64**	**5.64**	-----	-----
		U_{18} - L_{19}	212.06	59.24	-13.98	11.09	0.00	0.90	1.17	62.32	-14.71	11.09	0.00	Vehicle	Vehicle	356.70	-----	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	-----	-----	-----	-----	-----	**7.04**	**7.04**	-----	-----
	Structure 2	U_{19} - L_{20}	168.18	54.18	-15.48	9.14	0.00	0.90	1.17	57.00	-16.29	9.14	0.00	Vehicle	Vehicle	292.74	-----	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	-----	-----	-----	-----	-----	**7.63**	**7.63**	-----	-----
		U_{20} - L_{21}	97.21	36.00	-16.44	6.66	0.00	0.90	1.17	37.87	-17.29	6.66	0.00	Vehicle	Vehicle	175.61	-----	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	-----	-----	-----	-----	-----	**8.73**	**8.73**	-----	-----
		U_{21} - L_{22}	30.55	16.53	-22.37	0.58	-2.18	0.90	1.17	17.39	-23.54	0.58	-2.18	Vehicle	Vehicle	62.33	-----	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	-----	-----	-----	-----	-----	**22.83**	**22.83**	-----	-----
		U_{23} - L_{22}	49.81	38.00	-17.45	5.11	-0.95	0.90	1.17	39.97	-18.36	5.11	-0.95	Vehicle	Vehicle	116.73	-----	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	-----	-----	-----	-----	-----	**9.45**	**9.45**	-----	-----
		U_{24} - L_{23}	115.09	48.64	-16.87	8.00	-0.72	0.90	1.17	51.17	-17.74	8.00	-0.72	Vehicle	Vehicle	216.14	-----	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	-----	-----	-----	-----	-----	**6.11**	**6.11**	-----	-----
		U_{25} - L_{24}	179.20	60.05	-16.40	10.10	0.00	0.90	1.17	63.18	-17.26	10.10	0.00	Vehicle	Vehicle	315.10	-----	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	-----	-----	-----	-----	-----	**6.71**	**6.71**	-----	-----
		U_{26} - L_{25}	220.95	64.43	-14.39	11.89	0.00	0.90	1.17	67.79	-15.14	11.89	0.00	Vehicle	Vehicle	375.36	-----	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	-----	-----	-----	-----	-----	**6.34**	**6.34**	-----	-----
		U_{27} - L_{26}	234.79	66.54	-11.44	11.44	0.00	0.90	1.17	70.00	-12.04	11.44	0.00	Vehicle	Vehicle	396.23	-----	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	-----	-----	-----	-----	-----	**5.94**	**5.94**	-----	-----
		U_{28} - L_{27}	253.01	63.69	-10.10	12.25	0.00	0.90	1.17	67.01	-10.62	12.25	0.00	Vehicle	Vehicle	416.03	-----	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	-----	-----	-----	-----	-----	**6.82**	**6.82**	-----	-----
		U_{29} - L_{28}	215.83	51.92	-21.39	10.20	0.61	0.90	1.17	54.62	-22.50	10.20	0.61	Vehicle	Vehicle	351.59	-----	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	-----	-----	-----	-----	-----	**7.96**	**7.96**	-----	-----
		U_{30} - L_{29}	179.92	45.13	-20.12	8.46	0.00	0.90	1.17	47.48	-21.17	8.46	0.00	Vehicle	Vehicle	295.62	-----	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	-----	-----	-----	-----	-----	**9.91**	**9.91**	-----	-----
		U_{30} - L_{31}	294.37	66.70	-10.34	12.88	0.00	0.90	1.18	71.02	-11.00	12.88	0.00	Vehicle	Vehicle	475.00	-----	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	-----	-----	-----	-----	-----	**6.80**	**6.80**	-----	-----
		U_{31} - L_{32}	342.78	73.77	-8.60	13.71	-0.55	0.90	1.18	78.54	-9.16	13.71	-0.55	Vehicle	Vehicle	547.72	-----	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	-----	-----	-----	-----	-----	**5.54**	**5.54**	-----	-----
		U_{32} - L_{33}	363.31	77.70	-4.79	14.15	0.00	0.90	1.18	82.73	-5.10	14.15	0.00	Vehicle	Vehicle	579.85	-----	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	-----	-----	-----	-----	-----	**5.82**	**5.82**	-----	-----
		U_{33} - $L_{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: SC1
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-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	-0.10	1.75	1.27	-11.29				
	L_1-U_1	-54.49	-51.15	3.28	3.06	-1.67	-18.30				
	U_1-L_2	-54.49	-54.49	3.70	40.91	-22.34	-244.43				
	L_2-U_2	-52.26	-61.06	2.78	4.42	-5.28	-14.51				
	U_2-L_3	-28.29	-50.99	3.08	3.08	-1.37	-7.38				
	L_3-U_3	-48.74	-54.17	3.25	4.09	-1.99	-3.49				
	U_3-L_4	54.53	-69.27	3.80	-43.39	44.19	64.19				
	L_4-U_4	-69.92	-603.38	11.66	19.70	0.01	0.00				
	U_4-L_5	531.73	-129.19	0.27	1.08	11.84	-12.94				
	L_5-U_5	68.54	-61.95	1.89	3.24	2.50	-7.49				
	U_5-L_6	100.48	-176.70	3.37	2.77	2.58	-14.85				
	L_6-U_6	29.25	-160.14	2.88	2.23	2.60	-15.70				
	U_6-L_7	-56.66	-218.08	3.04	1.01	-2.73	-16.90				
	L_7-U_7	-135.50	-273.91	3.04	-0.63	-7.03	-27.88				
	U_7-L_8	-287.80	-237.44	2.64	1.54	-0.84	-17.18				
	L_8-U_8	-196.20	-337.71	1.34	0.60	-6.64	-17.06				
	U_8-L_9	-295.63	-154.75	1.34	0.60	-5.64	-11.34				
	L_9-U_9	-189.93	-29.96	-0.04	4.65	-3.20	-6.02				
	U_9-L_{10}	-179.63	-29.55	-0.27	2.27	-3.03	-4.71				
	L_{10}-U_{10}	-249.78	258.69	11.86	15.64	0.59	-6.69				
	U_{10}-L_{11}	-28.62	-172.11	-0.56	1.49	3.42	-15.05				
	L_{11}-U_{11}	-24.91	-195.34	-0.29	1.35	3.35	-15.74				
	U_{11}-L_{12}	-53.03	-283.30	-0.04	2.04	0.93	-26.48				
	L_{12}-U_{12}	-339.68	-287.42	0.13	1.92	4.19	-33.50				
	U_{12}-L_{13}	-360.46	-389.97	0.23	3.38	-9.14	-32.23				
	L_{13}-U_{13}	-403.42	-367.71	2.53	0.61	-8.26	-27.08				
	U_{13}-L_{14}	-349.63	-208.07	4.69	4.59	-11.22	-34.71				
	L_{14}-U_{14}	-253.78	-280.71	3.62	5.04	-14.04	-20.57				
	U_{14}-L_{15}	-330.32	-53.64	4.61	14.78	-9.36	-37.25				
	L_{15}-U_{15}	-237.02	39.91	5.23	6.60	-6.88	-10.73				
	U_{15}-L_{16}	-152.08	26.49	3.23	6.60	-3.38	-11.34				
	L_{16}-U_{16}	-116.69	170.75	-6.72	5.09	-0.61	-5.40				
	U_{16}-L_{17}	-58.84	199.34	-2.29	3.42	-0.12	-5.16				
	L_{17}-U_{17}	-53.03	211.64	-2.01	3.42	-0.04	-2.98				
	U_{17}-L_{18}	-218.18	408.38	-7.87	8.41	0.00	0.00				
	L_{18}-U_{18}	1028.71	-26.69	-0.23	2.03	24.88	-21.73				
	U_{18}-L_{19}	9.97	34.61	-0.23	2.33	0.00	0.00				
	L_{19}-U_{19}	271.39	25.19	3.87	3.64	2.11	-15.37				
	U_{19}-L_{20}	156.55	-8.67	3.80	4.30	2.29	-18.75				
	L_{20}-U_{20}	48.55	11.41	5.25	4.26	-5.12	-19.19				
	U_{20}-L_{21}	-45.85	0.44	4.29	4.29	-2.79	-17.46				
Structure 2	L_{21}-U_{21}	-92.57	-65.85	1.99	2.77	-7.70	-26.77				
	U_{21}-L_{22}	-59.44	-151.1	3.37	2.77	-4.20	-18.14				
	L_{22}-U_{22}	-48.31	-31.52	0.16	4.31	-0.04	-16.99				
	U_{22}-L_{23}	10.77	139.33	0.36	4.31	-0.04	-16.99				
	L_{23}-U_{23}	10.77	13.63	-7.57	5.64	-1.61	-7.70				
	U_{23}-L_{24}	57.22	122.85	-6.20	6.07	-1.25	-8.22				
	L_{24}-U_{24}	80.66	79.96	-6.20	6.07	-1.25	-8.22				
	U_{24}-L_{25}	85.41	4.86	-0.78	3.95	-4.78	-12.52				
	L_{25}-U_{25}	1152.1	806.37	-12.52	-155.56	16.43	-12.79				
	U_{25}-L_{26}	821.42	-89.58	0.26	2.88	23.20	-21.06				
	L_{26}-U_{26}	25.52	37.41	0.82	3.82	1.10	-18.69				
	U_{26}-L_{27}	145.61	-52.49	3.79	4.73	4.19	-17.27				
	L_{27}-U_{27}	17.52	-88.46	5.02	5.32	-0.56	-16.69				
	U_{27}-L_{28}	25.52	37.41	0.82	3.82	1.10	-18.69				
	L_{28}-U_{28}	-75.13	-230.47	5.30	3.31	-1.16	-26.70				
	U_{28}-L_{29}	-229.03	-229.03	5.30	5.27	-1.16	-26.70				
	L_{29}-U_{29}	-84.17	-278.54	5.21	4.56	-8.20	-24.47				
	U_{29}-L_{30}	-274.89	-274.89	5.21	5.01	-11.56	-25.70				
	L_{30}-U_{30}	-296.96	-269.01	1.82	6.09	-14.25	-20.25				
	U_{30}-L_{31}	-154.35	-34.80	-0.83	1.17	-3.37	-8.20				
	L_{31}-U_{31}	40.05	-167.81	0.52	0.52	4.04	-11.89				
	U_{31}-L_{32}	-10.43	-132.23	-0.36	0.64	1.52	-13.63				
	L_{32}-U_{32}	-187.01	-275.87	1.42	1.98	-7.79	-27.57				
	U_{32}-L_{33}	-322.39	-143.31	1.00	1.00	-4.44	-20.52				
	L_{33}-U_{33}	-192.57	-104.84	1.08	3.11	-4.94	-10.90				
	U_{33}-L_{34}	-147.74	26.71	2.32	3.73	-10.03	-6.19				
	L_{34}-U_{34}	-153.72	61.91	2.44	3.73	-10.03	-6.19				
Structure 3	U_{34}-L_{35}	10.81	46.01	-3.93	3.24	0.04	-2.98				
	L_{35}-U_{35}	-148.66	-148.66	3.24	3.24	-4.26	-15.28				
	U_{35}-L_{36}	426.14	9.08	-1.62	16.47	-15.28					
	L_{36}-U_{36}	128.06	64.05	4.29	3.76	2.72	-11.56				
	U_{36}-L_{37}	70.11	43.65	4.61	3.36	-1.93	-14.81				
	L_{37}-U_{37}	63.02	63.02	4.61	3.36	-1.93	-14.81				
	U_{37}-L_{38}	-83.60	-91.45	4.87	1.34	-5.65	-12.36				
	L_{38}-U_{38}	-52.68	-52.68	3.52	1.90	-4.87	-12.36				
	U_{38}-L_{39}	-8.37	-30.47	-10.80	16.01	-6.62	-5.73				

ZZ Axis Moment Properties

Location	Member	Rcv. Pos. Mom. Start (k-in)	Rcv. Pos. Mom. End (k-in)	Rcv. Neg. Mom. Start (k-in)	Rcv. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_x (in^3)	I (in^4)	I_{DC} (in^4)	Shape Factor	M_p (k-in)	Formula I.8 Term ** F_y*S_{top}	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_0-L_1	-172.41	1.05	-148.49	-225.43	90.2	90.24	72.24	1276.46	2147	1328.6	f	4206	0.99880041	2974.3	0.659	0.86	0.86
	L_1-U_1	-65.32	16.94	-16.05	-111.32	90.2	90.24	72.24	1276.46	2147	1328.6	f	4206	0.99880041	2974.3	0.260	0.70	0.70
	U_1-L_2	-158.58	-58.05	-208.52	-226.41	90.2	90.24	72.24	1276.46	2147	1328.6	f	4206	0.99880041	2974.3	0.924	0.97	0.97
	L_2-U_2	-19.62	156.17	-159.57	-172.67	90.2	90.24	72.24	1276.46	2147	1328.6	f	4206	0.99880041	2974.3	0.924	0.97	0.97
	U_2-L_3	18.76	156.17	-159.57	-172.67	90.2	90.24	72.24	1276.46	2147	1328.6	f	4206	0.99880041	2974.3	0.924	0.97	0.97
	L_3-U_3	66.12	298.09	-31.87	-128.14	90.2	90.24	76.71	1276.46	2147	1328.6	f	4206	0.99880041	2974.3	0.255	0.70	0.70
	U_3-L_4	169.67	168.86	-44.35	97.1	97.11	78.78	142.56	2586	1648.1	f	4705	0.99880041	3201.5	0.923	0.97	0.97
	L_4-U_4	291.52	1126.56	-90.81	784.35	138.2	138.17	111.77	788.97	3642	2197.7	f	6999	0.998945	4554.8	-0.259	0.50	0.50
	U_4-L_5	695.76	-149.73	890.32	389.62	130.3	130.26	105.11	180.77	2955	1795.3	1.39	5965	0.99880041	4292.8	-0.433	0.43	0.43
	L_5-U_5	129.19	111.57	131.13	-68.86	90.6	90.61	79.12	139.29	2172	1307.8	f	4465	0.99873139	3184.1	-0.525	0.39	0.39
	U_5-L_6	187.34	-183.18	173.97	-479.46	96.6	96.61	83.55	130.29	2174	1387.9	f	4465	0.99873139	3184.1	-0.363	0.45	0.45
	L_6-U_6	124.09	-183.11	94.57	-474.68	96.6	96.61	83.55	130.29	2174	1387.9	f	4465	0.99873139	3184.1	-0.363	0.45	0.45
	U_6-L_7	-74.51	-264.31	-171.52	-567.79	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905052	5033.4	0.303	0.72	0.72
	L_7-U_7	-192.72	-430.30	-272.43	-660.32	151.6	151.76	130.94	219.77	4535	2532.6	1.45	7252	0.99905052	5033.4	0.303	0.72	0.72
	U_7-L_8	-329.79	-282.83	-472.30	-597.65	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.750	0.92	0.92
	U_8-L_9	-232.47	-428.90	-368.78	-725.99	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.505	0.80	0.80
	L_9-U_9	-444.42	-191.07	-444.81	-389.11	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.99899321	6214.6	0.293	0.72	0.72
	U_9-L_{10}	-382.14	29.19	-300.70	-140.24	127.3	127.32	110.40	186.23	3668	2526.5	1.46	6146	0.99907139	4197.7	-0.103	0.56	0.56
	U_{10}-L_{11}	-152.61	215.46	-132.81	-318.16	130.67	104.5	104.75	86.43	1583.3	2089	1554.3	1.44	4971	0.99880042	3452.6	0.033	0.63	0.63
	U_{11}-L_{12}	624.23	599.27	314.80	223.80	104.8	104.75	86.43	1582.63	2589	1554.3	1.44	4971	0.99880042	3452.6	0.875	0.25	0.25
	U_{12}-L_{13}	-46.48	-199.08	19.57	-473.78	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861332	4212.5	-0.041	0.58	0.58
	U_{13}-L_{14}	-37.16	-237.37	-12.49	-519.05	127.8	127.83	111.16	118.51	2762	1538.8	1.40	5891	0.99861332	4212.5	-0.041	0.58	0.58
	U_{14}-L_{15}	-74.51	-364.35	-53.46	-808.05	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9820	0.99857	7005.5	0.066	0.53	0.53
	U_{15}-L_{16}	-84.79	-443.30	-57.55	-1223.33	212.6	212.59	170.43	297.57	4967	2491.6	1.40	9820	0.99857	7005.5	0.066	0.53	0.53
	U_{16}-L_{17}	31.32	12.55	-51.40	2.29	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{17}-L_{18}	-4.84	-31.07	3.04	-46.07	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{18}-L_{19}	-33.31	-20.52	94.70	61.93	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{19}-L_{20}	-19.74	-20.12	72.39	19.02	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{20}-L_{21}	-27.71	-13.40	68.52	12.04	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{21}-L_{22}	-25.77	-13.25	40.30	24.93	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{22}-L_{23}	-20.34	-17.55	2.34	-2.37	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{23}-L_{24}	60.74	-5.34	24.13	30.86	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{24}-L_{25}	-14.22	-13.47	13.03	12.05	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{25}-L_{26}	39.89	-51.68	132.81	-9.62	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{26}-L_{27}	-21.02	-24.56	-40.82	18.36	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{27}-L_{28}	-45.78	-61.43	33.55	-24.79	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{28}-L_{29}	-45.21	-16.11	54.10	43.82	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{29}-L_{30}	-26.94	-6.82	34.06	48.63	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{30}-L_{31}	-21.53	-20.64	36.12	83.86	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{31}-L_{32}	-3.26	-4.07	6.58	24.08	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{32}-L_{33}	-2.99	-7.97	27.75	63.81	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{33}-L_{34}	-14.20	-18.11	19.05	54.16	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{34}-L_{35}	-10.73	-8.52	32.33	8.48	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{35}-L_{36}	-12.72	-36.48	14.12	-24.48	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{36}-L_{37}	-46.64	-22.22	26.85	-23.60	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{37}-L_{38}	-41.74	-29.09	28.46	-34.19	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00
	U_{38}-L_{39}	-52.05	-52.05	26.50	-26.50	0.00	0.00	0.00	0.00	0.00	f	0.00	0.00	0.00	0.000	0.00	0.00	0.00

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	0.73	4.01	-0.96	-42.75	0.00	0.00	0.00	0.00	6.58	-18.03
	L_1-U_1	-0.31	16.94	15.35	-11.32	0.00	0.00	0.00	0.00	4.18	-53.92
	U_1-L_2	-2.02	-2.84	0.00	-0.00	0.00	0.00	0.00	0.00	1.97	31.36
	L_2-U_2	-17.02	-4.34	30.63	-5.56	0.00	0.00	0.00	0.00	45.31	43.88
	U_2-L_3	-6.36	-4.99	-3.59	-31.31	0.00	0.00	0.00	0.00	24.34	-7.76
	L_3-U_3	-23.02	-6.64	28.22	-40.75	0.00	0.00	0.00	0.00	-55.49	38.41
	U_3-L_4	-42.76	-2.36	-6.93	-0.00	0.00	0.00	0.00	0.00	-136.77	-18.91
	L_4-U_4	58.05	-69.73	-0.08	0.04	0.00	0.00	0.00	0.00	-165.61	-194.08
	U_4-L_5	-70.09	-5.56	-12.05	46.81	0.00	0.00	0.00	0.00	-328.32	-120.44
	L_5-U_5	-20.25	-21.68	13.39	69.74	0.00	0.00	0.00	0.00	-69.96	-120.17
	U_5-L_6	-20.07	3.17	45.19	27.42	0.00	0.00	0.00	0.00	93.90	88.43
	L_6-U_6	-16.90	3.17	45.19	27.42	0.00	0.00	0.00	0.00	93.90	88.43
	U_6-L_7	-12.53	-18.49	1.42	5.56	0.00	0.00	0.00	0.00	138.06	164.37
	L_7-U_7	-18.94	-4.46	72.32	45.40	0.00	0.00	0.00	0.00	384.39	219.19
	U_7-L_8	-17.05	-4.37	86.14	5.77	0.00	0.00	0.00	0.00	239.55	36.95
	U_8-L_9	-14.03	5.42	79.92	12.28	0.00	0.00	0.00	0.00	109.61	34.59
	U_9-L_{10}	-60.78	-5.30	52.83	-28.45	0.00	0.00	0.00	0.00	152.24	-52.18
	U_{10}-L_{11}	1.05	0.14	21.82	5.93	0.00	0.00	0.00	0.00	-1.56	-67.56
	U_{11}-L_{12}	45.37	-83.09	38.48	-53.66	0.00	0.00	0.00	0.00	-35.14	-267.13
	U_{12}-L_{13}	-2.25	-62.11	0.08	0.01	1.71	0.46
	U_{13}-L_{14}	-47.90	-58.41	-0.00	0.00	1.15	0.44
	U_{14}-L_{15}	-19.06	239.87	-0.03	1.27	1.55	-1.06
	U_{15}-L_{16}	-61.09	301.17	-0.02	-0.00	1.42	0.00
	U_{16}-L_{17}	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
	U_{18}-L_{19}	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
	U_{20}-L_{21}	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
	U_{22}-L_{23}	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
	U_{24}-L_{25}	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
	U_{26}-L_{27}	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
	U_{28}-L_{29}	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
	U_{30}-L_{31}	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
	U_{32}-L_{33}	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
	U_{34}-L_{35}	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
	U_{36}-L_{37}	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
	U_{38}-L_{39}	0.00	0.00	0.00	0.00	0.00	0.00

YY Axis Moment Properties

Location	Member	Rcv. Neg. Mom. Start (k-in)	Rcv. Neg. Mom. End (k-in)	S_{top} (in^3)	S_b (in^3)	Z_y (in^3)	I_{DC} (in^4)	Shape Factor	M_p (k-in)	F_{cm} (ksi)	Formula I.8 Term ** F_y*S_{top}	M_{ny} (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	Equivalent Mom. Factor $C_{m(y)}$
Structure 1	U_0-L_1	-78.81	158.6	128.68	179.40	778.9	1.13	5920	0.99872457	5220.7	-0.055	0.98	0.98	0.98	0.98
	L_1-U_1	-54.16	15.35	-11.32	0.00	0.00	1.00	5920	0.99872457	5220.7	-0.156	0.54	0.54	—	—
	U_1-L_2	-3.54	-3.71	-0.29	27.38	-102.62	1.00	5920	0.99872457	5220.7	-0.001	0.08	0.08	0.08	0.08
	L_2-U_2	-17.02	-4.34	30.63	-5.56	0.00	0.00	0.00	0.00	45.31	43.88	107.26	42.30	158.6	158.64	128.68	179.40	778.9	1.13	5920	0.99872457	5220.7	0.394	0.76	0.76	0.143	0.059	0.21	Yes	0.098	0.040	0.14	Yes	0.232	0.072	0.31	Yes	0.230	0.041	0.28	Yes
	U_2-L_3	-6.36	-4.99	-3.59	-31.31	0.00	0.00	0.00	0.00	24.34	-7.76	158.64	128.68	179.40	778.9	1.13	5920	0.99872457	5220.7	0.840	0.26	0.26	0.147	0.055	0.21	Yes	0.101	0.037	0.14	Yes	0.210	0.040	0.25	Yes	0.210	0.040	0.25	Yes
	L_3-U_3	-23.02	-6.64	28.22	-40.75	0.00	0.00	0.00	0.00	-55.49	38.41	111.12	-82.75	158.6	158.64	128.68	128.75	179.40	778.9	1.13	5920	0.99872457	5220.7	-0.134	0.55	0.55	0.328	0.076	0.41	Yes	0.224	0.049	0.28	Yes	—	—	—	—	—	—	—	—
	U_3-L_4	-42.76	-2.36	-6.93	-0.00	0.00	0.00	0.00	0.00	-136.77	-18.91	2.74	-164.62	186.9	186.91	156.47	199.51	1152.4	1.13	7274	0.99871456	6153.9	-0.017	0.59	0.59	0.443	0.063	0.51	Yes	0.313	0.043	0.36	Yes	—	—	—	—	—	—	—	—
	U_4-L_5	58.05	-69.73	-0.08	0.04	0.00	0.00	0.00	0.00	-165.61	-194

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: SCI
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-In (kip-ft)	Dead Load End-In (kip-ft)	Live Load (Max) Start-In (kip-ft)	Live Load (Max) End-In (kip-ft)	Pedestrian Load (Max) Start-In (kip-ft)	Pedestrian Load (Max) End-In (kip-ft)	Lane Reduction & Impact Live Load Start-In (kip-ft)	Lane Reduction & Impact Live Load End-In (kip-ft)	Impact Pedestrian Load Max Start-In (kip-ft)	Impact Pedestrian Load Max End-In (kip-ft)
Structure 1	L_0-L_1	-49.04	-101.19	0.92	1.04	3.85	-6.51	-12.25	13.95	51.49	-87.00
	L_1-L_2	-130.93	-112.57	-0.41	2.46	2.81	-11.93	-5.41	32.91	37.51	-109.31
	L_2-L_3	-139.07	-79.42	1.25	2.66	3.95	-11.73	16.85	38.16	52.26	-106.76
	L_3-L_4	18.53	15.80	1.39	5.16	-3.42	-13.49	18.50	68.88	-45.70	-180.26
	L_4-L_5	-68.87	210.25	4.01	6.03	-5.20	-20.31	53.33	73.50	-70.21	-272.41
	L_5-L_6	7.25	-228.45	3.11	6.09	-5.42	-4.20	41.48	81.35	-72.41	-56.05
	L_6-L_7	-62.67	-177.71	3.65	5.20	-1.66	-6.02	14.79	71.02	-22.46	-80.44
	L_7-L_8	7.98	461.19	-0.86	14.85	0.01	0.00	-11.46	198.33	0.08	0.00
	L_8-L_9	439.37	-23.36	5.35	0.74	12.19	-4.22	69.22	9.60	157.76	54.63
	L_9-L_{10}	204.91	-116.77	2.15	3.03	3.98	6.43	27.67	39.15	51.46	83.17
	L_{10}-L_{11}	168.36	-118.39	4.76	2.24	3.57	-6.93	61.60	28.97	48.18	-89.64
	L_{11}-L_{12}	234.93	-217.51	2.80	3.81	3.79	-6.92	37.52	34.74	68.91	-126.51
	L_{12}-L_{13}	-19.53	-128.46	2.94	1.44	-1.69	-8.33	38.04	18.68	-129.98	-185.54
	L_{13}-L_{14}	179.75	-425.17	2.28	1.98	5.99	-18.21	29.50	25.57	77.48	-235.66
	L_{14}-L_{15}	408.18	-287.67	1.74	2.57	14.70	-4.70	24.06	33.66	214.70	-62.63
	L_{15}-L_{16}	-209.34	-318.54	0.76	0.67	-10.05	-14.34	9.81	8.68	-129.98	-185.54
	L_{16}-L_{17}	-374.78	83.83	-5.08	-0.94	-19.65	-1.04	-87.81	18.36	-263.43	-14.01
	L_{17}-L_{18}	-170.99	204.48	-3.96	4.10	-2.23	-2.90	-51.17	53.03	-28.87	-37.46
	L_{18}-L_{19}	-297.50	250.73	-7.47	3.53	-2.64	-1.67	-86.65	71.02	-24.16	-21.51
	L_{19}-L_{20}	-99.23	0.16	7.84	4.93	0.44	-0.43	-101.46	63.81	5.67	-5.55
	L_0-L_1	5.36	-218.26	-0.92	1.18	3.49	-10.14	-6.36	15.10	44.62	-129.58
	L_1-L_2	16.18	-247.31	-0.92	2.52	3.49	-10.54	-7.22	16.53	51.99	-136.54
	L_2-L_3	1.07	-191.80	-0.64	1.24	3.59	-11.10	-8.11	15.88	45.88	-141.83
	L_3-L_4	37.47	-207.61	-0.64	1.24	3.59	-11.10	-3.73	17.52	46.28	-141.83
	L_4-L_5	-286.08	-268.86	-0.21	2.13	-4.92	-16.86	-2.73	27.23	-62.87	-215.46
	L_5-L_6	-209.34	-318.54	0.71	0.67	-10.05	-14.34	9.82	8.68	-129.98	-185.54
	L_6-L_7	-467.27	-273.20	3.11	4.60	-10.71	-23.92	39.67	58.73	-136.35	-300.62
	L_7-L_8	-310.47	-45.78	3.75	6.94	-10.08	-15.62	47.95	88.60	-128.74	-199.52
	L_8-L_9	-408.18	-287.67	1.74	2.57	14.70	-4.70	24.06	33.66	214.70	-62.63
	L_9-L_{10}	-209.34	-318.54	0.76	0.67	-10.05	-14.34	9.81	8.68	-129.98	-185.54
	L_{10}-L_{11}	-374.78	83.83	-5.08	-0.94	-19.65	-1.04	-87.81	18.36	-263.43	-14.01
	L_{11}-L_{12}	-170.99	204.48	-3.96	4.10	-2.23	-2.90	-51.17	53.03	-28.87	-37.46
	L_{12}-L_{13}	-297.50	250.73	-7.47	3.53	-2.64	-1.67	-86.65	71.02	-24.16	-21.51
	L_{13}-L_{14}	-99.23	0.16	7.84	4.93	0.44	-0.43	-101.46	63.81	5.67	-5.55
Structure 2	L_0-L_1	-131.41	389.19	-8.28	7.38	-4.14	-2.42	-105.83	94.24	-52.89	-30.97
	L_1-L_2	-164.24	-140.43	-3.05	2.21	-7.11	-14.22	-64.37	28.15	-90.97	-181.63
	L_2-L_3	-367.38	696.22	-5.35	6.29	-2.67	-3.21	-292.15	170.34	-26.74	-40.07
	L_3-L_4	911.85	-326.76	2.48	1.69	24.04	-16.50	31.34	213.31	303.47	-208.34
	L_4-L_5	289.04	42.03	6.41	4.19	6.41	-8.21	-81.28	11.49	-168.09	-109.71
	L_5-L_6	515.61	-35.20	7.56	2.30	6.52	-8.48	95.46	28.99	82.29	-119.69
	L_6-L_7	201.51	-208.03	2.46	2.46	2.46	-4.92	28.63	28.63	35.72	-64.35
	L_7-L_8	252.11	-256.04	5.60	2.84	4.22	-10.42	82.03	33.83	53.27	-131.50
	L_8-L_9	230.58	-46.22	3.78	4.32	0.96	-12.61	47.69	54.55	12.12	-161.69
	L_9-L_{10}	43.89	-183.34	0.10	3.28	-0.85	-24.48	-1.31	41.35	-10.74	-309.06
	L_{10}-L_{11}	43.89	-183.34	0.10	3.28	-0.85	-24.48	-1.31	41.35	-10.74	-309.06
	L_{11}-L_{12}	-104.37	-8.61	1.90	5.20	-8.67	-14.64	23.92	66.65	-109.48	-184.82
	L_{12}-L_{13}	230.58	-46.22	3.78	4.32	0.96	-12.61	47.69	54.55	12.12	-161.69
	L_{13}-L_{14}	-65.51	173.40	-7.32	6.45	-4.31	-7.25	-62.40	81.48	-54.40	-91.55
	L_{14}-L_{15}	-30.91	151.01	-7.74	8.38	-6.10	-5.27	-87.74	105.74	-76.99	-66.52
	L_{15}-L_{16}	23.53	313.89	-5.63	7.70	-3.13	-3.33	-29.28	151.39	-39.49	-56.29
	L_{16}-L_{17}	-19.86	-197.53	0.77	3.20	-4.70	-15.68	9.68	40.41	-59.28	-197.90
	L_{17}-L_{18}	-237.47	-120.66	0.18	1.19	-3.16	-4.35	-119.16	59.43	-4.37	-26.28
	L_{18}-L_{19}	747.52	-264.15	4.57	0.51	25.36	-15.84	58.44	6.52	324.01	-202.40
	L_{19}-L_{20}	-140.80	-80.21	-1.66	3.79	-7.68	-9.93	-21.22	48.36	-86.07	-114.12
	L_{20}-L_{21}	-153.52	-80.21	-1.66	3.79	-7.68	-9.93	-21.22	48.36	-86.07	-114.12
	L_{21}-L_{22}	150.40	-145.70	2.65	6.73	5.88	-11.06	33.86	60.39	-75.09	-141.28
	L_{22}-L_{23}	747.52	-264.15	4.57	0.51	25.36	-15.84	58.44	6.52	324.01	-202.40
	L_{23}-L_{24}	95.69	-212.39	3.77	3.87	5.88	-12.74	48.17	49.38	75.18	-162.73
	L_{24}-L_{25}	-267.54	-248.09	1.76	3.87	5.88	-12.74	18.78	49.38	-267.54	-162.73
	L_{25}-L_{26}	-182.72	415.40	3.32	3.08	-13.42	-27.53	62.46	39.34	177.50	-301.72
	L_{26}-L_{27}	-370.16	165.14	1.62	0.88	-15.74	-19.99	46.25	11.19	-201.06	-264.96
	L_{27}-L_{28}	-267.54	-248.09	1.76	3.87	5.88	-12.74	18.78	49.38	-267.54	-162.73
	L_{28}-L_{29}	-304.14	-22.17	-9.55	3.08	-5.49	-8.31	-594.05	32.41	-553.07	-166.79
	L_{29}-L_{30}	-370.16	165.14	1.62	0.88	-15.74	-19.99	-94.07	11.19	-201.06	-264.96
	L_{30}-L_{31}	-222.88	59.03	-9.94	4.98	-2.56	-3.44	-127.04	63.61	-32.67	-43.09
	L_{31}-L_{32}	-178.62	53.86	-10.65	5.13	-2.72	-7.28	-144.00	63.61	-32.67	-43.09
Structure 3	L_0-L_1	42.77	-120.03	-0.38	0.41	5.97	-8.15	-4.88	5.36	63.62	-105.38
	L_1-L_2	192.98	-177.52	-0.45	0.45	4.24	-8.54	-5.78	5.85	54.79	-110.47
	L_2-L_3	78.52	-153.82	-0.15	0.15	1.53	-7.28	-4.33	5.24	19.78	-98.60
	L_3-L_4	55.38	-320.81	-0.15	0.70	-1.50	-10.70	-1.91	9.11	-24.52	-138.39
	L_4-L_5	31.98	-347.08	-0.37	0.70	-3.61	-10.70	-3.25	9.11	-39.42	-138.39
	L_5-L_6	-64.00	-370.85	2.01	2.15	-1.63	-22.17	0.10	27.77	-21.08	-286.62
	L_6-L_7	-370.60	82.40	10.75	4.74	-9.62	-11.12	-139.01	54.17	-123.68	-143.91
	L_7-L_8	-200.72	-149.84	-7.38	4.12	-3.16	-3.82	-98.12	53.28	-40.83	-49.48
	L_8-L_9	-131.46	131.12	-7.38	4.12	-3.16	-3.82	-98.12	53.28	-40.83	-49.48
	L_9-L_{10}	-131.75	166.74	-6.32	5.05	-0.51	-4.15	-81.60	78.24	-0.06	-53.64
	L_{10}-L_{11}	-31.28	166.74	-6.32	5.05	-0.51	-4.15	-81.60	78.24	-0.06	-53.64
	L_{11}-L_{12}	361.79	-170.90	8.88	0.79	12.79	-4.73	118.82	10.51	170.60	-88.61
	L_{12}-L_{13}	67.95	-170.90	7.98	3.90	4.73	-7.55	-25.26	52.09	63.20	-94.17
	L_{13}-L_{14}	189.89	5.64	4.08	4.40	4.03	-12.03	54.53	58.73	53.89	-160.74
	L_{14}-L_{15}	189.89	5.64	4.08	4.40	4.03	-12.03	54.53	58.73	53.89	-160.74
	L_{15}-L_{16}	-38.98	-56.53	3.17	1.52	-6.68	-13.68	42.30	20.25	-115.91	-182.71
	L_{16}-L_{17}	-38.98	-56.53	3.17	1.52	-6.68	-13.68	42.30	20.25	-115.91	-182.71
	L_{17}-L_{18}	-66.65	-75.79	-5.88	4.17	0.90	-9.08	-78.61	55.72	11.96	-115.71

YY Axis Moments from STAAD

Location	Member	Start-In (kip-ft)	End-In (kip-ft)	Max. Neg. Mom. (kip-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_top	M_n (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor C_{mm}
Structure 1	L_0-L_1	-0.22	0.14	-0.08	-0.31	0.61	2.23	—	—	—	—	—	—	—	—	—
	L_1-L_2	4.22	-9.26	-25.34	-15.75	0.00	0.00	-37.49	-14.70	-75.93	-22.50	1.10	4659	0.99	0.99	0.99
	L_2-L_3	-3.65	11.81	-29.71	-17.56	0.00	0.00	-25.64	-5.47	-69.33	6.42	1.10	4659	0.99	0.99	0.99
	L_3-L_4	20.60	1.99	-37.71	-8.70	0.00	0.00	19.16	63.53	-56.65	49.64	1.10	6220	0.99	0.99	0.99
	L_4-L_5	16.37	13.30	-21.26	97.10	0.00	0.00	16.32	54.78	-118.28	186.33	1.10	9156	0.99	0.99	0.99
	L_5-L_6	28.39	91.19	0.70	0.06	0.82	0.38	49.56	119.40	51.14	205.53	1.10	7814	0.99	0.99	0.99
	L_6-L_7	57.06	-89.33	-0.62	-0.66	0.00	0.00	53.15	-42.82	86.76	-72.63	1.10	6220	0.99	0.99	0.99
	L_7-L_8	-12.20	-30.27	0.05	0.16	0.00	0.00	-80.32	-114.63	-64.39	-75.06	1.10	4659	0.99	0.99	0.99
	L_8-L_9	-6.51	8.64	3.33	61.52	0.00	0.00	-130.03	-132.46	-117.25	-89.72	1.10	4659	0.99	0.99	0.99
	L_9-L_{10}	20.48	17.69	18.97	-18.33	0.00	0.00	-70.90	52.67	-74.03	6.14	1.10	13826	0.99	0.99	0.99
	L_{10}-L_{11}	85.42	-29.31	0.46	1.23	-1.75	-1.43	118.80	-17.06	80.89	-42.09	1.10	5717	0.99	0.99	0.99
	L_{11}-L_{12}	18.46	-7.93	-2.81	-22.52	0.00	0.00	29.27	-2.60	-22.85	-34.58	1.10	5717	0.99	0.99	0.99
	L_{12}-L_{13}	-13.55	-5.89	10.78	26.02	0.00	0.00	74.73	54.05	106.35	95.53	1.10	8578	0.99	0.99	0.99
	L_{13}-L_{14}	14.10	14.91	6.92	-6.60	32.17	32.71	275.89	363.71	1221.7	113.9	1.10	12002	0.99	0.99	0.99
	L_{14}-L_{15}	14.10	14.91	6.92	-6.60	32.17	32.71	275.89	363.71	1221.7	113.9	1.10	14237	0.99	0.99	0.99
	L_{15}-L_{16}	-13.55	-5.89	10.78	26.02	0.00	0.00	74.73	54.05	106.35	95.53	1.10	8578	0.99	0.99	0.99
	L_{16}-L_{17}	85.42	-29.31	0.46	1.23	-1.75	-1.43	118.80	-17.06	80.89	-42.09	1.10	5717	0.99	0.99	0.99
	L_{17}-L_{18}	18.46	-7.93	-2.81	-22.52	0.00	0.00	29.27	-2.60	-22.85	-34.58	1.10	5717	0.99	0.99	0.99
	L_{18}-L_{19}	20.48	17.69	18.97	-18.33	0.00	0.00	-70.90	52.67	-74.03	6.14	1.10	13826	0.99	0.99	0.99
	L_{19}-L_{20}	28.39	91.19	0.70	0.06	0.82	0.38	49.56	119.40	51.14	205.53	1.10	7814	0.99	0.99	0.99
	L_0-L_1	5.36	-218.26	-0.92	1.18	3.49	-10.14	-6.36	15.10	44.62	-129.58	0.00	0.00	-1.31	-264.10	64.97	-452.18	122.0	122.01	103.28	148.52	3592	1395.7	122	4914	0.98833	4022.0	-0.144	0.54	0.54	-0.56	-1.91	-0.09	-0.31	-1.04	-3.60	-1.12	-2.90	-13.24	-67.56	17.69	97.91	155.45	164.50	1098.1	1.10	6089	0.98343	5531.9	0.288	0.72	0.72	0.025	0.102	0.13	Yes	0.015	0.066	0.09	Yes	0.184	0.538	0.723	Yes	0.272	0.25	Yes	0.172	0.272	0.25	Yes	—	—	—	—	0.289	0.111	0.41	Yes	0.172	0.272	0.25	Yes
	L_1-L_2	16.18	-247.31	-0.92	2.52	3.49	-10.54	-7.22	16.53	51.99	-136.54	0.00	0.00	-200.87	-307.02	-29.79	-349.06	122.0	122.01	103.28	148.52	3592	1395.7	122	4914	0.98833	4022.0	-0.144	0.54	0.54	-0.56	-1.91	-0.09	-0.31	-1.04	-3.60	-3.05	-7.34	-33.51	-67.56	17.69	97.91	155.45	164.50	1098.1	1.10	6089	0.98343	5531.9	-0.408	0.46	0.46	0.044	0.289	0.111	0.41	Yes	0.172	0.272	0.25	Yes	—	—	—	—
	L_2-L_3	1.07	-191.80	-0.64	1.24	3.59	-11.10	-8.11	15.88	45.88	-141.83	0.00	0.00	-9.16	-228.70	61.03	-433.72	157.0	157.00	151.98	208.63	4946	2118.1	131	6766	0.99068	5176.2	-0.141	0.54	0.54	60.37	43.99	-0.07	0.27	-2.21	-1.20	-0.62	-1.83	-0.86	3.39	-28.24	-2.68	0.00	77.37	61.89	71.21	1429.6	1.10	8383	0.98161	8388.3	0.798	0.92	0.92	0.363	0.072	0.44	Yes	0.238	0.542	0.29	Yes	—	—	—	—
	L_3-L_4	37.47	-207.61	-0.64	1.24	3.59	-11.10	-3.73	17.52	46.28	-141.83	0.00	0.00	58.29	-441.92	61.03	-433.72	157.0	157.00	151.98	208.63	4946	2118.1	131	6766	0.99140	4086.6	-0.128	0.54	0.54	60.37	43.99	-0.07	0.27	-2.21	-1.20	-0.62	-1.83	-17.66	3.39	-28.24	-2.68	0.00	77.37	61.89	71.21	1429.6	1.10	8383	0.98161	8388.3	0.798	0.92	0.92	0.363	0.072	0.44	Yes	0.238	0.542	0.29	Yes	—	—	—	—
	L_4-L_5	-286.08	-268.86	-0.21	2.13	-4.92	-16.86	-2.73	27.23	-62.87	-215.46	0.00	0.00	-375.48	-353.13	453.64	-868.62	174.3	174.28	163.71	320.70	7266	3127.5	184	10563	0.99524	5764.8	0.678	0.87	0.87	50.98	158.89	75.55	-119.83	385.1	385.05	321.50	445.45	1568.6	1.16	14832	0.99155	12607.3	0.553	0.84	0.84	0.584	0.074	0.46	Yes	0.254	0.544	0.30	Yes	—	—	—	—
	L_5-L_6	-209.34	-318.54	0.76	0.67	-10.05	-14.34	9.82	8.68	-129.98	-185.54	0.00	0.00	-299.39	-402.82	440.11	-655.30	179.7	179.69	170.68	251.43	6743	3050.7	140	8297	0.99132	5524.6	0.673	0.87	0.87	83.92	64.04	-0.21	0.81	-6.32	-3.56	-1.73	-4.29	-29.27	5.01	-41.85	-3.96	0.00	107.68	88.42	-112.78	119.84	428.2	428.23	482.00	1947.0	1.15	14237	0.99172	12356.7	0.572	0.84	0.84	0.562	0.072	0.43	Yes	0.246	0.543	0.29	Yes	—	—	—	—
	L_6-L_7	-467.27	-273.20	3.11	4.60	-10.71	-23.92	39.67	58.73	-136.35	300.62	0.00	0.00	-555.88	-278.81	788.35	-752.48	216.3	216.33	205.74	344.19	7625	3425.8	199	11778	0.99514	7132.6	0.958	0.98	0.98	67.30	38.48	-0.69	0.10	8.03	4.20	-35.06	-4.46	-137.88	68.42	-112.78	119.84	428.2	428.23	482.00	1947.0	1.15	16201	0.99179	14288.7	-0.351	0.46	0.46	0.364	0.078	0.45	Yes	0.241	0.544	0.29	Yes	—	—	—	—
	L_7-L_8	-310.47	-45.78	3.75	6.94	-10.08	-15.62	47.95	88.60	-128.74	-199.52	0.00	0.00	-341.34	-55.68	-570.97	-318.88	205.7	205.71	195.15	274.47	5445	2642.2	133	9057	0.99495	6781.3	0.558	0.82	0.82	-104.71	-3.39	0.11	0.24	1.87	-1.55	-0.43	-1.34	-105.05	-30.20	330.3	230.27	276.06	369.76	1851.4	1.12	12202	0.99199	10877.1	0.004	0.60	0.60	0.364	0.076	0.45	Yes	0.241	0.544	0.29	Yes	—	—	—	—
	L_8-L_9	-408.18	-287.67	1.74	2.57	14.70	-4.70	24.06	33.66	214.70	-62.63	0.00	0.00	-484.47	-301.15	-598.20	-322.30	142.3	142.32	168.54	149.99	3050	1744.7	92	5524	0.99122	5524.6	0.673	0.87	0.87	-48.88	1.52	-0.22	0.09	0.43	0.31	-0.26	-0.06	-32.86	5.01	-41.85	-3.96	0.00	107.68	88.42	-112.78	119.84	428.2	428.23	482.00	1947.0	1.15	14237	0.99172	12356.7	0.572	0.84	0.84	0.562	0.072	0.43	Yes	0.246	0.543	0.29	Yes	—	—	—	—
	L_9-L_{10}	-209.34	-318.54	0.76	0.67	-10.05	-14.34	9.81	8.68	-129.98	-185.54	0.00	0.00	-299.39	-402.82	-441.11	-655.30	179.7	179.69	170.68	251.43	6743	3050.7	140	8297	0.99132	5524.6	0.673	0.87	0.87	-83.92	64.04	-0.21	-18.71	6.27	-1.45	5.35	-375.47	322.87	431.42	1347.7	1.15	14237	0.99172	12356.7	0.572	0.84	0.84	0.562	0.072	0.43	Yes	0.246	0.543	0.29	Yes	—	—	—	—
	L_{10}-L_{11}	-374.78	83.83	-5.08	-0.94	-19.65	-1.04	-87.81	18.36	-263.43	-14.01	0.00	0.00	-387.81	-58.58	-602.42	-210.62	152.6	152.62	153.9	183.59	3806	2180.4	115	7208	0.99312	5524.6	0.673	0.87	0.87	-87.81	58.58	302.9	302.95	29.42	342.42	1154.2	1.12	11234	0.99142	9955.2	0.115	0.49	0.49	0.364	0.072	0.43	Yes	0.246	0.543	0.29	Yes	—	—	—	—
	L_{11}-L_{12}	-170.99	204.48	-3.96	4.10	-2.23	-2.90	-51.17	53.03	-28.87	-37.46	0.00	0.00	-288.81	95.56	-259.82	-22.07	121.1	121.08	112.11	157.22	3591	1640.0	130	5188	0.99044	3891.8	-0.331	0.47	0.47	-75.85	-11.28	-1.20	-1.48	-0.97	-3.42	-15.55	-19.08	-12.56	-44.29	0.00	0.00	-85.43	-39.47	-91.54	-72.24	213.3	213.34	184.04	236.66	908.1	1.11	7813	0.99738	7024.3	0.414	0.77	0.77	0.328	0.068	0.40	Yes	0.210	0.541	0.26	Yes	—	—	—	—
	L_{12}-L_{13}	-297.50	250.73	-7.47	3.53	-2.64	-1.67	-86.65	71.02	-24.16	-21.51	0.00	0.00	-265.96	418.99	-314.68	294.30	53.6	53.58	74.62	100.37	2746	1096.2	121	3244	0.99056	2755.5	-0.949	0.47	0.47	-52.37	-23.39	-5.61	-6.46	-1.74	-4.00	-22.56	-5.56	-22.68	-51.75	0.00	0.00	-102.48	-38.16	-97.28	-78.98	133.1	133.11	107.48	140.13	629.3	1.10	4822	0.99810	4363.9	0.232	0.69	0.69	0.329	0.068	0.40	Yes	0.178	0.100	0.28	Yes	—	—	—	—
	L_{13}-L_{14}	-99.23	0.16	7.84	4.93	0.44	-0.43	-101.46	63.81	5.67	-5.55	0.00	0.00	-260.90	63.17	-121.63	-7.00	83.6	83.58	67.49	100.97	2740	1098.2	121	3232	0.99056	2755.5	-0.319	0.47	0.47	-28.11	-6.27	4.15	0.92	11.03	0.33	53.75	12.06	5.40	1.59	-7.73	133.1	133.11	119.24	146.13	626.8	1.10	4822	0.99098	4383.9	0.223	0.69	0.69	0.329	0.068	0.40	Yes	0.193	0.058	0.25	Yes	0.192	0.601	0.25	Yes
	L_0-L_1	5.36	-218.26	-0.92	1.18	3.49	-10.14	-6.36	15.10	44.62	-129.58	0.00	0.00	-1.31	-264.10	64.97	-452.18	122.0	122.01	103.28	148.52	3592	1395.7	122	4914	0.98833	4022.0	-0.144	0.54	0.54	-0.56	-1.91	-0.09	-0.31	-1.04	-3.60	-1.12	-2.90	-13.24	-67.56	17.69	97.91	155.45	164.50	1098.1	1.10	6089	0.98343	5531.9	0.288	0.72	0.72	0.025	0.102	0.13	Yes	0.015	0.066	0.09	Yes	0.184	0.538	0.723	Yes	0.272	0.25	Yes	0.172	0.272	0.25	Yes	—	—	—	—
	L_1-L_2	16.18	-247.31	-0.92	2.52	3.49	-10.54	-7.22	16.53	51.99	-136.54	0.00	0.00	-200.87	-307.02	-29.79	-349.06	122.0	122.01	103.28	148.52	3592	1395.7	122	4914	0.98833	4022.0	-0.144	0.54	0.54	-0.56	-1.91	-0.09	-0.31	-1.04	-3.60	-3.05	-7.34	-33.51	-67.56	17.69	97.91	155.45	164.50	1098.1	1.10	6089	0.98343	5531.9	-0.408	0.46	0.46	0.044	0.289	0.111	0.41	Yes	0.172	0.272

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: SC1
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
2.0ksi Substitution 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-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
Structure 1	U_0~L_1	-55.75	82.39	-3.49	4.27	0.69	-0.90	-48.60	57.09	9.22	12.01
	U_1~L_1	-14.37	23.26	-3.56	3.40	0.91	-0.92	-47.61	45.37	12.17	-12.25
	U_1~L_2	43.13	5.17	-2.90	3.52	1.09	-1.24	-38.72	44.34	14.89	-16.55
	L_1~L_2	36.81	-39.20	-1.68	1.95	1.61	-1.42	-22.43	26.00	21.44	-18.96
	U_2~L_2	49.94	-49.31	-0.63	0.46	2.01	-1.61	-8.36	6.17	28.24	-27.43
	U_2~L_3	57.83	-70.07	0.02	0.62	2.99	-3.32	0.24	0.23	28.88	-44.29
	L_2~L_3	67.02	-66.38	0.08	0.11	2.40	-2.42	0.00	0.00	23.12	-45.58
	U_3~L_3	102.14	-112.44	0.14	0.12	5.00	-5.17	-1.91	1.66	66.85	-69.00
	U_3~L_4	-10.55	7.04	-4.75	5.66	0.14	-7.23	-63.48	75.58	82.00	-96.55
	L_3~L_4	-144.63	166.25	-4.46	4.74	0.36	-0.33	-263.06	298.89	187.92	210.51
	U_4~L_4	-101.27	95.46	-3.91	4.01	0.16	-0.36	-50.62	51.82	2.02	-4.66
	U_4~L_5	-111.05	109.51	-4.31	5.17	0.02	-0.17	-56.80	69.22	0.72	-1.71
	L_4~L_5	-96.41	93.86	-3.70	3.82	0.33	-0.24	-47.89	49.41	4.31	-3.09
	U_5~L_5	-90.90	75.93	-3.48	3.60	0.67	-0.60	-44.97	46.55	8.63	-8.42
	U_5~L_6	-33.33	39.85	-1.30	1.46	0.99	-0.79	-18.10	20.56	12.73	-10.79
	L_5~L_6	8.32	-15.89	-1.30	1.26	3.16	-3.33	-16.82	16.30	40.83	-43.12
	U_6~L_6	47.73	-59.30	0.70	0.70	3.46	-3.58	-0.24	0.24	50.27	-63.61
	U_6~L_7	61.54	-72.81	-0.53	0.54	3.80	-3.95	0.00	0.00	71.09	-85.62
	L_6~L_7	133.07	-138.05	-0.74	0.74	6.47	-6.65	0.00	0.00	150.42	-157.03
	U_7~L_7	158.01	-154.56	-0.76	0.68	7.49	-7.37	-9.81	8.84	96.55	-95.39
	U_7~L_8	131.43	-210.81	-0.32	0.55	5.21	-7.14	-4.08	7.06	67.46	-92.42
	L_7~L_8	144.68	167.26	-0.19	0.60	5.68	-5.49	-4.04	5.04	74.26	-74.26
	U_8~L_8	-122.98	131.23	-5.62	5.72	0.82	-0.84	-71.84	73.12	10.41	-10.74
	U_8~L_9	-126.85	127.72	-6.12	5.95	1.01	-1.04	-72.65	73.87	12.81	-13.01
	L_8~L_9	-62.37	68.86	-3.27	3.33	0.65	-0.66	-41.75	42.57	8.24	-8.44
	U_9~L_9	37.86	-43.18	-3.25	3.20	0.37	-0.37	-43.46	41.58	11.54	-13.32
	U_9~L_{10}	-9.12	15.71	3.14	3.28	1.20	-1.15	-40.12	41.91	15.36	14.65
	L_9~L_{10}	14.83	-14.93	-2.53	2.60	1.56	-1.61	-32.27	33.19	19.93	-20.56
	U_{10}~L_{10}	39.68	-45.44	-1.35	1.39	2.20	-2.27	-13.26	14.52	25.77	-28.15
	U_{10}~L_{11}	88.70	-97.90	-0.90	0.89	4.42	-4.52	-11.49	8.78	56.41	-57.71
	L_{10}~L_{11}	153.02	-153.05	-0.34	0.34	7.62	-7.85	-1.22	1.22	83.01	-84.77
	U_{11}~L_{11}	140.07	-146.97	0.00	0.11	5.95	-6.29	-0.05	1.42	75.96	-79.81
	U_{11}~L_{12}	148.94	-153.41	0.14	0.26	5.84	-6.45	-1.82	3.37	74.67	-77.72
	L_{11}~L_{12}	184.34	-189.55	0.46	0.46	7.23	-7.49	-1.82	3.37	74.67	-77.72
	U_{12}~L_{12}	185.37	-182.48	-0.70	0.69	7.23	-6.87	-8.91	8.84	92.34	-87.79
	U_{12}~L_{13}	72.78	71.71	-0.72	0.72	2.79	-2.75	-57.40	57.70	83.00	-82.14
	L_{12}~L_{13}	-128.23	129.95	-5.64	5.15	0.75	-0.67	-71.16	65.02	9.43	-8.41
	U_{13}~L_{13}	-129.07	129.82	-5.76	5.15	0.75	-0.67	-72.01	65.02	9.43	-8.41
	U_{13}~L_{14}	-125.93	122.62	-6.38	6.23	0.76	-0.71	-80.01	78.63	9.58	-9.01
	L_{13}~L_{14}	-109.68	106.90	-6.35	6.55	1.00	-0.98	-80.22	82.64	12.61	-12.40
	U_{14}~L_{14}	-88.03	79.89	-5.39	5.66	1.00	-0.98	-64.86	67.13	12.61	-12.40
	U_{14}~L_{15}	-43.26	43.75	-3.55	3.57	0.84	-0.84	-44.82	45.07	10.63	-10.58
	L_{14}~L_{15}	29.76	34.24	-2.61	2.60	0.84	-0.84	-30.11	30.11	10.63	-10.58
	U_{15}~L_{15}	-3.29	1.62	-1.87	2.00	1.59	-1.77	-23.62	25.23	20.07	-22.30
	U_{15}~L_{16}	28.80	28.80	-1.46	1.46	2.00	-2.00	-23.62	23.62	20.07	-22.30
	L_{15}~L_{16}	46.56	-51.19	-0.99	0.99	3.64	-3.77	-12.47	12.49	45.94	-47.57
	U_{16}~L_{16}	62.64	-61.32	-1.01	0.97	4.82	-4.76	-12.70	12.26	60.83	-60.05
	U_{16}~L_{17}	108.55	-105.78	-1.07	1.04	7.88	-8.00	-13.66	13.16	99.47	-100.94
	L_{16}~L_{17}	52.79	-74.30	-0.63	0.35	5.39	-6.88	-75.20	84.76	71.53	-81.53
	U_{17}~L_{17}	114.59	-114.85	-0.53	0.44	7.56	-7.18	-6.63	5.53	95.40	-90.64
	U_{17}~L_{18}	132.83	-132.83	-0.66	0.66	8.38	-8.38	-6.63	6.63	95.40	-90.64
	L_{17}~L_{18}	-122.25	119.98	-6.19	4.87	0.81	-0.76	-66.32	62.25	10.36	-10.75
	U_{18}~L_{18}	-93.55	87.71	0.52	4.83	0.65	-0.90	-64.16	61.71	8.24	-11.43
	U_{18}~L_{19}	-52.68	49.04	-0.42	4.52	0.65	-0.90	-64.16	61.71	8.24	-11.43
	L_{18}~L_{19}	-96.77	103.24	-5.04	5.32	0.07	-0.30	-64.44	67.91	0.88	-3.78
	U_{19}~L_{19}	-51.52	57.02	-4.28	5.13	0.07	-0.30	-49.53	54.93	0.88	-3.78
	U_{19}~L_{20}	-83.45	70.58	-4.50	4.56	0.51	-0.45	-57.48	58.27	6.55	-5.69
	L_{19}~L_{20}	-32.67	38.68	-2.26	2.54	0.76	-0.80	-28.90	32.44	9.72	-10.90
	U_{20}~L_{20}	-16.12	17.29	-1.52	1.52	0.76	-0.80	-28.90	28.90	9.72	-10.90
	U_{20}~L_{21}	4.43	-8.37	-1.30	1.23	2.87	-3.10	-16.56	15.65	39.71	-39.66
	L_{20}~L_{21}	18.50	-23.29	-0.64	0.64	2.87	-3.10	-16.56	16.56	39.71	-39.66
	U_{21}~L_{21}	47.21	-50.58	-0.79	0.80	3.69	-3.87	-10.11	10.21	47.14	-49.60
	U_{21}~L_{22}	52.79	-74.30	-0.63	0.35	5.39	-6.88	-75.20	84.76	71.53	-81.53
	L_{21}~L_{22}	104.42	-111.67	-1.13	1.06	7.79	-7.64	-14.49	13.59	99.53	-87.57
	U_{22}~L_{22}	108.14	-132.78	-0.57	0.94	5.04	-7.40	-7.32	11.95	64.38	-99.65
	U_{22}~L_{23}	114.31	-114.31	-0.53	0.53	7.56	-7.56	-6.63	6.63	95.40	-95.40
	L_{22}~L_{23}	-123.31	120.98	-6.33	5.19	0.81	-0.76	-66.32	62.25	10.36	-10.75
	U_{23}~L_{23}	-109.30	107.29	-6.60	5.99	0.49	-0.47	-72.42	72.34	6.31	-6.02
	U_{23}~L_{24}	-65.03	63.04	-5.87	5.87	0.49	-0.47	-65.03	63.04	6.31	-6.02
	L_{23}~L_{24}	-48.62	58.77	-3.21	3.23	0.41	-0.43	-41.08	41.80	5.24	-6.03
	U_{24}~L_{24}	-16.12	17.29	-1.52	1.52	0.76	-0.80	-28.90	28.90	9.72	-10.90
	U_{24}~L_{25}	-5.41	11.54	2.97	3.09	1.00	-1.02	-38.48	40.01	12.96	13.24
	L_{24}~L_{25}	27.84	30.65	-1.65	1.69	1.83	-1.94	-21.28	21.88	23.61	-25.05
	U_{25}~L_{25}	59.15	42.86	-2.40	2.40	1.83	-1.94	-21.28	21.88	23.61	-25.05
	U_{25}~L_{26}	75.52	-83.00	-0.43	0.30	4.05	-4.19	-5.54	3.87	52.35	54.19
	L_{25}~L_{26}	75.52	-117.43	-0.43	1.04	4.05	-4.19	-5.54	3.87	52.35	54.19
	U_{26}~L_{26}	94.97	-87.87	0.15	0.30	4.70	-5.28	1.91	3.84	60.77	-68.30
	U_{26}~L_{27}	139.42	-154.57	0.18	0.17	6.16	-6.67	-2.28	2.15	79.64	-86.29
	L_{26}~L_{27}	99.06	-131.45	0.04	0.03	4.76	-5.97	0.48	0.39	61.60	-77.28
	U_{27}~L_{27}	52.79	-74.30	-0.63	0.35	5.39	-6.88	-75.20	84.76	71.53	-81.53
	U_{27}~L_{28}	-62.86	69.52	-3.86	3.89	0.94	-0.33	-51.55	51.93	4.80	-4.34
	L_{27}~L_{28}	-38.80	43.42	2.26	4.65	0.00	0.00	-38.80	43.42	2.26	-4.65
	U_{28}~L_{28}	-33.83	35.50	0.09	1.35	0.00	0.00	-33.83	35.50	0.09	-1.35
	U_{28}~L_{29}	-28.34	27.00	4.88	-4.02	0.00	0.00	-28.34	27.00	4.88	-4.02
	L_{28}~L_{29}	-24.09	24.60	23.09	-26.53	0.00	0.00	-24.09	24.60	23.09	-26.53
	U_{29}~L_{29}	-17.62	19.95	38.17	-40.52	0.00	0.00	-17.62	19.95	38.17	-40.52
	U_{29}~L_{30}	-18.04	18.40	53.52	-58.31	0.00	0.00	-18.04	18.40	53.52	-58.31
	L_{29}~L_{30}	-4.03	12.75	52.22	-52.38	0.00	0.00	-4.03	12.75	52.22	-52.38

ZZ Axis Moment Properties

Location	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)	I_{xx} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_y (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{b(UC)}$	$C_{b(LC)}$
Structure 1	U_0~L_1	-133.05	181.32	80.49	91.92	13.2	13.18	15.42	20.35	2	618.4	1.54	672	1.5	652.4
	U_1~L_1	-54.05	58.68	-93.11	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.903
	U_1~L_2	-41.19	58.02	-27.32	-26.75	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.903
	L_1~L_2	22.32	-28.75	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.930	0.23
	U_2~L_2	54.05	58.68	-93.11	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.982
	U_2~L_3	75.50	80.79	127.02	-148.66	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	L_2~L_3	85.82	83.14	150.79	-137.15	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	U_3~L_3	-1.91	1.66	66.85	-69.00	0.00	0.00	130.29	-144.62	219.68	-235.88	16.2	16.18	18.36	27.38
	U_3~L_4	-63.48	75.58	82.00	-96.55	0.00	0.00	-96.25	107.40	82.89	-116.36	107.1	107.13	107.11	162.71
	L_3~L_4	-263.06	298.89	187.92	210.51	0.00	0.00	-263.06	298.89	187.92	210.51	31.4	31.42	52.07	54.13
	U_4~L_4	-197.46	191.47	-128.03	118.05	32.8	32.76	33.44	54.32	14	1236.0	1.66	1793	1.5	1621.6
	L_4~L_5	-216.56	260.94	-144.65	201.76	32.8	32.76	42.74	63.30	14	1389.6	1.53	2155	1.5	2115.6
	U_5~L_5	-187.68	186.26	-119.73	118.00	21.1	21.09	21.09	36.48	10	1137.6	1.68	1770	1.5	1544.0
	L_5~L_6	-137.63	159.22	-87.93	87.76	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_6~L_6	-81.19	89.82	-52.24	52.62	17.2	17.24	17.24	26.54	2	793.3	1.54	782	1.5	763.3
	U_6~L_7	-11.05	0.55	63.90	-76.70	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_6~L_7	50.27	-33.61	32.40	-40.36	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_7~L_7	71.09	-85.62	143.95	-161.13	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	L_7~L_8	150.42	-157.03	281.84	-291.37	19.4	19.37	35.09	35.09	53.74	1187.1	1.57	1766	1.5	1737.0
	U_7~L_8	192.66	-189.44	331.44	-324.94	32.4	32.42	42.74	42.74	65.30	1389.6	1.53	2155	1.5	2115.6
	L_8~L_9	263.06	298.89	187.92	210.51	0.00	0.00	263.06	298.89	187.92	210.51	31.4	31.42	52.07	54.13
	U_8~L_8	274.23	303.33	218.68	243.33	32.4	32.42	42.74	42.74	65.30	1389.6	1.53	2155	1.5	2115.6
	U_8~L_9	260.66	146.30	156.64	86.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.903
	L_9~L_{10}	144.99	76.36	88.63	44.92	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.903
	U_9~L_9	335.36	144.99	70.36	78.70	21.5	21.54	21.54	33.27	3	987.9	1.54	1098	1.5	1066.2
	U_9~L_{10}	103.04	78.92	44.86	46.16	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{10}~L_{11}	64.01	74.50	8.11	1.37	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{10}~L_{10}	22.67	23.75	45.19	-46.13	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{10}~L_{11}	34.22	-40.18	85.08	-95.66	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{10}~L_{11}	100.50	-115.86	188.76	-202.30	20.8	20.80	20.67	34.64	3	1037.5	1.67	1743	1.5	1529.6
	U_{11}~L_{11}	140.07	-146.97	0.00	0.11	5.95	-6.29	-0.05	1.42	75.96	-79.81	46.7	46.71	71.43	10
	U_{11}~L_{12}	148.94	-153.41	0.14	0.26	5.84	-6.45	-1.82	3.37	74.67	-77.72	0.00	0.00	0.00	0.00
	L_{11}~L_{12}	184.34	-189.55	0.46	0.46	7.23	-7.49	-1.82	3.37	74.67	-77.72	0.00	0.00	0.00	0.00
	U_{12}~L_{12}	229.40	-229.73	361.01	-351.35	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{12}~L_{13}	72.78	71.71	83.00	-82.14	0.00	0.00	-57.40	57.70	83.00	-82.14	39.2	39.17	59.11	63.33
	L_{12}~L_{13}	299.21	253.45	164.44	158.00	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{13}~L_{13}	221.98	206.52	143.93	133.80	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{13}~L_{14}	268.37	261.62	151.25	147.69	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	L_{13}~L_{14}	268.37	261.62	151.25	147.69	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{14}~L_{14}	240.87	249.01	128.19	125.46	39.8	39.83	39.83	59.23	6	1264.6	1.53	1903	1.5	1922.1
	U_{14}~L_{15}	144.34	145.49	83.58	84.77	20.8	20.80	20.67	34.64	3	1037.5	1.67	1743	1.5	1529.6
	L_{14}~L_{15}	114.51	110.47	42.42	43.12	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{15}~L_{15}	65.10	64.19	34.19	34.19	17.2	17.24	17.24	26.54	2	793.3	1.54	782	1.5	763.3
	U_{15}~L_{16}	32.39	34.90	24.42	-26.88	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	L_{15}~L_{16}	13.80	22.54	2.45	-10.77	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{16}~L_{16}	44.31	-50.32	120.25	-128.39	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_{16}~L_{17}	64.92	-63.78	160.51	-157.77	18.7	18.71	18.61	31.48	8	970.0	1.68	1639	1.5	926.1
	L_{16}~L_{17}	107.17	-110.66	249.55	-257.36	18.7	18.71	18.61	31.48	8	970.0	1.68	1639	1.5	926.1
	U_{17}~L_{17}	120.89	-120.39	267.83	-268.71	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{17}~L_{18}	132.83	-132.83	272.98	-267.13	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	L_{17}~L_{18}	140.35	-142.11	272.98	-267.13	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{18}~L_{18}	132.83	-132.83	272.98	-267.13	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	U_{18}~L_{19}	245.14	236.89	-145.45	143.30	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	L_{18}~L_{19}	205.15	194.25	-111.03	99.16	43.2	43.24	43.16	70.66	10	1516.6	1.63	2332	1.5	2140.4
	U_{19}~L_{19}	218.50	207.29	-122.59	110.21	42.1	42.16	42.16	67.53	8	1484.6	1.63	2222	1.5	2084.4
	U_{19}~L_{20}	245.14	236.89	-145.45	143.30	39.2	39.17	59.11	63.33	14	1392.6	1.62	2090	1.5	1938.9
	L_{19}~L_{20}	205.15	194.25	-111.03	99.16	43.2	43.24	43.16	70.66	10	1516.6	1.63	2332	1.5	2140.4
	U_{20}~L_{20}	218.50	207.29	-122.59	110.21	42.1	42.16	42.16	67.53	8	1484.6	1.63	2222	1.5	2084.4
	U_{20}~L_{21}	209.58	222.49	-124.66	129.29	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	L_{20}~L_{21}	209.58	222.49	-124.66	129.29	43.0	43.01	42.96	68.66	14	1479.6	1.60	2266	1.5	2129.0
	U_{21}~L_{21}	157.21	167.51	-87.54	93.46	46.7	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.903
	U_{21}~L_{22}	52.79	-74.30	-0.63	0.35	5.39	-6.88	-75.20	84.76	71.53	-81.53	107.1	107.13	107.11	162.71
	L_{21}~L_{22}	104.42	-111.67	-1.13	1.06	7.79	-7.64	-14.49	13.59	99.53	-87.57	46.7	46.71	46.71	71.43
	U_{22}~L_{22}	108.14	-132.78	-0.57	0.94	5.04	-7.40	-7.32	11.95	64.38	-99.65	46.7	46.71	71.43	10
	U_{22}~L_{23}	114.31	-114.31	-0.53	0.53	7.56	-7.56	-6.63	6.63	95.40	-95.40	46.7	46.71	71.43	10
	L_{22}~L_{23}	-123.31	120.98	-6.33	5.19	0.81	-0.76	-66.32	62.25	10.36	-10.75	21.5	21.54	21.54	33.27
	U_{23}~L_{23}	-109.30	107.29	-6.60	5.99	0.49	-0.47	-72.42	72.34	6.31	-6.02	21.5	21.54	21.54	33.27
	U_{23}~L_{24}	-65.03	63.04	-5.87	5.87	0.49	-0.47	-65.03	63.04	6.31	-6.02	21.5	21.54	21.54	33.27
	L_{23}~L_{24}	-48.62	58.77	-3.21	3.23	0.41	-0.43	-41.08	41.80	5.24	-6.03	19.4	19.37	19.37	29.87
	U_{24}~L_{24}	-16.12	17.29	-1.52	1.52	0.76	-0.80	-28.90	28.90	9.72	-10.90	19.4	19.37	19.37	29.87
	U_{24}~L_{25}	-5.41	11.54	2.97	3.09	1.00	-1.02	-38.48	40.01	12.96	13.24	0.00	0.00	-57.05	67.01
	L_{24}~L_{25}	27.84	30.65	-1.65	1.69	1.83	-1.94	-21.28	21.88	23.61	-25.05	0.00	0.00	8.52	-10.41
	U_{25}~L_{25}	59.15	42.86	-2.40	2.40	1.83	-1.94	-21.28	21.88	23.61	-25.05	0.00	0.00	58.17	-69.20
	U_{25}~L_{26}	75.52	-83.00	-0.43	0.30	4.05	-4.19	-5.54	3.87	52.35	54.19	0.00	0.00	104.02	-102.87
	L_{25}~L_{26}	75.52	-117.43	-0.43	1.04	4.05	-4.19	-5.54	3.87	52.35	54.19	0.00	0.00	104.02	-102.87
	U_{26}~L_{26}	94.97	-87.87	0.15	0.30	4.70	-5.28	1.91	3.84	60.77	-68.30	0.00	0.00	125.95	-122.24
	U_{26}~L_{27}	139.42	-154.57	0.18	0.17	6.16	-6.67	-2.28	2.15	79.64	-86.29	0.00	0.00	173.09	-197.49
	L_{26}~L_{27}	99.06	-131.45	0.04	0.03	4.76	-5.97	0.48	0.39	61.60	-77.28	0.00	0.00	129.41	-170.38
	U_{27}~L_{27}	52.79	-74.30	-0.63	0.35	5.39	-6.88	-75.20	84.76	71.53	-81.53	107.1	107.13	107.11	162.71
	U_{27}~L_{28}	-62.86	69.52	-3.86	3.89	0.94	-0.33	-51.55	51.93	4.80	-4.34	0.00	0.00

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:	SC1
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_0-L_1	-23.63	7.60	2.00	0.56	0.28	-0.23				
	U_1-L_2	-26.77	8.71	-0.92	0.43	-0.02	-2.31				
	U_2-L_3	-7.75	3.39	-5.25	-0.41	-0.56	-1.72				
	U_3-L_4	7.94	-13.41	0.42	0.10	-0.73	-0.86				
	U_4-L_5	-14.57	18.47	0.19	0.09	-0.12	-0.38				
	U_5-L_6	-37.80	77.38	2.42	2.09	0.00	-0.01				
	U_6-L_7	-73.28	134.31	4.61	3.70	0.00	-0.01				
	U_7-L_8	-9.33	102.64	-1.96	3.92	0.15	-0.01				
	U_8-L_9	-5.01	118.90	-1.12	2.89	0.34	-0.19				
	U_9-L_{10}	-26.26	30.97	5.10	-1.67	0.00	-0.13				
	U_{10}-L_{11}	-64.28	73.58	-1.96	1.67	-0.01	-0.00				
	U_{11}-L_{12}	-77.89	77.89	2.06	1.64	-0.07	-0.07				
	U_{12}-L_{13}	-65.20	48.77	1.85	1.81	0.00	-0.49				
	U_{13}-L_{14}	-24.89	8.62	-0.76	0.57	0.01	-0.67				
	U_{14}-L_{15}	-0.81	2.68	-22.63	0.16	0.00	-0.00				
	U_{15}-L_{16}	-25.30	9.99	-1.56	1.28	0.39	-0.60				
	U_{16}-L_{17}	-52.39	20.92	-2.22	1.72	0.00	-0.00				
	U_{17}-L_{18}	-101.98	74.35	-4.06	3.65	0.49	-0.48				
	U_{18}-L_{19}	-115.65	79.79	-4.65	3.71	0.40	-0.41				
	U_{19}-L_{20}	-76.53	79.74	-3.03	3.66	0.10	-0.24				
	U_{20}-L_{21}	-109.78	99.44	-3.94	3.85	0.53	-0.55				
	U_{21}-L_{22}	-39.86	78.41	-2.73	2.72	0.00	-0.00				
	U_{22}-L_{23}	-90.94	71.81	-3.73	3.29	0.76	-0.66				
	U_{23}-L_{24}	-39.34	38.28	-1.61	1.44	0.28	-0.57				
	U_{24}-L_{25}	-20.34	9.87	-1.61	1.44	0.28	-0.57				
	U_{25}-L_{26}	-1.38	-11.20	-1.40	1.34	0.00	-0.00				
	U_{26}-L_{27}	6.85	-23.86	0.73	0.42	0.74	-1.30				
	U_{27}-L_{28}	-44.40	35.30	-1.63	1.40	0.40	-0.92				
	U_{28}-L_{29}	-96.54	69.68	-3.62	3.16	0.00	-0.00				
	U_{29}-L_{30}	-85.37	67.20	-3.71	2.69	-0.01	-0.28				
	U_{30}-L_{31}	-42.17	39.29	-4.12	2.32	0.00	-0.00				
	U_{31}-L_{32}	-109.81	116.32	-4.67	4.14	-0.09	-0.06				
	U_{32}-L_{33}	-141.94	130.59	-5.90	5.15	0.80	-0.43				
	U_{33}-L_{34}	-82.17	130.36	-3.28	5.20	0.00	-0.00				
	U_{34}-L_{35}	-11.95	79.18	-2.88	3.42	0.66	-0.53				
	U_{35}-L_{36}	77.25	37.47	-3.39	1.47	0.00	-0.00				
	U_{36}-L_{37}	-66.11	89.96	-4.15	3.89	0.35	-0.43				
	U_{37}-L_{38}	-42.42	42.42	-1.76	1.76	0.43	-0.36				
	U_{38}-L_{39}	-56.05	72.68	-3.45	3.02	0.49	-0.56				
	U_{39}-L_{40}	-31.83	37.59	-2.25	2.15	0.02	-0.50				
	U_{40}-L_{41}	-21.67	21.67	-2.16	1.96	0.00	-0.00				
Structure 2	U_{41}-L_{42}	-10.04	3.78	-0.97	0.70	0.38	-1.03				
	U_{42}-L_{43}	-1.65	1.65	-1.66	1.66	0.00	-0.00				
	U_{43}-L_{44}	-19.42	19.56	-1.68	1.46	0.43	-0.75				
	U_{44}-L_{45}	-32.04	32.04	-2.68	2.68	0.00	-0.00				
	U_{45}-L_{46}	-46.48	58.24	-3.81	3.41	0.66	-0.73				
	U_{46}-L_{47}	-54.27	68.32	-4.29	3.78	0.54	-0.67				
	U_{47}-L_{48}	-61.80	77.40	-4.72	4.17	0.00	-0.00				
	U_{48}-L_{49}	-69.31	71.94	-5.18	4.84	0.37	-0.45				
	U_{49}-L_{50}	-77.99	79.64	-5.77	5.46	0.00	-0.00				
	U_{50}-L_{51}	-36.18	94.54	-2.55	3.84	0.87	-0.71				
	U_{51}-L_{52}	-77.05	85.18	-3.52	3.52	0.87	-0.27				
	U_{52}-L_{53}	-78.35	71.28	-3.56	3.03	-0.13	-0.16				
	U_{53}-L_{54}	-65.54	38.65	-2.81	1.61	-0.10	-0.00				
	U_{54}-L_{55}	-76.62	55.14	-3.47	2.96	-0.08	-0.36				
	U_{55}-L_{56}	-37.24	33.91	-1.66	1.66	-0.04	-0.00				
	U_{56}-L_{57}	6.27	-17.63	-0.64	0.33	1.46	-1.37				
	U_{57}-L_{58}	-16.19	11.20	10.55	-14.12	0.00	-0.00				
	U_{58}-L_{59}	-47.06	31.69	-1.77	1.77	4.87	2.01				
	U_{59}-L_{60}	-33.68	19.58	-2.44	1.97	0.57	-0.51				
	U_{60}-L_{61}	-78.90	59.78	-5.26	4.29	0.77	-0.69				
	U_{61}-L_{62}	-84.96	64.27	-5.66	4.61	0.00	-0.00				
	U_{62}-L_{63}	-98.23	63.59	-5.56	3.97	0.27	-0.25				
	U_{63}-L_{64}	-90.31	64.36	-3.66	2.89	0.32	-0.29				
	U_{64}-L_{65}	-96.74	73.46	-3.92	3.20	0.00	-0.00				
	U_{65}-L_{66}	-33.50	18.26	-1.84	1.62	0.05	-0.29				
	U_{66}-L_{67}	-19.85	19.85	-1.80	1.80	0.00	-0.00				
	U_{67}-L_{68}	-1.49	-18.98	-0.79	0.42	0.33	-0.88				
	U_{68}-L_{69}	-33.83	33.83	-2.72	2.72	0.00	-0.00				
	U_{69}-L_{70}	-53.83	37.97	-2.72	2.23	-0.46	-0.38				
	U_{70}-L_{71}	-61.79	22.37	-2.79	1.33	-0.56	-0.33				
Structure 3	U_{71}-L_{72}	-52.70	52.23	-2.45	2.45	-0.03	-0.00				
	U_{72}-L_{73}	-73.25	65.79	-3.46	2.88	0.00	-0.00				
	U_{73}-L_{74}	-51.90	30.38	-1.38	1.38	0.00	-0.00				
	U_{74}-L_{75}	5.27	-6.49	0.70	2.84	0.35	-0.16				
	U_{75}-L_{76}	-38.98	50.40	-3.11	2.52	0.49	-0.13				
	U_{76}-L_{77}	-75.78	19.68	0.21	0.73	-0.33	-0.29				
	U_{77}-L_{78}	-58.68	58.68	-3.16	3.16	0.00	-0.00				
	U_{78}-L_{79}	2.61	-8.77	-0.54	0.23	-0.35	-0.50				
	U_{79}-L_{80}	-51.58	51.58	-1.48	1.48	0.00	-0.00				
	U_{80}-L_{81}	-5.73	35.35	-0.41	0.63	0.12	-0.14				

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	-148.57	-15.43	7.13	12.56	0.00	0.00	-230.06	-80.14	-27.64	-23.75
	U_1-L_2	-19.89	-23.15	125.30	33.08	0.00	0.00	-83.05	125.47	-9.95	94.10
	U_2-L_3	-11.34	-10.29	13.09	4.78	0.00	0.00	-82.61	-60.34	-50.88	-33.13
	U_3-L_4	21.01	21.91	-32.28	-28.28	0.00	0.00	-16.14	-20.03	-85.42	-85.28
	U_4-L_5	17.93	17.71	47.21	-54.69	0.00	0.00	-142.48	-144.02	-114.8	-114.79
	U_5-L_6	-68.55	-68.25	-1.07	-0.24	0.00	0.00	-56.57	-158.35	31.10	-32.94
	U_6-L_7	-132.77	-84.62	-2.39	-1.52	0.00	0.00	-19.70	-42.09	-132.99	-68.64
	U_7-L_8	-105.86	-69.44	26.68	15.40	0.00	0.00	32.13	8.42	204.43	118.72
	U_8-L_9	47.38	56.55	68.38	3.44	0.00	0.00	137.10	174.16	68.06	202.9
	U_9-L_{10}	28.50	41.04	13.91	-3.06	0.00	0.00	79.63	175.20	80.91	202.96
	U_{10}-L_{11}	10.35	37.79	-0.16	-0.17	0.00	0.00	44.06	195.50	30.41	146.13
	U_{11}-L_{12}	21.88	19.55	0.76	-1.49	1.51	0.48	7.77	84.29	126.41	66.81
	U_{12}-L_{13}	12.76	16.63	14.49	-13.39	0.00	0.00	0.76	-12.27	6.02	-51.30
	U_{13}-L_{14}	7.06	3.11	11.28	-7.93	0.00	0.00	-50.16	-108.28	-50.48	-122.63
	U_{14}-L_{15}	-15.76	-15.76	-23.23	-11.14	-4.83	0.01	-149.75	-150.25	-144.43	-144.3
	U_{15}-L_{16}	-41.92	-39.45	-31.22	-5.55	0.00	0.00	-267.25	-176.62	-193.34	-132.55
	U_{16}-L_{17}	-102.58	-83.06	-22.75	-14.35	0.00	0.00	-302.42	-252.31	-188.77	-113.4
	U_{17}-L_{18}	-114.39	-92.28	20.75	15.63	0.00	0.00	-328.31	-289.55	-152.63	-149.27
	U_{18}-L_{19}	-113.44	-94.98	39.28	13.66	0.00	0.00	-277.06	-268.17	-85.43	-134.73
	U_{19}-L_{20}	-184.52	-93.96	161.28	10.79	0.00	0.00	-393.83	-194.26	-133.63	-61.21
	U_{20}-L_{21}	-22.23	-11.09	-0.82	2.50	0.00	0.00	-64.48	-71.03	-56.64	-53.36
	U_{21}-L_{22}	-6.65	-6.65	-34.29	-11.85	-6.84	0.00	-34.29	-34.29	-11.85	-6.84
	U_{22}-L_{23}	-27.75	-39.18	-13.53	-2.72	0.00	0.00	-72.60	-38.00	-33.32	-72.88
	U_{23}-L_{24}	-24.57	-19.96	9.65	7.64	0.00	0.00	-53.89	-47.24	-12.53	-12.53
	U_{24}-L_{25}	-35.21	-12.55	-2.33	-13.85	0.00	0.00	-17.03	-68.00	25.19	-102.31
	U_{25}-L_{26}	-11.01	-20.57	2.71	-4.83	0.00	0.00	-42.60	-108.56	-0.27	-69.70
	U_{26}-L_{27}	-2.75	-12.06	19.78	-24.34	0.00	0.00	-110.36	-196.58	-61.08	-233.88
	U_{27}-L_{28}	-21.71	-32.75	-28.56	-5.10	0.00	0.00	-170.66	-256.95	-179.56	-214.52
	U_{28}-L_{29}	-58.32	-51.99	-10.36	-2.67	0.00	0.00	-225.52	-236.37	-164.61	-164.61
	U_{29}-L_{30}	-89.12	-79.75	-29.14	-9.43	0.00	0.00	-225.52	-242.62	-147.55	-152.19
	U_{30}-L_{31}	-103.42	-89.76	-39.74	-12.43	0.00	0.00	-207.74	-215.68	-116.41	-120.6
	U_{31}-L_{32}	-132.38	-88.45	-11.22	-7.63	0.00	0.00	-117.16	-148.76	40.35	-28.68
	U_{32}-L_{33}	-15.00	-58.39	214.34	74.63	0.00	0.00	-117.65	-84.13	248.74	201.3
	U_{33}-L_{34}	-94.54	-62.25	25.15	6.55	0.00	0.00	-223.17	-137.24	19.78	19.78
	U_{34}-L_{35}	14.87	-45.96	27.16	-0.92	0.00	0.00	67.30	22.03	83.27	-38.91
	U_{35}-L_{36}	-32.41	-32.41	-9.68	-4.23	0.00	0.00	-123.67	-123.67	-54.15	-54.15
	U_{36}-L_{37}	-35.99	-69.91	-10.71	-8.26	0.00	0.00	-68.00	-72.74	-2.85	-3.95
	U_{37}-L_{38}	-5.62	-31.35	-38.74	-11.54	-7.31	0.00	-38.74	-38.74	-11.54	-7.31
	U_{38}-L_{39}	8.03	44.03	36.56	6.68	3.54	-0.91	-0.58	89.13	106.10	63.04
	U_{39}-L_{40}	22.04	27.12	18.89	4.27	0.00	0.00	31.60	33.67	31.49	-7.14
	U_{40}-L_{41}	14.88	14.88	0.00	0.00	0.00	0.00	24.04	24.04	0.00	0.00
	U_{41}-L_{42}	12.23	10.47	19.46	-18.81	0.00	0.00	-54.08	-47.72	-44.69	-85.78
	U_{42}-L_{43}	-28.23	-28.23	-14.52	-14.52	0.00	0.00	-38.57	-38.57	-19.73	-19.73
	U_{43}-L_{44}	-49.11	-42.12	-44.10	-0.96	0.00	0.00	-123.36	-107.02	-116.84	-53.51
	U_{44}-L_{45}	-60.12	-60.12	-26.26	-26.26	0.00	0.00	-150.00	-150.00	-66.51	-66.51
	U_{45}-L_{46}	-85.27	-80.03	-24.33	18.14	0.00	0.00	-90.52	-131.85	51.96	-4.22
	U_{46}-L_{47}	-117.58	-77.38	21.37	15.76	0.00	0.00	-54.31	-89.86	126.33	31.20
	U_{47}-L_{48}	-97.80	-97.80	0.00	0.00	0.00	0.00	-91.19	-91.19	0.00	0.00
	U_{48}-L_{49}	-80.47	-64.57	14.35	8.21	0.00	0.00	53.48	-12.22	176.76	82.39
	U_{49}-L_{50}	-64.09	-64.09	0.00	0.00	0.00	0.00	-26.37	-26.37	-17.89	-17.89
	U_{50}-L_{51}	12.79	20.86	25.53	-0.33	0.00	0.00	92.10	25.61	113.92	-1.75
	U_{51}-L_{52}	10.50	17.89	19.04	-0.19	0.00	0.00	82.73	56.61	109.52	23.09
	U_{52}-L_{53}	7.04	22.58	8.61	-8.99	0.00	0.00	7.91	-24.03	9.69	-65.07
	U_{53}-L_{54}	-1.68	18.68	-0.62	-10.64	0.00	0.00	-47.23	-21.74	-19.47	-76.47
	U_{54}-L_{55}	-6.39	-18.82	-34.30	-9.56	0.00	0.00	-109.68	-153.43	-169.96	-115.36
	U_{55}-L_{56}	-23.89	-26.11	-33.68	-5.34	0.00	0.00	-176.04	-192.40	-188.76	-116.92
	U_{56}-L_{57}	-47.06	-31.69	-1.77	-1.77	-4.87	-2.01	-58.51	-34.24	-31.69	-31.69
	U_{57}-L_{58}	-16.19	11.20	10.55	-14.12	0.00	0.00	-176.04	-192.40	-188.76	-116.92
	U_{58}-L_{59}	-33.68	19.58	-2.44	1.97	0.57	-0.51	-225.25	-208.98	-125.01	-110.63
	U_{59}-L_{60}	-78.90	59.78	-5.26	4.29	0.77	-0.69	-162.30	-129.59	-127.76	-94.34
	U_{60}-L_{61}	-84.96	64.27	-5.66	4.61	0.00	-0.00	-244.43	-183.23	-191.64	-137.92
	U_{61}-L_{62}	-98.23	63.59	-5.56	3.97	0.27	-0.25	-188.67	-199.60	-31.58	-67.94
	U_{62}-L_{63}	-90.31	64.36	-3.66	2.89	0.32	-0.29	-254.29	-138.38	-13.37	-18.76
	U_{63}-L_{64}	-96.74	73.46	-3.92	3.20	0.00	-0.00	-192.24	-181.18	-11.34	-30.64
	U_{64}-L_{65}	-33.50	18.26	-1.84	1.62	0.05	-0.29	-190.14	-29.19	-1.56	-5.23
	U_{65}-L_{66}	-19.85	19.85	-1.80	1.80	0.00	-0.00	-25.05	-6.73	-1.29	-0.78
	U_{66}-L_{67}	-1.49	-18.98	-0.79	0.42	0.33	-0.88	-149.46	-48.63	-118.58	-40.89
	U_{67}-L_{68}	-33.83	33.83	-2.72	2.72	0.00	-0.00	-46.62	-46.62	-31.13	-31.13
	U_{68}-L_{69}	-53.83	37.97	-2.72	2.23	-0.46	-0.38	-51.22	-50.55	-39.20	-32.03
	U_{69}-L_{70}	-61.79	22.37	-2.79	1.33	-0.56	-0.33	-17.42	-75.74	-144.41	-66.77
	U_{70}-L_{71}	-52.70	52.23	-2.45	2.45	-0.03	-0.00	-269.23	-303.08	-366.31	-262.82
	U_{71}-L_{72}	-73.25	65.79	-3.46	2.88	0.00	-0.00	-208.01	-207.23	-191.64	-191.64
	U_{72}-L_{73}	-51.90	30.38	-1.38	1.38	0.00	-0.00	-122.63	-82.68	-40.03	-40.03
	U_{73}-L_{74}	5.27	-6.49	0.70	2.84	0.35	-0.16	-34.56	-55.30	-56.57	-4.22
	U_{74}-L_{75}	-38.98	50.40	-3.11	2.52	0.49	-0.13	-41.91	-33.65	-6.56	-1.75
	U_{75}-L_{76}	-75.78	19.68	0.21	0.73	-0.33	-0.29	-69.87	-66.80	-22.68	-14.72
	U_{76}-L_{77}	-58.68	58.68	-3.16	3.16	0.00	-0.00	-44.33	-44.33	-6.01	-6.01
	U_{77}-L_{78}	2.61	-8.77	-0.54	0.23	-0.35	-0.50	-22.71	-19.32	-90.78	-43.30
	U_{78}-L_{79}	-51.58	51.58	-1.48	1.48	0.00	-0.00	-135.19	-135.19	-42.66	-42.66
	U_{79}-L_{80}	-5.73	35.35	-0.41	0.63	0.12	-0.14	-44.65	-29.42	-2.81	-2.81

M_2 Information

Location	Member	Max. Pos. Mom. Start (k-in)	Max. Pos. Mom. End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_z (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term = F/ S_{bot}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	C_{mx}/a
Structure 1	U_0-L_1	-65.52	26.48	25.82	5.95	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7
	U_1-L_2	-150.58	37.50	-15.76	35.31	-41.21	54.89	54.84	2.14	1.5	763.3	0.168	0.67	0.67	763.3
	U_2-L_3	-135.78	104.41	-7.25	31.42	-32.56	15.44	15.42	2.14	1.5	763.3	0.168	0.67	0.67	763.3
	U_3-L_4	47.02	-63.39	31.07	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.903	0.24
	U_4-L_5	-26.18	52.32	1.94	-0.07	0.00	0.00	0.00	0.00	0.00	-46.16	201.44	-9.61	133.35	35.1
	U_5-L_6	-25.40	203.16	-0.76	183.34	42.67	2.48	0.00	0.00	0.00	-91.15	136.81	-49.21	100.39	35.1
	U_6-L_7	-142.24	137.05	-69.84	94.61	40.7	40.70	40.44	67.92	25	1661.0	1.67	2241	1.5	2214.7
	U_7-L_8	-116.55	123.80	-63.48	95.59	39.8	39.77	39.56	65.61	21	1616.3	1.65	2165	1.5	1968.6
	U_8-L_9	-125.53	82.80	-61.36	92.35	38.4	38.43	38.24	63.30	4	1569.6	1.53	2155	1.5	2115.6
	U_9-L_{10}	-115.94	80.80	-64.73	93.25	20.8	20.80	20.67	34.66	4	1076.0	1.67	1444	1.5	1029.6
	U_{10}-L_{11}	-95.15	20.71	-32.28	-0.04	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{11}-L_{12}	-14.54	23.23	11.51	-16.84	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{12}-L_{13}	-20.16	14.57	4.93	-7.80	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{13}-L_{14}	-26.38	22.19	1.16	-4.48	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{14}-L_{15}	-52.58	47.16	6.31	-6.24	0.00	0.00	0.00	0.00	0.00	-200.91	157.96	-124.35	88.55	35.1
	U_{15}-L_{16}	-208.50	166.17	-142.82	90.92	35.4	38.83	38.63	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{16}-L_{17}	-198.87	163.56	-97.88	99.57	38.8	38.83	38.63	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{17}-L_{18}	-208.19	193.14	-133.86	120.09	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{18}-L_{19}	-197.47	158.53	-113.53	92.45	35.1	35.09	35.09	53.51	4	1163.7	1.53	1766	1.5	1737.0
	U_{19}-L_{20}	-180.10	148.00	-105.53	82.45	35.1	35.09	35.09	53.51	4	1163.7	1.53	1766	1.5	1737.0
	U_{20}-L_{21}	-53.17	36.78	-21.74	21.54	32.7	32.69	32.69	49.84	4	967.9	1.50	1444	1.5	1068.2
	U_{21}-L_{22}	-53.17	36.78	-21.77	3.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{22}-L_{23}	-24.58	24.58	-2.73	3.43	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3
	U_{23}-L_{24}	-3.14	24.09	21.14	29.72	17.24	26.54	824.7	1.54	876	1	853.4	-0.402	0.44	0.44
	U_{24}-L_{25}	-84.71	69.08	-51.14	30.54	20.5	20.51	20.40	33.89	8	1017.2	1.65	1118	1.5	1015.2
	U_{25}-L_{26}	-178.25	172.63	-128.84	117.04	36.5	38.83	38.63	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{26}-L_{27}	-172.66	132.08	-115.67	82.63	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6
	U_{27}-L_{28}	-195.79	172.63	-128.84	117.04	36.5	38.83	38.63	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{28}-L_{29}	-215.17	219.93	-139.05	160.21	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1
	U_{29}-L_{30}	-282.43	255.26	-171.23	162.61	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{30}-L_{31}	-143.81	256.25	-93.25	175.05	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{31}-L_{32}	-62.87	159.10	-4.66	94.20	35.1	35.09	35.09	53.51	4	1163.7	1.53	1766	1.5	1737.0
	U_{32}-L_{33}	-189.79	154.52	-129.47	94.61	35.1	35.09	35.09	53.51	4	1163.7	1.53	1766	1.5	1737.0
	U_{33}-L_{34}	-153.33	180.84	-80.31	109.82	38.8	38.83	38.63	59.23	4	1284.6	1.53	1955	1.5	1922.1
	U_{34}-L_{35}	-143.67	96.25	-93.25	58.63	35.1	35.09	35.09	53.51	4	1163.7	1.53	1766	1.5	1737.0
	U_{35}-L_{36}	-129.42	143.99	-84.84	85.35

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

ZZ Axis Moments from STAAD

Location	Member	Dead Load Start (k-in)	Dead Load End (k-in)	Live Load (Max) End (k-ft)	Live Load (Min) 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 (Min) End (k-ft)	Impact Pedestrian Load (Max) Start (k-ft)	Impact Pedestrian Load (Min) End (k-ft)
Structure 1	U_0 - U_1	-75.17	-0.72	-1.16	1.52	6.47	-17.22	0.00	0.00	0.00	0.00
	U_1 - U_2	-46.82	-29.29	3.26	2.91	-2.97	-17.29	0.00	0.00	0.00	0.00
	U_2 - U_3	-112.29	86.52	1.43	3.62	-2.29	-17.70	0.00	0.00	0.00	0.00
	U_3 - U_4	-15.71	66.12	2.24	3.40	-0.76	-15.76	0.00	0.00	0.00	0.00
	U_4 - U_5	-9.25	61.62	1.89	3.48	-0.21	-8.49	0.00	0.00	0.00	0.00
	U_5 - U_6	42.76	120.21	6.48	3.96	-1.28	-4.62	0.00	0.00	0.00	0.00
	U_6 - U_7	93.16	199.26	2.16	3.86	-0.29	-8.27	0.00	0.00	0.00	0.00
	U_7 - U_8	-147.38	526.15	16.26	20.56	0.09	-0.05	0.00	0.00	0.00	0.00
	U_8 - U_9	475.03	-124.95	1.23	11.51	13.56	-15.62	0.00	0.00	0.00	0.00
	U_9 - U_{10}	46.82	20.99	1.53	2.61	2.21	-10.53	0.00	0.00	0.00	0.00
	U_{10} - U_{11}	64.59	-38.61	1.38	1.97	1.66	-15.61	0.00	0.00	0.00	0.00
	U_{11} - U_{12}	27.91	-140.51	2.89	1.55	0.80	-16.00	0.00	0.00	0.00	0.00
	U_{12} - U_{13}	-106.12	-155.13	0.36	0.85	2.45	-21.40	0.00	0.00	0.00	0.00
	U_{13} - U_{14}	-138.04	-282.91	0.73	1.27	3.10	-29.26	0.00	0.00	0.00	0.00
	U_{14} - U_{15}	-245.82	-183.07	0.33	1.38	-1.81	-19.26	0.00	0.00	0.00	0.00
	U_{15} - U_{16}	-123.51	-327.01	0.36	1.64	3.81	-18.63	0.00	0.00	0.00	0.00
	U_{16} - U_{17}	-269.97	-145.19	-0.59	1.25	-3.72	-14.17	0.00	0.00	0.00	0.00
	U_{17} - U_{18}	-134.36	-67.45	0.89	1.41	-2.64	-7.86	0.00	0.00	0.00	0.00
	U_{18} - U_{19}	-170.82	-20.32	2.87	3.95	0.76	-5.37	0.00	0.00	0.00	0.00
	U_{19} - U_{20}	-186.22	23.42	-7.78	10.25	2.69	-14.56	0.00	0.00	0.00	0.00
	U_{20} - U_{21}	114.62	238.71	0.35	0.76	1.08	-17.65	0.00	0.00	0.00	0.00
	U_{21} - U_{22}	-71.24	-180.99	-0.29	2.15	0.32	-20.09	0.00	0.00	0.00	0.00
	U_{22} - U_{23}	-314.12	-30.60	-0.42	1.12	-3.02	-30.65	0.00	0.00	0.00	0.00
	U_{23} - U_{24}	-327.34	-325.40	0.98	3.36	-7.20	-31.01	0.00	0.00	0.00	0.00
	U_{24} - U_{25}	-338.58	-367.31	1.78	3.66	-7.09	-31.60	0.00	0.00	0.00	0.00
	U_{25} - U_{26}	-396.14	-197.74	-1.57	0.18	-10.73	-32.36	0.00	0.00	0.00	0.00
	U_{26} - U_{27}	-344.18	-179.44	4.51	3.93	-6.71	-39.31	0.00	0.00	0.00	0.00
	U_{27} - U_{28}	-226.16	-295.72	3.32	4.46	-5.37	-39.60	0.00	0.00	0.00	0.00
	U_{28} - U_{29}	-350.21	-90.73	3.06	5.11	-2.50	-15.98	0.00	0.00	0.00	0.00
	U_{29} - U_{30}	-87.73	79.31	4.22	5.45	-0.49	-7.10	0.00	0.00	0.00	0.00
	U_{30} - U_{31}	-167.09	39.84	4.87	6.85	0.74	-8.86	0.00	0.00	0.00	0.00
	U_{31} - U_{32}	-109.78	170.74	4.80	5.49	-1.02	-7.21	0.00	0.00	0.00	0.00
	U_{32} - U_{33}	-8.75	279.50	3.03	3.69	-1.05	-7.03	0.00	0.00	0.00	0.00
	U_{33} - U_{34}	-261.01	1266.00	-6.77	36.86	-0.78	-1.55	0.00	0.00	0.00	0.00
	U_{34} - U_{35}	1192.78	2.92	0.00	0.00	8.63	-33.57	0.00	0.00	0.00	0.00
	U_{35} - U_{36}	-25.29	11.66	2.53	4.69	-4.23	-18.54	0.00	0.00	0.00	0.00
	U_{36} - U_{37}	-26.61	12.54	2.73	4.89	-4.38	-19.53	0.00	0.00	0.00	0.00
	U_{37} - U_{38}	-150.60	33.06	3.48	3.79	1.99	-18.21	0.00	0.00	0.00	0.00
	U_{38} - U_{39}	-147.31	4.37	4.37	3.07	2.33	-20.73	0.00	0.00	0.00	0.00
	U_{39} - U_{40}	-150.61	-25.01	4.27	2.89	2.51	-20.73	0.00	0.00	0.00	0.00
Structure 2	U_0 - U_1	-31.69	-33.99	0.11	3.41	-0.87	-27.56	0.00	0.00	0.00	0.00
	U_1 - U_2	-86.03	-71.79	2.18	3.37	-1.07	-26.72	0.00	0.00	0.00	0.00
	U_2 - U_3	-60.96	-66.58	1.92	1.95	-3.46	-19.94	0.00	0.00	0.00	0.00
	U_3 - U_4	-21.55	15.10	1.50	1.50	-3.46	-19.53	0.00	0.00	0.00	0.00
	U_4 - U_5	-33.01	-28.69	2.34	4.14	-4.65	-15.94	0.00	0.00	0.00	0.00
	U_5 - U_6	-15.13	113.78	-11.26	5.53	-0.28	-11.08	0.00	0.00	0.00	0.00
	U_6 - U_7	-18.63	129.54	-12.44	6.14	-0.31	-12.21	0.00	0.00	0.00	0.00
	U_7 - U_8	-2.74	209.84	-11.65	8.06	-1.74	-10.28	0.00	0.00	0.00	0.00
	U_8 - U_9	5.42	306.95	-9.39	9.76	-1.74	-10.28	0.00	0.00	0.00	0.00
	U_9 - U_{10}	-122.51	1157.56	-6.73	36.13	0.15	-2.01	0.00	0.00	0.00	0.00
	U_{10} - U_{11}	1154.91	-197.36	0.69	4.02	27.04	-27.08	0.00	0.00	0.00	0.00
	U_{11} - U_{12}	-87.84	62.39	-1.77	1.76	-2.24	-16.70	0.00	0.00	0.00	0.00
	U_{12} - U_{13}	-178.89	-59.81	3.75	4.58	-2.27	-20.11	0.00	0.00	0.00	0.00
	U_{13} - U_{14}	-236.51	-153.10	4.01	3.49	-4.60	-38.20	0.00	0.00	0.00	0.00
	U_{14} - U_{15}	-98.60	-313.21	4.21	3.98	-6.01	-24.13	0.00	0.00	0.00	0.00
	U_{15} - U_{16}	-134.10	-32.00	3.24	3.98	-5.14	-24.24	0.00	0.00	0.00	0.00
	U_{16} - U_{17}	-350.37	-386.86	-4.85	1.97	-7.13	-27.45	0.00	0.00	0.00	0.00
	U_{17} - U_{18}	-252.51	-37.61	3.61	3.61	-6.20	-22.74	0.00	0.00	0.00	0.00
	U_{18} - U_{19}	-279.39	-117.76	-10.13	5.30	-5.68	-13.06	0.00	0.00	0.00	0.00
	U_{19} - U_{20}	-282.51	-31.61	2.92	3.61	-6.20	-22.74	0.00	0.00	0.00	0.00
	U_{20} - U_{21}	-186.32	-74.12	0.32	10.85	2.69	-13.98	0.00	0.00	0.00	0.00
	U_{21} - U_{22}	-139.08	-187.97	-7.67	0.94	8.58	-14.29	0.00	0.00	0.00	0.00
	U_{22} - U_{23}	-47.38	-119.55	0.41	1.43	1.34	-16.36	0.00	0.00	0.00	0.00
	U_{23} - U_{24}	-52.58	-129.17	-0.20	1.02	3.93	-19.74	0.00	0.00	0.00	0.00
	U_{24} - U_{25}	-277.84	-111.68	-8.51	2.25	-3.52	-26.00	0.00	0.00	0.00	0.00
	U_{25} - U_{26}	-166.98	-243.52	1.28	1.88	-2.92	-28.03	0.00	0.00	0.00	0.00
	U_{26} - U_{27}	-287.74	-127.82	1.36	1.80	-0.99	-16.50	0.00	0.00	0.00	0.00
	U_{27} - U_{28}	-141.43	-113.94	-8.56	3.72	-3.80	-11.86	0.00	0.00	0.00	0.00
	U_{28} - U_{29}	-159.54	-60.07	2.29	3.54	-4.41	-16.27	0.00	0.00	0.00	0.00
Structure 3	U_{29} - U_{30}	-141.64	-96.96	-0.18	3.81	-1.81	-3.29	0.00	0.00	0.00	0.00
	U_{30} - U_{31}	-136.67	-67.04	-0.78	17.24	6.13	-6.03	0.00	0.00	0.00	0.00
	U_{31} - U_{32}	-497.26	-34.44	2.91	1.98	22.03	-19.28	0.00	0.00	0.00	0.00
	U_{32} - U_{33}	-141.54	-56.96	-0.18	3.81	-1.81	-3.29	0.00	0.00	0.00	0.00
	U_{33} - U_{34}	-136.67	-67.04	-0.78	17.24	6.13	-6.03	0.00	0.00	0.00	0.00
	U_{34} - U_{35}	-497.26	-34.44	2.91	1.98	22.03	-19.28	0.00	0.00	0.00	0.00
	U_{35} - U_{36}	-113.04	44.48	3.62	2.84	2.80	-14.85	0.00	0.00	0.00	0.00
	U_{36} - U_{37}	-59.39	15.11	3.51	2.21	-2.09	-16.41	0.00	0.00	0.00	0.00
	U_{37} - U_{38}	86.09	-19.75	3.51	1.94	3.25	-13.50	0.00	0.00	0.00	0.00
	U_{38} - U_{39}	-24.63	-27.07	-2.57	1.82	-1.66	-10.33	0.00	0.00	0.00	0.00
	U_{39} - U_{40}	-29.38	-160.66	-9.20	8.53	0.58	-15.39	0.00	0.00	0.00	0.00

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_{bc} (in^3)	I (in^4)	I_{eff} (in^4)	Shape Factor f	M_p (k-in)	Formula I & f Terms * F / S_{bc}	M_n (k-in)	Equivalent Mom. Factor a	$C_{b(a)}$	$C_{b(b)}$
Structure 1	U_0 - U_1	-107.96	27.00	2.38	-250.18	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.009	0.60	0.60
	U_1 - U_2	-107.11	-53.75	-102.84	-276.03	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.000	0.75	0.75
	U_2 - U_3	-125.23	164.91	-178.09	-143.74	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.803	0.92	0.92
	U_3 - U_4	-13.22	67.75	-142.81	-30.21	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.118	0.69	0.65
	U_4 - U_5	15.39	130.49	-15.12	-62.78	90.2	90.24	72.24	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	0.118	0.65	0.65
	U_5 - U_6	-38.18	213.62	37.00	89.45	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4206	0.9988004	2974.3	-0.179	0.53	0.53
	U_6 - U_7	-160.03	47.86	19.45	-160.57	90.2	90.24	76.71	127.46	2147	1328.6	1.41	4204	0.9990136	3201.5	0.474	0.79	0.79
	U_7 - U_8	-296.93	981.57	-60.73	663.26	138.2	138.17	111.77	199.97	3642	2197.7	1.45	6099	0.9989545	4564.8	-0.302	0.48	0.48
	U_8 - U_9	639.04	-140.46	807.58	-380.09	130.3	130.26	105.11	180.77	2960	1796.3	1.39	5665	0.9989539	4250.8	-0.471	0.41	0.41
	U_9 - U_{10}	82.36	63.30	91.77	-120.81	96.6	96.61	79.12	135.29	2174	1387.9	1.40	4465	0.9987316	3184.1	-0.760	0.30	0.30
	U_{10} - U_{11}	119.75	-152.87	111.45	-453.04	96.6	96.61	83.93	135.29	2174	1387.9	1.40	4465	0.9987316	3184.1	-0.760	0.30	0.30
	U_{11} - U_{12}	76.20	-160.96	47.55	-406.96	128.7	128.69	105.26	182.66	3153	1864.4	1.42	6028	0.9987589	4241.5	-0.117	0.55	0.55
	U_{12} - U_{13}	-132.94	-189.73	-103.57	-501.59	151.8	151.76	130.54	219.77	4535	2632.6	1.45	7252	0.9990592	5003.4	0.206	0.68	0.68
	U_{13} - U_{14}	-265.30	-375.59	-214.87	-557.90	151.8	151.76	130.54	219.77	4535	2632.6	1.45	7252	0.9990592	5003.4	0.206	0.68	0.68
	U_{14} - U_{15}	-324.22	-216.63	-344.87	-507.94	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.9989592	6214.6	0.679	0.87	0.87
	U_{15} - U_{16}	-279.70	-402.07	-137.18	-689.00	188.5	188.51	164.41	274.68	5476	3413.6	1.46	9064	0.9989592	6214.6	0.156	0.66	0.66
	U_{16} - U_{17}	-359.21	-171.18	-603.05	-387.40	188.5	188.51	157.55	274.68	5476	3413.6	1.46	9064	0.9989592	6214.6	0.961	0.98	0.98
	U_{17} - U_{18}	-325.27	-18.87	-237.71	-517.92	127.3	127.33	110.40	199.23	3668	2326.5	1.46	6146	0.9990716	4197.7	0.095	0.62	0.62
	U_{18} - U_{19}	-262.26	28.99	-211.44	-101.63	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.9988542	3452.6	-0.111	0.56	0.56
	U_{19} - U_{20}	-251.20	114.06	-264.39	-173.58	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4971	0.9988542	3452.6	-0.496	0.40	0.40
	U_{20} - U_{21}	-152.72	-246.66	-152.72	-246.66	104.8	104.75	86.43	150.63	2589	1554.3	1.44	4891	0.9988542	4212.5	-0.333	0.45	0.45
	U_{21} - U_{22}	-411.95	-376.57	-525.25	-852.18	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6	0.616	0.85	0.85
	U_{22} - U_{23}	-412.96	-408.80	-412.96	-408.80	232.7	232.70	198.86	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6	0.000	0.75	0.75
	U_{23} - U_{24}	-536.68	-171.50	-663.44	-705.01	251.7	251.73	219.41	365.62	7161	3870.6	1.45	12993	0.9989193	8298.1	-0.541	0.58	0.58
	U_{24} - U_{25}	-384.56	-178.83	-540.32	-777.32	232.7	232.70	199.45	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6	0.695	0.88	0.88
	U_{25} - U_{26}	-248.34	-512.69	-247.58	-653.73	232.7	232.70	199.45	340.10	6520	3217.6	1.46	11223	0.9988836	7670.6	0.000	0.75	0.75
	U_{26} - U_{27}	-412.55	-67.22	-489.85	-339.06	198.9	198.88	169.65	289.08	5137	2713.1	1.43	9408	0.9988501	6555.5	0.692	0.88	0.88
	U_{27} - U_{28}	-316.08	-29.33	-374.53	-224.74	198.9	198.88	169.65	289.08	5137	2713.1	1.43	9408	0.9988501	6555.5	0.692	0.88	0.88
	U_{28} - U_{29}	-149.78	-118.87	-207.00	-70.86	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.9985442	5166.9	0.342	0.74	0.74
	U_{29} - U_{30}	-209.12	-297.59	-158.76	-358.12	156.8	156.80	128.72	214.81	3285	1852.3	1.37	7089	0.9985442	5166.9	0.702	0.92	0.92
	U_{30} - U_{31}	-80.24	-1.80	-216.61	-0.16	156.8	156.80	134.92	214.81	3285	1852.3	1.37	7089	0.9985442	5166.9	0.000	0.75	0.75
	U_{31} - U_{32}	-432.98	2156.02	-350.10	1624.31	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.9989350	7310.6	-0.201	0.52	0.52
	U_{32} - U_{33}	-360.81	1797.52	-360.81	1797.52	221.8	221.77	196.91	327.26	6244	3427.0	1.48	10799	0.9989350	7310.6	0.000	0.75	0.75
	U_{33} - U_{34}	-1.76	166.77	-90.78	-160.41	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.9988804	6121.2	0.566	0.83	0.83
	U_{34} - U_{35}	-597.63	-97.70	-644.23	-817.17	185.7	185.70	154.12	266.55	4767	2721.4	1.44	8796	0.9988804	6121.2	0.000	0.75	0.75
	U_{35} - U_{36}	-243.33	83.63	-222.93	-209.02	127.9	127.93	106.84	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5	0.386	0.75	0.75
	U_{36} - U_{37}	-249.92	47.71	-223.36	-277.85	127.9	127.93	111.16	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5	-0.804	0.28	0.28
	U_{37} - U_{38}	-248.34	47.72	-222.69	-277.16	127.9	127.93	111.16	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5	-0.804	0.28	0.28
	U_{38} - U_{39}	-249.92	47.71	-223.36	-277.85	127.9	127.93	111.16	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5	-0.804	0.28	0.28
	U_{39} - U_{40}	-243.33	83.63	-222.93	-209.02	127.9	127.93	106.84	178.51	2762	1538.8	1.40	5891	0.9986137	4212.5	0.386	0.75	0.75

YY Axis Moments from STAAD

Location	Member	Dead Load Start (k-ft)	Dead Load End (k-ft)	Live Load (Max) End (k-ft)	Live Load (Min) 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 (Min) End (k-ft)	Impact Pedestrian Load (Max) Start (k-ft)	Impact Pedestrian Load (Min) End (k-ft)
Structure 1	U_0 - U_1	-5.54	-7.11	-10.26	-11.71	0.00	0.00	0.00	0.00	0.00	0.00
	U_1 - U_2	-18.20	-5.32	-16.16	-23.48	0.00	0.00	0.00	0.00	0.00	0.00
	U_2 - U_3	-18.81	0.20	55.94	2.63	0.00	0.00	0.00	0.00	0.00	0.00
	U_3 - U_4	-21.62	-5.77	-4.06	-28.02	0.00	0.00	0.00	0.00	0.00	0.00
	U_4 - U_5	-12.06	14.47	-7.04	-19.03	0.00	0.00	0.00	0.00	0.00	0.00
	U_5 - U_6	21.90	-26.60	-11.66	-33.90	0.00	0.00	0.00	0.00	0.00	0.00
	U_6 - U_7	-11.79	21.91	-19.22	-43.89	0.00	0.00	0.00	0.00	0.00	0.00
	U_7 - U_8	-12.12	3.81	-9.29	-1.01	0.00	0.00	0.00	0.00	0.00	0.00
	U_8 - U_9	-16.41	-13.90	-21.05	-38.27	0.00	0.00	0.00	0.00	0.00	0.00
	U_9 - U_{10}	-7.41	2.06	20.48	29.38	0.00	0.00	0.00	0.00	0.00	0.00
	U_{10} - U_{11}	-6.44	6.11	25.19	3.42	0.00	0.00	0.00	0.00	0.00	0.00
	U_{11} - U_{12}	-12.43	-2.18	18.15	-8.08	0.00	0.00	0.00	0.00	0.00	0.00
	U_{12} - U_{13}	23.43	-20.88	3.70	-15.08	0.00	0.00	0.00	0.00	0.00	0.00
	U_{13} - U_{14}	-26.81	26.81	-5.74	-24.67	0.00	0.00	0.00	0.00	0.00	0.00
	U_{14} - U_{15}	1.29	-27.27	1.64	-7.14	0.00	0.00	0.00	0.00	0.00	0.00
	U_{15} - U_{16}	-48.63	2.23	-18.48	-44.11	0.00	0.00	0.00	0.00	0.00	0.00
	U_{16} - U_{17}	28.58	-16.68	-31.44	-15.17	0.00	0.00	0.00	0.00	0.00	0.00
	U_{17} - U_{18}	-13.06	-32.97	4.72	8.96	0.00	0.00	0.00	0.00	0.00	0.00
	U_{18} - U_{19}	29.08	10.21	14.60	-24.19	0.00	0.00	0.00	0.00	0.00	0.00
	U_{19} - U_{20}	-29.11	-15.48	3.37	-71.37	0.00	0.00	0.00	0.00	0.00	0.00
	U_{20} - U_{21}	-0.24	0.24	-11.16	-11.13	0.00	0.00	0.00	0.00	0.00	0.00
	U_{21} - U_{22}	3.83	24.90	-6.79	-24.32	0.00	0.00	0.00	0.00	0.00	0.00
	U_{22} - U_{23}	-14.04	14.04	-19.80	-19.80	0.00	0.00	0.00	0.00	0.00	0.00
	U_{23} - U_{24}	15.66	-27.15	20.76	-13.46	0.00	0.00	0.00	0.00	0.00	0.00
	U_{24} - U_{25}	-20.43	-20.55	2.07	-14.64	0.00	0.00	0.00	0.00	0.00	0.00
	U_{25} - U_{26}	-3.68	-168.21	0.43	-46.55	0.00	0.00	0.00	0.00	0.00	0.00
	U_{26} - U_{27}	-27.29	-13.99	-18.85	-34.73	0.00	0.00	0.00	0.00	0.00	0.00
	U_{27} - U_{28}	-28.56	-15.92	-27.33	-37.75	0.00	0.00	0.00	0.00	0.00	0.00
	U_{28} - U_{29}	-20.13	8.94	-17.28	-36.76	0.00	0.00	0.00	0.00	0.00	0.00
	U_{29} - U_{30}	-27.11	-23.83	-24.84	-33.87	0.00	0.00	0.00	0.00	0.00	0.00
	U_{30} - U_{31}	-13.82	-12.46	-21.37	-8.56	0.00	0.00	0.00	0.00	0.00	0.00
	U_{31} - U_{32}	-23.59	-28.64	-16.31	-30.71	0.00	0.00	0.00	0.00	0.00	0.00
	U_{32} - U_{33}	-30.79	-30.79	-30.79	-30.79	0.00	0.00	0.00	0.00	0.00	0.00
	U_{33} - U_{34}	-44.87	11.59	-9.55	-17.63	0.00	0.00	0.00	0.00	0.00	0.00
	U_{34} - U_{35}	-57.47	-50.14	-20.25	-39.03	0.00	0.00	0.00	0.00	0.00	0.00
	U_{35} - U_{36}	-31.02	-22.43	-23.21	-29.13	0.00	0.00	0.00	0.00	0.00	0.00
	U_{36} - U_{37}	-18.62	-20.03	-22.23	-25.26	0.00	0.00	0.00	0.00	0.00	0.00
	U_{37} - U_{38}	-20.76	-10.04	-12.41	-2.86	0.00	0.00	0.00	0.00	0.00	0.00
	U_{38} - U_{39}	-10.72	14.17	9.70	-1.61	0.00	0.00	0.00	0.00	0.00	0.00
	U_{39} - U_{40}	-10.27	10.27	9.70	-1.61	0.00	0.00	0.00	0.00	0.00	0.00
Structure 2	U_0 - U_1	-11.16	-1.49	7.81	-16.04	0.00	0.00	0.00	0.00	0.00	0.00
	$U

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 Space

Loading:	SCI
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
Per Guidelines 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-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 Max Start-In	Lane Reduction & Impact Live Load Max End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In
Structure 1	L_0-L_1	-15.50	-73.38	-1.00	1.04	3.26	-7.89				
	L_1-L_2	39.75	-88.06	-0.12	2.32	2.54	-11.24				
	L_2-L_3	70.30	-42.24	1.46	2.63	-0.75	-11.36				
	L_3-L_4	-11.39	11.52	1.26	4.01	-1.05	-12.92				
	L_4-L_5	-49.18	208.14	-5.29	4.39	-41.87	-88.00				
	L_5-L_6	-0.43	187.22	2.25	5.44	-4.25	-4.41				
	L_6-L_7	41.36	78.74	4.01	4.41	-4.04	-9.26				
	L_7-L_8	-25.09	448.92	-1.66	17.33	0.08	-0.06				
	L_8-L_9	426.08	-36.00	2.48	1.04	14.10	-6.06				
	L_9-L_{10}	120.53	-116.03	3.66	1.64	3.29	-7.33				
	L_{10}-L_{11}	139.16	-198.23	2.25	2.31	4.64	-8.36				
	L_{11}-L_{12}	-45.20	-121.29	2.13	1.01	-0.65	-9.38				
	L_{12}-L_{13}	96.42	-350.16	1.66	1.23	5.71	-17.66				
	L_{13}-L_{14}	-352.17	-64.21	1.80	1.23	0.74	-17.21				
	L_{14}-L_{15}	-192.00	-318.69	-1.23	1.38	-9.16	-14.70				
	L_{15}-L_{16}	339.87	44.80	3.21	4.20	-8.28	-30.34				
	L_{16}-L_{17}	-154.69	-31.48	-4.04	3.96	-5.65	-3.87				
	L_{17}-L_{18}	-216.17	148.84	-6.52	5.14	-2.72	-2.37				
	L_{18}-L_{19}	-136.64	-69.93	0.12	5.05	0.30	-2.23				
	L_0-U_1	2.99	-170.85	-0.74	1.43	4.11	-10.80				
	U_1-U_2	16.59	-245.54	1.79	4.26	4.35	-12.99				
	U_2-U_3	-6.26	-160.81	-0.20	1.55	3.60	-12.63				
	U_3-U_4	87.36	-64.61	-1.20	1.74	4.12	-15.17				
	U_4-U_5	-253.03	-295.08	1.43	2.53	-2.64	-18.17				
	U_5-U_6	-475.14	-252.78	3.90	3.93	-6.43	-24.58				
	U_6-U_7	-280.52	-64.48	3.20	5.64	-9.76	-15.87				
	U_7-U_8	-292.37	219.77	4.85	5.64	-11.66	-17.21				
	U_8-U_9	-225.88	141.33	2.56	5.73	-6.66	-7.58				
	U_9-U_{10}	-261.56	206.85	1.67	6.70	-4.23	-8.38				
	U_{10}-U_{11}	-160.09	387.18	-6.14	7.97	-7.36	-4.53				
	U_{11}-U_{12}	-202.72	-204.41	1.12	3.86	-5.04	-18.73				
	U_{12}-U_{13}	-379.75	-103.15	-12.55	2.68	4.37	-7.67				
	U_{13}-U_{14}	1072.48	-412.36	1.32	1.49	31.30	-21.01				
	U_{14}-U_{15}	339.48	-413.63	1.06	1.49	9.91	-125.53				
	U_{15}-U_{16}	470.61	-89.01	5.41	2.42	10.78	-11.04				
	U_{16}-U_{17}	1.03	-42.33	1.06	1.49	0.03	-2.98				
	U_{17}-U_{18}	-226.53	-41.80	5.34	3.24	4.78	-10.84				
	U_{18}-U_{19}	214.46	-56.44	3.05	3.21	-0.84	-12.00				
	U_{19}-U_{20}	46.37	33.81	-8.82	1.26	-1.73	-6.01				
Structure 2	L_{20}-L_{21}	49.26	-202.49	0.51	3.17	-0.74	-22.88				
	L_{21}-L_{22}	-197.13	34.93	20.99	2.24	-2.64	-21.47				
	L_{22}-L_{23}	-111.93	0.87	2.07	4.48	-8.49	-14.99				
	L_{23}-L_{24}	76.50	-4.75	0.20	4.48	-5.42	-22.27				
	L_{24}-L_{25}	-60.79	179.83	-6.90	6.08	-0.88	-8.76				
	L_{25}-L_{26}	-81.88	265.66	-6.92	7.11	-5.63	-7.83				
	L_{26}-L_{27}	79.74	-213.12	4.84	5.71	-0.38	-7.49				
	L_{27}-L_{28}	-100.08	-279.84	2.16	3.74	-7.51	-21.73				
	L_{28}-L_{29}	20.70	103.94	-4.11	4.13	-1.52	-8.36				
	L_{29}-L_{30}	1027.57	362.88	-1.54	1.93	29.66	-20.46				
	L_{30}-L_{31}	-227.20	-125.85	0.69	5.25	-1.15	-12.34				
	L_{31}-L_{32}	68.89	-114.31	1.52	5.25	0.73	-12.34				
	L_{32}-L_{33}	278.16	-133.13	2.43	4.69	5.04	-11.17				
	L_{33}-L_{34}	178.74	-84.91	1.43	4.69	3.23	-11.17				
	L_{34}-L_{35}	222.98	-243.33	3.32	3.70	4.62	-12.94				
	L_{35}-L_{36}	68.89	-114.31	1.52	3.70	0.73	-12.94				
	L_{36}-L_{37}	-187.99	-470.88	4.11	2.98	-5.64	-25.84				
	L_{37}-L_{38}	-445.18	-93.03	3.44	5.84	-13.72	-24.66				
	L_{38}-L_{39}	-291.76	-319.65	3.44	5.84	-10.33	-24.66				
	L_{39}-L_{40}	-392.42	-38.25	-6.07	3.46	-10.37	-11.54				
	L_{40}-L_{41}	-297.29	-199.08	-7.48	4.16	-6.28	-3.69				
	L_{41}-L_{42}	-21.12	-290.67	-1.73	4.16	0.52	-3.69				
	L_0-L_1	24.89	-109.63	0.37	0.58	5.05	-8.65				
	L_1-L_2	139.96	-178.06	-0.36	0.81	4.32	-9.07				
	L_2-L_3	70.64	-27.55	0.09	3.29	0.40	-8.36				
	L_3-L_4	47.96	-293.92	-2.22	1.16	0.84	-12.21				
	L_4-L_5	-41.79	-343.26	0.32	2.06	-0.22	-20.60				
	L_5-L_6	-341.31	86.25	-11.00	5.68	-6.65	-13.53				
	L_6-L_7	-201.18	152.50	-7.75	6.19	-3.10	-5.61				
	L_7-L_8	-25.96	162.14	-4.35	5.68	-0.40	-5.61				
	L_8-L_9	-147.72	-149.48	-4.37	5.33	-1.94	-6.34				
	L_9-L_{10}	-428.40	-26.47	-3.43	5.12	17.63	-6.93				
	L_{10}-L_{11}	-70.64	-27.55	0.09	3.29	0.40	-8.36				
	L_{11}-L_{12}	194.51	-25.06	2.47	3.92	3.99	-12.69				
	L_{12}-L_{13}	-85.44	-80.85	-3.41	1.38	-7.21	-13.21				
	L_{13}-L_{14}	-74.43	-5.53	-6.91	4.68	0.77	-0.72				

M_y Information

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	Pedestrian Load (Max) Start-In	Pedestrian Load (Min) End-In	Lane Reduction & Impact Live Load Max Start-In	Lane Reduction & Impact Live Load Max End-In	Impact Pedestrian Load Max Start-In	Impact Pedestrian Load Max End-In
Structure 1	L_0-L_1	-4.03	-14.79	0.19	0.71	0.01	0.03				
	L_1-L_2	8.64	-4.55	2.99	-3.30	0.00	0.00				
	L_2-L_3	-3.41	-3.06	-2.96	0.24	0.00	0.00				
	L_3-L_4	6.39	-9.22	-5.08	-3.64	0.00	0.00				
	L_4-L_5	-4.78	11.77	-26.08	19.72	0.00	0.00				
	L_5-L_6	5.36	-7.27	-2.42	-0.73	0.00	0.00				
	L_6-L_7	-1.86	-2.77	0.19	-0.60	-0.01	0.00				
	L_7-L_8	-8.31	-11.72	-0.80	0.38	0.00	0.00				
	L_8-L_9	17.76	55.36	-0.79	-1.05	-0.01	-0.03				
	L_9-L_{10}	-1.64	-0.36	2.18	-1.34	0.00	0.00				
	L_{10}-L_{11}	1.75	1.24	7.63	-6.48	0.00	0.00				
	L_{11}-L_{12}	5.75	0.81	-5.69	-1.32	0.00	0.00				
	L_{12}-L_{13}	2.36	7.32	-6.57	6.40	0.00	0.00				
	L_{13}-L_{14}	-4.19	-4.98	23.72	-5.89	0.00	0.00				
	L_{14}-L_{15}	16.10	20.98	-5.48	-9.74	0.00	0.00				
	L_{15}-L_{16}	-1.68	5.50	-9.81	2.05	0.00	0.00				
	L_{16}-L_{17}	0.86	-4.06	15.04	0.00	0.00	0.00				
	L_{17}-L_{18}	-17.09	-4.52	-15.97	57.39	0.00	0.00				
	L_{18}-L_{19}	-4.51	-29.43	-1.58	-0.46	-1.48	5.38				
	L_0-U_1	0.87	3.05	-18.26	-63.37	0.00	0.00				
	U_1-U_2	4.65	-0.23	-4.52	7.83	-0.45	0.00				
	U_2-U_3	-1.87	-23.54	0.63	-5.86	0.00	0.00				
	U_3-U_4	69.86	2.47	0.27	0.67	0.00	0.00				
	U_4-U_5	25.75	18.62	-5.92	0.00	0.00	0.00				
	U_5-U_6	37.78	18.45	-5.29	0.00	0.00	0.00				
	U_6-U_7	4.47	16.93	-11.80	0.00	0.00	0.00				
	U_7-U_8	9.28	8.54	2.69	-6.75	0.00	0.00				
	U_8-U_9	-5.82	2.91	-8.86	-0.11	0.00	0.00				
	U_9-U_{10}	1.78	4.19	-4.00	-5.93	0.00	0.00				
	U_{10}-U_{11}	-11.93	70.09	-19.45	52.25	0.00	0.00				
	U_{11}-U_{12}	-54.48	-37.94	-1.37	-1.99	0.00	0.00				
	U_{12}-U_{13}	-40.58	-60.89	35.22	-44.92	0.00	0.00				
	U_{13}-U_{14}	40.54	34.67	-1.12	2.48	0.00	0.00				
	U_{14}-U_{15}	2.10	18.04	-4.68	-2.72	0.00	0.00				
	U_{15}-U_{16}	19.63	6.86	-10.74	-7.13	0.00	0.00				
	U_{16}-U_{17}	2.23	10.93	-5.01	-3.01	0.00	0.00				
	U_{17}-U_{18}	-11.43	-10.36	-14.80	0.03	0.00	0.00				
	U_{18}-U_{19}	3.68	-8.73	-7.54	9.66	0.00	0.00				
	U_{19}-U_{20}	12.86	-36.72	0.00	0.00	0.00	0.00				
Structure 2	L_{20}-L_{21}	-4.25	69.52	0.16	-0.12	-1.09	1.18				
	L_{21}-L_{22}	1.73	-1.21	-11.45	12.38	0.00	0.00				
	L_{22}-L_{23}	8.79	-2.72	-0.29	0.00	0.00	0.00				
	L_{23}-L_{24}	-22.49	38.32	0.35	0.26	-0.35	-0.48				
	L_{24}-L_{25}	31.41	-39.69	0.00	0.00	0.00	0.00				
	L_{25}-L_{26}	-10.41	39.70	0.98	1.54	-0.60	-0.67				
	L_{26}-L_{27}	-48.02	-23.13	0.31	0.61	0.07	1.08				
	L_{27}-L_{28}	22.68	-30.24	0.00	0.00	0.00	0.00				
	L_{28}-L_{29}	8.20	8.20	-60.14	60.14	0.00	0.00				
	L_{29}-L_{30}	55.59	-12.65	107.34	-5.75	0.83	0.83				
	L_{30}-L_{31}	-12.34	47.68	-15.83	1.97	0.00	0.00				
	L_{31}-L_{32}	-37.16	-25.24	1.48	0.45	0.60	0.70				
	L_{32}-L_{33}	-19.27	-6.89	10.49	7.80	0.00	0.00				
	L_{33}-L_{34}	-3.50	-4.47	4.44	0.00	0.00	0.00				
	L_{34}-L_{35}	-4.54	-13.71	-3.27	0.14	0.60	0.70				
	L_{35}-L_{36}	-19.27	-6.89	10.49	7.80	0.00	0.00				
	L_{36}-L_{37}	0.97	-1.51	-0.15	-0.50	-0.30	1.50				
	L_{37}-L_{38}	1.78	4.19	-4.00	-5.93	0.00	0.00				
	L_{38}-L_{39}	-11.93	70.09	-19.45	52.25	0.00	0.00				
	L_{39}-L_{40}	-54.48	-37.94	-1.37	-1.99	0.00	0.00				
	L_{40}-L_{41}	-40.58	-60.89	35.22	-44.92	0.00	0.00				
	L_{41}-L_{42}	40.54	34.67	-1.12	2.48	0.00	0.00				
	L_0-L_1	0.87	3.05	-18.26	-63.37	0.00	0.00				
	L_1-L_2	4.65	-0.23	-4.52	7.83	-0.45	0.00				
	L_2-L_3	-1.87	-23.54	0.63	-5.86	0.00	0.00				
	L_3-L_4	69.86	2.47	0.27	0.67	0.00	0.00				
	L_4-L_5	25.75	18.62	-5.92	0.00	0.00	0.00				
	L_5-L_6	37.78	18.45	-5.29	0.00	0.00	0.00				
	L_6-L_7	4.47	16.93	-11.80	0.00	0.00	0.00				
	L_7-L_8	9.28	8.54	2.69	-6.75	0.00	0.00				
	L_8-L_9	-5.82	2.91	-8.86	-0.11	0.00	0.00				
	L_9-L_{10}	1.78	4.19	-4.00	-5.93	0.00	0.00				
	L_{10}-L_{11}	-11.93	70.09	-19.45	52.25	0.00	0.00				
	L_{11}-L_{12}	-54.48	-37.94	-1.37	-1.99	0.00	0.00				
	L_{12}-L_{13}	-40.58	-60.89	35.22	-44.92	0.00	0.00				
	L_{13}-L_{14}	40.54	34.67	-1.12	2.48	0.00	0.00				
	L_0-L_1	24.89	-109.63	0.37	0.58	5.05	-8.65				
	L_1-L_2	139.96	-178.06	-0.36	0.81	4.32	-9.07				
	L_2-L_3	70.64	-27.55	0.09	3.29	0.40	-8.36				
	L_3-L_4	47.96	-293.92	-2.22	1.16	0.84	-12.21				
	L_4-L_5	-41.79	-343.26	0.32	2.06	-0.22	-20.60				
	L_5-L_6	-341.31	86.25	-11.00	5.68	-6.65	-13.53				
	L_6-L_7	-201.18	152.50	-7.75	6.19	-3.10	-5.61				
	L_7-L_8	-25.96	162.14	-4.35	5.68	-0.40	-5.61				
	L_8-L_9	-147.72	-149.48	-4.37	5.33	-1.94	-6.34				
	L_9-L_{10}	-428.40	-26.47	-3.43	5.12	17.63	-6.93				
	L_{10}-L_{11}	-70.64	-27.55	0.09	3.29	0.40	-8.36				
	L_{11}-L_{12}	194.51	-25.06	2.47	3.92	3.99	-12.69				
	L_{12}-L_{13}	-85.44	-80.85	-3.41	1.38	-7.21	-13.21				
	L_{13}-L_{14}	-74.43	-5.53	-6.91	4.68	0.77	-0.72				

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: SC1
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-In (k-ft)	Dead Load End-In (k-ft)	Live Load (Max) Start-In (k-ft)	Live Load (Max) End-In (k-ft)	Pedestrian Load (Max) Start-In (k-ft)	Pedestrian Load (Min) End-In (k-ft)	Lane Reduction & Impact Live Load Start-In (k-ft)	Lane Reduction & Impact Live Load End-In (k-ft)	Impact Pedestrian Load Max Start-In (k-ft)	Impact Pedestrian Load Max End-In (k-ft)
Structure 1	U_0–L_1	-29.87	49.03	3.80	4.94	0.85	-0.92				
	U_1–L_1	-9.08	15.18	-3.71	3.63	0.72	-0.78				
	U_1–L_2	10.00	9.70	-7.96	3.27	0.87	-0.90				
	U_2–L_2	33.45	-34.40	-2.52	2.53	2.06	-1.88				
	U_2–L_3	41.64	-42.40	-1.12	0.90	2.44	-2.27				
	U_3–L_3	45.56	-51.10	-0.26	0.15	2.99	-3.29				
	U_3–L_4	55.60	-55.88	0.02	0.06	3.64	-3.84				
	U_4–L_4	91.24	-101.87	-0.02	0.02	4.82	-5.09				
	U_4–L_5	-20.57	21.23	4.80	5.73	0.67	-0.71				
	U_5–L_5	-52.21	61.10	2.13	2.03	2.79	-2.95				
	U_5–L_6	-88.47	88.21	-3.85	3.92	-2.24	-0.19				
	U_6–L_6	-91.12	94.05	-4.12	4.77	0.68	-0.55				
	U_6–L_7	-79.57	78.39	-4.04	3.87	0.79	-0.68				
	U_7–L_7	-49.26	60.16	-3.59	3.63	1.06	-1.01				
	U_7–L_8	-29.77	34.66	-2.99	2.64	1.19	-1.09				
	U_8–L_8	-1.50	-2.65	-2.02	1.92	3.16	-3.28				
	U_8–L_9	34.13	-36.55	-1.30	1.06	3.94	-3.46				
	U_9–L_9	46.23	-55.85	-0.31	0.32	3.34	-3.46				
	U_9–L_{10}	110.44	-114.63	-0.42	0.43	5.98	-5.57				
	U_{10}–L_{10}	121.36	-131.26	-0.37	0.38	6.04	-6.23				
	U_{10}–L_{11}	-134.59	-173.50	-0.23	0.31	6.15	-7.13				
	U_{11}–L_{11}	-114.25	-168.97	-1.31	0.75	5.13	-6.13				
	U_{11}–L_{12}	-123.79	131.39	-5.84	5.95	0.98	-1.04				
	U_{12}–L_{12}	-113.45	113.45	-5.55	5.75	1.13	-1.15				
	U_{12}–L_{13}	-56.01	62.13	-3.12	3.10	0.66	-0.70				
	U_{13}–L_{13}	-34.05	39.73	-2.31	2.33	0.77	-0.78				
	U_{13}–L_{14}	-7.04	12.29	-2.03	3.09	1.61	-1.58				
	U_{14}–L_{14}	15.85	-15.59	-2.73	2.72	2.07	-2.19				
	U_{14}–L_{15}	38.85	-44.94	-1.36	1.35	2.64	-2.78				
	U_{15}–L_{15}	86.91	-96.07	-1.54	1.36	4.75	-4.70				
	U_{15}–L_{16}	155.08	-159.47	-1.26	1.10	3.44	-3.46				
	U_{16}–L_{16}	141.23	-149.41	-0.46	0.44	5.37	-5.56				
	U_{16}–L_{17}	192.55	-192.83	-0.39	0.21	5.23	-5.37				
	U_{17}–L_{17}	203.52	-203.17	-0.49	0.52	6.79	-6.50				
	U_{17}–L_{18}	60.05	-59.11	-0.77	0.78	7.24	-7.09				
	U_{18}–L_{18}	-109.89	162.81	-6.51	6.36	0.83	-0.87				
	U_{19}–L_{19}	-113.84	113.84	-6.18	6.11	0.87	-0.91				
	U_{19}–L_{20}	-130.37	-127.18	-6.17	6.06	0.84	-0.82				
	U_{20}–L_{20}	-113.07	114.60	-0.89	5.95	0.94	-0.96				
	U_{20}–L_{21}	-44.77	47.44	-3.92	3.92	0.67	-0.70				
	U_{21}–L_{21}	-44.77	46.58	-3.39	3.33	1.10	-1.04				
	U_{21}–L_{22}	-30.30	34.29	-2.91	2.91	1.23	-1.15				
	U_{22}–L_{22}	-3.69	4.33	-2.19	2.21	1.91	-2.02				
	U_{22}–L_{23}	22.65	25.72	-1.94	1.94	2.11	-2.08				
	U_{23}–L_{23}	39.85	-42.14	-1.26	1.15	2.40	-2.50				
	U_{23}–L_{24}	93.89	-97.14	-1.36	1.15	3.42	-3.50				
	U_{24}–L_{24}	88.57	-87.50	-1.03	0.74	4.18	-4.12				
	U_{24}–L_{25}	138.00	-142.64	-0.78	0.77	7.03	-7.14				
	U_{25}–L_{25}	138.29	-139.04	-0.78	0.77	7.03	-7.14				
	U_{25}–L_{26}	124.04	-124.04	-0.76	0.76	7.03	-7.14				
	U_{26}–L_{26}	173.56	-176.28	-0.44	0.39	7.50	-7.22				
	U_{27}–L_{27}	167.25	-167.49	-0.44	0.39	7.50	-7.22				
	U_{28}–L_{28}	-167.25	167.49	-0.16	5.86	0.77	-0.85				
	U_{29}–L_{29}	-116.13	110.00	-5.07	4.95	0.39	-0.71				
	U_{30}–L_{30}	-119.87	119.87	-5.07	4.97	0.52	-0.41				
	U_{31}–L_{31}	-119.87	124.44	-5.07	4.97	0.52	-0.41				
	U_{32}–L_{32}	-79.51	88.87	-4.41	4.30	1.08	-1.00				
	U_{33}–L_{33}	-43.86	51.94	-2.33	2.50	1.17	-1.31				
	U_{34}–L_{34}	-5.58	1.82	-1.77	1.66	3.11	-3.30				
	U_{35}–L_{35}	34.13	-36.55	-1.30	1.06	3.94	-3.46				
	U_{36}–L_{36}	55.25	-61.09	-0.64	0.65	3.39	-3.47				
	U_{37}–L_{37}	97.53	-98.52	-1.03	0.74	4.18	-4.12				
	U_{38}–L_{38}	137.10	-150.77	-0.84	0.86	6.50	-6.57				
	U_{39}–L_{39}	165.74	-206.85	-0.62	0.83	5.73	-7.34				
	U_{40}–L_{40}	92.36	-94.15	-1.29	1.24	4.89	-5.39				
	U_{41}–L_{41}	-92.36	94.15	-1.29	1.24	4.89	-5.39				
	U_{42}–L_{42}	-109.90	113.02	-5.28	5.35	0.46	-0.49				
	U_{43}–L_{43}	-109.90	113.02	-5.28	5.35	0.46	-0.49				
	U_{44}–L_{44}	-38.43	48.15	-3.06	3.07	0.34	-0.36				
	U_{45}–L_{45}	-38.43	48.15	-3.06	3.07	0.34	-0.36				
	U_{46}–L_{46}	-27.16	34.15	-2.32	2.19	1.02	-1.02				
	U_{47}–L_{47}	-2.76	8.37	-3.06	3.67	1.62	-1.68				
	U_{48}–L_{48}	25.90	-28.71	-1.95	1.96	2.50	-2.51				
	U_{49}–L_{49}	25.90	-28.71	-1.95	1.96	2.50	-2.51				
	U_{50}–L_{50}	79.40	-77.51	-0.99	0.83	4.02	-4.04				
	U_{51}–L_{51}	79.40	-77.51	-0.99	0.83	4.02	-4.04				
	U_{52}–L_{52}	142.75	-166.20	-0.06	0.08	5.70	-6.27				
	U_{53}–L_{53}	-38.99	40.31	-2.44	2.28	0.95	-0.73				
	U_{54}–L_{54}	-37.48	38.74	-2.46	2.49	2.25	-2.47				
	U_{55}–L_{55}	-10.30	11.14	-1.37	1.29	3.20	-3.63				
	U_{56}–L_{56}	3.52	-11.96	-0.76	0.74	4.01	-3.83				
	U_{56}–L_{56}	44.79	-53.88	-0.51	0.71	3.71	-5.13				

ZZ Axis Moment Properties

Location	Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{bb} (in^3)	S_b (in^3)	S_t (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bb}	M_r (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m/a}$	C_{com}
Structure 1	U_0–L_1	-93.76	135.19	26.50	90.37	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1–L_1	-55.53	72.25	-1.40	8.48	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_1–L_2	-29.61	94.77	25.83	-26.59	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_2–L_2	-7.05	-8.07	73.31	-71.98	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_2–L_3	37.89	-62.12	84.48	-83.05	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_3–L_3	50.46	-64.27	152.50	-173.46	19.4	19.37	19.31	29.87	3	907.0	1.54	986	1.5	958.8
	U_3–L_4	72.57	-71.41	123.53	-137.84	21.8	20.80	20.67	34.66	4	1076.0	1.67	1164	1.5	1029.6
	U_4–L_4	118.31	-132.09	188.30	-205.54	18.5	18.45	18.36	30.78	4	1020.9	1.67	1016	1.5	913.3
	U_4–L_5	-86.16	110.45	61.13	-76.42	107.1	107.13	107.11	162.71	26	5362.9	1.52	5369	1.5	5302.3
	U_5–L_5	-243.86	262.09	-173.20	199.02	33.1	33.05	32.91	54.51	14	1408.8	1.65	1799	1.5	1758.2
	U_5–L_6	-169.01	169.64	-118.26	112.03	35.5	35.52	35.44	58.46	14	1309.7	1.65	1929	1.5	1758.2
	U_6–L_6	-176.17	228.20	147.27	203.37	42.7	42.74	42.74	65.30	8	1389.6	1.53	2130	1.5	2115.6
	U_6–L_7	-160.11	156.09	-93.58	92.83	21.1	21.09	21.09	35.40	10	1137.6	1.68	1170	1.5	1044.0
	U_7–L_7	-114.37	129.04	-49.17	63.19	17.2	17.24	17.24	26.54	2	824.7	1.54	876	1.5	853.4
	U_7–L_8	-74.97	-31.89	-13.65	19.96	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_8–L_8	20.23	23.44	42.35	-49.46	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_8–L_9	26.09	-32.65	52.29	-56.02	15.4	15.42	15.42	23.71	2	791.9	1.54	782	1.5	763.3
	U_9–L_9	59.77	-68.13	106.94	-121.14	19.4	19.37	19.37	29.87	3	907.0	1.54	986	1.5	958.8
	U_9–L_{10}	-137.75	-143.07	225.95	-232.67	33.1	35.09	35.09	53.51	4	1167.1	1.61	1766	1.5	1737.2
	U_{10}–L_{10}	152.57	-165.38	242.39	-257.90	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{10}–L_{11}	-269.73	329.51	134.30	-163.99	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6
	U_{11}–L_{11}	412.6	63.38	10.44	-11.07	0.00	0.00	0.00	0.00	0.00	241.73	23.20	5607	1.5	2312.1
	U_{11}–L_{12}	-113.45	113.45	5.75	-5.75	0.00	0.00	0.00	0.00	0.00	43.31	11.98	519	1.5	1922.1
	U_{12}–L_{12}	-56.01	62.13	-3.12	3.10	0.66	-0.70	0.00	0.00	0.00	-33.18	33.00	-7.07	1.5	1115.94
	U_{13}–L_{13}	-34.05	39.73	-2.31	2.33	0.77	-0.78	0.00	0.00	0.00	-19.22	19.11	-4.09	1.5	1115.94
	U_{13}–L_{14}	-7.04	12.29	-2.03	3.09	1.61	-1.58	0.00	0.00	0.00	-5.54	5.51	-1.18	1.5	1115.94
	U_{14}–L_{14}	15.85	-15.59	-2.73	2.72	2.07	-2.19	0.00	0.00	0.00	-17.18	17.42	-69.24	-50.52	15.4
	U_{14}–L_{15}	38.85	-44.94	-1.36	1.35	2.64	-2.78	0.00	0.00	0.00	-21.92	21.80	-4.67	-39.05	15.4
	U_{15}–L_{15}	86.91	-96.07	-1.54	1.36	4.75	-4.70	0.00	0.00	0.00	-16.43	14.49	-3.15	-106.05	178.73
	U_{15}–L_{16}	155.08	-159.47	-1.26	1.10	3.44	-3.46	0.00	0.00	0.00	-14.06	11.44	-2.45	-83.46	-64.39
	U_{16}–L_{16}	141.23	-149.41	-0.46	0.44	5.37	-5.56	0.00	0.00	0.00	-4.92	4.65	-1.00	-6.72	-69.17
	U_{16}–L_{17}	192.55	-192.83	-0.39	0.21	5.23	-5.37	0.00	0.00	0.00	-4.10	2.26	-0.49	-5.67	-67.05
	U_{17}–L_{17}	203.52	-203.17	-0.49	0.52	6.79	-6.50	0.00	0.00	0.00	-5.25	5.54	-1.25	-69.19	0.00
	U_{17}–L_{18}	60.05	-59.11	-0.77	0.78	7.24	-7.09	0.00	0.00	0.00	-29.67	29.56	-6.43	-54.69	0.00
	U_{18}–L_{18}	-109.89	162.81	-6.51	6.36	0.83	-0.87	0.00	0.00	0.00	-68.00	66.92	-15.13	-196.47	199.77
	U_{19}–L_{19}	-113.84	113.84	-6.18	6.11	0.87	-0.91	0.00	0.00	0.00	-64.84	63.73	-14.41	-194.27	0.00
	U_{19}–L_{20}	-130.37	-127.18	-6.17	6.06	0.84	-0.82	0.00	0.00	0.00	-64.84	63.72	-14.41	-194.27	0.00
	U_{20}–L_{20}	-113.07	114.60	-0.89	5.95	0.94	-0.96	0.00	0.00	0.00	-61.96	62.57	-13.85	-185.74	0.00
	U_{20}–L_{21}	-44.77	47.44	-3.92	3.92	0.67	-0.70	0.00	0.00	0.00	-35.65	35.58	-11.52	-107.34	0.00
	U_{21}–L_{21}	-44.77	46.58	-3.39	3.33	1.10	-1.04	0.00	0.00	0.00	-35.65	35.58	-11.52	-10.93	0.00
	U_{21}–L_{22}	-30.30	34.29	-2.91	2.91	1.23	-1.15	0.00	0.00	0.00	-34.39	34.29	-11.13	-15.93	0.00
	U_{22}–L_{22}	-3.69	4.33	-2.19	2.21	1.91	-2.02	0.00	0.00	0.00	-23.00	23.27	20.08	-21.23	0.00
	U_{22}–L_{23}	22.65	25.72	-1.94	1.94	2.11	-2.08	0.00	0.00	0.00	-13.27	13.24	36.60	0.00	0.00
	U_{23}–L_{23}	39.85	-42.14	-1.26	1.15	2.40	-2.50	0.00	0.00	0.00	-13.27	12.06	36.00	0.00	0.00
	U_{23}–L_{24}	93.89	-97.14	-1.36	1.15	3.42	-3.50	0.00	0.00	0.00	-34.39	34.11	98.61	-102.68	17.2
	U_{24}–L_{24}	88.57	-87.50	-1.03	0.74	4.18	-4.12	0.00	0.00	0.00	-10.79	7.75	44.00	-43.31	0.00
	U_{24}–L_{25}	138.00	-142.64	-0.78	0.77	7.03	-7.14	0.00	0.00	0.00	-8.21	8.10	73.93	-75.10	0.00
	U_{25}–L_{25}	138.29	-139.04	-0.78	0.77	7.03	-7.14	0.00	0.00	0.00	-8.21	8.10	73.93	-75.10	0.00
	U_{25}–L_{26}	124.04	-124.04	-0.76	0.76	7.03	-7.14	0.00	0.00	0.00	-8.21	8.10	73.93	-75.10	0.00
	U_{26}–L_{26}	173.56	-176.28	-0.44	0.39	7.50	-7.22	0.00	0.00	0.00	-4.63	4.05	78.94	-76.00	0.00
	U_{27}–L_{27}	167.25	-167.49	-0.44	0.39	7.50	-7.22	0.00	0.00	0.00	-4.63	4.05	78.94	-76.00	0.00
	U_{28}–L_{28}	-167.25	167.49	-0.16	5.86	0.77	-0.85	0.00	0.00	0.00	-65.59	62.39	8.18	-9.07	0.00
	U_{29}–L_{29}	-116.13	110.00	-5.07	4.95	0.39	-0.71	0.00	0.00	0.00	-53.94	52.73	4.18	-7.54	0.00
	U_{30}–L_{30}	-119.87	119.87	-5.07	4.97	0.52	-0.41	0.00	0.00	0.00	-54.00	52.94	5.53	-4.37	0.00
	U_{31}–L_{31}	-119.87	124.44	-5.07	4.97	0.52	-0.41	0.00	0.00	0.00	-54.00	52.94	5.53	-4.37	0.00
	U_{32}–L_{32}	-79.51	88.87	-4.41	4.30	1.08	-1.00	0.00	0.00	0.00	-46.94	45.81	11.50	-10.62	0.00
	U_{33}–L_{33}	-43.86	51.94	-2.33	2.50	1.17	-1.31	0.00	0.00	0.00	-24.80	24.64	12.44	-13.50	0.00
	U_{34}–L_{34}	-5.58	1.82	-1.77	1.66	3.11	-3.30	0.00	0.00	0.00	-18.85	17.64	33.13	-35.15	0.00
	U_{35}–L_{35}	34.13	-36.55	-1.30	1.06	3.94	-3.46	0.00	0.00	0.00	-13.27	12.06	36.00	0.00	0.00
	U_{36}–L_{36}	55.25	-61.09	-0.64	0.65	3.39	-3.47	0.00	0.00	0.00	-6.80	6.95	36.04	-36.92	0.00
	U_{37}–L_{37}	97.53	-98.52	-1.03	0.74	4.18	-4.12	0.00	0.00	0.00	-10.79	7.75	44.00	-43.31	0.00
	U_{38}–L_{38}	137.10	-150.77	-0.84	0.86	6.50	-6.57	0.00	0.00	0.00	-8.96	9.10	69.72	-69.92	0.00
	U_{39}–L_{39}	165.74	-206.85	-0.62	0.83	5.73	-7.34	0.00	0.00	0.00	-6.58	8.81	61.23	-78.10	0.00
	U_{40}–L_{40}	92.36	-94.15	-1.29	1.24	4.89	-5.39	0.00	0.00	0.00	-10.79	7.75	44.00	-43.31	0.00
	U_{41}–L_{41}	-92.36	94.15	-1.29	1.24	4.89	-5.39	0.00	0.00	0.00	-10.79	7.75	44.00	-43.31	0.00
	U_{42}–L_{42}	-109.90	113.02	-5.28	5.35	0.46	-0.49	0.00	0.00	0.00	-56.68	57.71	4.99	-5.32	0.00
	U_{43}–L_{43}	-109.90	113.02	-5.28	5.35	0.46	-0.49	0.00	0.00	0.00	-56.68	57.71	4.99	-5.32	0.00
	U_{44}–L_{44}	-38.43	48.15	-3.06	3.07	0.34	-0.36	0.00	0.00	0.00	-33.03	33.10	3.64	-3.91	0.00
	U_{45}–L_{45}	-38.43	48.15	-3.06	3.07	0.34	-0.36	0.00	0.00	0.00	-33.03	33.10	3.64	-3.91	0.00
	U_{46}–L_{46}	-27.16	34.15	-2.32	2.19	1.02	-1.02	0.00	0.00	0.00	-32.95	33.14	17.45	-18.07	0.00
	U_{47}–L_{47}	-2.76	8.37	-3.06	3.67	1.62	-1.68	0.00	0.00	0.00	-32.95	33.14	17.45	-18.07	0.00
	U_{48}–L_{48}	25.90	-28.71	-1.95	1.96	2.50	-2.51	0.00	0.00	0.00	-21.00	21.08	26.92	-27.07	0.00
	U_{49}–L_{49}	25.90	-28.71	-1.95	1.96	2.50	-2.51	0.00	0.00	0.00	-21.00	21.08	26.92	-27.07	0.00
	U_{50}–L_{50}	79.40	-77.51	-0.99	0.83	4.02	-4.04	0.00	0.00	0.00	-10.72	8.95	43.30	-43.54	0.00
	U_{51}–L_{51}	79.40	-77.51	-0.99	0.83	4.02	-4.04	0.00	0.00	0.00	-10.72	8.95	43.30	-43.54	0.00
	U_{52}–L_{52}	142.75	-166.20	-0.06	0.08	5.70	-6.27	0.00	0.00	0.00	-0.67	0.84	61.55	-67.62	0.00
	U_{53}–L_{53}	-38.99	40.31	-2.44	2.28	0.95	-0.73	0.00	0.00	0.00	-27.11	25.42	10.62	-8.17	0.00
	U_{54}–L_{54}	-37.48	38.74	-2.46	2.49	2.25	-2.47	0.00	0.00	0.00	-27.34	27.71	25.02	-27.52	0.00
	U_{55}–L_{55}	-10.30	11.14	-1.37	1.29	3.20	-3.63	0.00	0.00	0.00	-15.24	14.36	35.61	-40.36	0.00
	U_{56}–L_{56}	3.52	-11.96	-0.76	0.74	4.01	-3.83	0.00	0.00	0.00	-8.49	8.23	44.64	-42.59	0.00
	U_{56}–L_{56}	44.79	-53.88	-0.51	0.71	3.71	-5.13	0.00	0.00	0.00	-5.62	7.90	47.27	-57.45	0.00

YY Axis Moments from STAAD

Location	Member	Dead Load Start-In (k-ft)	Dead Load End-In (k-ft)	Live Load (Max) Start-In (k-ft)	Live Load (Max) End-In (k-ft)	Pedestrian Load (Max) Start-In (k-ft)	Pedestrian Load (Min) End-In (k-ft)	Lane Reduction & Impact Live Load Start-In (k-ft)	Lane Reduction & Impact Live Load End-In (k-ft)	Impact Pedestrian Load Max Start-In (k-ft)	Impact Pedestrian Load Max End-In (k-ft)
Structure 1	U_0–L_1	-165.39	-33.79	-14.67	-4.70	2.15	0.69				
	U_1–L_1	-163.28	-52.37	-23.89	7.66	0.00	0.00				
	U_1–L_2	80.47	36.79	15.72	7.79	0.00	0.00				
	U_2–L_2	-13.10	7.04	2.63	1.43	0.85	-0.02				
	U_2–L_3	12.35	18.22	24.70	12.21	0.00	0.00				
	U_3–L_3	8.02	12.64	5.25	-1.29	0.00	0.00				
	U_3–L_4	25.25	42.88	-11.34	0.00	0.00	0.00				
	U_4–L_4	-156.58	-112.09	-0.52	-0.47	-0.20	-0.36				
	U_4–L_5	-22.22	19.72	-8.26	-2.49	0.00	0.00				
	U_5–L_5	15.54	20.17	-9.10	-3.06	0.00	0.00				
	U_5–L_6	17.83	20.84	2.20	7.44	0.00	0.00				
	U_6–L_6	15.39	19.72	2.33	7.44	0.00	0.00				
	U_6–L_7	1.91	-3.25	25.12	-8.30	0.00	0.00				
	U_7–L_7	-137.11	-101.42	1.08	0.19	0.77	-1.23				
	U_7–L_8	1.87	2.70	30.57	1.11	0.00	0.00				
	U_8–L_8	-137.05	-101.42	1.08	0.19	0.77	-1.23				
	U_8–L_9	3.99	-7.05	35.27	-1.15	0.00	0.00				
	U_9–L_9	-138.58	-44.74	0.33	-0.09	1.50	0.11				
	U_9–L_{10}	-42.91	25.16	-0.18	-0.41	8.47	0.51				
	U_{10}–L_{10}	-48.55	6.36	-0.87	-0.12	14.64	1.92				
	U_{10}–L_{11}	-223.70	31.19	-0.29	-0.05	0.00	0.08				
	U_{11}–L_{11}	-108.84	-11.94	19.26	2.98	0.00	0.00				
	U_{11}–L_{12}	-16.44	5.69	31.52	10.77	0.00	0.00				
	U_{12}–L_{12}	18.43	18.13	8.18	6.76	0.00	0.00				
	U_{13}–L_{13}	6.16	10.34	5.83	2.49	0.00	0.00				
	U_{14}–L_{14}	5.77	16.13	3.00	5.89	0.00	0.00				
	U_{14}–L_{15}	13.49	14.83	3.03	6.60	0.00	0.00				
	U_{15}–L_{15}	0.40

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: SCI

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) 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 Max Start (k-ft)	Impact Pedestrian Load Max End (k-ft)
Structure 1	U_0-L_1	-12.57	3.38	2.73	1.30	0.42	-0.24				
	U_1-L_1	-1.68	-7.06	-0.87	0.60	-0.30	-0.40				
	U_1-L_2	-0.58	-0.58	0.42	-0.35	-0.06	-0.06				
	U_2-L_2	-9.78	-11.76	0.07	0.13	0.05	-0.84				
	U_2-L_3	-10.33	17.60	0.05	0.60	-12.54	-5.28				
	U_3-L_3	-26.83	58.49	-2.01	2.03	0.00	0.00				
	U_3-L_4	-74.80	111.09	-3.73	2.67	0.00	0.00				
	U_4-L_4	-6.35	88.86	-1.83	3.62	0.01	-0.01				
	U_4-L_5	-9.60	109.55	-1.34	3.32	0.13	-0.29				
	U_5-L_5	-74.80	111.09	-3.73	2.67	0.00	0.00				
	U_5-L_6	-58.84	54.78	-1.69	1.68	-0.20	-0.03				
	U_6-L_6	-26.83	58.49	-2.01	2.03	0.00	0.00				
	U_6-L_7	-55.25	39.07	-1.65	1.84	0.23	-0.73				
	U_7-L_7	-20.99	7.38	-0.91	0.71	0.28	-0.78				
	U_7-L_8	-1.18	-30.29	0.96	-0.89	0.86	-0.84				
	U_8-L_8	-28.64	12.99	-1.05	0.61	0.32	-0.65				
	U_8-L_9	-89.35	58.15	-3.62	3.15	0.31	-0.35				
	U_9-L_9	-93.27	61.38	-3.97	3.19	0.28	-0.32				
	U_9-L_{10}	-105.39	89.05	-4.91	3.87	0.19	-0.19				
	U_{10}-L_{10}	-82.31	86.26	-5.93	4.54	0.84	-0.76				
	U_{10}-L_{11}	-28.64	12.99	-1.05	0.61	0.32	-0.65				
	U_{11}-L_{11}	-0.61	-11.46	-1.26	1.09	0.28	-0.28				
	U_{11}-L_{12}	-7.43	-23.92	-0.64	0.51	1.03	-1.41				
	U_{12}-L_{12}	-44.32	36.88	-1.87	1.55	0.75	-1.06				
	U_{13}-L_{13}	-56.39	68.68	-2.28	2.12	0.26	-0.19				
	U_{13}-L_{14}	-88.55	73.83	-3.19	2.48	0.49	-0.61				
	U_{14}-L_{14}	-76.40	58.92	-2.57	2.01	0.32	-0.43				
	U_{14}-L_{15}	-108.38	116.68	-4.08	3.89	0.67	-0.10				
	U_{15}-L_{15}	-154.28	139.71	-5.22	4.56	0.52	-0.20				
	U_{16}-L_{16}	-86.83	68.73	-3.23	2.75	0.45	-0.71				
	U_{16}-L_{17}	-24.73	100.38	-3.26	4.24	0.69	-0.59				
	U_{17}-L_{17}	-98.38	79.24	-3.24	2.42	0.42	-0.52				
	U_{17}-L_{18}	-74.14	95.51	-4.37	3.86	0.48	-0.55				
	U_{18}-L_{18}	-55.46	68.65	-3.33	3.00	0.42	-0.48				
	U_{18}-L_{19}	-55.46	68.65	-3.06	2.74	0.23	-0.73				
	U_{19}-L_{19}	-32.97	39.97	-2.07	2.07	0.32	-0.81				
Structure 2	U_{19}-L_{20}	-74.14	95.51	-4.37	3.86	0.48	-0.55				
	U_{20}-L_{20}	-10.32	4.39	-0.83	0.77	0.63	-1.06				
	U_{20}-L_{21}	-6.27	2.67	-0.49	0.46	0.38	-0.64				
	U_{21}-L_{21}	-17.08	16.16	-1.63	0.66	-0.88					
	U_{21}-L_{22}	-66.83	54.03	-2.53	2.53	0.45	-0.71				
	U_{22}-L_{22}	-55.69	65.14	-3.42	3.01	0.52	-0.72				
	U_{23}-L_{23}	-49.22	80.41	-3.87	3.43	0.46	-0.51				
	U_{24}-L_{24}	-55.46	68.65	-3.33	3.00	0.42	-0.48				
	U_{25}-L_{25}	-106.11	102.57	-5.31	4.58	0.35	-0.29				
	U_{26}-L_{26}	-33.11	53.53	-2.29	2.42	0.19	-0.19				
	U_{27}-L_{27}	-47.67	128.15	-3.63	4.66	0.75	-0.66				
	U_{28}-L_{28}	-55.46	68.65	-3.33	3.00	0.42	-0.48				
	U_{29}-L_{29}	-89.53	99.33	-3.56	3.51	0.12	-0.08				
	U_{30}-L_{30}	-86.54	82.57	-2.75	2.73	-0.08	-0.25				
	U_{31}-L_{31}	-60.17	67.66	-2.89	2.74	0.13	-1.04				
	U_{32}-L_{32}	-12.59	26.40	-0.95	0.52	1.24	-1.33				
	U_{33}-L_{33}	-6.51	17.79	-1.45	1.08	1.01	-1.18				
	U_{34}-L_{34}	-17.68	8.67	-1.33	1.03	0.41	-0.41				
	U_{35}-L_{35}	-38.92	20.55	-2.18	1.87	0.44	-0.60				
	U_{36}-L_{36}	-88.53	71.15	-4.32	3.66	0.65	-0.55				
Structure 3	U_{37}-L_{37}	-70.13	111.68	-4.32	4.04	0.60	-0.60				
	U_{38}-L_{38}	-49.68	49.24	-6.46	4.31	0.42	-0.34				
	U_{39}-L_{39}	-86.92	56.40	-3.94	2.83	0.39	-0.29				
	U_{40}-L_{40}	-28.11	12.70	-1.60	1.51	0.16	-0.55				
	U_{41}-L_{41}	-28.11	12.70	-1.60	1.51	0.16	-0.55				
	U_{42}-L_{42}	-6.07	-18.30	-0.67	0.53	0.55	-1.13				
	U_{43}-L_{43}	-50.49	35.10	-2.10	1.86	0.07	-0.66				
	U_{44}-L_{44}	-59.60	20.61	-2.31	1.57	-0.79	-0.45				
	U_{45}-L_{45}	-70.13	111.68	-4.32	4.04	0.60	-0.60				
	U_{46}-L_{46}	-2.84	82.10	-1.50	3.67	0.61	-0.51				
	U_{47}-L_{47}	-54.59	58.66	-3.27	2.40	0.02	-0.51				
	U_{48}-L_{48}	-9.15	17.58	-0.44	0.65	-0.51	-0.50				
	U_{49}-L_{49}	-70.13	111.68	-4.32	4.04	0.60	-0.60				
	U_{50}-L_{50}	-9.13	-8.77	-0.39	0.37	0.25	-0.56				
	U_{51}-L_{51}	-23.22	7.61	-1.86	1.27	0.18	-0.14				

ZZ Axis Moments from STAAD

Location	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)	I (in^4)	I_{eff} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F/S_{bc}	M_u (k-in)	Equivalent Mom. Factor a	Equivalent Mom. Factor C_{mx}	Equivalent Mom. Factor $C_{mx/\delta}$
Structure 1	U_0-L_1	-55.79	23.19	-10.33	0.95	15.6	15.63	15.58	25.96	5		804.0	1.66	857	1.5
	U_1-L_1	-14.77	-5.56	-6.51	-14.96	15.4	15.42	15.42	23.71	2		773.7	-0.416	0.43	0.43
	U_1-L_2	-4.32	-4.80	-20.66	-15.4	15.4	15.42	15.42	23.71	2		773.7	-0.222	0.43	0.43
	U_2-L_2	13.76	-13.42	13.47	-27.40	15.4	15.42	15.42	23.71	2		773.7	-0.492	0.40	0.40
	U_2-L_3	-12.64	18.14	24.93	16.07	15.4	15.42	15.42	23.71	2		773.7	0.644	0.40	0.40
	U_3-L_3	-63.90	105.40	-34.86	76.04	35.1	35.09	35.09	53.13	4		1883.7	1.51	1753	1.5
	U_3-L_4	-131.45	126.56	-77.61	68.99	35.1	35.09	35.09	53.13	4		1883.7	1.51	1753	1.5
	U_4-L_4	-36.72	167.88	-8.19	115.38	35.1	35.09	35.09	53.13	4		1883.7	1.51	1753	1.5
	U_4-L_5	-20.36	40.26	0.06	-0.10	0.00	0.00	0.00	0.00	0		1737.0	-0.207	0.52	0.52
	U_5-L_5	-131.45	126.56	-77.61	68.99	35.1	35.09	35.09	53.13	4		1883.7	1.51	1753	1.5
	U_5-L_6	-31.28	188.16	-10.71	141.11	40.7	40.70	40.44	67.92	25		1961.0	1.67	2241	1.5
	U_6-L_6	-63.90	105.40	-34.86	76.04	35.1	35.09	35.09	53.13	4		1883.7	1.51	1753	1.5
	U_6-L_7	-68.55	40.01	-38.98	20.81	20.8	20.80	20.67	34.66	10		1076.0	1.67	1144	1.5
	U_7-L_7	-20.99	7.38	-9.91	0.71	0.28	-0.78								
	U_7-L_8	-1.18	-30.29	-0.96	-0.89	0.86	-0.84								
	U_8-L_8	-28.64	12.99	-1.05	0.61	0.32	-0.65								
	U_8-L_9	-89.35	58.15	-3.62	3.15	0.31	-0.35								
	U_9-L_9	-93.27	61.38	-3.97	3.19	0.28	-0.32								
	U_9-L_{10}	-105.39	89.05	-4.91	3.87	0.19	-0.19								
	U_{10}-L_{10}	-82.31	86.26	-5.93	4.54	0.84	-0.76								
	U_{10}-L_{11}	-28.64	12.99	-1.05	0.61	0.32	-0.65								
	U_{11}-L_{11}	-0.61	-11.46	-1.26	1.09	0.28	-0.28								
	U_{11}-L_{12}	-7.43	-23.92	-0.64	0.51	1.03	-1.41								
	U_{12}-L_{12}	-44.32	36.88	-1.87	1.55	0.75	-1.06								
	U_{13}-L_{13}	-56.39	68.68	-2.28	2.12	0.26	-0.19								
	U_{13}-L_{14}	-88.55	73.83	-3.19	2.48	0.49	-0.61								
	U_{14}-L_{14}	-76.40	58.92	-2.57	2.01	0.32	-0.43								
	U_{14}-L_{15}	-108.38	116.68	-4.08	3.89	0.67	-0.10								
	U_{15}-L_{15}	-154.28	139.71	-5.22	4.56	0.52	-0.20								
	U_{16}-L_{16}	-86.83	68.73	-3.23	2.75	0.45	-0.71								
	U_{16}-L_{17}	-24.73	100.38	-3.26	4.24	0.69	-0.59								
	U_{17}-L_{17}	-98.38	79.24	-3.24	2.42	0.42	-0.52								
	U_{17}-L_{18}	-74.14	95.51	-4.37	3.86	0.48	-0.55								
	U_{18}-L_{18}	-55.46	68.65	-3.33	3.00	0.42	-0.48								
	U_{18}-L_{19}	-55.46	68.65	-3.06	2.74	0.23	-0.73								
	U_{19}-L_{19}	-32.97	39.97	-2.07	2.07	0.32	-0.81								
Structure 2	U_{19}-L_{20}	-74.14	95.51	-4.37	3.86	0.48	-0.55								
	U_{20}-L_{20}	-10.32	4.39	-0.83	0.77	0.63	-1.06								
	U_{20}-L_{21}	-6.27	2.67	-0.49	0.46	0.38	-0.64								
	U_{21}-L_{21}	-17.08	16.16	-1.63	0.66	-0.88									
	U_{21}-L_{22}	-66.83	54.03	-2.53	2.53	0.45	-0.71								
	U_{22}-L_{22}	-55.69	65.14	-3.42	3.01	0.52	-0.72								
	U_{23}-L_{23}	-49.22	80.41	-3.87	3.43	0.46	-0.51								
	U_{24}-L_{24}	-55.46	68.65	-3.33	3.00	0.42	-0.48								
	U_{25}-L_{25}	-106.11	102.57	-5.31	4.58	0.35	-0.29								
	U_{26}-L_{26}	-33.11	53.53	-2.29	2.42	0.19	-0.19								
	U_{27}-L_{27}	-47.67	128.15	-3.63	4.66	0.75	-0.66								
	U_{28}-L_{28}	-55.46	68.65	-3.33	3.00	0.42	-0.48								
	U_{29}-L_{29}	-89.53	99.33	-3.56	3.51	0.12	-0.08								
	U_{30}-L_{30}	-86.54	82.57	-2.75	2.73	-0.08	-0.25								
	U_{31}-L_{31}	-60.17	67.66	-2.89	2.74	0.13	-1.04								
	U_{32}-L_{32}	-12.59	26.40	-0.95	0.52	1.24	-1.33								
	U_{33}-L_{33}	-6.51	17.79	-1.45	1.08	1.01	-1.18								
	U_{34}-L_{34}	-17.68	8.67	-1.33	1.03	0.41	-0.41								
	U_{35}-L_{35}	-38.92	20.55	-2.18	1.87	0.44	-0.60								
	U_{36}-L_{36}	-88.53	71.15	-4.32	3.66	0.65	-0.55								
Structure 3	U_{37}-L_{37}	-70.13	111.68	-4.32	4.04	0.60	-0.60								
	U_{38}-L_{38}	-49.68	49.24	-6.46	4.31	0.42	-0.34								
	U_{39}-L_{39}	-86.92	56.40	-3.94	2.83	0.39	-0.29								
	U_{40}-L_{40}	-28.11	12.70	-1.60	1.51	0.16	-0.55								
	U_{41}-L_{41}	-28.11	12.70	-1.60	1.51	0.16	-0.55								
	U_{42}-L_{42}	-6.07	-18.30	-0.67	0.53	0.55	-1.13								
	U_{43}-L_{43}	-50.49	35.10	-2.10	1.86	0.07	-0.66								
	U_{44}-L_{44}	-59.60	20.61	-2.31	1.57	-0.79	-0.45								
	U_{45}-L_{45}	-70.13	111.68	-4.32	4.04	0.60	-0.60								
	U_{46}-L_{46}	-2.84	82.10	-1.50	3.67	0.61	-0.51								
	U_{47}-L_{47}	-54.59	58.66	-3.27	2.40	0.02	-0.51								
	U_{48}-L_{48}	-9.15	17.58	-0.44	0.65	-0.51	-0.50								
	U_{49}-L_{49}	-70.13	111.68	-4.32	4.04	0.60	-0.60								
	U_{50}-L_{50}	-9.13	-8.77	-0.39	0.37	0.25	-0.56								
	U_{51}-L_{51}	-23.22	7.61	-1.86	1.27	0.18	-0.14								

M_1 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 (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-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_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_{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_{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
Structure 2	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_{23}-L_{23}	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_{25}-L_{25}	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_{27}-L_{27}	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_{29}-L_{29}	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_{31}-L_{31}	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_{33}-L_{33}	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_{35}-L_{35}	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
Structure 3	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_{38}-L_{38}	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_{40}-L_{40}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{41}-L_{41}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{42}-L_{42}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{43}-L_{43}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{44}-L_{44}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{45}-L_{45}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{46}-L_{46}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{47}-L_{47}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{48}-L_{48}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{49}-L_{49}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{50}-L_{50}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	U_{51}-L_{51}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

YY Axis

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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, 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-ft) | Live Load (Max) End (k-ft) | Pedestrian Load (Min) 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) | 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_{tb} (in^3) | I (in^4) | I_{eff} (in^4) | Shape Factor f | M_p (k-in) | Formula I & Y Term * F$_y$/S$_{eff}$ | M_u (k-in) | Equivalent Mom. Factor: a | $C_{m(a)}$ | $C_{m(b)}$ | 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 (Min) 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) | 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_{tb} (in^3) | Z_Y (in^3) | I_{YY} (in^4) | Shape Factor f | M_p (k-in) | P_{allow} (kip) | Formula I & Y Term * F$_y$/S$_{eff}$ | M_u (k-in) | Equivalent Mom. Factor: a | $C_{m(a)}$ | $C_{m(b)}$ | Yield: Axial Portion | Yield: Moment Portion | Yield: Total | Pass | Tension: Axial Portion | Tension: Moment Portion | Tension: Total | Pass | Fracture: Axial Portion | Fracture: Moment Portion | Fracture: Total | Pass | Buckle: Axial Portion | Buckle: Moment Portion | Buckle: Total | Pass | Compression: Axial Portion | Compression: Moment Portion | Compression: 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: SCI
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 Net, 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) (k-in)	Pedestrian Load (Min) (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	-0.70	0.74	2.18	-4.26	-0.11	0.13	0.30	-0.64
	L_1-L_2	30.30	-116.56	-0.55	2.35	0.35	-7.04	-0.16	0.42	-0.07	-1.33
	L_2-L_3	39.07	-78.01	-0.61	2.64	0.35	-4.30	-0.31	0.23	0.50	-1.04
	L_3-L_4	-65.02	14.74	1.34	4.24	-2.51	-6.83	0.23	0.86	-1.19	-1.34
	L_4-L_5	-50.69	234.13	3.20	0.00	-6.01	-0.00	0.53	0.00	-2.78	-0.00
	L_5-L_6	-2.17	269.23	2.45	4.63	-2.97	-10.02	-0.31	1.16	0.00	0.00
	L_6-L_7	-38.62	54.79	1.89	2.91	-2.29	-5.32	-0.90	0.34	0.62	-0.48
	L_7-L_8	-38.81	57.46	-1.02	7.48	0.61	-1.89	-0.35	3.66	0.00	-13.67
	L_8-L_9	555.91	-39.94	2.49	0.74	6.16	-2.16	1.31	0.05	2.10	-0.32
	L_9-L_{10}	185.62	-153.59	-0.65	2.11	3.97	-5.01	-0.37	0.46	0.85	-1.41
	L_{10}-L_{11}	164.49	164.37	2.65	1.45	0.97	-4.96	0.70	0.32	0.30	-1.05
	L_{11}-L_{12}	198.56	-201.16	0.89	2.29	0.42	0.26	0.16	-0.07	-0.21	-1.80
	L_{12}-L_{13}	-57.21	-170.41	1.89	0.94	4.02	-5.10	0.43	0.20	-0.57	-0.37
	L_{13}-L_{14}	70.10	-469.56	1.40	1.29	0.23	-12.41	0.35	0.23	-0.45	-2.28
	L_{14}-L_{15}	-489.53	-131.75	1.40	1.29	0.23	-12.41	0.35	0.23	-0.45	-2.28
	L_{15}-L_{16}	-272.75	-394.04	0.49	0.86	-4.79	-8.04	0.00	0.00	1.30	-1.07
	L_{16}-L_{17}	-389.62	-47.36	0.49	0.86	-4.79	-8.04	0.00	0.00	1.30	-1.07
	L_{17}-L_{18}	-202.30	-201.51	-2.88	1.44	-1.64	-1.50	-0.96	0.27	0.06	-0.07
	L_{18}-L_{19}	-240.68	180.28	4.31	2.30	-2.97	-0.54	-1.50	0.57	0.06	-0.06
	L_{19}-L_{20}	-192.40	90.95	3.97	2.36	0.53	-0.24	-1.23	0.86	0.06	-0.06
	L_{20}-L_{21}	26.60	-260.09	-0.43	0.93	2.68	-7.14	-0.06	0.13	0.35	-1.08
	L_{21}-L_{22}	201.84	-347.07	1.77	0.45	4.27	-7.27	-0.45	0.09	0.27	-0.56
	L_{22}-L_{23}	7.16	-277.32	-0.70	-0.17	0.57	-7.34	-0.13	0.23	-0.18	-0.89
	L_{23}-L_{24}	136.10	-473.24	-0.70	-0.17	0.57	-7.34	-0.13	0.23	-0.18	-0.89
	L_{24}-L_{25}	-367.51	-421.35	0.59	2.13	-3.66	-10.59	0.04	0.32	-1.24	-1.72
	L_{25}-L_{26}	-219.89	-548.41	0.59	2.13	-3.66	-10.59	0.04	0.32	-1.24	-1.72
	L_{26}-L_{27}	-419.43	-397.04	3.54	3.80	-13.91	-11.93	0.47	0.59	2.41	-2.01
	L_{27}-L_{28}	-394.52	-7.37	3.07	5.75	-7.62	-8.90	0.46	0.90	-1.94	-0.96
	L_{28}-L_{29}	-324.29	260.70	4.70	2.23	-3.28	-0.47	-1.50	0.57	0.06	-0.06
	L_{29}-L_{30}	-295.59	262.58	2.79	5.38	-2.28	-2.96	-0.92	1.06	1.43	-0.05
	L_{30}-L_{31}	-153.08	344.11	0.79	3.55	-1.42	-2.09	0.80	0.00	0.00	0.00
	L_{31}-L_{32}	-188.97	686.21	2.83	5.69	-0.81	-1.35	-0.58	1.88	0.00	0.00
	L_{32}-L_{33}	-129.46	-276.11	-1.50	2.75	-0.79	-3.39	-0.97	0.04	0.55	-1.24
	L_{33}-L_{34}	-472.24	1391.45	5.01	1.75	4.19	-5.36	0.42	0.54	0.77	-1.01
	L_{34}-L_{35}	1356.12	-488.32	-4.04	2.99	13.39	-7.99	0.00	0.00	-1.83	-51.04
	L_{35}-L_{36}	-396.66	-82.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{36}-L_{37}	579.83	-109.25	4.60	2.12	5.12	-6.57	0.85	0.41	0.93	-0.92
	L_{37}-L_{38}	1.03	-1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{38}-L_{39}	275.68	-101.76	4.71	2.18	-0.79	-6.48	0.70	0.49	0.12	-0.98
	L_{39}-L_{40}	209.89	-114.91	2.74	3.21	0.18	-9.32	0.42	0.64	-0.18	-1.10
	L_{40}-L_{41}	1.03	-1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{41}-L_{42}	-33.73	-318.64	0.26	3.02	-4.62	-15.27	0.43	0.76	-1.99	-2.03
	L_{42}-L_{43}	328.90	-84.84	2.61	3.33	0.33	-9.03	0.41	0.63	-0.17	-1.07
	L_{43}-L_{44}	-183.23	53.46	1.90	4.10	-7.13	-7.01	0.42	0.44	-0.58	-0.56
	L_{44}-L_{45}	472.24	1391.45	5.01	1.75	4.19	-5.36	0.42	0.54	0.77	-1.01
	L_{45}-L_{46}	-100.74	310.70	2.10	4.30	-1.70	-2.92	-0.56	1.26	0.00	0.00
	L_{46}-L_{47}	-69.72	308.73	5.01	0.70	-2.01	-0.22	0.85	0.00	0.00	0.00
	L_{47}-L_{48}	29.75	643.54	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_{48}-L_{49}	-18.47	-438.87	1.14	3.17	-2.03	-9.82	-0.15	0.00	0.00	-1.65
	L_{49}-L_{50}	550.01	-198.34	4.60	2.12	5.12	-6.57	0.85	0.41	0.93	-0.92
	L_{50}-L_{51}	1437.37	-471.51	-3.79	2.27	12.60	-7.79	0.00	0.00	0.29	-1.88
	L_{51}-L_{52}	-253.75	-181.16	-1.43	3.99	1.02	-6.94	-1.03	0.00	-1.67	-0.18
	L_{52}-L_{53}	550.01	-198.34	4.60	2.12	5.12	-6.57	0.85	0.41	0.93	-0.92
	L_{53}-L_{54}	390.20	-203.85	2.02	4.10	3.60	-7.61	0.33	0.80	0.47	-1.24
	L_{54}-L_{55}	1437.37	-471.51	-3.79	2.27	12.60	-7.79	0.00	0.00	0.29	-1.88
	L_{55}-L_{56}	243.13	341.77	2.95	3.25	0.65	-8.95	0.32	0.46	-0.15	-1.37
	L_{56}-L_{57}	1437.37	-471.51	-3.79	2.27	12.60	-7.79	0.00	0.00	0.29	-1.88
	L_{57}-L_{58}	-365.08	644.79	2.00	2.53	-8.36	-17.66	0.68	0.27	2.07	-2.23
	L_{58}-L_{59}	-620.48	-212.54	2.52	0.68	-13.24	-10.40	0.38	0.07	2.14	-1.36
	L_{59}-L_{60}	-434.07	-328.96	4.64	2.11	5.12	-6.57	0.85	0.41	0.93	-0.92
	L_{60}-L_{61}	467.92	30.72	5.73	1.64	-7.50	-3.54	0.00	0.00	-1.17	-0.38
	L_{61}-L_{62}	1437.37	-471.51	-3.79	2.27	12.60	-7.79	0.00	0.00	0.29	-1.88
	L_{62}-L_{63}	-332.43	186.70	2.53	0.80	-0.99	-1.17	0.34	0.10	-0.10	-0.97
	L_{63}-L_{64}	1437.37	-471.51	-3.79	2.27	12.60	-7.79	0.00	0.00	0.29	-1.88
	L_{64}-L_{65}	53.61	162.26	0.29	0.39	3.21	-5.72	-0.06	0.04	0.53	-0.99
	L_{65}-L_{66}	-192.76	-240.13	-0.33	0.53	3.05	-5.97	-0.10	0.04	-0.85	-1.12
	L_{66}-L_{67}	24.74	-186.47	0.33	0.53	3.05	-5.97	-0.10	0.04	-0.85	-1.12
	L_{67}-L_{68}	40.28	-374.67	-0.27	0.84	0.69	-6.31	-0.09	0.05	-0.04	-1.42
	L_{68}-L_{69}	24.74	-186.47	0.33	0.53	3.05	-5.97	-0.10	0.04	-0.85	-1.12
	L_{69}-L_{70}	-121.39	-479.27	0.20	2.11	-1.34	-13.46	0.00	0.30	1.04	-2.51
	L_{70}-L_{71}	-476.75	99.76	0.65	2.97	-3.79	-4.22	0.19	0.38	2.32	-0.38
	L_{71}-L_{72}	-241.27	199.03	3.50	2.31	-1.58	-1.25	-0.97	0.65	0.00	0.00
	L_{72}-L_{73}	-127.13	162.45	-2.21	3.61	0.11	-3.33	-0.85	0.67	0.45	-0.34
	L_{73}-L_{74}	-606.98	-34.68	3.29	0.70	7.57	-2.59	0.00	0.00	0.00	0.00
	L_{74}-L_{75}	98.33	-47.56	0.49	2.96	2.78	-4.77	-0.46	0.93	0.57	-0.96
	L_{75}-L_{76}	-217.20	-65.09	2.58	3.24	0.89	-8.34	0.66	0.69	-0.04	-1.53
	L_{76}-L_{77}	-112.39	-133.89	2.90	3.79	-6.00	0.49	-0.22	1.38	-1.22	27.91
	L_{77}-L_{78}	-120.88	38.04	2.17	2.26	0.71	-0.70	-0.88	0.72	0.19	-1.39

YY Axis Moments from STAAD

Location	Member	Start (k-in)	End (k-in)	S_{top} (in^3)	S_{bot} (in^3)	Z_y (in^3)	I_y (in^4)	$I_{t/3}$ (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F$_y$/S_{bot}	M_y (k-in)	Equivalent Mem. Factor a	Equivalent Mem. Factor $C_{m/a}$	Equivalent Mem. Factor C_{comb}
Structure 1	L_0-L_1	-106.41	17.05	-109.33	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.156	0.54	0.54
	L_1-L_2	-106.41	17.05	-109.33	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.156	0.53	0.53
	L_2-L_3	-45.49	-272.83	83.6	83.6	83.58	74.65	100.97	2577	1026.3	1.21	3332	0.99000394	2755.4	-0.156	0.53	0.53
	L_3-L_4	-257.28	-212.97	99.5	99.5	99.53	84.14	125.49	3409	1372.0	1.26	4141	0.99991188	3294.8	0.776	0.91	0.91
	L_4-L_5	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_5-L_6	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_6-L_7	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_7-L_8	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_8-L_9	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_9-L_{10}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{10}-L_{11}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{11}-L_{12}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{12}-L_{13}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{13}-L_{14}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{14}-L_{15}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{15}-L_{16}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{16}-L_{17}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{17}-L_{18}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{18}-L_{19}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{19}-L_{20}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{20}-L_{21}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{21}-L_{22}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{22}-L_{23}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{23}-L_{24}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{24}-L_{25}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{25}-L_{26}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{26}-L_{27}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{27}-L_{28}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{28}-L_{29}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{29}-L_{30}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{30}-L_{31}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{31}-L_{32}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{32}-L_{33}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{33}-L_{34}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{34}-L_{35}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{35}-L_{36}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{36}-L_{37}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{37}-L_{38}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{38}-L_{39}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{39}-L_{40}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{40}-L_{41}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{41}-L_{42}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{42}-L_{43}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{43}-L_{44}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{44}-L_{45}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{45}-L_{46}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{46}-L_{47}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{47}-L_{48}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{48}-L_{49}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{49}-L_{50}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{50}-L_{51}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{51}-L_{52}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{52}-L_{53}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{53}-L_{54}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{54}-L_{55}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{55}-L_{56}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{56}-L_{57}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{57}-L_{58}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{58}-L_{59}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{59}-L_{60}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{60}-L_{61}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{61}-L_{62}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{62}-L_{63}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{63}-L_{64}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{64}-L_{65}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{65}-L_{66}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{66}-L_{67}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{67}-L_{68}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{68}-L_{69}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{69}-L_{70}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{70}-L_{71}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{71}-L_{72}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{72}-L_{73}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{73}-L_{74}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58	0.58
	L_{74}-L_{75}	-68.02	-25.65	78.5	78.5	78.52	62.14	92.39	2511	1010.2	1.21	3048	0.99991188	3052.4	-0.058	0.58

Columbia Parkway (HAM-471-0025).
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: SC1
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 (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_1–L_1	-15.73	54.50	2.65	2.90	0.50	-0.74	-0.04	0.43	0.03	-0.13
	L_1–L_2	-27.56	29.23	-2.26	2.22	0.98	-0.91	-0.57	0.52	0.20	-0.18
	L_2–U_2	-39.39	5.96	5.80	1.56	1.46	-1.08	-0.26	0.35	0.22	-0.23
	U_2–L_3	-40.63	-41.52	-0.77	0.82	0.72	-0.89	-0.06	0.10	0.17	-0.21
	L_3–L_4	-28.81	-57.61	-2.31	0.12	0.05	-0.30	-0.31	0.30	0.30	-0.30
	L_4–U_4	-16.99	-54.49	2.64	2.42	0.50	-0.74	-0.04	0.43	0.03	-0.13
	U_4–L_4	-121.83	132.23	2.59	2.72	0.69	-0.11	-0.72	0.78	0.00	0.00
	L_4–L_5	-79.55	88.71	-2.21	2.28	0.63	-0.66	-0.37	0.41	0.10	-0.10
	L_5–U_5	-37.21	54.58	-1.98	1.98	0.76	-0.76	-0.11	0.11	0.19	-0.19
	U_5–L_5	-4.05	12.51	1.49	1.65	0.78	-0.82	-0.17	0.21	0.13	-0.13
	L_5–L_6	27.52	-27.99	1.09	1.13	1.10	-1.14	-0.04	0.05	0.10	-0.12
	L_6–U_6	59.94	-69.39	0.31	0.34	1.42	-1.46	0.03	-0.04	0.02	-0.03
	U_6–L_6	130.30	-141.79	2.24	0.17	2.74	-2.90	0.00	0.00	0.00	0.00
	L_6–L_7	116.90	-226.41	1.87	-2.26	0.99	-0.99	0.49	-0.43	0.49	-0.49
	L_7–U_7	193.17	-200.18	-0.24	0.36	3.47	-3.67	0.00	0.00	0.00	0.00
	U_7–L_7	194.78	-194.56	0.48	0.56	3.40	-3.48	0.00	0.00	0.00	0.00
	L_7–L_8	177.51	-177.99	0.51	0.51	3.23	-3.23	0.00	0.00	0.00	0.00
	L_8–U_8	231.79	-230.81	1.34	1.35	3.11	-2.93	0.00	0.00	0.00	0.00
	U_8–L_8	26.69	26.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_8–L_9	-225.27	219.21	-4.47	4.11	0.38	-0.46	-0.83	0.81	0.00	0.00
	L_9–U_9	-182.72	181.55	-4.42	4.52	0.69	-0.66	-0.77	0.78	0.07	0.00
	U_9–L_9	-159.30	160.85	-4.11	4.30	0.84	-0.84	-0.74	0.76	0.07	0.00
	L_9–L_{10}	-139.40	139.40	-3.97	3.97	0.84	-0.84	-0.74	0.74	0.07	0.00
	L_{10}–U_{10}	-99.48	63.33	-1.75	1.75	0.84	-0.84	-0.74	0.74	0.07	0.00
Structure 2	U_1–L_1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L_1–L_2	37.60	-37.60	1.75	1.75	0.84	-0.84	-0.74	0.74	0.07	0.00
	L_2–U_2	-5.03	-5.03	0.87	0.87	1.11	-1.23	-0.07	0.09	0.13	-0.14
	U_2–L_3	28.53	-28.53	0.76	0.76	1.07	-1.07	0.09	-0.09	0.13	-0.13
	L_3–L_4	70.77	-74.09	0.72	0.72	2.23	-2.30	-0.05	0.05	0.40	-0.41
	L_4–U_4	104.64	-104.99	0.08	0.05	2.79	-2.76	-0.06	0.06	0.52	-0.51
	U_4–L_4	189.52	-191.09	0.68	0.66	4.26	-4.29	-0.06	0.06	0.80	-0.81
	L_4–L_5	152.80	-157.66	0.71	0.71	3.42	-3.42	-0.06	0.06	0.64	-0.64
	L_5–U_5	207.45	-212.05	-1.44	1.46	3.36	-3.12	0.05	0.00	0.81	-0.82
	U_5–L_5	192.67	192.96	-4.02	4.01	0.68	-0.68	-0.77	0.77	0.07	0.00
	L_5–L_6	185.33	192.16	-3.51	3.65	0.04	-0.13	-0.64	0.64	0.00	0.00
	L_6–U_6	152.36	157.22	-2.94	3.05	0.04	-0.13	-0.64	0.64	0.00	0.00
	U_6–L_6	185.28	177.57	3.54	3.63	0.38	-0.68	-0.66	0.69	0.00	0.00
	L_6–L_7	207.45	212.05	-1.44	1.46	3.36	-3.12	0.05	0.00	0.81	-0.82
	L_7–U_7	207.67	198.96	-4.02	4.01	0.68	-0.68	-0.77	0.77	0.07	0.00
	U_7–L_7	251.63	246.66	-4.10	3.82	0.42	-0.42	-0.82	0.81	0.00	0.00
	L_7–L_8	185.28	177.57	3.54	3.63	0.38	-0.68	-0.66	0.69	0.00	0.00
	L_8–U_8	152.36	157.22	-2.94	3.05	0.04	-0.13	-0.64	0.64	0.00	0.00
	U_8–L_8	185.33	192.16	-3.51	3.65	0.04	-0.13	-0.64	0.64	0.00	0.00
	L_8–L_9	192.67	192.96	-4.02	4.01	0.68	-0.68	-0.77	0.77	0.07	0.00
	L_9–U_9	207.45	212.05	-1.44	1.46	3.36	-3.12	0.05	0.00	0.81	-0.82
	U_9–L_9	207.67	198.96	-4.02	4.01	0.68	-0.68	-0.77	0.77	0.07	0.00
	L_9–L_{10}	185.28	177.57	3.54	3.63	0.38	-0.68	-0.66	0.69	0.00	0.00
	L_{10}–U_{10}	152.36	157.22	-2.94	3.05	0.04	-0.13	-0.64	0.64	0.00	0.00

ZZ Axis Moment Properties

Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. 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 f	M_p (k-in)	Formula 1.8 Term * F_y/S_bc	M_u (k-in)	Equivalent Mom. Factor
U_1–L_1	-65.51	121.26	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_1–L_2	-65.51	78.65	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_2–U_2	-65.51	36.04	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_2–L_3	-65.51	-6.57	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_3–L_4	-65.51	-49.18	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_4–U_4	-65.51	-91.79	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_4–L_4	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_4–L_5	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_5–U_5	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_5–L_5	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_5–L_6	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_6–U_6	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_6–L_6	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_6–L_7	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_7–U_7	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_7–L_7	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_7–L_8	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_8–U_8	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_8–L_8	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_8–L_9	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_9–U_9	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
U_9–L_9	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_9–L_{10}	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782
L_{10}–U_{10}	-107.1	107.11	15.17	57.54	15.4	15.42	15.42	23.71	2	751.9	1.54	782

M_3 Information

YY Axis Moments from STAAD

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)
U_1–L_1	129.29	39.52	-38.92	-12.49	1.52	0.49	1.77	0.57	0.12	0.04
L_1–L_2	89.78	183.83	-125.71	-12.96	-5.15	1.32	-6.01	4.77	2.28	-0.20
L_2–U_2	50.27	328.14	-212.50	-13.43	-11.82	3.14	-16.04	12.97	4.43	-0.37
U_2–L_3	49.04	158.44	-4.75	-1.26	1.03	-0.17	5.12	2.07	-0.39	-0.31
L_3–L_4	89.52	39.36	1.54	0.62	1.52	0.49	1.77	0.57	0.12	0.04
L_4–U_4	129.29	39.52	-38.92	-12.49	1.52	0.49	1.77	0.57	0.12	0.04
U_4–L_4	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_4–L_5	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_5–U_5	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_5–L_5	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_5–L_6	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_6–U_6	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_6–L_6	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_6–L_7	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_7–U_7	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_7–L_7	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_7–L_8	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_8–U_8	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_8–L_8	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_8–L_9	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_9–U_9	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_9–L_9	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_9–L_{10}	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_{10}–U_{10}	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43

YY Axis Moment Properties

Member	Max. Neg. Mom. Start (k-ft)	Max. Neg. Mom. End (k-ft)	S_{top} (in^3)	S_b (in^3)	Z_z (in^3)	I_{zz} (in^4)	Shape Factor f	M_p (k-in)	Formula 1.8 Term * F_y/S_bc	M_u (k-in)	Equivalent Mom. Factor
U_1–L_1	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_1–L_2	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_2–U_2	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_2–L_3	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_3–L_4	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_4–U_4	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_4–L_4	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_4–L_5	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_5–U_5	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_5–L_5	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_5–L_6	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_6–U_6	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_6–L_6	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_6–L_7	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_7–U_7	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_7–L_7	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_7–L_8	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_8–U_8	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_8–L_8	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_8–L_9	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_9–U_9	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
U_9–L_9	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_9–L_{10}	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43
L_{10}–U_{10}	1.03	1.77	0.57	0.12	0.04	-619.98	-166.78	20.36	6.53	26.29	8.43

Yield

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.123	0.252	0.38	Yes
L_1–L_2				
L_2–U_2				
U_2–L_3				
L_3–L_4				
L_4–U_4				
U_4–L_4				
L_4–L_5				
L_5–U_5				
U_5–L_5				
L_5–L_6				
L_6–U_6				
U_6–L_6				
L_6–L_7				
L_7–U_7				
U_7–L_7				
L_7–L_8				
L_8–U_8				
U_8–L_8				
L_8–L_9				
L_9–U_9				
U_9–L_9				
L_9–L_{10}				
L_{10}–U_{10}				

Tension

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.068	0.138	0.21	Yes
L_1–L_2				
L_2–U_2				
U_2–L_3				
L_3–L_4				
L_4–U_4				
U_4–L_4				
L_4–L_5				
L_5–U_5				
U_5–L_5				
L_5–L_6				
L_6–U_6				
U_6–L_6				
L_6–L_7				
L_7–U_7				
U_7–L_7				
L_7–L_8				
L_8–U_8				
U_8–L_8				
L_8–L_9				
L_9–U_9				
U_9–L_9				
L_9–L_{10}				
L_{10}–U_{10}				

Fracture

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.21	0.42	0.63	Yes
L_1–L_2				
L_2–U_2				
U_2–L_3				
L_3–L_4				
L_4–U_4				
U_4–L_4				
L_4–L_5				
L_5–U_5				
U_5–L_5				
L_5–L_6				
L_6–U_6				
U_6–L_6				
L_6–L_7				
L_7–U_7				
U_7–L_7				
L_7–L_8				
L_8–U_8				
U_8–L_8				
L_8–L_9				
L_9–U_9				
U_9–L_9				
L_9–L_{10}				
L_{10}–U_{10}				

Buckle

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.125	0.219	0.35	Yes
L_1–L_2	0.404	0.251	0.64	Yes
L_2–U_2	0.563	0.149	0.72	Yes
U_2–L_3	0.471	0.134	0.61	Yes
L_3–L_4	0.464	0.140	0.61	Yes
L_4–U_4	0.406	0.252	0.66	Yes
U_4–L_4	0.563	0.149	0.72	Yes
L_4–L_5	0.471	0.134	0.61	Yes
L_5–U_5	0.464	0.140	0.61	Yes
L_5–L_6	0.406	0.252	0.66	Yes
L_6–U_6	0.421	0.171	0.6	Yes
U_6–L_6	0.428	0.153	0.58	Yes
L_6–L_7	0.428	0.153	0.58	Yes
L_7–U_7	0.421	0.171	0.6	Yes
U_7–L_7	0.428	0.153	0.58	Yes
L_7–L_8	0.520	0.177	0.7	Yes
L_8–U_8	0.480	0.192	0.67	Yes
U_8–L_8	0.456	0.159	0.62	Yes
L_8–L_9	0.520	0.177	0.7	Yes
L_9–U_9	0.480	0.192	0.67	Yes
U_9–L_9	0.456	0.159	0.62	Yes
L_9–L_{10}	0.520	0.177	0.7	Yes
L_{10}–U_{10}	0.520	0.177	0.7	Yes

Compression

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.476	0.206	0.69	Yes
L_1–L_2	0.236	0.160	0.4	Yes
L_2–U_2	0.205	0.123	0.33	Yes
U_2–L_3	0.123	0.075	0.2	Yes
L_3–L_4	0.123	0.252	0.38	Yes
L_4–U_4	0.476	0.206	0.69	Yes
U_4–L_4	0.205	0.123	0.33	Yes
L_4–L_5	0.433	0.225	0.66	Yes
L_5–U_5	0.506	0.154	0.66	Yes
U_5–L_5	0.563	0.149	0.72	Yes
L_5–L_6	0.471	0.134	0.61	Yes
L_6–U_6	0.464	0.140	0.61	Yes
U_6–L_6	0.406	0.252	0.66	Yes
L_6–L_7	0.563	0.149	0.72	Yes
L_7–U_7	0.471	0.134	0.61	Yes
U_7–L_7	0.464	0.140	0.61	Yes
L_7–L_8	0.520	0.177	0.7	Yes
L_8–U_8	0.480	0.192	0.67	Yes
U_8–L_8	0.456	0.159	0.62	Yes
L_8–L_9	0.520	0.177	0.7	Yes
L_9–U_9	0.480	0.192	0.67	Yes
U_9–L_9	0.456	0.159	0.62	Yes
L_9–L_{10}	0.520	0.177	0.7	Yes
L_{10}–U_{10}	0.520	0.177	0.7	Yes

Yield

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.440	0.136	0.58	Yes
L_1–L_2	0.416	0.109	0.53	Yes
L_2–U_2	0.476	0.178	0.66	Yes
L_3–L_4	0.399	0.194	0.60	Yes
L_4–U_4	0.440	0.136	0.58	Yes
U_4–L_4	0.399	0.194	0.60	Yes
L_4–L_5	0.449	0.117	0.57	Yes
L_5–U_5	0.464	0.140	0.61	Yes
L_5–L_6	0.423	0.123	0.55	Yes
L_6–U_6	0.406	0.152	0.56	Yes
U_6–L_6	0.406	0.153	0.56	Yes
L_6–L_7	0.423	0.123	0.55	Yes
L_7–U_7	0.449	0.117	0.57	Yes
U_7–L_7	0.464	0.140	0.61	Yes
L_7–L_8	0.497	0.165	0.69	Yes
L_8–U_8	0.485	0.153	0.64	Yes
U_8–L_8	0.497	0.165	0.69	Yes
L_8–L_9	0.497	0.165	0.69	Yes
L_9–U_9	0.485	0.153	0.64	Yes
U_9–L_9	0.497	0.165	0.69	Yes
L_9–L_{10}	0.513	0.170	0.69	Yes
L_{10}–U_{10}	0.513	0.170	0.69	Yes

Buckle

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.502	0.209	0.72	Yes
L_1–L_2	0.502	0.055	0.57	Yes
L_2–U_2	0.447	0.160	0.61	Yes
U_2–L_3	0.420	0.105	0.39	Yes
L_3–L_4	0.502	0.055	0.57	Yes
L_4–U_4	0.502	0.209	0.72	Yes
U_4–L_4	0.447	0.160	0.61	Yes
L_4–L_5	0.420	0.105	0.39	Yes
L_5–U_5	0.502	0.055	0.57	Yes
L_5–L_6	0.420	0.105	0.39	Yes
L_6–U_6	0.121	0.171	0.3	Yes
U_6–L_6	0.116	0.119	0.24	Yes
L_6–L_7				
L_7–U_7				
U_7–L_7				
L_7–L_8				
L_8–U_8				
U_8–L_8				
L_8–L_9				
L_9–U_9				
U_9–L_9				
L_9–L_{10}				
L_{10}–U_{10}				

Yield

Member	Axial Axial Force	Moment Portion	Total	Pass
U_1–L_1	0.453	0.186	0.64	Yes
L_1–L_2	0.437	0.237	0.68	Yes
L_2–U_2	0.476	0.178	0.66	Yes
L_3–L_4	0.449

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: SC1
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

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_{top} (in^3)	S_{bot} (in^3)	Z_x (in^3)	I (in^4)	I_{xx} (in^4)	Shape Factor	M_p (k-in)	Formula 1.8 Term * F_y/S_x	M_n (k-in)	YY Axis Moments from STAAD: Equivalent Mom. Factor a	Equivalent Mom. Factor $C_{m(x)}$	$C_{m(x)}$	Max. Neg. Mom. S_{top} (in^3)	Max. Neg. Mom. S_{bot} (in^3)	S_{xx} (in^3)	S_{yy} (in^3)	Z_y (in^3)	I_{yy} (in^4)	Tension: Yield: Shape Factor	Tension: Yield: M_p (k-in)	Tension: Yield: F_{yn} (ksi)	Tension: Yield: Formula 1.8 Term * F_y/S_x	Tension: Yield: M_n (k-in)	Tension: Yield: Equivalent Mom. Factor a	Tension: Yield: Equivalent Mom. Factor $C_{m(x)}$	Tension: Yield: $C_{m(x)}$	Tension: Yield: Axial Force (k)	Tension: Yield: Moment Force (k)	Tension: Yield: Total	Tension: Yield: Pass	Tension: Fracture: Axial Force (k)	Tension: Fracture: Moment Force (k)	Tension: Fracture: Total	Tension: Fracture: Pass	Compression: Buckle: Axial Force (k)	Compression: Buckle: Moment Force (k)	Compression: Buckle: Pass	Compression: Yield: Axial Force (k)	Compression: Yield: Moment Force (k)	Compression: Yield: Total	Compression: Yield: Pass
Structure 1		U_1-L_1	3.62	-1.41	-1.32	0.77	-0.02	-0.13	0.15	0.01	-0.03	-0.02	-17.58	10.29	-0.29	-1.72	1.75	0.12	-0.35	-0.23	-18.18	11.54	4.32	-4.07	15.6	15.63	15.58	25.96	5	804.0	1.66	857	1.5	773.7	-0.636	0.35	0.35	-84.71	-28.00	-14.09	-5.61	2.34	2.34	-1.09	-0.56	0.65	0.50	-188.24	-74.98	31.25	31.19	-16.17	-8.33	8.12	7.41	354.64	-133.65	-69.91	4.16	100.5	100.60	150.48	126.29	66.1	1.20	3970	144	0.94257776	3126.1	0.377	0.75	0.75	0.241	0.111	0.36	Yes	0.146	0.061	0.21	Yes	—	—	—	—	—	—	—	—
	U_1-L_2	-11.46	-3.33	-0.50	0.24	-0.04	-0.20	0.25	0.07	0.08	-0.04	-6.67	3.15	-0.56	2.67	-2.95	0.84	0.98	-0.47	-23.56	-0.23	-16.53	-7.81	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.310	0.60	0.60	122.41	-23.66	-3.95	-0.94	-11.65	-3.88	1.18	-0.11	0.49	0.45	-52.80	-12.52	-10.57	17.52	-1.60	7.52	6.02	90.50	14.48	-43.15	-36.54	94.0	93.99	93.99	104.66	65.3	1.11	3454	166	0.96257757	2947.1	0.160	0.66	0.66	0.130	0.056	0.19	Yes	0.072	0.031	0.11	Yes	—	—	—	—
	U_1-L_3	-21.31	-11.79	-2.29	0.00	-0.24	-0.35	0.00	0.00	-0.04	-0.04	-12.40	-3.75	1.15	-3.25	4.70	0.25	-0.46	-0.27	-0.74	-2.25	-15.34	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.001	0.60	0.60	139.81	-60.93	-9.42	-2.28	-13.27	-2.88	0.00	0.00	0.00	0.00	-17.13	-4.60	-3.90	24.43	5.63	19.47	32.81	-31.33	3.05	34.38	93.99	104.66	65.3	1.11	3454	160	0.94257757	2947.1	0.160	0.66	0.66	—	—	—	—	0.181	0.059	0.24	Yes	—	—	—	—
	U_1-L_4	9.82	-15.00	0.14	0.11	-0.31	-0.54	0.08	0.01	-0.08	-0.12	1.87	1.48	-4.07	-7.25	0.90	0.13	-0.94	-1.40	15.19	-17.57	6.25	1.51	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.865	0.25	0.25	206.42	91.50	3.41	2.39	-5.31	-4.14	0.11	0.19	2.20	0.58	45.56	31.90	-70.94	-55.24	1.69	2.85	32.60	8.61	327.57	160.42	218.50	207.72	94.0	93.99	93.99	104.66	65.3	1.11	3454	171	0.95180782	2952.4	0.490	0.80	0.80	—	—	—	—	0.355	0.104	0.46	Yes	0.328	0.022	0.36	Yes
	U_1-L_5	-16.21	25.07	0.18	0.03	0.12	-0.17	0.01	0.01	2.40	0.85	-7.21	-1.34	0.36	1.43	-2.29	0.07	-0.88	-0.53	-17.88	16.58	-13.83	-4.30	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.431	0.60	0.60	-154.18	8.21	0.86	0.24	-2.19	-0.83	11.44	16.99	2.31	54.64	5.06	3.99	22.43	0.24	0.43	-187.07	82.85	-101.36	113.4	113.37	132.57	93.99	104.66	65.3	1.11	3454	123	0.96257757	2947.1	0.160	0.66	0.66	—	—	—	—	0.353	0.088	0.45	Yes	0.263	0.043	0.31	Yes
	U_1-L_6	-34.06	79.11	1.43	1.13	0.00	0.00	-0.28	0.44	0.00	0.00	-19.13	15.15	0.00	-3.32	5.26	0.00	0.00	-0.65	-13.45	122.54	-44.28	102.61	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.564	0.37	0.37	-192.50	23.39	0.58	2.62	0.00	0.00	-1.31	-0.37	0.00	0.00	-240.15	75.84	-34.95	0.04	34.9	0.00	34.90	148.0	147.96	147.96	167.25	201.8	1.13	5519	262	0.99584852	4728.8	-0.32	0.43	0.55	0.372	0.115	0.49	Yes	0.205	0.063	0.27	Yes	—	—	—	—
	U_1-L_7	-41.67	72.27	1.84	1.53	0.00	0.00	-0.26	0.40	0.00	0.00	-26.26	20.80	0.00	-3.89	-6.16	0.00	0.00	-0.76	-125.23	134.90	-25.73	102.61	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.529	0.23	0.23	-235.57	22.36	-4.57	-1.08	-6.48	-1.69	0.00	0.00	0.00	0.00	-294.00	72.49	-37.27	-34.33	-7.41	-0.11	0.64	0.44	0.89	1.33	147.96	147.96	167.25	201.8	1.13	5519	265	0.99629788	4728.8	-0.32	0.43	0.55	0.374	0.114	0.49	Yes	0.206	0.063	0.27	Yes	—	—	—	—
	U_1-L_8	-1.45	103.74	-0.84	1.63	0.33	-0.55	-0.09	0.65	0.00	0.00	-11.24	21.82	4.38	3.71	-1.07	7.78	0.00	0.00	-16.49	163.22	3.81	125.36	35.1	35.09	35.09	53.13	4	1183.7	1.51	1753	1.5	1737.0	-0.101	0.56	0.56	-153.51	-53.38	0.52	2.02	-0.82	-0.95	-1.81	-0.82	0.00	0.00	-190.62	-89.36	-213.81	-137.82	148.0	147.96	147.96	167.25	201.8	1.13	5519	205	0.99994741	4689.9	0.645	0.86	0.86	0.347	0.132	0.48	Yes	0.191	0.073	0.27	Yes	—	—	—	—
	U_1-L_9	-12.32	139.19	0.80	2.33	-0.07	-0.39	0.01	0.01	0.00	0.00	-10.29	30.13	-0.89	-1.16	0.14	8.52	0.00	0.00	29.39	220.11	-17.18	179.43	40.7	40.70	40.44	67.52	25	1661.0	1.67	2241	1.5	2314.7	-0.134	0.55	0.55	251.85	97.14	-6.75	-4.84	2.67	0.56	1.96	0.67	0.00	0.00	328.24	112.96	30.77	97.50	29.3	0.93	126.94	148.0	147.96	147.96	167.25	201.8	1.13	7872	228	0.98361845	6457.7	0.294	0.72	0.72	0.444	0.113	0.56	Yes	0.275	0.073	0.34	Yes	—	—	—	—
	U_1-L_{10}	-73.41	69.80	-1.38	1.08	0.00	0.00	-0.31	0.35	0.00	0.00	-17.79	13.91	0.03	-0.04	-3.77	4.25	0.00	0.00	-118.56	108.62	-55.40	90.69	39.8	39.77	39.56	65.61	21	1610.3	1.65	2165	1.5	1968.6	-0.918	0.23	0.23	62.43	-78.54	-6.70	-5.37	0.04	0.04	1.09	0.30	0.00	0.00	-31.45	-182.40	81.85	-101.45	197.4	197.41	184.99	230.30	248.6	1.17	7600	299	0.99831336	6309.9	0.163	0.67	0.67	0.425	0.080	0.51	Yes	0.263	0.045	0.31	Yes	—	—	—	—
	U_1-L_{11}	-49.88	47.84	-1.19	0.90	-0.29	-0.19	-0.31	0.21	0.00	0.00	-13.09	9.36	-0.11	-0.38	-4.52	2.71	0.00	0.00	-80.56	74.41	-38.01	62.19	39.8	39.77	39.56	65.61	21	1389.8	1.53	2155	1.5	2115.6	-0.479	0.42	0.42	49.24	-37.24	-6.53	-4.27	-15.51	8.75	2.23	0.68	0.00	0.00	-60.02	-185.05	72.38	-285.60	197.4	197.41	184.99	230.30	248.6	1.17	6690	277	0.97252526	5561.6	0.949	0.96	0.96	0.421	0.100	0.54	Yes	0.237	0.055	0.30	Yes	—	—	—	—
	U_1-L_{12}	-69.88	47.84	-1.19	0.90	-0.29	-0.19	-0.31	0.21	0.00	0.00	-15.45	11.59	-0.39	-1.46	-3.70	2.56	0.00	0.00	-110.93	72.36	-55.72	59.00	20.8	20.80	20.67	34.66	7	1076.0	1.67	1444	1.5	1529.6	-0.697	0.32	0.32	5.20	-86.18	-3.61	-4.94	-11.96	-3.39	1.84	0.69	0.00	0.00	-46.76	-63.95	-104.93	-43.89	27.89	9.91	0.00	37.81	148.0	147.96	147.96	167.25	201.8	1.13	5128	76	0.93038181	4196.9	0.276	0.71	0.71	0.385	0.135	0.53	Yes	0.242	0.076	0.32	Yes	—	—	—	—
	U_1-L_{13}	-27.39	6.37	-0.41	0.22	-0.01	-0.43	-0.03	0.05	-0.12	-0.02	-5.29	2.87	-0.17	-0.60	-0.31	0.61	-1.43	-0.28	-42.48	12.01	-35.82	1.00	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.283	0.49	0.49	59.26	-79.74	-1.95	-1.01	-12.68	-3.29	-0.09	-0.07	2.44	0.86	-25.17	-13.12	-164.02	-62.52	-1.32	-0.93	35.13	12.33	44.32	-120.72	-136.19	-158.93	94.0	93.99	93.99	104.66	65.3	1.11	3454	145	0.94237353	2925.7	0.857	0.94	0.94	0.356	0.100	0.46	Yes	0.196	0.055	0.25	Yes	—	—	—	—
	U_1-L_{14}	-0.38	32.70	-0.41	0.00	-0.01	-0.01	0.00	0.00	-0.06	0.00	-0.88	0.00	0.00	-0.14	-0.62	0.00	0.00	0.00	-14.08	-26.62	32.70	35.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.001	0.60	0.60	-250.50	193.33	0.77	0.21	-4.64	-3.42	0.00	0.00	-40.93	-8.78	-326.51	-57.82	-25.31	-25.10	103.1	103.08	150.48	126.29	66.1	1.20	3970	144	0.94257776	3126.1	0.377	0.75	0.75	0.241	0.111	0.36	Yes	0.146	0.061	0.21	Yes	—	—	—	—
	U_1-L_{15}	-31.03	12.71	-1.04	0.76	0.14	-0.23	-0.19	0.11	0.05	-0.04	-13.47	9.77	1.85	-2.96	-2.29	1.32	0.56	-0.32	-57.85	29.22	-37.94	12.67	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.505	0.40	0.40	-199.71	-100.30	0.77	2.11	0.07	0.02	-2.80	-0.48	0.07	-0.03	-242.62	-94.99	-258.45	-130.06	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93372272	2894.2	0.503	0.83	0.83	0.237	0.149	0.39	Yes	0.131	0.082	0.22	Yes	—	—	—	—
	U_1-L_{16}	-46.63	27.25	-1.34	0.98	0.14	-0.29	-0.19	0.14	0.05	-0.04	-18.66	13.54	1.85	-2.96	-3.89	1.88	0.56	-0.46	-83.09	52.31	-52.56	17.55	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.330	0.50	0.50	-208.68	-83.69	-258.45	-130.06	94.0	93.99	93.99	104.66	65.3	1.11	3454	123	0.93372272	2894.2	0.503	0.83	0.83	0.237	0.149	0.39	Yes	0.131	0.082	0.22	Yes	—	—	—	—
	U_1-L_{17}	-118.88	85.28	-2.49	1.99	0.31	-0.29	-0.55	0.42	0.06	-0.05	-32.16	25.72	4.04	-3.74	-6.59	5.04	0.67	-0.62	-196.10	144.30	-149.03	106.00	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.736	0.31	0.31	302.82	-67.43	0.66	1.72	-0.11	-0.32	-3.14	-1.42	0.03	0.05	8.57	-22.28	-1.46	-4.10	-45.08	-20.43	0.39	0.79	-382.53	-58.70	-395.57	-92.99	148.0	147.96	147.96	167.25	201.8	1.13	5519	207	0.99021955	4688.3	0.235	0.69	0.69	0.420	0.183	0.61	Yes	0.231	0.100	0.34	Yes	—	—	—	—
	U_1-L_{18}	-117.64	87.57	-2.42	1.93	-0.57	-0.45	0.54	-0.41	0.04	-0.04	-31.22	23.76	3.41	-3.71	-6.75	5.48	0.67	-0.46	-193.63	144.98	-148.54	110.08	35.1	35.09	35.09	53.51	4	1394.8	1.53	2133	1.5	1902.1	-0.561	0.30	0.30	299.59	-101.27	-4.04	-2.71	2.19	0.10	-0.10	-0.28	-1.47	-0.22	-407.02	-22.67	-0.17	0.22	-442.42	-113.17	-460.87	-198.22	148.0	147.96	147.96	167.25	201.8	1.13	6080	193	0.95172364	5072.2	0.227	0.77	0.77	0.228	0.097	0.34	Yes	0.176	0.063	0.24	Yes	—	—	—	—
	U_1-L_{19}	-148.08	120.85	2.36	2.07	0.17	-0.19	-0.79	0.63	0.04	0.04	-30.01	26.81	2.21	-2.32	-5.47	7.56	0.50	-0.46	-232.14	191.96	-189.61	164.10	38.8	38.83	38.83	59.23	1	1284.6	1.53	1965	1.5	1922.1	-0.827	0.22	0.22	14.07	21.83	0.03	0.05	14.67	21.83	0.03	0.05	0.00	0.00	-16.06	-14.61	-0.30	0.16	0.00	0.00	0.00	0.00	148.0	147.96	147.96	167.25	201.8	1.13	6080	156	0.94117776	5078.9	0.512	0.80	0.80	0.444	0.164	0.61	Yes	0.244	0.090	0.34	Yes	—	—	—	—
	U_1-L_{20}	-86.91	116.74	-3.05	2.85	0.24	-0.44	-0.13	0.38	0.01	-0.06	-38.96	36.40	3.00	-5.66	-1.51	4.57	0.14	-0.70	-163.62	199.08	-109.08	144.41	42.7	42.74	42.74	65.30	8	1389.6	1.53	2155	1.5	2115.6	-0.822	0.27	0.27	-89.45	-31.21	-17.53	-5.94	1.66	0.85	-1.06	-0.10	0.41	0.20	-224.00	-75.53	21.21	10.83	-15.09	-1.36	5.79	2.83	-537.48	-139.15	-218.71	-26.49	-173.7	173.70	173.70	202.71	247.5	1.17	6690	180	0.95421621	5489.3	0.259	0.70	0.70	0.473	0.173	0.65	Yes	0.260	0.095	0.36	Yes	—	—	—	—
	U_1-L_{21}	-118.23	92.26	-2.92	2.36	0.76	-0.67	-0.62	0.43	0.11	-0.10	-37.35	30.09	0.70	-8.55	-6.28	5.11	1.37	-1.25	-202.25	159.05	-141.10	108.83	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.786	0.29	0.29	32.87	-71.82	-6.55	-8.59	1.75	1.40	1.01	0.31	0.33	0.26	-81.12	-122.49	22.40	17.91	14.32	16.16	4.70	3.62	-62.72	-252.59	71.91	-180.68	148.0	147.96	147.96	167.25	201.8	1.13	5519	217	0.98189757	4686.6	0.248	0.70	0.70	0.451	0.160	0.62	Yes	0.248	0.088	0.34	Yes	—	—	—	—
	U_1-L_{22}	-34.33	8.61	-1.05	0.80	0.46	-0.37	-0.18	0.11	0.07	-0.06	-13.49	10.17	5.81	-4.78	-2.14	1.27	0.86	-0.72	-65.17	24.41	-24.07	4.98	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.496	0.40	0.40	88.13	-32.25	-4.32	-5.03	1.63	1.05	1.44	0.29	0.21	0.16	-126.18	-141.69	-25.08	94.0	93.99	93.99	104.66	65.3	1.11	3454	96	0.91239827	2834.9	-0.177	0.33	0.33	0.323	0.104	0.33	Yes	0.122	0.057	0.18	Yes	—	—	—	—
	U_1-L_{23}	-1.47	18.42	-0.65	0.64	0.44	-0.44	-0.11	0.07	0.06	-0.04	-4.64	4.61	-1.17	0.07	-0.96	-0.96	-0.43	0.43	-14.08	-26.62	18.42	35.09	15.4	15.42	15.42	23.71	2	751.9	1.54	782	1.5	763.3	-0.001	0.60	0.60	124.18	-22.48	-3.75	-0.89	-11.07	-3.68	1.12	-0.10	0.46	0.43	-50.12	-11.89	-10.04	16.64	-1.52	7.14	5.72	85.94	13.75	-40.97	-34.71	94.0	93.99	93.99	104.66	65.3	1.11	3454	160	0.94257757	2947.1	0.160	0.66	0.66	0.118	0.056	0.17	Yes	0.068	0.030	0.10	Yes	—	—	—	—
	U_1-L_{24}	-13.33	-37.03	-0.29	0.13	0.37	-0.89	0.00	0.00	0.04	-0.13	-3.74	1.69	-4.78	4.78	-11.41	0.00	0.00	0.00	-150.54	-12.46	-49.54	23.54	-62.97	17.72	17.24	17.24	26.54	824.7	1.54	876	1.5	853.4	-0.334	0.45	0.45	131.93	1.76	-1.60	-1.52	-13.41	-1.60	0.00	0.00	0.00	0.00	-29.68	10.41	144.54	-25.10	103.1	103.08	116.41	73.3	1.11	3841	126	0.94395437	3179.0	-0.158	0.54	0.54	—	—	—	—	0.439	0.072	0.51	Yes
	U_1-L_{25}	-66.01	54.01	-1.33	1.03	-0.06	-0.30	-0.23	0.17	0.00	0.00	-16.93	13.11	-0.75	-3.86	-2.80	2.04	0.00	0.00	-107.83	87.26	-86.80	65.20	20.5	20.51	20.40	33.89	8	1012.7	1.65	1118	1.5	1010.2	-0.809	0.28	0.28	-243.56	-138.11	0.47	2.53	8.52	-0.25	-1.76	-0.67	0.00	0.00	6.03	32.31	108.79	-3.23	-24.96	-5.45	0.00	0.00	-308.79	-137.53	-175.20	-183.74	128.2	128.15	118.23	148.43	106.4	1.16	4898	160	0.94859536	4011.5	0.445	0.78	0.78	0.435	0.159	0.60	Yes	0.274	0.091	0.37	Yes	—	—	—	—
	U_1-L_{26}	-133.77	94.01	-2.79	2.15	-0.42	-0.32	-0.62	0.29	0.11	-0.07	-32.03	23.79	-1.47	-3.18	-5.70	4.00	0.00	0.00	-216.32	159.23	-167.26	131.77	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.937	0.23	0.23	193.33	28.56	-5.69	-5.44	0.67	0.67	1.58	0.44	0.00	0.00	-157.89	-61.56	-262.26	-48.69	148.0	147.96	147.96	167.25	201.8	1.13	5519	224	0.99431426	4702.7	0.186	0.67	0.67	0.422	0.139	0.56	Yes	0.232	0.074	0.31	Yes	—	—	—	—
	U_1-L_{27}	-116.17	105.67	-2.34	1.70	-0.10	-0.12	-0.36	0.36	0.00	0.00	-29.01	21.66	-1.21	-1.58	-4.27	4.21	0.00	0.00	-189.90	165.52	-152.60	135.31	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.872	0.25	0.25	-153.55	-20.11	1.37	3.30	-2.24	-0.42	-1.64	-0.32	0.00	0.00	14.96	-42.11	-3.10	-3.39	-23.31	-4.96	0.00	0.00	-180.17	28.08	-203.66	-33.68	173.7	173.70	173.70	202.71	247.5	1.17	6690	234	0.95473158	5330.1	0.165	0.67	0.67	0.519	0.119	0.64	Yes	0.286	0.065	0.36	Yes	—	—	—	—
	U_1-L_{28}	-139.38	104.34	-2.68	2.04	-0.14	-0.16	-0.45	0.45	0.00	0.00	-32.90	21.81	-1.23	-4.60	-5.40	5.00	0.00	0.00	-228.62	164.41	-203.28	153.26	42.7	42.74	42.74	65.30	5	1389.6	1.53	2155	1.5	2115.6	-0.852	0.25	0.25	-153.55	-20.11	1.37	3.30	-2.24	-0.42	-1.64	-0.32	0.00	0.00	14.96	-42.11	-3.10	-3.39	-23.31	-4.96	0.00	0.00	-180.17	28.08	-203.66	-33.68	173.7	173.70	173.70	202.71	247.5	1.17	6690	234	0.95473158	5330.1	0.165	0.67	0.67	0.519	0.119	0.64	Yes	0.286	0.065	0.36	Yes	—	—	—	—
	U_1-L_{29}	-131.97	151.07	-2.53	2.38	0.65	-0.34	-0.42	0.51	0.00	0.00	-32.35	30.43	8.24	-4.37	-6.03	6.11	0.00	0.00	-213.61	235.95	-160.84	190.71	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	-1.63	3.41	-2.18	0.92	2.21	-0.57	0.00	0.00	-449.76	57.93	-498.81	16.64	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.91184845	6323.0	-0.036	0.99	0.99	0.519	0.163	0.68	Yes	0.284	0.090	0.38	Yes	—	—	—	—
	U_1-L_{30}	-175.19	162.79	-2.71	2.93	-0.09	-0.78	-0.54	0.56	0.04	0.02	-34.64	32.23	13.95	-9.90	-7.64	6.66	0.42	-0.22	-272.78	253.98	-209.61	198.15	46.7	46.71	46.71	71.43	10	1711.0	1.53	2357	1.5	2312.1	-0.909	0.24	0.24	-325.20	1.03	-1.63	3.41	-2.18	0.92	2.21	-0.57	0.00	0.00	-449.76	57.93	-498.81	16.64	201.3	201.30	201.30	221.31	271.6	1.10	7303	171	0.91184845	6323.0	-0.036	0.99	0.99	0.519	0.163	0.68	Yes	0.284	0.090	0.38	Yes	—	—	—	—
	U_1-L_{31}	-64.39	89.07	-1.72	1.68	-0.03	-0.25	-0.27	0.27	0.00	0.00	-17.85	16.76	-12.42	-2.42	-2.29	2.29	0.00	0.00	-104.72	122.25	-82.09	104.66	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.426	0.43	0.43	254.55	118.13	-3.65	-7.08	3.27	1.52	-0.21	0.37	1.76	0.17	-46.13	-89.37	41.33	19.14	-2.93	5.25	25.03	2.33	270.95	34.78	384.65	173.85	148.0	147.96	147.96	167.25	201.8	1.13	5519	114	0.92749992	4328.7	0.457	0.78	0.78	0.424	0.195	0.62	Yes	0.232	0.107	0.34	Yes	—	—	—	—
	U_1-L_{32}	-143.90	77.91	-2.25	1.39	0.00	0.00	-0.36	0.29	0.00	0.00	-44.42	33.97	-3.90	-2.31	-8.39	6.13	0.00	0.00	-244.07	129.02	-216.16	116.16	35.1	35.09	35.09	53.51	4	1183.7	1.53	1766	1.5	1737.0	-0.579	0.21	0.21

Moment (End) AI Operating

Operating Loads - 5C1

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				20.38	-530.98	-178	93	-82	-819	9	-2	1	-247	0.023	0.236	0.26	Yes	0.016	0.162	0.18	Yes	0.722	0.272	1.00	Yes	0.716	0.195	0.92	Yes	1.00	**4.03**
		U_1 - U_2				21.42	-574.95	-59	64	-142	-845	-7	-22	43	-112	0.025	0.220	0.25	Yes	0.017	0.151	0.17	Yes	0.782	0.218	1.00	Yes	0.775	0.201	0.98	Yes	1.00	**2.45**
		U_2 - U_3				124.99	-562.60	-126	247	-393	-631	9	25	70	197	0.143	0.183	0.33	Yes	0.097	0.120	0.22	Yes	0.766	0.232	1.00	Yes	0.759	0.150	0.91	Yes	1.00	**2.42**
		U_3 - U_4				346.03	-540.64	77	310	-343	-677	1	33	187	28	0.397	0.193	0.59	Yes	0.272	0.132	0.41	Yes	0.736	0.255	1.00	Yes	0.729	0.161	0.90	Yes	1.00	**3.00**
		U_4 - U_5				421.81	-612.67	158	338	-600	-400	10	-36	33	-161	0.483	0.170	0.66	Yes	0.332	0.116	0.45	Yes	0.834	0.160	1.00	Yes	0.826	0.143	0.97	Yes	1.00	**3.64**
		U_5 - U_6				726.33	-5.93	283	500	-150	-79	-158	-68	137	-264	0.833	0.163	1.00	Yes	0.562	0.107	0.67	Yes	0.008	0.146	0.16	Yes	0.008	0.119	0.13	Yes	1.00	**4.42**
		U_6 - U_7				899.28	-----	397	241	-109	-387	-311	-109	265	-380	0.860	0.137	1.00	Yes	0.601	0.094	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		U_7 - U_8				679.97	-----	-1399	3016	-90	784	251	-623	-242	-116	0.471	0.520	1.00	Yes	0.329	0.355	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.52**
		U_8 - U_9				563.06	-----	731	-8	2443	-2084	-1039	-126	-375	416	0.461	0.537	1.00	Yes	0.316	0.366	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.80**
		U_9 - U_{10}				720.75	-75.30	234	311	285	-530	-166	18	68	572	0.782	0.211	1.00	Yes	0.529	0.141	0.68	Yes	0.097	0.125	0.23	Yes	0.096	0.119	0.22	Yes	1.00	**4.66**
		U_{10} - U_{11}				280.02	-585.20	327	-69	281	-1095	30	99	323	208	0.304	0.297	0.61	Yes	0.202	0.191	0.40	Yes	0.753	0.214	0.97	Yes	0.747	0.245	1.00	Yes	1.00	**3.46**
		U_{11} - U_{12}				-----	-861.64	218	-113	70	-856	106	411	219	655	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.183	1.00	Yes	0.808	0.142	0.96	Yes	1.00	**2.44**
		U_{12} - U_{13}				-----	-1186.51	3	-237	-242	-997	347	210	519	373	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.192	1.00	Yes	0.793	0.138	0.94	Yes	1.00	**2.51**
		U_{13} - U_{14}				-----	-1318.77	-144	-379	-331	-1603	222	174	373	452	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.228	1.00	Yes	0.756	0.177	0.94	Yes	1.00	**2.46**
		U_{14} - U_{15}				-----	-1383.89	-260	-242	-627	-1054	205	28	551	62	-----	-----	-----	-----	-----	-----	-----	-----	0.802	0.190	1.00	Yes	0.793	0.116	0.91	Yes	1.00	**2.58**
		U_{15} - U_{16}				-----	-1414.15	-198	-413	-539	-1170	81	45	392	68	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.178	1.00	Yes	0.811	0.129	0.94	Yes	1.00	**2.55**
		U_{16} - U_{17}				-----	-1352.42	-710	-146	-712	-1238	455	-66	541	-216	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.216	1.00	Yes	0.775	0.137	0.92	Yes	1.00	**5.44**
		U_{17} - U_{18}				-----	-1102.17	-721	235	-435	-394	444	-7	277	-200	-----	-----	-----	-----	-----	-----	-----	-----	0.873	0.123	1.00	Yes	0.862	0.117	0.98	Yes	1.00	**3.51**
		U_{18} - U_{19}				-----	-742.79	-740	60	-482	-284	424	-181	250	-249	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.155	1.00	Yes	0.836	0.149	0.99	Yes	1.00	**2.94**
		U_{19} - U_{20}				-----	-526.45	-1581	1993	-262	-372	287	-841	38	-598	-----	-----	-----	-----	-----	-----	-----	-----	0.598	0.238	0.84	Yes	0.592	0.401	1.00	Yes	1.00	**6.30**
	Structure 2	U_0 - U_1				-----	-585.90	-94	-72	313	-1767	5	-67	172	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.267	0.97	Yes	0.692	0.300	1.00	Yes	1.00	**6.17**
		U_1 - U_2				-----	-842.99	-48	-179	35	-1133	-70	-220	2	-177	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.176	1.00	Yes	0.814	0.172	0.99	Yes	1.00	**3.36**
		U_2 - U_3				-----	-1147.37	-101	-266	-22	-1695	-26	375	53	309	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.177	1.00	Yes	0.814	0.173	0.99	Yes	1.00	**3.02**
		U_3 - U_4				-----	-1339.95	-410	-397	-802	-1735	325	482	285	342	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.229	1.00	Yes	0.763	0.155	0.92	Yes	1.00	**2.65**
		U_4 - U_5				-----	-1433.49	-458	-351	-891	-1995	789	312	490	275	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.249	1.00	Yes	0.736	0.165	0.91	Yes	1.00	**2.78**
		U_5 - U_6				-----	-1488.88	-408	39	-980	-1688	183	-228	327	430	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.221	1.00	Yes	0.764	0.140	0.91	Yes	1.00	**2.76**
		U_6 - U_7				-----	-1332.38	-249	-70	-947	-1793	-155	-198	285	99	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.235	1.00	Yes	0.759	0.160	0.92	Yes	1.00	**2.64**
		U_7 - U_8				-----	-1437.17	-165	-135	-971	-1305	-119	-197	211	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.174	1.00	Yes	0.818	0.116	0.94	Yes	1.00	**2.75**
		U_8 - U_9				164.00	-1201.39	-151	306	-741	-1123	-162	-237	272	-344	0.095	0.148	0.25	Yes	0.066	0.097	0.17	Yes	0.821	0.171	1.00	Yes	0.815	0.119	0.94	Yes	1.00	**4.25**
		U_9 - U_{10}				535.77	-996.20	146	623	-904	-879	-225	-196	264	-275	0.393	0.140	0.54	Yes	0.266	0.095	0.37	Yes	0.865	0.131	1.00	Yes	0.860	0.110	0.97	Yes	1.00	**5.22**
		U_{10} - U_{11}				690.78	-838.46	306	486	-987	-532	-228	-178	376	-280	0.583	0.185	0.77	Yes	0.397	0.120	0.52	Yes	0.838	0.157	1.00	Yes	0.833	0.139	0.98	Yes	1.00	**4.69**
		U_{11} - U_{12}				-----	-637.40	-2598	1650	-155	-1291	1214	-189	411	-749	-----	-----	-----	-----	-----	-----	-----	-----	0.637	0.264	0.91	Yes	0.633	0.366	1.00	Yes	1.00	**16.88**
		U_{12} - U_{13}				1172.86	-----	502	185	51	-1184	-434	-365	-2	-529	0.792	0.200	1.00	Yes	0.565	0.136	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.52**
		U_{13} - U_{14}				864.74	-----	-2259	5173	-346	1382	-65	-1327	-413	-496	0.425	0.569	1.00	Yes	0.301	0.374	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.00**
		U_{14} - U_{15}				949.09	-----	1307	243	4738	-3005	-1316	-697	-989	-233	0.467	0.528	1.00	Yes	0.330	0.347	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.33**
		U_{15} - U_{16}				1309.60	-----	139	501	-66	-1195	-652	-423	-238	745	0.792	0.199	1.00	Yes	0.563	0.135	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.65**
		U_{16} - U_{17}				1077.37	-----	673	334	528	-1240	-230	-34	421	359	0.794	0.200	1.00	Yes	0.528	0.132	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.05**
		U_{17} - U_{18}				722.64	-126.46	457	329	406	-951	3	252	198	738	0.725	0.270	1.00	Yes	0.483	0.178	0.67	Yes	0.150	0.272	0.43	Yes	0.149	0.161	0.32	Yes	1.00	**3.69**
		U_{18} - U_{19}				677.07	-616.45	609	300	372	-1447	69	109	439	445	0.680	0.311	1.00	Yes	0.446	0.198	0.65	Yes	0.732	0.173	0.91	Yes	0.728	0.246	0.98	Yes	1.00	**4.66**
		U_{19} - U_{20}				367.64	-702.60	358	254	-224	-1062	9	1	265	466	0.345	0.233	0.58	Yes	0.229	0.153	0.39	Yes	0.780	0.218	1.00	Yes	0.775	0.170	0.95	Yes	1.00	**3.42**
		U_{20} - U_{21}				99.25	-842.21	-72	138	-49	-1386	72	-10	298	254	0.077	0.233	0.32	Yes	0.054	0.150	0.21	Yes	0.774	0.217	1.00	Yes	0.769	0.201	0.97	Yes	1.00	**3.41**
		U_{21} - U_{22}				102.43	-798.51	-26	46	-487	-1359	40	55	156	326	0.079	0.232	0.32	Yes	0.056	0.156	0.22	Yes	0.734	0.262	1.00	Yes	0.729	0.197	0.93	Yes	1.00	**2.90**
		U_{22} - U_{23}				116.35	-852.22	104	-15	-581	-1027	47	-1	377	-15	0.090	0.190	0.29	Yes	0.064	0.128	0.20	Yes	0.783	0.209	1.00	Yes	0.778	0.149	0.93	Yes	1.00	**3.01**
		U_{23} - U_{24}				341.40	-864.41	-51	286	-66	-1328	-53	-77	210	-83	0.265	0.215	0.49	Yes	0.185	0.138	0.33	Yes	0.795	0.202	1.00	Yes	0.789	0.192	0.99	Yes	1.00	**4.62**
		U_{24} - U_{25}				466.83	-707.59	292	400	-553	-915	-108	-89	323	-271	0.438	0.190	0.63	Yes	0.290	0.125	0.42	Yes	0.786	0.211	1.00	Yes	0.781	0.146	0.93	Yes	1.00	**4.45**
		U_{25} - U_{26}				-----	-721.20	-865	834	-173	-716	350	-274	168	-287	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.138	1.00	Yes	0.852	0.147	1.00	Yes	1.00	**7.08**
		U_{26} - U_{27}				-----	-572.38	-1314	1518	-206	-1681	656	-605	420	-695	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.313	1.00	Yes	0.676	0.285	0.97	Yes	1.00	**13.64**
		U_{27} - U_{28}				-----	-361.22	-5210	5198	-1347	-4582	2298	-1116	1291	-1079	-----	-----	-----	-----	-----	-----	-----	-----	0.315	0.683	1.00	Yes	0.313	0.655	0.97	Yes	1.00	**36.37**
		U_{28} - U_{29}				1180.96	-----	-12	624	-637	-1950	105	-717	488	-649	0.714	0.282	1.00	Yes	0.508	0.190	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.52**
		U_{29} - U_{30}				993.08	-----	-1499	4818	-56	736	-64	-930	-268	-16	0.488	0.510	1.00	Yes	0.346	0.334	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.33**
		U_{30} - U_{31}				874.36	-----	1115	402	5254	-3916	-1145	-653	-1055	74	0.430	0.565	1.00	Yes	0.304	0.371	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.86**
		U_{31} - U_{32}				1200.98	-----	40	453	-361	-909	-425	-225	-25	687	0.811	0.180	1.00	Yes	0.578	0.123	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		U_{32} - U_{33}				876.99	-81.96	461	271	490	-1308	-84	7	543	493	0.741	0.251	1.00	Yes	0.498	0.167	0.67	Yes	0.082	0.151	0.24	Yes	0.081	0.184	0.27	Yes	1.00	**4.32**
		U_{33} - U_{34}				779.82	-608.58	423	309	-54	-1445	-2	243	492	1070	0.659	0.334	1.00	Yes	0.448	0.220	0.67	Yes	0.608	0.288	0.90	Yes	0.605	0.204	0.81	Yes	1.00	**4.80**
		U_{34} - U_{35}				473.40	-879.85	426	132	-145	-1525	164	146	686	536	0.347	0.260	0.61	Yes	0.235	0.176	0.42	Yes	0.764	0.233	1.00	Yes	0.759	0.186	0.95	Yes	1.00	**4.06**
		U_{35} - U_{36}				177.50	-1114.25	190	-119	-160	-1752	98	90	410	550	0.102	0.232	0.34	Yes	0.072	0.152	0.23	Yes	0.761	0.233	1.00	Yes	0.756	0.186	0.95	Yes	1.00	**3.27**
		U_{36} - U_{37}				20.01	-1330.51	-30	64	-661	-1922	76	-6	372	259	0.010	0.197	0.21	Yes	0.007	0.134	0.15	Yes	0.763	0.234	1.00	Yes	0.758	0.171	0.93	Yes	1.00	**3.23**
		U_{37} - U_{38}				39.33	-1394.19	173	-103	-645	-1751	37	22	313	206	0.019	0.178	0.20	Yes	0.014	0.121	0.14	Yes	0.800	0.194	1.00	Yes	0.794	0.156	0.95	Yes	1.00	**3.42**
		U_{38} - U_{39}				43.88	-1474.07	284	-227	-199	-2495	125	-22	502	-35	0.019	0.237	0.26	Yes	0.013	0.151	0.17	Yes	0.763	0.229	1.00	Yes	0.757	0.207	0.97	Yes	1.00	**4.58**
		U_{39} - U_{40}				-----	-1516.60	-226	-301	-1002	-1791	54	5	441	62	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.211	1.00	Yes	0.779	0.148	0.93	Yes	1.00	**3.36**
		U_{40} - U_{41}				-----	-1400.26	-233	-311	-1129	-1479	51	-84	468	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.803	0.194	1.00	Yes	0.797	0.132	0.93	Yes	1.00	**3.36**
		U_{41} - U_{42}				-----	-1247.09	-881	282	-542	-943	366	-78	225	-292	-----	-----	-----	-----	-----	-----	-----	-----	0.890	0.107	1.00	Yes	0.885	0.096	0.99	Yes	1.00	**4.96**
		U_{42} - U_{43}				-----	-746.37	-313	112	-655	-1149	-77	-116	348	-555	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.273	1.00	Yes	0.720	0.174	0.90	Yes	1.00	**8.11**
		U_{43} - U_{44}				-----	-585.83	-1801	1782	-70	-588	173	-648	-16	-553	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.224	0.92	Yes	0.692	0.306	1.00	Yes	1.00	**6.05**
	Structure 3	U_0 - U_1				-----	-605.36	-7	-160	506	-1556	-2	-54	51	-257	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.249	0.94	Yes	0.681	0.313	1.00	Yes	1.00	**6.69**
		U_1 - U_2				-----	-722.84	-32	-140	62	-855	-61	-228	-114	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.177	1.00	Yes	0.813	0.172	0.99	Yes	1.00	**2.94**
		U_2 - U_3				-----	-1051.61	-73	-163	139	-953	-49	334	26	283	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.159	1.00	Yes	0.823	0.155	0.98	Yes	1.00	**2.98**
		U_3 - U_4				-----	-1348.05	-168	-295	-321	-1398	368	577	337	414	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.211	1.00	Yes	0.773	0.154	0.93	Yes	1.00	**3.04**
		U_4 - U_5				-----	-1331.85	-398	-65	-606	-1178	681	225	416	250	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.225	1.00	Yes	0.764	0.130	0.90	Yes	1.00	**2.60**
		U_5 - U_6				-----	-1343.06	-184	-277	-565	-1497	138	-149	301	278	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.212	1.00	Yes	0.770	0.165	0.94	Yes	1.00	**2.45**
		U_6 - U_7				-----	-1370.78	-352	-54	-681	-1154	-123	-208	340	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.203	1.00	Yes	0.786	0.127	0.92	Yes	1.00	**3.98**
		U_7 - U_8				-----	-1192.72	-138	77	-551	-883	-83	-201	245	-258	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.190	1.00	Yes	0.797	0.122	0.92	Yes	1.00	**4.08**
		U_8 - U_9				-----	-925.34	-92	196	-627	-233	-40	-162	270	-298	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.118	1.00	Yes	0.868	0.104	0.98	Yes	1.00	**2.58**
		U_9 - U_{10}				-----	-635.04	-822	336	-276	-90	175	-184	131	-319	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.152	0.98	Yes	0.810	0.184	1.00	Yes	1.00	**4.38**
		U_{10} - U_{11}				505.28	-443.49	-1126	999	26	-804	710	-812	415	-1188	0.548	0.443	1.00	Yes	0.371	0.297	0.67	Yes	0.571	0.288	0.86	Yes	0.566	0.252	0.82	Yes	1.00	**17.26**
		U_{11} - U_{12}				537.92	-----	-1627	2597	-153	555	164	-975	-222	-191	0.441	0.555	1.00	Yes	0.302	0.378	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		U_{12} - U_{13}				975.64	-----	1071	126	1714	-1064	-542	-496	-374	-9	0.676	0.315	1.00	Yes	0.472	0.215	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.05**
		U_{13} - U_{14}				869.81	-----	225	442	60	-429	-343	-217	-53	493	0.832	0.162	1.00	Yes	0.581	0.111	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		U_{14} - U_{15}				687.56	-216.91	451	320	347	-697	-139	-39	252	95	0.788	0.208	1.00	Yes	0.532	0.136	0.67	Yes	0.295	0.224	0.52	Yes	0.292	0.166	0.46	Yes	1.00	**3.82**
		U_{15} - U_{16}				568.78	-552.38	434	306	-52	-1044	-98	116	143	411	0.652	0.318	0.97	Yes	0.447	0.218	0.67	Yes	0.752	0.230	0.99	Yes	0.745	0.248	1.00	Yes	1.00	**4.28**
		U_{16} - U_{17}				560.39	-566.21	504	197	114	-957	47	74	384	75	0.642	0.292	0.94	Yes	0.441	0.200	0.65	Yes	0.770	0.178	0.95	Yes	0.764	0.228	1.00	Yes	1.00	**4.28**
		U_{17} - U_{18}				272.69	-573.81	380	-50	-207	-814	-80	72	251	87	0.313	0.236	0.55	Yes	0.211	0.154	0.37	Yes	0.781	0.211	1.00	Yes	0.774	0.194	0.97	Yes	1.00	**3.22**
		U_{18} - U_{19}				321.46	-500.12	417	13	-94	-1311	-227	76	453	-363	0.368	0.388	0.76	Yes	0.253	0.266	0.52	Yes	0.680	0.312	1.00	Yes	0.674	0.312	0.99	Yes	1.00	**6.57**
		U_{19} - U_{20}				-----	-464.54	-1148	1540	-76	-641	185	209	528	-507	-----	-----	-----	-----	-----	-----	-----	-----	0.632	0.162	0.80	Yes	0.626	0.366	1.00	Yes	1.00	**6.06**

Operating Loads - 5C1

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	-----	-86.26	-439	296	1514	-2797	-37	-138	246	903	-----	-----	-----	-----	-----	-----	-----	-----	0.157	0.759	0.92	Yes	0.155	0.839	1.00	Yes	1.00	**23.57**
		L_1 - L_2	444.73	-26.65	144	14	354	-926	-22	-47	-167	-79	0.681	0.314	1.00	Yes	0.415	0.211	0.63	Yes	0.048	0.147	0.20	Yes	0.048	0.278	0.33	Yes	1.00	**3.77**
		L_2 - L_3	655.85	-105.54	8	84	-334	-872	-39	42	-167	68	0.755	0.237	1.00	Yes	0.437	0.142	0.58	Yes	0.144	0.226	0.38	Yes	0.143	0.211	0.36	Yes	1.00	**3.77**
		L_3 - L_4	663.68	-232.17	110	341	-189	-819	88	70	-183	20	0.764	0.227	1.00	Yes	0.454	0.147	0.61	Yes	0.317	0.191	0.51	Yes	0.314	0.198	0.52	Yes	1.00	**3.58**
		L_4 - L_5	119.51	-543.84	120	614	-365	100	59	37	-128	413	0.155	0.236	0.40	Yes	0.093	0.152	0.25	Yes	0.836	0.161	1.00	Yes	0.829	0.163	1.00	Yes	1.00	**3.01**
		L_5 - L_6	-----	-733.47	165	601	-261	87	72	121	78	138	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.136	1.00	Yes	0.846	0.133	0.98	Yes	1.00	**2.88**
		L_6 - L_7	-----	-1041.30	-910	1010	-331	-668	-275	45	182	816	-----	-----	-----	-----	-----	-----	-----	-----	0.848	0.147	1.00	Yes	0.838	0.159	1.00	Yes	1.00	**8.52**
		L_7 - L_8	-----	-1158.52	-57	1765	11	599	-136	-253	-64	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.248	1.00	Yes	0.734	0.234	0.97	Yes	1.00	**4.52**
		L_8 - L_9	-----	-1226.92	1042	35	1643	-402	-166	-85	-99	138	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.209	1.00	Yes	0.777	0.218	1.00	Yes	1.00	**5.23**
		L_9 - L_{10}	-----	-1088.30	59	140	649	-771	55	162	37	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.058	0.95	Yes	0.876	0.121	1.00	Yes	1.00	**5.72**
		L_{10} - L_{11}	-----	-548.45	524	-10	447	-598	141	42	-4	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.105	0.95	Yes	0.836	0.158	1.00	Yes	1.00	**3.81**
		L_{11} - L_{12}	525.30	-385.83	563	-117	641	-1109	132	-45	-148	-133	0.680	0.320	1.00	Yes	0.408	0.211	0.62	Yes	0.593	0.114	0.71	Yes	0.588	0.294	0.89	Yes	1.00	**5.28**
		L_{12} - L_{13}	1041.99	-57.38	213	-50	-163	-844	7	25	160	225	0.822	0.176	1.00	Yes	0.526	0.105	0.64	Yes	0.054	0.160	0.22	Yes	0.053	0.150	0.21	Yes	1.00	**4.83**
		L_{13} - L_{14}	1233.15	-----	395	-408	667	-1887	10	-10	-22	-104	0.725	0.269	1.00	Yes	0.470	0.164	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.35**
		L_{14} - L_{15}	1655.48	-----	-1179	16	-1377	-1016	-283	-147	-215	275	0.809	0.186	1.00	Yes	0.526	0.113	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		L_{15} - L_{16}	1622.14	-----	-216	-364	-1019	-1480	-125	-57	-119	-349	0.793	0.203	1.00	Yes	0.509	0.119	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.42**
		L_{16} - L_{17}	1175.60	-----	-1110	476	-1330	-525	-593	-33	-277	526	0.743	0.248	1.00	Yes	0.482	0.154	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_{17} - L_{18}	859.44	-----	-893	722	-601	-465	-279	-265	-240	-596	0.748	0.248	1.00	Yes	0.479	0.151	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.09**
		L_{18} - L_{19}	316.09	-73.63	-1175	996	-590	100	-747	-86	-278	454	0.484	0.508	1.00	Yes	0.327	0.323	0.65	Yes	0.134	0.214	0.35	Yes	0.133	0.353	0.49	Yes	1.00	**7.20**
		L_{19} - L_{20}	81.77	-426.72	-746	388	-95	-34	290	65	-28	-6	0.125	0.284	0.41	Yes	0.076	0.189	0.27	Yes	0.775	0.178	0.96	Yes	0.768	0.224	1.00	Yes	1.00	**4.68**
	Structure 2	L_0 - L_1	29.57	-234.43	-139	63	1030	-3256	-27	-92	-304	-1057	0.036	0.836	0.88	Yes	0.021	0.534	0.56	Yes	0.337	0.581	0.92	Yes	0.335	0.662	1.00	Yes	1.00	**17.64**
		L_1 - L_2	565.74	-----	150	-191	467	-1451	-45	24	74	-50	0.687	0.307	1.00	Yes	0.409	0.199	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.36**
		L_2 - L_3	990.81	-----	-59	-130	345	-1312	72	83	-133	37	0.791	0.208	1.00	Yes	0.520	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.76**
		L_3 - L_4	1317.84	-----	38	-398	224	-1658	4	48	-156	-36	0.782	0.210	1.00	Yes	0.528	0.135	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.74**
		L_4 - L_5	1742.59	-----	-390	-211	-782	-1793	91	218	4	33	0.812	0.184	1.00	Yes	0.538	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.01**
		L_5 - L_6	1856.65	-----	-135	-325	-807	-2156	125	-17	-139	-110	0.797	0.200	1.00	Yes	0.535	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.46**
		L_6 - L_7	1814.80	-----	-349	28	-1500	-2349	-184	42	-58	401	0.768	0.231	1.00	Yes	0.510	0.136	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.02**
		L_7 - L_8	1457.07	-241.98	-98	505	-1224	-1331	-127	15	16	-131	0.835	0.158	1.00	Yes	0.549	0.092	0.65	Yes	0.164	0.170	0.34	Yes	0.163	0.147	0.32	Yes	1.00	**4.90**
		L_8 - L_9	1105.77	-----	-1024	655	-1146	-460	-277	40	-76	684	0.773	0.219	1.00	Yes	0.521	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.13**
		L_9 - L_{10}	693.69	-798.94	-40	858	-994	-396	37	117	259	-12	0.619	0.190	0.81	Yes	0.361	0.118	0.48	Yes	0.845	0.113	0.96	Yes	0.839	0.159	1.00	Yes	1.00	**5.40**
		L_{10} - L_{11}	385.80	-46.31	-2536	1833	-1216	-557	-1258	111	-288	1111	0.385	0.613	1.00	Yes	0.226	0.381	0.61	Yes	0.055	0.248	0.31	Yes	0.054	0.444	0.50	Yes	1.00	**13.90**
		L_{11} - L_{12}	-----	-944.41	-1415	1614	-793	143	11	207	465	2	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.157	0.94	Yes	0.774	0.220	1.00	Yes	1.00	**9.04**
		L_{12} - L_{13}	-----	-1321.41	-671	17	-858	-1470	38	-94	97	224	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.194	1.00	Yes	0.790	0.146	0.94	Yes	1.00	**5.45**
		L_{13} - L_{14}	-----	-1415.45	-1001	3250	-348	1194	-196	-426	-184	-297	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.220	0.94	Yes	0.712	0.284	1.00	Yes	1.00	**4.52**
		L_{14} - L_{15}	-----	-1395.37	1410	-272	3363	-1919	-202	-304	-142	186	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.197	0.91	Yes	0.702	0.294	1.00	Yes	1.00	**5.52**
		L_{15} - L_{16}	-----	-1426.69	-910	336	-1416	-667	-9	372	87	131	-----	-----	-----	-----	-----	-----	-----	-----	0.860	0.139	1.00	Yes	0.853	0.141	1.00	Yes	1.00	**5.06**
		L_{16} - L_{17}	-----	-1149.16	1213	119	1138	-726	398	185	-78	-175	-----	-----	-----	-----	-----	-----	-----	-----	0.844	0.148	1.00	Yes	0.837	0.150	0.99	Yes	1.00	**4.37**
		L_{17} - L_{18}	-----	-828.62	470	234	754	-609	102	-56	-222	-113	-----	-----	-----	-----	-----	-----	-----	-----	0.876	0.091	0.97	Yes	0.870	0.121	1.00	Yes	1.00	**3.24**
		L_{18} - L_{19}	-----	-648.36	672	118	551	-584	-4	33	129	135	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.121	1.00	Yes	0.864	0.130	1.00	Yes	1.00	**3.23**
		L_{19} - L_{20}	401.49	-605.58	566	244	367	-962	56	-43	-13	-98	0.455	0.201	0.66	Yes	0.269	0.128	0.40	Yes	0.812	0.152	0.97	Yes	0.807	0.186	1.00	Yes	1.00	**4.29**
		L_{20} - L_{21}	729.23	-767.74	839	165	324	-1790	-142	-150	-103	164	0.589	0.284	0.88	Yes	0.387	0.163	0.56	Yes	0.735	0.172	0.91	Yes	0.730	0.266	1.00	Yes	1.00	**7.68**
		L_{21} - L_{22}	777.82	-35.57	48	53	-19	-2415	-28	62	41	-79	0.629	0.368	1.00	Yes	0.422	0.222	0.65	Yes	0.034	0.274	0.31	Yes	0.034	0.359	0.40	Yes	1.00	**5.42**
		L_{22} - L_{23}	895.81	-152.20	-126	246	-1463	-1127	-15	3	-122	451	0.724	0.267	1.00	Yes	0.486	0.163	0.65	Yes	0.146	0.240	0.39	Yes	0.145	0.218	0.37	Yes	1.00	**4.40**
		L_{23} - L_{24}	913.18	-435.41	64	535	-1049	-1555	18	99	279	13	0.738	0.262	1.00	Yes	0.485	0.151	0.64	Yes	0.417	0.314	0.74	Yes	0.414	0.231	0.65	Yes	1.00	**6.42**
		L_{24} - L_{25}	604.11	-----	-600	506	-1128	-671	-275	201	-208	631	0.684	0.314	1.00	Yes	0.405	0.197	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.56**
		L_{25} - L_{26}	565.47	-492.55	-1523	1493	-932	-1199	2	-380	257	-311	0.641	0.352	1.00	Yes	0.370	0.209	0.58	Yes	0.661	0.178	0.84	Yes	0.656	0.294	0.96	Yes	1.00	**11.97**
		L_{26} - L_{27}	-----	-807.40	-703	914	-563	-255	-400	-18	-40	451	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.117	0.98	Yes	0.848	0.146	1.00	Yes	1.00	**5.22**
		L_{27} - L_{28}	-----	-1145.65	-517	1329	-66	198	-78	-54	89	198	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.127	0.97	Yes	0.834	0.164	1.00	Yes	1.00	**4.79**
		L_{28} - L_{29}	-----	-1431.45	25	-44	-337	-1296	-39	3	183	185	-----	-----	-----	-----	-----	-----	-----	-----	0.863	0.132	1.00	Yes	0.856	0.129	0.99	Yes	1.00	**4.04**
		L_{29} - L_{30}	-----	-1224.06	-1556	4384	-395	685	-170	-222	-42	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.621	0.259	0.88	Yes	0.616	0.383	1.00	Yes	1.00	**7.68**
		L_{30} - L_{31}	-----	-1269.15	1527	-281	4051	-2267	-425	-338	-18	250	-----	-----	-----	-----	-----	-----	-----	-----	0.645	0.241	0.89	Yes	0.639	0.354	1.00	Yes	1.00	**7.31**
		L_{31} - L_{32}	-----	-1212.23	-495	607	-1625	-1782	-579	23	-151	-144	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.257	1.00	Yes	0.731	0.180	0.92	Yes	1.00	**11.31**
		L_{32} - L_{33}	-----	-1020.10	969	149	1154	-1080	-132	-72	178	-47	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.085	0.93	Yes	0.837	0.157	1.00	Yes	1.00	**6.04**
		L_{33} - L_{34}	-----	-689.60	405	185	661	-1065	5	-92	-45	-60	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.072	0.89	Yes	0.810	0.186	1.00	Yes	1.00	**4.77**
		L_{34} - L_{35}	563.55	-725.33	720	85	338	-1481	-44	58	352	425	0.503	0.288	0.80	Yes	0.293	0.178	0.48	Yes	0.767	0.194	0.97	Yes	0.762	0.237	1.00	Yes	1.00	**6.27**
		L_{35} - L_{36}	1084.01	-565.16	544	154	779	-1693	101	-83	49	-134	0.758	0.241	1.00	Yes	0.511	0.150	0.67	Yes	0.469	0.137	0.61	Yes	0.465	0.228	0.70	Yes	1.00	**6.70**
		L_{36} - L_{37}	1350.54	-165.70	354	84	-201	-1863	-115	0	-163	202	0.774	0.222	1.00	Yes	0.509	0.130	0.64	Yes	0.113	0.192	0.31	Yes	0.112	0.206	0.32	Yes	1.00	**4.72**
		L_{37} - L_{38}	1810.76	-----	6	-314	-1222	-2558	-35	-4	74	-29	0.766	0.229	1.00	Yes	0.509	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.41**
		L_{38} - L_{39}	1828.50	-----	-151	-135	-1915	-2032	-51	2	-18	449	0.785	0.208	1.00	Yes	0.527	0.128	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		L_{39} - L_{40}	1711.74	-----	-185	-300	-1270	-1827	-50	-32	-69	-324	0.798	0.194	1.00	Yes	0.528	0.116	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.39**
		L_{40} - L_{41}	1332.03	-----	-1422	303	-1416	-922	-577	7	-239	543	0.783	0.212	1.00	Yes	0.527	0.133	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		L_{41} - L_{42}	1002.36	-----	-1195	569	-1022	-816	-112	14	288	25	0.790	0.203	1.00	Yes	0.518	0.122	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.99**
		L_{42} - L_{43}	446.13	-----	-1548	707	-613	-359	-503	153	-237	445	0.570	0.425	1.00	Yes	0.341	0.245	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.62**
		L_{43} - L_{44}	244.67	-367.00	-2292	847	-43	-27	1244	363	-173	-50	0.297	0.671	0.97	Yes	0.177	0.424	0.61	Yes	0.528	0.429	0.96	Yes	0.524	0.466	1.00	Yes	1.00	**11.57**
	Structure 3	L_0 - L_1	134.76	-325.65	4	-99	753	-1277	-8	-36	-30	-134	0.214	0.415	0.63	Yes	0.131	0.279	0.42	Yes	0.615	0.216	0.84	Yes	0.609	0.385	1.00	Yes	1.00	**8.18**
		L_1 - L_2	323.12	-----	128	-162	844	-1537	-55	13	187	121	0.495	0.500	1.00	Yes	0.334	0.311	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.10**
		L_2 - L_3	882.71	-----	-41	-154	157	-1050	34	23	122	218	0.769	0.230	1.00	Yes	0.492	0.138	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.61**
		L_3 - L_4	1233.68	-----	60	-358	-87	-1317	37	54	287	195	0.780	0.219	1.00	Yes	0.506	0.135	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		L_4 - L_5	1612.67	-----	-376	-159	-774	-1609	114	229	-19	94	0.788	0.210	1.00	Yes	0.506	0.123	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.98**
		L_5 - L_6	1528.75	-----	-83	-340	-191	-1951	142	77	-172	7	0.747	0.247	1.00	Yes	0.485	0.149	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		L_6 - L_7	1326.27	-----	-1249	406	-1164	-687	-247	3	-76	519	0.780	0.215	1.00	Yes	0.505	0.132	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		L_7 - L_8	1123.51	-----	-78	129	-571	-579	-29	34	41	5	0.887	0.108	1.00	Yes	0.567	0.064	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		L_8 - L_9	497.09	-----	-913	549	-532	-134	-283	190	-146	644	0.644	0.354	1.00	Yes	0.386	0.228	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.11**
		L_9 - L_{10}	162.92	-539.87	8	514	-640	-24	70	131	143	103	0.211	0.194	0.41	Yes	0.123	0.118	0.25	Yes	0.830	0.115	0.95	Yes	0.823	0.169	1.00	Yes	1.00	**4.84**
		L_{10} - L_{11}	-----	-1042.83	-958	970	-172	-299	-442	-168	120	526	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.093	0.95	Yes	0.839	0.152	1.00	Yes	1.00	**7.40**
		L_{11} - L_{12}	-----	-1235.37	-196	1339	-39	472	-276	-504	-173	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.200	1.00	Yes	0.782	0.177	0.96	Yes	1.00	**3.91**
		L_{12} - L_{13}	-----	-1189.48	1376	57	1775	-505	-203	-378	-289	125	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.236	1.00	Yes	0.753	0.235	0.99	Yes	1.00	**5.87**
		L_{13} - L_{14}	-----	-1148.09	-49	297	407	-458	-240	139	-207	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.935	0.051	0.99	Yes	0.924	0.072	1.00	Yes	1.00	**3.98**
		L_{14} - L_{15}	-----	-743.71	565	165	290	-294	159	-7	103	-86	-----	-----	-----	-----	-----	-----	-----	-----	0.867	0.124	1.00	Yes	0.858	0.125	0.99	Yes	1.00	**2.71**
		L_{15} - L_{16}	11.85	-556.69	428	202	425	-525	15	-56	-126	-47	0.015	0.161	0.18	Yes	0.009	0.106	0.12	Yes	0.856	0.144	1.00	Yes	0.848	0.139	0.99	Yes	1.00	**2.55**
		L_{16} - L_{17}	636.62	-300.42	388	49	-195	-868	99	-54	88	317	0.732	0.261	1.00	Yes	0.435	0.167	0.61	Yes	0.410	0.219	0.63	Yes	0.407	0.210	0.62	Yes	1.00	**3.17**
		L_{17} - L_{18}	672.87	-168.49	130	13	-547	-855	-1	14	86	11	0.774	0.220	1.00	Yes	0.448	0.133	0.59	Yes	0.230	0.236	0.47	Yes	0.228	0.207	0.44	Yes	1.00	**3.29**
		L_{18} - L_{19}	411.29	-----	-670	268	-468	-720	-142	100	-71	693	0.629	0.365	1.00	Yes	0.384	0.238	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.73**
		L_{19} - L_{20}	60.11	-221.84	-1558	1010	137	-253	1723	469	-7	-2	0.092	0.838	0.93	Yes	0.054	0.502	0.56	Yes	0.403	0.590	1.00	Yes	0.399	0.468	0.87	Yes	1.00	**14.40**

Moment (End) Al Operating

Operating Loads - 5C1

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

DL Factor: 1.300 Vehicle 1.300 Pedestrian 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
			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	$U_0 - L_0$	-----	-282.46	-169	225	-53	82	-302	-97	-38	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.238	0.94	Yes	0.660	0.335	1.00	Yes	1.00	**1.59**
		$U_1 - L_1$	39.77	-320.76	-246	247	40	-28	-125	-15	1	-11	0.072	0.352	0.43	Yes	0.039	0.194	0.24	Yes	0.701	0.112	0.82	Yes	0.679	0.316	1.00	Yes	1.00	**3.68**
		$U_2 - L_2$	129.81	-284.30	-265	306	111	-124	-168	19	121	43	0.233	0.440	0.68	Yes	0.128	0.242	0.38	Yes	0.621	0.153	0.78	Yes	0.602	0.391	1.00	Yes	1.00	**5.43**
		$U_3 - L_3$	171.97	-293.55	-206	249	291	-261	528	166	266	188	0.309	0.525	0.84	Yes	0.170	0.289	0.46	Yes	0.643	0.236	0.88	Yes	0.621	0.372	1.00	Yes	1.00	**8.72**
		$U_4 - L_4$	-----	-232.74	-32	8	393	-383	12	199	-218	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.512	0.192	0.71	Yes	0.492	0.503	1.00	Yes	1.00	**8.94**
		$U_5 - L_5$	-----	-420.99	76	-90	229	-262	-175	-62	31	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.128	0.89	Yes	0.726	0.266	1.00	Yes	1.00	**2.97**
		$U_6 - L_6$	-----	-490.46	84	-79	244	-261	-224	-44	174	-15	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.125	0.91	Yes	0.741	0.253	1.00	Yes	1.00	**2.46**
		$U_7 - L_7$	-----	-412.22	129	-143	273	-291	-148	20	186	32	-----	-----	-----	-----	-----	-----	-----	-----	0.733	0.144	0.88	Yes	0.672	0.322	1.00	Yes	1.00	**1.61**
		$U_8 - L_8$	-----	-1186.57	-336	392	402	-481	40	29	1060	318	-----	-----	-----	-----	-----	-----	-----	-----	0.857	0.136	1.00	Yes	0.823	0.090	0.92	Yes	1.00	**3.90**
		$U_9 - L_9$	-----	-642.02	-389	429	-172	201	-431	-321	-343	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.164	0.95	Yes	0.743	0.250	1.00	Yes	1.00	**2.67**
		$U_{10} - L_{10}$	-----	-671.04	-340	337	-123	105	-1020	-667	-781	-424	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.265	1.00	Yes	0.690	0.190	0.88	Yes	1.00	**3.16**
		$U_{11} - L_{11}$	-----	-655.68	-392	500	-145	196	-612	-488	-540	-371	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.188	0.98	Yes	0.763	0.232	1.00	Yes	1.00	**3.41**
		$U_{12} - L_{12}$	-----	-526.19	-318	321	-108	110	-15	-148	-278	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.140	0.90	Yes	0.722	0.274	1.00	Yes	1.00	**3.09**
		$U_{13} - L_{13}$	-----	-360.09	-244	270	-48	68	-73	-38	-185	-1	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.133	0.87	Yes	0.690	0.308	1.00	Yes	1.00	**2.82**
		$U_{14} - L_{14}$	-----	-172.84	-470	491	206	-219	435	332	3	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.386	0.296	0.69	Yes	0.366	0.628	1.00	Yes	1.00	**11.48**
		$U_{15} - L_{15}$	113.74	-309.46	-85	72	242	-265	29	69	247	-107	0.205	0.411	0.62	Yes	0.113	0.226	0.34	Yes	0.694	0.160	0.86	Yes	0.655	0.339	1.00	Yes	1.00	**4.36**
		$U_{16} - L_{16}$	-----	-321.70	27	-30	237	-247	-84	-103	316	-139	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.135	0.86	Yes	0.681	0.315	1.00	Yes	1.00	**3.01**
		$U_{17} - L_{17}$	-----	-436.74	60	-75	223	-243	-122	-113	139	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.817	0.117	0.94	Yes	0.753	0.246	1.00	Yes	1.00	**2.23**
		$U_{18} - L_{18}$	-----	-537.16	144	-150	427	-440	-134	-121	209	-209	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.092	0.88	Yes	0.747	0.249	1.00	Yes	1.00	**2.33**
		$U_{19} - L_{19}$	-----	-638.62	172	-171	535	-525	-117	-46	243	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.110	0.91	Yes	0.743	0.248	1.00	Yes	1.00	**2.61**
		$U_{20} - L_{20}$	-----	-571.99	161	-261	334	-501	27	4	434	57	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.206	1.00	Yes	0.700	0.241	0.95	Yes	1.00	**1.86**
	Structure 2	$U_0 - L_0$	-----	-661.54	-430	552	-157	203	-305	-52	-51	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.162	1.00	Yes	0.741	0.249	1.00	Yes	1.00	**2.81**
		$U_1 - L_1$	-----	-719.23	-501	518	-110	120	-620	-82	-111	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.137	0.96	Yes	0.771	0.220	1.00	Yes	1.00	**3.65**
		$U_2 - L_2$	-----	-583.77	-494	494	-97	107	-236	-40	-102	-40	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.101	0.89	Yes	0.744	0.253	1.00	Yes	1.00	**3.35**
		$U_3 - L_3$	-----	-492.30	-237	249	-50	58	-83	-57	88	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.090	0.93	Yes	0.772	0.227	1.00	Yes	1.00	**2.88**
		$U_4 - L_4$	-----	-335.12	-222	221	-5	13	-201	-46	270	81	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.159	0.92	Yes	0.709	0.284	1.00	Yes	1.00	**3.21**
		$U_5 - L_5$	93.10	-321.98	-230	248	72	-59	-86	-47	-69	105	0.167	0.348	0.52	Yes	0.092	0.191	0.29	Yes	0.727	0.143	0.88	Yes	0.681	0.317	1.00	Yes	1.00	**4.18**
		$U_6 - L_6$	322.00	-293.86	-268	276	197	-202	220	-5	165	138	0.579	0.416	1.00	Yes	0.319	0.229	0.55	Yes	0.661	0.167	0.83	Yes	0.622	0.353	0.98	Yes	1.00	**6.84**
		$U_7 - L_7$	-----	-266.88	-81	85	308	-339	-61	161	423	58	-----	-----	-----	-----	-----	-----	-----	-----	0.603	0.236	0.84	Yes	0.565	0.433	1.00	Yes	1.00	**7.65**
		$U_8 - L_8$	-----	-469.57	68	-91	351	-368	0	-30	206	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.681	0.109	0.79	Yes	0.676	0.322	1.00	Yes	1.00	**3.21**
		$U_9 - L_9$	-----	-690.13	179	-186	592	-601	-38	-156	275	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.101	0.87	Yes	0.740	0.255	1.00	Yes	1.00	**3.65**
		$U_{10} - L_{10}$	-----	-795.16	182	-184	544	-571	-148	-93	354	-170	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.106	0.90	Yes	0.743	0.252	1.00	Yes	1.00	**3.66**
		$U_{11} - L_{11}$	-----	-814.32	186	-185	512	-531	-182	-63	240	-128	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.110	0.93	Yes	0.761	0.234	1.00	Yes	1.00	**3.28**
		$U_{12} - L_{12}$	-----	-881.84	155	-131	522	-531	-143	12	299	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.117	0.97	Yes	0.764	0.228	1.00	Yes	1.00	**3.27**
		$U_{13} - L_{13}$	-----	-734.99	210	-206	567	-547	-159	20	357	43	-----	-----	-----	-----	-----	-----	-----	-----	0.819	0.178	1.00	Yes	0.709	0.271	0.98	Yes	1.00	**2.71**
		$U_{14} - L_{14}$	-----	-1198.53	-528	489	753	-719	-88	199	671	410	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.121	1.00	Yes	0.795	0.133	0.93	Yes	1.00	**5.18**
		$U_{15} - L_{15}$	-----	-699.59	-612	575	-108	116	-581	-178	-385	1	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1.00	Yes	0.674	0.293	0.97	Yes	1.00	**4.81**
		$U_{16} - L_{16}$	-----	-703.11	-498	480	-84	56	-794	-477	-833	-262	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.187	1.00	Yes	0.754	0.211	0.97	Yes	1.00	**3.90**
		$U_{17} - L_{17}$	-----	-631.25	-556	542	-117	116	-663	-463	-275	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.194	0.98	Yes	0.735	0.258	1.00	Yes	1.00	**3.74**
		$U_{18} - L_{18}$	-----	-578.70	-494	503	-87	87	-263	-318	-115	-125	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.126	0.90	Yes	0.737	0.257	1.00	Yes	1.00	**3.37**
		$U_{19} - L_{19}$	-----	-484.74	-284	287	-50	54	33	-137	-66	-31	-----	-----	-----	-----	-----	-----	-----	-----	0.729	0.093	0.83	Yes	0.724	0.276	1.00	Yes	1.00	**2.98**
		$U_{20} - L_{20}$	-----	-374.65	-242	244	-12	13	-90	-97	-69	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.103	0.88	Yes	0.718	0.278	1.00	Yes	1.00	**3.19**
		$U_{21} - L_{21}$	39.52	-319.05	-236	250	18	-13	34	-32	-106	38	0.071	0.350	0.43	Yes	0.039	0.192	0.24	Yes	0.721	0.115	0.84	Yes	0.675	0.319	1.00	Yes	1.00	**3.50**
		$U_{22} - L_{22}$	-----	-119.75	-546	584	461	-512	70	376	95	92	-----	-----	-----	-----	-----	-----	-----	-----	0.269	0.266	0.54	Yes	0.253	0.746	1.00	Yes	1.00	**17.73**
		$U_{23} - L_{23}$	70.89	-318.91	-51	38	234	-252	49	114	161	-77	0.127	0.369	0.50	Yes	0.070	0.203	0.28	Yes	0.720	0.127	0.85	Yes	0.675	0.323	1.00	Yes	1.00	**3.68**
		$U_{24} - L_{24}$	-----	-372.74	13	-19	234	-246	-64	-31	309	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.126	0.90	Yes	0.714	0.281	1.00	Yes	1.00	**2.90**
		$U_{25} - L_{25}$	-----	-470.90	35	-35	303	-298	-92	-28	321	-64	-----	-----	-----	-----	-----	-----	-----	-----	0.708	0.100	0.81	Yes	0.703	0.292	1.00	Yes	1.00	**2.80**
		$U_{26} - L_{26}$	-----	-567.65	61	-65	501	-530	-128	-21	457	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.116	0.88	Yes	0.723	0.271	1.00	Yes	1.00	**3.16**
		$U_{27} - L_{27}$	-----	-628.96	81	-82	557	-562	-139	3	403	-39	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.118	0.90	Yes	0.732	0.261	1.00	Yes	1.00	**3.24**
		$U_{28} - L_{28}$	-----	-714.03	72	-70	548	-541	-159	16	502	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.120	0.95	Yes	0.765	0.232	1.00	Yes	1.00	**3.42**
		$U_{29} - L_{29}$	-----	-695.12	117	-122	616	-593	-121	27	533	51	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.220	1.00	Yes	0.670	0.295	0.97	Yes	1.00	**3.77**
		$U_{30} - L_{30}$	-----	-1165.88	-648	581	743	-733	172	355	917	14	-----	-----	-----	-----	-----	-----	-----	-----	0.868	0.123	1.00	Yes	0.788	0.134	0.93	Yes	1.00	**5.96**
		$U_{31} - L_{31}$	-----	-747.15	-525	500	-102	102	-216	-141	-306	-34	-----	-----	-----	-----	-----	-----	-----	-----	0.833	0.157	1.00	Yes	0.720	0.251	0.98	Yes	1.00	**4.25**
		$U_{32} - L_{32}$	-----	-781.10	-462	441	-78	53	-1024	-477	-707	-282	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.247	1.00	Yes	0.677	0.198	0.88	Yes	1.00	**4.08**
		$U_{33} - L_{33}$	-----	-810.34	-482	478	-116	104	-521	-502	-457	-345	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.171	1.00	Yes	0.764	0.216	0.98	Yes	1.00	**4.10**
		$U_{34} - L_{34}$	-----	-819.81	-494	523	-121	113	67	-300	-327	-312	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.118	0.93	Yes	0.766	0.231	1.00	Yes	1.00	**4.40**
		$U_{35} - L_{35}$	-----	-695.01	-586	579	-112	128	-195	-183	-161	6	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.088	0.87	Yes	0.745	0.249	1.00	Yes	1.00	**4.24**
		$U_{36} - L_{36}$	-----	-480.07	-333	346	-54	67	98	3	-53	60	-----	-----	-----	-----	-----	-----	-----	-----	0.696	0.096	0.80	Yes	0.692	0.303	1.00	Yes	1.00	**3.35**
		$U_{37} - L_{37}$	-----	-110.81	-530	598	122	-134	-200	233	-267	63	-----	-----	-----	-----	-----	-----	-----	-----	0.250	0.302	0.56	Yes	0.234	0.764	1.00	Yes	1.00	**12.98**
		$U_{38} - L_{38}$	347.79	-213.37	-245	246	179	-188	106	147	195	-110	0.626	0.371	1.00	Yes	0.344	0.204	0.55	Yes	0.480	0.103	0.59	Yes	0.451	0.315	0.77	Yes	1.00	**5.81**
		$U_{39} - L_{39}$	97.69	-327.01	-88	78	213	-235	63	39	286	-90	0.176	0.383	0.56	Yes	0.097	0.211	0.31	Yes	0.739	0.133	0.88	Yes	0.692	0.301	1.00	Yes	1.00	**4.35**
		$U_{40} - L_{40}$	10.24	-343.66	-14	8	210	-211	17	-31	241	-112	0.018	0.340	0.36	Yes	0.010	0.187	0.20	Yes	0.779	0.095	0.88	Yes	0.727	0.270	1.00	Yes	1.00	**3.05**
		$U_{41} - L_{41}$	-----	-488.67	23	-27	242	-255	11	-27	219	-120	-----	-----	-----	-----	-----	-----	-----	-----	0.832	0.092	0.93	Yes	0.766	0.233	1.00	Yes	1.00	**2.95**
		$U_{42} - L_{42}$	-----	-582.57	56	-65	476	-485	13	-34	293	-146	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.077	0.86	Yes	0.742	0.248	1.00	Yes	1.00	**3.02**
		$U_{43} - L_{43}$	-----	-708.89	74	-88	558	-559	-51	-52	380	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.811	0.098	0.91	Yes	0.760	0.237	1.00	Yes	1.00	**3.26**
		$U_{44} - L_{44}$	-----	-641.66	115	-130	369	-510	-141	-24	893	151	-----	-----	-----	-----	-----	-----	-----	-----	0.768	0.226	1.00	Yes	0.688	0.216	0.91	Yes	1.00	**2.72**
	Structure 3	$U_0 - L_0$	-----	-576.92	-416	478	-145	193	-611	-80	-58	-8	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.206	1.00	Yes	0.693	0.229	0.93	Yes	1.00	**2.33**
		$U_1 - L_1$	-----	-658.50	-480	490	-113	124	134	134	-121	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.822	0.082	0.91	Yes	0.766	0.227	1.00	Yes	1.00	**3.59**
		$U_2 - L_2$	-----	-550.04	-395	413	-110	116	90	33	-146	-45	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.088	0.90	Yes	0.765	0.234	1.00	Yes	1.00	**3.01**
		$U_3 - L_3$	-----	-440.27	-217	231	-44	57	-130	-64	46	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.113	0.94	Yes	0.760	0.234	1.00	Yes	1.00	**2.84**
		$U_4 - L_4$	-----	-324.29	-235	241	-19	24	-41	-3	222	47	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.143	0.88	Yes	0.686	0.308	1.00	Yes	1.00	**3.22**
		$U_5 - L_5$	106.54	-305.09	-256	274	77	-71	-139	-27	-85	108	0.192	0.391	0.59	Yes	0.105	0.215	0.33	Yes	0.684	0.161	0.85	Yes	0.646	0.351	1.00	Yes	1.00	**4.99**
		$U_6 - L_6$	-----	-224.78	-272	277	378	-403	-17	200	62	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.502	0.193	0.70	Yes	0.476	0.515	1.00	Yes	1.00	**11.14**
		$U_7 - L_7$	-----	-365.27	32	-46	240	-261	10	-34	70	-141	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.114	0.86	Yes	0.700	0.298	1.00	Yes	1.00	**2.90**
		$U_8 - L_8$	-----	-515.12	88	-92	332	-337	6	-68	203	-132	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.104	0.85	Yes	0.707	0.288	1.00	Yes	1.00	**3.25**
		$U_9 - L_9$	-----	-652.83	131	-169	399	-510	-175	-135	139	-169	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.101	0.89	Yes	0.760	0.236	1.00	Yes	1.00	**3.37**
		$U_{10} - L_{10}$	-----	-782.08	132	-110	397	-435	-25	18	330	-6	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.127	0.94	Yes	0.772	0.225	1.00	Yes	1.00	**3.47**
		$U_{11} - L_{11}$	-----	-648.34	169	-194	424	-469	-131	-28	373	76	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.137	0.92	Yes	0.732	0.261	1.00	Yes	1.00	**2.40**
		$U_{12} - L_{12}$	-----	-1176.63	-401	433	515	-670	35	90	829	408	-----	-----	-----	-----	-----	-----	-----	-----	0.850	0.147	1.00	Yes	0.816	0.125	0.95	Yes	1.00	**4.80**
		$U_{13} - L_{13}$	-----	-456.61	-289	299	-63	73	-445	-174	-320	-21	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.196	0.96	Yes	0.704	0.294	1.00	Yes	1.00	**3.09**
		$U_{14} - L_{14}$	-----	-510.93	-232	245	-44	25	-584	-420	-742	-352	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.223	1.00	Yes	0.733	0.214	0.95	Yes	1.00	**3.52**
		$U_{15} - L_{15}$	-----	-423.95	-233	247	-47	45	-521	-362	-567	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.225	1.00	Yes	0.731	0.251	0.99	Yes	1.00	**4.22**
		$U_{16} - L_{16}$	-----	-157.89	-520	498	29	-15	-1441	-494	-787	-420	-----	-----	-----	-----	-----	-----	-----	-----	0.347	0.567	0.92	Yes	0.334	0.665	1.00	Yes	1.00	**12.71**
		$U_{17} - L_{17}$	286.89	-270.53	-308	315	201	-231	-277	58	-79	-162	0.516	0.483	1.00	Yes	0.284	0.266	0.55	Yes	0.593	0.160	0.76	Yes	0.572	0.403	0.98	Yes	1.00	**8.21**
		$U_{18} - L_{18}$	143.57	-300.93	-133	149	233	-280	-135	24	243	-59	0.258	0.428	0.69	Yes	0.142	0.235	0.38	Yes	0.658	0.157	0.82	Yes	0.637	0.357	1.00	Yes	1.00	**5.04**
		$U_{19} - L_{19}$	57.28	-315.70	-65	52	255	-240	-90	1	126	-35	0.103	0.363	0.47	Yes	0.057	0.200	0.26	Yes	0.690	0.110	0.80	Yes	0.668	0.326	1.00	Yes	1.00	**3.00**
		$U_{20} - L_{20}$	-----	-332.06	17	-23	103	-202	-54	-17	447	143	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.251	1.00	Yes	0.703	0.259	0.97	Yes	1.00	**1.83**

Moment (End) AI Operating

Operating Loads - 5C1

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									
		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
				Tension	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		442.39	-31.50	-174	78	-11	-6	-834	-123	1	27	0.580	0.414	1.00	Yes	0.350	0.228	0.58	Yes	0.054	0.292	0.35	Yes	0.049	0.203	0.26	Yes	1.00	**4.13**
		U_1 - L_2		405.23	-----	-73	19	-6	-33	-163	-176	609	123	0.729	0.270	1.00	Yes	0.401	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		U_2 - L_3		433.86	-312.02	-113	35	-81	-118	-228	-173	117	-95	0.780	0.216	1.00	Yes	0.429	0.119	0.55	Yes	0.718	0.233	0.96	Yes	0.660	0.150	0.82	Yes	1.00	**10.89**
		U_3 - L_4		-----	-327.96	56	-6	-68	-111	127	129	-305	-278	-----	-----	-----	-----	-----	-----	-----	-----	0.750	0.245	1.00	Yes	0.694	0.141	0.84	Yes	1.00	**6.24**
		U_4 - L_5		477.85	-----	0	94	-132	-15	98	53	-655	-493	0.707	0.287	1.00	Yes	0.389	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		U_5 - L_6		682.42	-----	-199	230	-49	100	-286	-303	28	-34	0.807	0.186	1.00	Yes	0.444	0.102	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.57**
		U_6 - L_7		645.98	-----	-309	252	-95	102	-307	-245	153	48	0.764	0.232	1.00	Yes	0.420	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.67**
		U_7 - L_8		649.77	-----	-103	315	-5	133	-197	-142	262	152	0.768	0.227	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.66**
		U_8 - L_9		967.67	-----	-87	361	18	141	348	377	464	83	0.774	0.220	1.00	Yes	0.479	0.124	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		U_9 - L_{10}		1018.90	-----	-284	290	-71	86	221	379	130	112	0.815	0.178	1.00	Yes	0.505	0.100	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.81**
		U_{10} - L_{11}		999.04	-----	-223	215	-83	95	88	354	30	145	0.844	0.150	1.00	Yes	0.522	0.084	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		U_{11} - L_{12}		862.18	-----	-242	145	-118	12	98	213	152	139	0.853	0.144	1.00	Yes	0.469	0.079	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.38**
		U_{12} - L_{13}		657.54	-----	-201	177	-85	33	49	47	57	-99	0.802	0.195	1.00	Yes	0.504	0.109	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		U_{13} - L_{14}		464.54	-----	-88	53	-32	-38	-25	-95	-1	-157	0.835	0.158	1.00	Yes	0.460	0.087	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		U_{15} - L_{14}		239.30	-300.56	-62	-1	27	-99	-222	-241	-496	-134	0.430	0.270	0.71	Yes	0.237	0.149	0.39	Yes	0.704	0.289	1.00	Yes	0.636	0.127	0.77	Yes	1.00	**4.52**
		U_{16} - L_{15}		406.42	-40.93	-128	91	-10	-24	-350	-311	-300	-152	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	0.097	0.182	0.28	Yes	0.087	0.164	0.26	Yes	1.00	**3.63**
		U_{17} - L_{16}		505.49	-----	-140	97	-44	12	-498	-372	-338	-216	0.741	0.258	1.00	Yes	0.408	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.47**
		U_{18} - L_{17}		606.47	-----	-307	253	-112	76	-558	-475	-111	-118	0.717	0.275	1.00	Yes	0.394	0.151	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.55**
		U_{19} - L_{18}		682.40	-----	-342	257	-132	87	-488	-480	-65	-106	0.739	0.255	1.00	Yes	0.407	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		U_{20} - L_{19}		678.83	-----	-254	259	-95	93	-776	-359	-100	-39	0.735	0.260	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.60**
	Structure 2	U_0 - L_1		804.47	-----	-387	367	-110	95	-163	-110	-60	-44	0.796	0.204	1.00	Yes	0.438	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		U_1 - L_2		803.03	-----	-386	336	-84	61	-147	-115	-95	-21	0.794	0.201	1.00	Yes	0.437	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.14**
		U_2 - L_3		658.26	-----	-328	279	-75	56	-149	-24	-16	98	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.39**
		U_3 - L_4		593.64	-----	-181	134	-33	12	-163	-20	115	66	0.791	0.199	1.00	Yes	0.435	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		U_4 - L_5		435.81	-72.75	-133	108	-8	-25	-153	-20	15	-156	0.784	0.215	1.00	Yes	0.431	0.118	0.55	Yes	0.180	0.092	0.28	Yes	0.154	0.170	0.33	Yes	1.00	**3.97**
		U_5 - L_6		444.54	-215.45	-125	78	40	-95	-132	1	-36	-136	0.800	0.199	1.00	Yes	0.440	0.110	0.55	Yes	0.509	0.148	0.66	Yes	0.456	0.160	0.62	Yes	1.00	**5.33**
		U_6 - L_7		44.44	-381.21	-30	-8	49	-101	-118	-151	-23	-306	0.072	0.195	0.27	Yes	0.040	0.107	0.15	Yes	0.816	0.178	1.00	Yes	0.730	0.116	0.85	Yes	1.00	**3.27**
		U_8 - L_7		589.55	-----	-177	149	-29	-22	-267	-403	-307	-215	0.752	0.241	1.00	Yes	0.473	0.137	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.43**
		U_8 - L_9		701.02	-----	-322	242	-126	47	-404	-389	-411	-242	0.759	0.232	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		U_{10} - L_9		791.62	-----	-304	227	-111	73	-472	-464	-228	-178	0.783	0.212	1.00	Yes	0.431	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		U_{11} - L_{10}		865.97	-----	-333	283	-132	112	-441	-483	-74	-138	0.789	0.207	1.00	Yes	0.434	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.00**
		U_{12} - L_{11}		858.72	-----	-364	352	-142	148	-448	-393	12	-48	0.782	0.216	1.00	Yes	0.430	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.92**
		U_{13} - L_{12}		750.79	-----	-424	379	-152	152	-216	-187	345	137	0.743	0.248	1.00	Yes	0.409	0.137	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.45**
		U_{14} - L_{13}		751.99	-----	-272	424	-33	147	-279	-166	374	184	0.744	0.253	1.00	Yes	0.409	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.03**
		U_{14} - L_{15}		641.10	-----	-220	346	32	65	132	221	201	-43	0.758	0.236	1.00	Yes	0.417	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.33**
		U_{15} - L_{16}		628.49	-----	-374	350	-54	62	-248	8	-58	13	0.743	0.257	1.00	Yes	0.409	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_{16} - L_{17}		709.43	-----	-318	337	-66	92	-269	318	-156	58	0.768	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.44**
		U_{17} - L_{18}		655.83	-----	-282	296	-62	74	-7	275	-35	96	0.775	0.217	1.00	Yes	0.426	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.48**
		U_{18} - L_{19}		673.89	-----	-273	270	-44	62	117	254	25	14	0.797	0.201	1.00	Yes	0.438	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.54**
		U_{19} - L_{20}		623.65	-----	-192	194	-40	12	124	143	108	-24	0.795	0.202	1.00	Yes	0.437	0.113	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.10**
		U_{20} - L_{21}		448.68	-22.41	-122	116	-10	-7	46	70	-2	-95	0.807	0.184	1.00	Yes	0.444	0.101	0.55	Yes	0.053	0.062	0.12	Yes	0.047	0.156	0.21	Yes	1.00	**3.54**
		U_{21} - L_{22}		445.99	-258.29	-102	70	22	-90	19	15	72	-198	0.802	0.188	1.00	Yes	0.441	0.103	0.55	Yes	0.610	0.136	0.75	Yes	0.547	0.131	0.68	Yes	1.00	**5.61**
		U_{23} - L_{22}		432.62	-296.05	-108	66	57	-100	-267	-276	-234	-43	0.778	0.217	1.00	Yes	0.428	0.120	0.55	Yes	0.705	0.205	0.92	Yes	0.626	0.138	0.77	Yes	1.00	**5.87**
		U_{24} - L_{23}		424.53	-36.94	-118	106	-1	-16	-275	-237	-253	-56	0.764	0.231	1.00	Yes	0.420	0.127	0.55	Yes	0.088	0.130	0.22	Yes	0.078	0.151	0.23	Yes	1.00	**3.38**
		U_{25} - L_{24}		579.19	-----	-190	178	-9	24	-425	-347	84	16	0.739	0.256	1.00	Yes	0.406	0.146	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.35**
		U_{26} - L_{25}		657.24	-----	-271	264	-24	35	-353	-378	127	52	0.777	0.222	1.00	Yes	0.427	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		U_{27} - L_{26}		642.59	-----	-288	285	-42	54	-384	-307	186	75	0.760	0.233	1.00	Yes	0.418	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.16**
		U_{28} - L_{27}		706.13	-----	-331	358	-45	64	-292	-288	209	116	0.765	0.231	1.00	Yes	0.421	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.34**
		U_{29} - L_{28}		636.18	-----	-360	346	-71	70	-174	-195	217	106	0.752	0.243	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.17**
		U_{30} - L_{29}		630.81	-----	-220	356	-14	76	-269	-159	196	108	0.746	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
		U_{30} - L_{31}		762.93	-----	-288	436	24	65	157	132	264	-3	0.755	0.242	1.00	Yes	0.415	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.91**
		U_{31} - L_{32}		726.32	-----	-408	368	-66	72	-194	232	-16	39	0.754	0.239	1.00	Yes	0.415	0.123	0.54	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.81**
		U_{32} - L_{33}		884.65	-----	-347	357	-54	92	-260	250	-154	149	0.806	0.187	1.00	Yes	0.443	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		U_{33} - L_{34}		883.36	-----	-339	294	-110	82	-9	361	38	130	0.805	0.193	1.00	Yes	0.443	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.01**
		U_{34} - L_{35}		831.56	-----	-294	257	-101	53	137	180	236	-2	0.823	0.171	1.00	Yes	0.452	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		U_{35} - L_{36}		749.26	-----	-327	265	-105	35	35	62	42	-99	0.812	0.184	1.00	Yes	0.446	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.94**
		U_{36} - L_{37}		618.39	-----	-176	170	-44	-16	-64	6	32	-243	0.788	0.207	1.00	Yes	0.496	0.117	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.63**
		U_{38} - L_{37}		38.91	-387.97	-29	-4	69	-101	-180	-218	-216	-84	0.063	0.172	0.24	Yes	0.035	0.094	0.13	Yes	0.838	0.157	1.00	Yes	0.743	0.115	0.86	Yes	1.00	**3.49**
		U_{38} - L_{39}		406.06	-304.58	-118	70	79	-117	-321	-309	-393	-119	0.730	0.265	1.00	Yes	0.402	0.146	0.55	Yes	0.726	0.251	0.98	Yes	0.644	0.151	0.80	Yes	1.00	**5.67**
		U_{40} - L_{39}		403.40	-63.05	-132	97	7	-26	-355	-312	-214	-129	0.726	0.271	1.00	Yes	0.399	0.149	0.55	Yes	0.151	0.186	0.34	Yes	0.133	0.169	0.31	Yes	1.00	**3.84**
		U_{41} - L_{40}		564.33	-----	-171	128	-14	-1	-402	-381	-87	-73	0.752	0.240	1.00	Yes	0.414	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.13**
		U_{42} - L_{41}		606.66	-----	-319	261	-45	28	-524	-439	-63	-59	0.717	0.276	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.06**
		U_{43} - L_{42}		750.59	-----	-386	309	-61	41	-510	-469	-1	-43	0.743	0.255	1.00	Yes	0.408	0.140	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		U_{44} - L_{43}		739.27	-----	-286	318	-92	78	-785	-397	60	-21	0.731	0.265	1.00	Yes	0.402	0.146	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
	Structure 3	U_0 - L_1		593.87	-----	-418	316	-114	95	-824	51	-61	-51	0.643	0.350	1.00	Yes	0.354	0.192	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.11**
		U_1 - L_2		722.38	-----	-341	260	-98	66	-235	-72	-123	-44	0.782	0.213	1.00	Yes	0.430	0.117	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.63**
		U_2 - L_3		649.54	-----	-331	245	-96	62	-244	87	-48	78	0.768	0.232	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		U_3 - L_4		555.02	-----	-148	115	-41	7	-135	-56	95	-14	0.814	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.36**
		U_4 - L_5		428.84	-79.11	-132	93	-15	-27	-202	21	-11	-166	0.771	0.228	1.00	Yes	0.424	0.125	0.55	Yes	0.188	0.108	0.30	Yes	0.167	0.169	0.34	Yes	1.00	**3.99**
		U_5 - L_6		352.42	-331.89	-78	15	30	-109	-159	-166	-74	-327	0.634	0.234	0.87	Yes	0.349	0.129	0.48	Yes	0.778	0.221	1.00	Yes	0.702	0.140	0.85	Yes	1.00	**5.69**
		U_7 - L_6		433.33	-61.01	-81	43	-5	-47	-218	-277	-387	-221	0.779	0.215	1.00	Yes	0.429	0.118	0.55	Yes	0.142	0.175	0.32	Yes	0.129	0.103	0.24	Yes	1.00	**4.72**
		U_8 - L_7		590.40	-----	-191	144	-82	24	-413	-396	-573	-229	0.720	0.278	1.00	Yes	0.453	0.159	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.24**
		U_8 - L_9		773.43	-----	-236	104	-135	11	-503	-532	-793	-398	0.765	0.228	1.00	Yes	0.421	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.32**
		U_{10} - L_9		955.23	-----	-237	182	-75	68	-557	-613	-89	-138	0.807	0.190	1.00	Yes	0.499	0.108	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		U_{11} - L_{10}		993.03	-----	-302	257	-95	85	-512	-449	52	-21	0.794	0.200	1.00	Yes	0.492	0.113	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		U_{12} - L_{11}		984.74	-----	-103	361	-9	129	-380	-314	238	123	0.787	0.209	1.00	Yes	0.488	0.117	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.66**
		U_{12} - L_{13}		661.47	-----	-107	282	30	73	167	238	275	-19	0.782	0.210	1.00	Yes	0.430	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.86**
		U_{13} - L_{14}		670.16	-----	-280	251	-15	56	-88	243	-48	32	0.792	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.24**
		U_{14} - L_{15}		696.28	-----	-173	241	-21	66	-90	191	-63	72	0.823	0.172	1.00	Yes	0.453	0.094	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.48**
		U_{15} - L_{16}		462.48	-----	40	198	-89	-43	491	495	154	171	0.678	0.316	1.00	Yes	0.373	0.174	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**13.66**
		U_{17} - L_{16}		-----	-347.54	32	1	14	-87	358	222	-176	41	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.195	1.00	Yes	0.735	0.112	0.85	Yes	1.00	**5.49**
		U_{18} - L_{17}		182.92	-331.49	-51	12	-32	-62	-161	-130	-682	-15	0.329	0.277	0.61	Yes	0.181	0.152	0.34	Yes	0.763	0.235	1.00	Yes	0.701	0.079	0.79	Yes	1.00	**5.88**
		U_{19} - L_{18}		407.67	-161.67	-100	27	32	-23	-455	-348	207	162	0.733	0.259	1.00	Yes	0.403	0.142	0.55	Yes	0.371	0.244	0.62	Yes	0.342	0.127	0.47	Yes	1.00	**3.77**
		U_{20} - L_{19}		597.89	-93.67	-32	39	-15	-8	-666	-455	128	144	0.784	0.213	1.00	Yes	0.474	0.117	0.60	Yes	0.160	0.212	0.38	Yes	0.145	0.045	0.19	Yes	1.00	**3.49**

Operating Loads - 5C1

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	$U_0 - U_1$	18.75	-512.10	-176	110	380	-1257	5	-24	-57	-447	0.021	0.374	0.40	Yes	0.015	0.256	0.28	Yes	0.697	0.299	1	Yes	0.691	0.299	0.99	Yes	1.00	**5.04**
		$U_1 - U_2$	73.05	-542.76	-48	120	-210	-895	-23	39	18	169	0.084	0.241	0.33	Yes	0.057	0.166	0.23	Yes	0.739	0.258	1	Yes	0.732	0.213	0.95	Yes	1.00	**3.47**
		$U_2 - U_3$	182.35	-531.34	-72	300	-264	-802	-27	-89	320	-78	0.209	0.245	0.46	Yes	0.141	0.160	0.31	Yes	0.723	0.276	1	Yes	0.717	0.191	0.91	Yes	1.00	**3.57**
		$U_3 - U_4$	444.06	-516.20	154	341	-78	-1100	-143	-94	-24	-244	0.509	0.303	0.82	Yes	0.349	0.208	0.56	Yes	0.702	0.290	1	Yes	0.696	0.261	0.96	Yes	1.00	**5.19**
		$U_4 - U_5$	505.64	-590.71	158	392	-31	-682	-136	66	-112	-204	0.580	0.196	0.78	Yes	0.398	0.135	0.54	Yes	0.804	0.190	1	Yes	0.797	0.162	0.96	Yes	1.00	**6.20**
		$U_5 - U_6$	-----	-554.81	-843	706	-123	-484	90	-412	-328	-503	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.238	1	Yes	0.748	0.200	0.95	Yes	1.00	**9.59**
		$U_6 - U_7$	855.37	-----	329	224	407	-584	-333	127	-385	-57	0.818	0.177	1.00	Yes	0.572	0.122	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_7 - U_8$	726.10	-----	-1870	2971	-55	678	-364	212	-246	164	0.503	0.487	1.00	Yes	0.351	0.332	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.69**
		$U_8 - U_9$	712.90	-----	777	-4	2031	-1789	-127	50	235	555	0.584	0.409	1.00	Yes	0.400	0.278	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.44**
		$U_9 - U_{10}$	610.34	-211.41	219	295	288	-1057	87	321	353	582	0.662	0.330	1.00	Yes	0.448	0.222	0.68	Yes	0.272	0.187	0.46	Yes	0.270	0.237	0.51	Yes	1.00	**7.35**
		$U_{10} - U_{11}$	165.43	-573.28	244	-58	207	-1169	206	56	389	86	0.179	0.324	0.51	Yes	0.120	0.208	0.33	Yes	0.738	0.235	0.98	Yes	0.732	0.262	1.00	Yes	1.00	**4.46**
		$U_{11} - U_{12}$	-----	-875.95	187	-101	79	-1031	144	53	295	64	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.169	1	Yes	0.822	0.171	1.00	Yes	1.00	**3.78**
		$U_{12} - U_{13}$	-----	-1159.84	-119	-156	-7	-1345	359	-180	261	-151	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.206	1	Yes	0.775	0.186	0.97	Yes	1.00	**3.81**
		$U_{13} - U_{14}$	-----	-1301.15	-500	-327	-311	-1926	290	36	127	-24	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.242	1	Yes	0.746	0.212	0.96	Yes	1.00	**3.74**
		$U_{14} - U_{15}$	-----	-1367.02	-339	-159	-422	-1335	183	-223	185	-117	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.201	1	Yes	0.784	0.147	0.94	Yes	1.00	**4.06**
		$U_{15} - U_{16}$	-----	-1306.19	-613	-286	161	-2015	421	-63	-104	-426	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.241	1	Yes	0.749	0.222	0.98	Yes	1.00	**6.02**
		$U_{16} - U_{17}$	-----	-1273.01	-405	-74	-691	-1487	313	-352	-197	-337	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.255	1	Yes	0.730	0.164	0.90	Yes	1.00	**6.53**
		$U_{17} - U_{18}$	-----	-1061.43	-706	192	-351	-535	-108	-481	-152	-260	-----	-----	-----	-----	-----	-----	-----	-----	0.841	0.151	1	Yes	0.831	0.115	0.95	Yes	1.00	**4.06**
		$U_{18} - U_{19}$	-----	-747.69	-465	308	-158	-481	-43	-129	-156	-399	-----	-----	-----	-----	-----	-----	-----	-----	0.849	0.146	1	Yes	0.841	0.097	0.94	Yes	1.00	**6.04**
		$U_{19} - U_{20}$	-----	-549.09	-1250	1357	106	-1854	-418	-195	-136	-866	-----	-----	-----	-----	-----	-----	-----	-----	0.623	0.317	0.95	Yes	0.618	0.373	1.00	Yes	1.00	**9.24**
	Structure 2	$U_0 - U_1$	-----	-601.65	169	-128	226	-1688	95	182	-20	-181	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.219	0.94	Yes	0.711	0.287	1.00	Yes	1.00	**5.80**
		$U_1 - U_2$	-----	-765.19	-107	-133	-77	-1195	345	666	297	445	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.253	1	Yes	0.739	0.181	0.92	Yes	1.00	**3.45**
		$U_2 - U_3$	-----	-1091.84	-81	-203	-82	-1883	610	-2	636	25	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.217	1	Yes	0.775	0.192	0.97	Yes	1.00	**3.64**
		$U_3 - U_4$	-----	-1321.18	-374	-248	-800	-2037	242	-333	267	-266	-----	-----	-----	-----	-----	-----	-----	-----	0.758	0.237	1	Yes	0.752	0.181	0.94	Yes	1.00	**3.76**
		$U_4 - U_5$	-----	-1425.56	-343	-283	-495	-2553	-91	-375	48	-364	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.261	1	Yes	0.732	0.212	0.95	Yes	1.00	**3.84**
		$U_5 - U_6$	-----	-1433.39	-597	65	-1074	-1942	18	-456	-52	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.253	1	Yes	0.736	0.161	0.90	Yes	1.00	**3.76**
		$U_6 - U_7$	-----	-1248.80	-221	-36	-784	-2206	-112	-277	-72	-374	-----	-----	-----	-----	-----	-----	-----	-----	0.716	0.277	1	Yes	0.711	0.197	0.91	Yes	1.00	**3.63**
		$U_7 - U_8$	-----	-1386.24	-111	-137	-870	-1473	-219	-238	-224	-388	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.196	1	Yes	0.789	0.131	0.93	Yes	1.00	**4.01**
		$U_8 - U_9$	159.58	-1129.73	-207	297	-658	-1417	-208	-84	-187	-433	0.092	0.186	0.28	Yes	0.065	0.122	0.19	Yes	0.772	0.225	1	Yes	0.766	0.151	0.92	Yes	1.00	**5.87**
		$U_9 - U_{10}$	524.82	-924.70	125	590	-792	-1118	-212	27	-231	-407	0.385	0.180	0.57	Yes	0.261	0.122	0.39	Yes	0.803	0.188	1	Yes	0.798	0.136	0.94	Yes	1.00	**7.19**
		$U_{10} - U_{11}$	961.60	-390.57	373	639	-128	-1022	-247	-9	-332	-248	0.812	0.185	1.00	Yes	0.553	0.120	0.68	Yes	0.390	0.188	0.58	Yes	0.388	0.144	0.54	Yes	1.00	**8.75**
		$U_{11} - U_{12}$	-----	-771.72	-1305	1552	-389	-1540	-830	-918	-664	-733	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.223	1	Yes	0.767	0.219	0.99	Yes	1.00	**17.51**
		$U_{12} - U_{13}$	797.57	-----	100	275	198	-2687	-907	-1238	-900	-392	0.539	0.456	1.00	Yes	0.384	0.311	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.59**
		$U_{13} - U_{14}$	844.76	-----	-1070	5625	-423	1478	-912	93	-554	-206	0.415	0.583	1.00	Yes	0.294	0.382	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.80**
		$U_{14} - U_{15}$	1118.69	-----	1628	228	4375	-2813	-581	-208	61	504	0.550	0.445	1.00	Yes	0.389	0.291	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_{15} - U_{16}$	1164.29	-----	233	581	-477	-1852	-129	287	453	962	0.704	0.292	1.00	Yes	0.501	0.198	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.67**
		$U_{16} - U_{17}$	935.54	-----	658	317	944	-1904	188	64	642	194	0.689	0.307	1.00	Yes	0.459	0.202	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		$U_{17} - U_{18}$	717.23	-202.69	478	344	357	-1435	-40	-7	216	48	0.720	0.275	1.00	Yes	0.479	0.183	0.67	Yes	0.241	0.287	0.53	Yes	0.239	0.244	0.49	Yes	1.00	**5.94**
		$U_{18} - U_{19}$	611.33	-578.80	573	280	400	-1847	-19	81	155	-53	0.614	0.336	0.95	Yes	0.403	0.213	0.62	Yes	0.688	0.135	0.83	Yes	0.684	0.314	1.00	Yes	1.00	**6.54**
		$U_{19} - U_{20}$	317.78	-715.84	345	196	-206	-1303	-4	174	127	40	0.298	0.232	0.54	Yes	0.198	0.153	0.36	Yes	0.795	0.195	1	Yes	0.790	0.209	1.00	Yes	1.00	**4.79**
		$U_{20} - U_{21}$	91.30	-799.52	-34	176	-97	-1821	46	-96	163	-185	0.071	0.284	0.36	Yes	0.050	0.182	0.24	Yes	0.735	0.259	1	Yes	0.730	0.264	1.00	Yes	1.00	**4.71**
		$U_{21} - U_{22}$	98.33	-780.44	15	46	-461	-1657	-33	-60	11	-115	0.076	0.253	0.33	Yes	0.054	0.168	0.23	Yes	0.717	0.277	1	Yes	0.712	0.240	0.96	Yes	1.00	**4.28**
		$U_{22} - U_{23}$	112.96	-829.73	9	9	-295	-1355	-107	-105	-49	-232	0.088	0.222	0.31	Yes	0.062	0.148	0.22	Yes	0.763	0.229	1	Yes	0.757	0.196	0.96	Yes	1.00	**4.56**
		$U_{23} - U_{24}$	299.51	-788.25	62	241	158	-1703	-298	-116	-208	-432	0.232	0.294	0.53	Yes	0.163	0.190	0.36	Yes	0.725	0.269	1	Yes	0.719	0.247	0.97	Yes	1.00	**6.50**
		$U_{24} - U_{25}$	373.42	-643.40	219	372	-419	-1252	-329	-7	-174	-280	0.350	0.245	0.60	Yes	0.232	0.161	0.40	Yes	0.714	0.279	1	Yes	0.710	0.200	0.92	Yes	1.00	**5.91**
		$U_{25} - U_{26}$	-----	-673.10	-1188	722	-48	-1001	-64	-71	-215	-176	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.108	0.91	Yes	0.795	0.202	1.00	Yes	1.00	**7.59**
		$U_{26} - U_{27}$	-----	-551.94	-1831	1182	-208	-2042	-185	-213	-387	-262	-----	-----	-----	-----	-----	-----	-----	-----	0.656	0.239	0.9	Yes	0.652	0.347	1.00	Yes	1.00	**14.67**
		$U_{27} - U_{28}$	-----	-437.22	-4936	3627	-728	-4007	-565	-1388	-886	-1493	-----	-----	-----	-----	-----	-----	-----	-----	0.381	0.528	0.91	Yes	0.379	0.620	1.00	Yes	1.00	**30.44**
		$U_{28} - U_{29}$	1040.36	-----	-80	367	622	-2627	-807	-565	-795	-164	0.629	0.367	1.00	Yes	0.447	0.247	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.16**
		$U_{29} - U_{30}$	862.93	-----	-693	5579	-142	1279	-843	236	-117	343	0.424	0.574	1.00	Yes	0.300	0.376	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.24**
		$U_{30} - U_{31}$	1146.70	-----	1569	137	4148	-2908	-493	-244	337	715	0.564	0.433	1.00	Yes	0.399	0.284	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		$U_{31} - U_{32}$	1075.95	-----	153	506	-121	-1486	-77	202	671	833	0.727	0.266	1.00	Yes	0.518	0.182	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{32} - U_{33}$	801.91	-170.58	532	288	414	-1684	186	49	643	100	0.677	0.316	1.00	Yes	0.455	0.211	0.67	Yes	0.171	0.164	0.34	Yes	0.170	0.238	0.41	Yes	1.00	**5.77**
		$U_{33} - U_{34}$	752.77	-737.38	518	386	-105	-1859	19	41	316	53	0.636	0.301	0.94	Yes	0.433	0.194	0.63	Yes	0.737	0.233	0.98	Yes	0.733	0.262	1.00	Yes	1.00	**7.11**
		$U_{34} - U_{35}$	340.40	-890.76	436	49	156	-1871	103	23	203	-133	0.250	0.250	0.50	Yes	0.169	0.169	0.34	Yes	0.773	0.177	0.96	Yes	0.769	0.228	1.00	Yes	1.00	**4.76**
		$U_{35} - U_{36}$	20.64	-1140.15	188	-194	-255	-1988	68	36	164	-57	0.012	0.225	0.24	Yes	0.008	0.146	0.16	Yes	0.779	0.215	1	Yes	0.773	0.211	0.99	Yes	1.00	**4.22**
		$U_{36} - U_{37}$	-----	-1310.30	-97	-16	-548	-2203	163	-35	279	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.751	0.245	1	Yes	0.746	0.196	0.95	Yes	1.00	**3.78**
		$U_{37} - U_{38}$	-----	-1407.66	132	-161	-500	-1902	18	47	51	-163	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.188	1	Yes	0.802	0.169	0.98	Yes	1.00	**4.48**
		$U_{38} - U_{39}$	-----	-1421.03	190	-330	-102	-2916	90	-63	79	-415	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.258	1	Yes	0.730	0.242	0.98	Yes	1.00	**5.42**
		$U_{39} - U_{40}$	-----	-1351.47	-814	-357	-982	-2530	157	-174	-239	-515	-----	-----	-----	-----	-----	-----	-----	-----	0.699	0.295	1	Yes	0.694	0.210	0.91	Yes	1.00	**5.34**
		$U_{40} - U_{41}$	-----	-1344.35	-449	-409	-857	-1650	60	-281	-261	-377	-----	-----	-----	-----	-----	-----	-----	-----	0.771	0.224	1	Yes	0.765	0.147	0.92	Yes	1.00	**3.86**
		$U_{41} - U_{42}$	-----	-1097.12	-1101	233	-777	-1105	-216	-1170	-150	-7	-----	-----	-----	-----	-----	-----	-----	-----	0.783	0.207	1	Yes	0.779	0.113	0.90	Yes	1.00	**5.27**
		$U_{42} - U_{43}$	-----	-870.52	-572	299	-560	-865	201	-138	148	-357	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.145	1	Yes	0.840	0.131	0.98	Yes	1.00	**7.02**
		$U_{43} - U_{44}$	-----	-543.98	-1348	1346	116	-1954	-474	-207	-81	-828	-----	-----	-----	-----	-----	-----	-----	-----	0.646	0.350	1	Yes	0.642	0.332	0.98	Yes	1.00	**9.60**
	Structure 3	$U_0 - U_1$	-----	-572.84	-631	-145	1089	-1757	341	157	81	-326	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.223	0.88	Yes	0.644	0.353	1.00	Yes	1.00	**7.55**
		$U_1 - U_2$	-----	-677.78	-68	-113	2	-789	260	531	201	13	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.224	1	Yes	0.763	0.159	0.93	Yes	1.00	**3.15**
		$U_2 - U_3$	-----	-984.83	-78	-117	128	-1154	513	5	664	-35	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.219	1	Yes	0.771	0.188	0.96	Yes	1.00	**3.57**
		$U_3 - U_4$	-----	-1345.68	-136	-190	-354	-1702	139	-265	268	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.215	1	Yes	0.771	0.188	0.96	Yes	1.00	**4.31**
		$U_4 - U_5$	-----	-1278.44	-813	-26	-548	-1526	282	-189	10	-430	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.254	1	Yes	0.733	0.168	0.91	Yes	1.00	**3.79**
		$U_5 - U_6$	-----	-1268.88	-141	-204	-392	-1996	-67	-230	-87	-303	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.263	1	Yes	0.727	0.220	0.95	Yes	1.00	**4.27**
		$U_6 - U_7$	-----	-1355.75	-294	-72	-433	-1164	-107	-238	-19	-327	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.207	1	Yes	0.777	0.128	0.91	Yes	1.00	**4.20**
		$U_7 - U_8$	-----	-1173.55	-715	82	-420	-883	80	-194	-225	-454	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.202	1	Yes	0.784	0.122	0.91	Yes	1.00	**4.42**
		$U_8 - U_9$	-----	-926.95	-533	338	-221	-708	125	-292	-228	-304	-----	-----	-----	-----	-----	-----	-----	-----	0.877	0.117	1	Yes	0.870	0.117	0.99	Yes	1.00	**6.87**
		$U_9 - U_{10}$	-----	-592.70	-1060	437	-357	-240	-178	-383	-251	-269	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.219	0.99	Yes	0.756	0.237	1.00	Yes	1.00	**6.80**
		$U_{10} - U_{11}$	450.76	-33.61	-1011	1145	62	-1487	-1063	-788	-648	-393	0.489	0.504	1.00	Yes	0.331	0.338	0.67	Yes	0.043	0.368	0.42	Yes	0.043	0.333	0.38	Yes	1.00	**24.80**
		$U_{11} - U_{12}$	652.48	-----	-743	2301	-165	609	-568	146	-284	19	0.535	0.456	1.00	Yes	0.366	0.310	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.99**
		$U_{12} - U_{13}$	863.21	-----	866	104	2306	-1498	-432	-75	-146	261	0.598	0.393	1.00	Yes	0.417	0.268	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.21**
		$U_{13} - U_{14}$	798.24	-----	226	366	95	-697	-158	285	117	579	0.763	0.228	1.00	Yes	0.533	0.157	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		$U_{14} - U_{15}$	614.05	-300.01	407	240	348	-1010	50	157	303	-32	0.704	0.291	1.00	Yes	0.475	0.190	0.67	Yes	0.408	0.311	0.72	Yes	0.405	0.240	0.65	Yes	1.00	**4.97**
		$U_{15} - U_{16}$	417.24	-534.29	330	179	-73	-1164	-34	167	99	100	0.478	0.305	0.79	Yes	0.328	0.209	0.54	Yes	0.727	0.231	0.96	Yes	0.720	0.277	1.00	Yes	1.00	**4.98**
		$U_{16} - U_{17}$	459.63	-540.91	397	132	376	-1123	11	111	86	-131	0.527	0.289	0.82	Yes	0.362	0.198	0.56	Yes	0.736	0.133	0.87	Yes	0.729	0.267	1.00	Yes	1.00	**5.62**
		$U_{17} - U_{18}$	-----	-572.86	-37	-65	-111	-925	30	-197	-46	-182	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.200	0.98	Yes	0.772	0.220	1.00	Yes	1.00	**4.26**
		$U_{18} - U_{19}$	-----	-560.98	-244	115	-169	-889	-27	158	88	5	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.234	1	Yes	0.756	0.211	0.97	Yes	1.00	**5.71**
		$U_{19} - U_{20}$	-----	-397.93	-598	665	97	-1784	10	-71	111	-613	-----	-----	-----	-----	-----	-----	-----	-----	0.541	0.449	1	Yes	0.537	0.424	0.97	Yes	1.00	**7.07**

Moment (End) Al Operating

Operating Loads - 5C1

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	-----	-161.64	-303	201	904	-2334	49	181	-3	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.293	0.500	0.8	Yes	0.291	0.700	1.00	Yes	1.00	**19.61**
		L_1 - L_2	434.79	-84.26	42	79	264	-1056	52	2	9	12	0.665	0.328	1.00	Yes	0.406	0.223	0.63	Yes	0.153	0.188	0.35	Yes	0.152	0.317	0.47	Yes	1.00	**5.79**
		L_2 - L_3	613.92	-182.54	22	154	-163	-1030	-3	-19	-224	-65	0.706	0.285	1.00	Yes	0.409	0.171	0.58	Yes	0.249	0.284	0.54	Yes	0.247	0.249	0.50	Yes	1.00	**5.93**
		L_3 - L_4	622.92	-323.84	92	356	-104	-1082	-10	3	-97	45	0.717	0.277	1.00	Yes	0.426	0.180	0.61	Yes	0.442	0.228	0.68	Yes	0.438	0.261	0.70	Yes	1.00	**5.87**
		L_4 - L_5	541.52	-----	-851	846	-624	-907	-24	66	-309	172	0.701	0.295	1.00	Yes	0.421	0.193	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.30**
		L_5 - L_6	-----	-749.16	142	581	-270	-44	9	64	-35	76	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.118	1	Yes	0.864	0.128	1.00	Yes	1.00	**4.38**
		L_6 - L_7	-----	-950.91	-737	853	-741	-1474	-19	-237	120	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.774	0.117	0.9	Yes	0.765	0.232	1.00	Yes	1.00	**11.77**
		L_7 - L_8	-----	-1145.48	-170	2021	-26	578	-21	-15	35	75	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.255	0.99	Yes	0.725	0.268	1.00	Yes	1.00	**5.73**
		L_8 - L_9	-----	-1185.43	778	47	1829	-595	24	-17	19	-25	-----	-----	-----	-----	-----	-----	-----	-----	0.760	0.210	0.98	Yes	0.751	0.242	1.00	Yes	1.00	**6.45**
		L_9 - L_{10}	-----	-998.29	146	192	785	-1201	46	64	121	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.066	0.88	Yes	0.804	0.189	1.00	Yes	1.00	**9.64**
		L_{10} - L_{11}	-----	-518.13	465	-9	442	-785	98	25	6	8	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.088	0.89	Yes	0.789	0.208	1.00	Yes	1.00	**6.18**
		L_{11} - L_{12}	525.12	-296.69	424	-131	597	-1108	-17	-7	-97	1	0.680	0.310	1.00	Yes	0.408	0.205	0.62	Yes	0.456	0.124	0.58	Yes	0.452	0.293	0.75	Yes	1.00	**6.89**
		L_{12} - L_{13}	1010.43	-----	125	-70	-115	-970	-32	-50	-189	-2	0.797	0.194	1.00	Yes	0.510	0.116	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.18**
		L_{13} - L_{14}	1206.48	-----	258	-363	584	-1894	-103	52	-294	49	0.710	0.285	1.00	Yes	0.460	0.175	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		L_{14} - L_{15}	1679.22	-----	-1366	77	-1177	-1346	-35	151	-207	37	0.820	0.179	1.00	Yes	0.533	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		L_{15} - L_{16}	1629.14	-----	-342	-311	-937	-1517	45	180	-105	-34	0.796	0.195	1.00	Yes	0.511	0.114	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		L_{16} - L_{17}	1264.00	-----	-851	373	-1240	-757	-52	-23	-125	114	0.799	0.193	1.00	Yes	0.519	0.119	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.94**
		L_{17} - L_{18}	952.03	-----	-634	384	-806	-455	-96	1	45	-39	0.829	0.168	1.00	Yes	0.531	0.100	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.64**
		L_{18} - L_{19}	410.81	-----	-886	574	-534	-30	-158	-81	-149	461	0.629	0.362	1.00	Yes	0.425	0.229	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.63**
		L_{19} - L_{20}	97.75	-190.29	-2089	1124	-104	17	1053	236	-35	-8	0.150	0.845	1.00	Yes	0.091	0.561	0.66	Yes	0.346	0.492	0.84	Yes	0.343	0.627	0.97	Yes	1.00	**14.96**
	Structure 2	L_0 - L_1	34.81	-----	-166	106	949	-2707	14	48	-399	-1387	0.053	0.947	1.00	Yes	0.032	0.472	0.51	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**16.62**
		L_1 - L_2	555.63	-----	148	-167	554	-1363	84	94	-250	191	0.675	0.318	1.00	Yes	0.401	0.205	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.80**
		L_2 - L_3	972.55	-----	-27	-86	336	-1444	112	172	91	89	0.766	0.227	1.00	Yes	0.503	0.135	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.92**
		L_3 - L_4	1325.81	-----	48	-257	-573	-1733	47	127	12	204	0.779	0.219	1.00	Yes	0.525	0.135	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		L_4 - L_5	1676.40	-----	-192	-140	-574	-2136	15	-12	-149	-32	0.782	0.212	1.00	Yes	0.517	0.125	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.97**
		L_5 - L_6	1733.47	-----	12	-187	-311	-2568	-90	56	-372	-44	0.744	0.251	1.00	Yes	0.499	0.153	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		L_6 - L_7	1743.71	-11.01	-222	71	-1168	-2820	57	-46	-155	121	0.738	0.257	1.00	Yes	0.490	0.150	0.65	Yes	0.006	0.398	0.41	Yes	0.005	0.248	0.26	Yes	1.00	**7.33**
		L_7 - L_8	1406.90	-243.32	-78	420	-1239	-1503	-50	81	-331	-65	0.807	0.193	1.00	Yes	0.530	0.114	0.65	Yes	0.165	0.202	0.37	Yes	0.164	0.166	0.34	Yes	1.00	**6.46**
		L_8 - L_9	1168.10	-----	-877	742	-1173	-849	51	110	-144	160	0.817	0.173	1.00	Yes	0.550	0.108	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.40**
		L_9 - L_{10}	747.88	-799.65	-25	786	-993	-613	46	139	-20	-12	0.668	0.176	0.85	Yes	0.389	0.109	0.50	Yes	0.845	0.115	0.96	Yes	0.840	0.159	1.00	Yes	1.00	**7.59**
		L_{10} - L_{11}	565.58	-----	-2260	1868	-1454	-1270	-107	-10	-255	-160	0.565	0.430	1.00	Yes	0.331	0.271	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**18.81**
		L_{11} - L_{12}	-----	-910.10	-1281	1826	-1494	-200	15	133	-80	-92	-----	-----	-----	-----	-----	-----	-----	-----	0.752	0.147	0.9	Yes	0.746	0.249	1.00	Yes	1.00	**12.62**
		L_{12} - L_{13}	-----	-1067.39	-117	238	-922	-2715	-605	-538	47	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.644	0.348	1	Yes	0.638	0.270	0.91	Yes	1.00	**9.44**
		L_{13} - L_{14}	-----	-1211.80	-1619	4376	-476	1312	-116	-149	-201	-271	-----	-----	-----	-----	-----	-----	-----	-----	0.615	0.267	0.89	Yes	0.610	0.382	1.00	Yes	1.00	**6.50**
		L_{14} - L_{15}	-----	-1250.76	1513	-402	4208	-2425	219	188	-137	-87	-----	-----	-----	-----	-----	-----	-----	-----	0.635	0.234	0.87	Yes	0.629	0.367	1.00	Yes	1.00	**6.57**
		L_{15} - L_{16}	-----	-1238.75	-437	478	-2391	-1336	-42	149	-1	51	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.248	1	Yes	0.741	0.238	0.98	Yes	1.00	**7.86**
		L_{16} - L_{17}	-----	-1105.77	1083	148	1551	-1026	185	53	-67	-63	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.142	0.96	Yes	0.805	0.191	1.00	Yes	1.00	**6.37**
		L_{17} - L_{18}	-----	-819.25	493	229	791	-830	18	-48	-41	47	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.075	0.95	Yes	0.860	0.133	1.00	Yes	1.00	**4.85**
		L_{18} - L_{19}	-----	-638.21	635	89	600	-747	-48	-79	-68	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.111	0.97	Yes	0.851	0.144	1.00	Yes	1.00	**4.67**
		L_{19} - L_{20}	512.24	-588.39	531	190	210	-1071	-28	-37	-116	107	0.580	0.225	0.81	Yes	0.343	0.144	0.49	Yes	0.789	0.152	0.95	Yes	0.784	0.207	1.00	Yes	1.00	**6.04**
		L_{20} - L_{21}	831.66	-649.62	619	108	289	-2134	-12	-58	-194	-112	0.663	0.332	1.00	Yes	0.435	0.197	0.64	Yes	0.614	0.221	0.84	Yes	0.609	0.311	0.93	Yes	1.00	**9.30**
		L_{21} - L_{22}	860.14	-137.80	103	-22	8	-2006	-49	56	-144	154	0.686	0.309	1.00	Yes	0.459	0.193	0.66	Yes	0.130	0.217	0.35	Yes	0.129	0.293	0.43	Yes	1.00	**5.57**
		L_{22} - L_{23}	908.47	-294.51	-90	258	-834	-1679	40	-42	-234	-63	0.724	0.270	1.00	Yes	0.485	0.169	0.66	Yes	0.278	0.307	0.59	Yes	0.276	0.245	0.53	Yes	1.00	**6.11**
		L_{23} - L_{24}	952.65	-508.69	66	461	-1017	-1537	7	76	-65	1	0.760	0.233	1.00	Yes	0.498	0.137	0.64	Yes	0.481	0.271	0.76	Yes	0.477	0.224	0.71	Yes	1.00	**7.50**
		L_{24} - L_{25}	708.03	-----	-555	563	-845	-645	105	87	-50	172	0.802	0.189	1.00	Yes	0.474	0.121	0.60	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.74**
		L_{25} - L_{26}	619.18	-7.99	-1288	1300	-969	-1303	158	252	-118	-66	0.701	0.290	1.00	Yes	0.405	0.173	0.58	Yes	0.011	0.144	0.16	Yes	0.011	0.251	0.27	Yes	1.00	**12.82**
		L_{26} - L_{27}	164.38	-691.69	-1358	1694	-1174	-1139	121	85	-65	175	0.147	0.292	0.44	Yes	0.085	0.182	0.27	Yes	0.731	0.160	0.9	Yes	0.726	0.271	1.00	Yes	1.00	**13.86**
		L_{27} - L_{28}	-----	-1033.88	-1018	1954	-1126	147	132	293	35	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.759	0.184	0.95	Yes	0.753	0.241	1.00	Yes	1.00	**9.65**
		L_{28} - L_{29}	-----	-1109.69	139	103	-1068	-3076	-113	-248	0	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.669	0.325	1	Yes	0.664	0.306	0.97	Yes	1.00	**9.12**
		L_{29} - L_{30}	-----	-1219.79	-1613	4397	-496	1160	-92	-88	99	135	-----	-----	-----	-----	-----	-----	-----	-----	0.619	0.256	0.88	Yes	0.614	0.384	1.00	Yes	1.00	**7.01**
		L_{30} - L_{31}	-----	-1234.49	1182	-279	4291	-2510	-354	-254	8	42	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.252	0.88	Yes	0.621	0.375	1.00	Yes	1.00	**7.20**
		L_{31} - L_{32}	-----	-1304.15	-224	375	-414	-1431	-181	-51	107	91	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.205	1	Yes	0.780	0.142	0.93	Yes	1.00	**7.42**
		L_{32} - L_{33}	-----	-1033.40	951	95	1085	-1053	19	-41	52	29	-----	-----	-----	-----	-----	-----	-----	-----	0.854	0.088	0.95	Yes	0.847	0.148	1.00	Yes	1.00	**5.84**
		L_{33} - L_{34}	-----	-715.68	517	127	684	-888	-21	5	-15	95	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.068	0.92	Yes	0.841	0.155	1.00	Yes	1.00	**4.62**
		L_{34} - L_{35}	384.94	-734.59	731	11	720	-1392	-11	-71	-59	-50	0.344	0.231	0.58	Yes	0.200	0.145	0.35	Yes	0.777	0.093	0.87	Yes	0.771	0.223	1.00	Yes	1.00	**6.63**
		L_{35} - L_{36}	1052.31	-645.23	654	90	796	-1734	-73	-19	-300	30	0.736	0.262	1.00	Yes	0.496	0.164	0.66	Yes	0.535	0.112	0.65	Yes	0.531	0.234	0.77	Yes	1.00	**7.92**
		L_{36} - L_{37}	1312.99	-174.40	424	1	47	-2109	12	-20	62	174	0.753	0.247	1.00	Yes	0.495	0.144	0.64	Yes	0.119	0.199	0.32	Yes	0.118	0.233	0.36	Yes	1.00	**5.68**
		L_{37} - L_{38}	1734.54	-----	121	-366	-634	-2746	-65	38	-314	-23	0.734	0.261	1.00	Yes	0.488	0.152	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.97**
		L_{38} - L_{39}	1880.33	-----	-304	-55	-1675	-2093	-5	-67	-16	97	0.807	0.192	1.00	Yes	0.541	0.116	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.78**
		L_{39} - L_{40}	1726.60	-----	-1089	-82	-1247	-1876	92	212	-56	-42	0.805	0.192	1.00	Yes	0.533	0.113	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.44**
		L_{40} - L_{41}	1344.48	-----	-1173	428	-1643	-1211	-45	-6	-153	-21	0.790	0.205	1.00	Yes	0.532	0.126	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.89**
		L_{41} - L_{42}	1015.97	-----	-788	489	-981	-891	-486	-229	96	15	0.801	0.193	1.00	Yes	0.525	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.22**
		L_{42} - L_{43}	528.67	-----	-1172	644	-1046	-181	-11	-56	-91	691	0.642	0.352	1.00	Yes	0.382	0.222	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.59**
		L_{43} - L_{44}	17.23	-127.12	-3785	1295	69	-116	1259	367	-82	-24	0.021	0.977	1.00	Yes	0.012	0.623	0.64	Yes	0.183	0.654	0.84	Yes	0.182	0.770	0.96	Yes	1.00	**23.25**
	Structure 3	L_0 - L_1	31.64	-----	-57	-3	1244	-2216	1	5	-297	-1348	0.048	0.945	1.00	Yes	0.030	0.625	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**17.11**
		L_1 - L_2	433.60	-----	149	-170	502	-914	41	60	-50	280	0.664	0.333	1.00	Yes	0.449	0.209	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		L_2 - L_3	897.34	-----	-27	-127	129	-982	79	124	115	213	0.781	0.217	1.00	Yes	0.500	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.14**
		L_3 - L_4	1236.89	-----	46	-296	125	-1288	34	119	25	250	0.782	0.211	1.00	Yes	0.507	0.130	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
		L_4 - L_5	1563.78	-----	-246	-101	-630	-1826	27	10	-147	33	0.764	0.230	1.00	Yes	0.490	0.134	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.91**
		L_5 - L_6	1519.97	-----	-30	-292	-71	-1986	-64	129	-157	241	0.743	0.256	1.00	Yes	0.483	0.155	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.33**
		L_6 - L_7	1338.65	-----	-1350	581	-992	-1004	139	288	-163	148	0.787	0.210	1.00	Yes	0.510	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.88**
		L_7 - L_8	1051.57	-----	-405	160	-714	-735	80	277	-9	97	0.830	0.163	1.00	Yes	0.531	0.098	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		L_8 - L_9	592.57	-----	-810	598	-557	-336	52	-16	-57	-75	0.767	0.227	1.00	Yes	0.460	0.150	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.80**
		L_9 - L_{10}	534.96	-354.78	-920	879	-1051	-403	-27	108	1	121	0.693	0.299	1.00	Yes	0.403	0.182	0.59	Yes	0.545	0.167	0.72	Yes	0.541	0.278	0.82	Yes	1.00	**12.39**
		L_{10} - L_{11}	-----	-1023.55	-943	1070	-511	-846	141	-339	96	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.066	0.91	Yes	0.829	0.170	1.00	Yes	1.00	**11.71**
		L_{11} - L_{12}	-----	-1158.23	-212	1950	-57	532	-58	-84	-90	-106	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.244	0.99	Yes	0.734	0.258	1.00	Yes	1.00	**6.40**
		L_{12} - L_{13}	-----	-1152.67	844	59	1982	-615	-279	-232	-126	-127	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.253	1	Yes	0.730	0.262	1.00	Yes	1.00	**5.78**
		L_{13} - L_{14}	-----	-1079.62	87	271	129	-818	-114	-62	-16	-78	-----	-----	-----	-----	-----	-----	-----	-----	0.879	0.074	0.96	Yes	0.869	0.129	1.00	Yes	1.00	**6.45**
		L_{14} - L_{15}	-----	-749.90	577	157	505	-515	56	-46	-27	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.115	0.99	Yes	0.865	0.128	1.00	Yes	1.00	**4.83**
		L_{15} - L_{16}	50.86	-518.79	458	140	488	-782	10	-78	-96	135	0.066	0.231	0.30	Yes	0.040	0.152	0.20	Yes	0.798	0.094	0.9	Yes	0.790	0.207	1.00	Yes	1.00	**4.08**
		L_{16} - L_{17}	626.04	-----	-439	64	-96	-1059	51	-6	-118	89	0.720	0.275	1.00	Yes	0.428	0.178	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.23**
		L_{17} - L_{18}	627.16	-----	-263	-23	-489	-894	-28	353	-25	97	0.722	0.272	1.00	Yes	0.417	0.163	0.59	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.12**
		L_{18} - L_{19}	452.57	-----	-527	230	-513	-729	49	-147	17	387	0.693	0.302	1.00	Yes	0.423	0.200	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.62**
		L_{19} - L_{20}	-----	-68.75	-2919	1905	219	-302	1430	389	-212	-57	-----	-----	-----	-----	-----	-----	-----	-----	0.125	0.748	0.88	Yes	0.124	0.876	1.00	Yes	1.00	**28.22**

Moment (End) AI Operating

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-342.26	-131	184	-18	41	-494	-158	-85	-27	-----	-----	-----	-----	-----	-----	-----	-----	0.764	0.233	1	Yes	0.724	0.235	0.96	Yes	1.00	**1.68**
		$U_1 - L_1$			50.76	-301.39	-274	276	39	-35	495	223	83	38	0.091	0.496	0.59	Yes	0.050	0.273	0.33	Yes	0.659	0.229	0.89	Yes	0.638	0.353	1.00	Yes	1.00	**4.88**
		$U_2 - L_2$			115.65	-276.58	-291	323	102	-115	274	177	70	8	0.208	0.493	0.71	Yes	0.114	0.271	0.39	Yes	0.604	0.206	0.82	Yes	0.585	0.413	1.00	Yes	1.00	**7.09**
		$U_3 - L_3$			243.27	-231.49	-361	362	375	-347	69	260	247	174	0.438	0.554	1.00	Yes	0.241	0.305	0.55	Yes	0.507	0.156	0.67	Yes	0.490	0.479	0.97	Yes	1.00	**11.10**
		$U_4 - L_4$			26.15	-239.92	-95	65	379	-357	-65	79	-98	-90	0.047	0.512	0.56	Yes	0.026	0.282	0.31	Yes	0.528	0.139	0.67	Yes	0.508	0.484	1.00	Yes	1.00	**9.19**
		$U_5 - L_5$			-----	-426.96	44	-58	230	-252	-103	-80	-126	-105	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.103	0.88	Yes	0.737	0.255	1.00	Yes	1.00	**3.94**
		$U_6 - L_6$			-----	-520.41	73	-69	272	-289	-98	68	72	57	-----	-----	-----	-----	-----	-----	-----	-----	0.788	0.086	0.88	Yes	0.746	0.253	1.00	Yes	1.00	**3.90**
		$U_7 - L_7$			-----	-443.08	118	-132	293	-316	-129	46	-30	80	-----	-----	-----	-----	-----	-----	-----	-----	0.741	0.121	0.87	Yes	0.684	0.311	1.00	Yes	1.00	**2.51**
		$U_8 - L_8$			-----	-1291.58	-397	469	442	-527	-157	-67	-218	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.933	0.050	0.99	Yes	0.895	0.098	1.00	Yes	1.00	**5.33**
		$U_9 - L_9$			-----	-644.53	-413	479	-167	190	-272	-228	-219	-156	-----	-----	-----	-----	-----	-----	-----	-----	0.769	0.140	0.91	Yes	0.728	0.266	1.00	Yes	1.00	**3.48**
		$U_{10} - L_{10}$			-----	-795.49	-399	404	-133	101	-241	-181	-218	-173	-----	-----	-----	-----	-----	-----	-----	-----	0.824	0.102	0.93	Yes	0.785	0.209	1.00	Yes	1.00	**5.26**
		$U_{11} - L_{11}$			-----	-662.28	-398	486	-113	158	2	93	-192	-79	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.100	0.9	Yes	0.771	0.225	1.00	Yes	1.00	**4.85**
		$U_{12} - L_{12}$			-----	-500.06	-359	347	-59	61	-34	124	-172	-13	-----	-----	-----	-----	-----	-----	-----	-----	0.722	0.111	0.84	Yes	0.686	0.307	1.00	Yes	1.00	**4.51**
		$U_{13} - L_{13}$			-----	-360.03	-254	270	-8	22	-19	147	-96	82	-----	-----	-----	-----	-----	-----	-----	-----	0.728	0.111	0.84	Yes	0.690	0.309	1.00	Yes	1.00	**3.78**
		$U_{14} - L_{14}$			-----	-227.98	-390	403	205	-198	45	102	-143	-52	-----	-----	-----	-----	-----	-----	-----	-----	0.509	0.176	0.69	Yes	0.482	0.515	1.00	Yes	1.00	**9.70**
		$U_{15} - L_{15}$			186.49	-315.74	-155	143	239	-253	-152	-140	11	-176	0.335	0.375	0.72	Yes	0.184	0.206	0.40	Yes	0.708	0.162	0.88	Yes	0.668	0.324	1.00	Yes	1.00	**5.43**
		$U_{16} - L_{16}$			70.39	-319.60	-32	14	244	-249	-108	-86	-126	-204	0.127	0.378	0.51	Yes	0.070	0.208	0.28	Yes	0.720	0.164	0.89	Yes	0.676	0.319	1.00	Yes	1.00	**4.16**
		$U_{17} - L_{17}$			-----	-439.79	46	-58	216	-235	-173	-102	-49	-109	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.133	0.96	Yes	0.759	0.238	1.00	Yes	1.00	**3.34**
		$U_{18} - L_{18}$			-----	-532.29	123	-128	435	-445	-164	-62	92	-53	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.094	0.88	Yes	0.740	0.252	1.00	Yes	1.00	**3.54**
		$U_{19} - L_{19}$			-----	-649.29	138	-150	487	-510	-66	11	406	60	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.147	0.96	Yes	0.756	0.237	1.00	Yes	1.00	**3.89**
		$U_{20} - L_{20}$			-----	-597.87	167	-214	405	-493	30	4	611	80	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.209	1	Yes	0.696	0.229	0.93	Yes	1.00	**2.67**
	Structure 2	$U_0 - L_0$			-----	-615.49	-440	524	-108	173	-1119	-190	-262	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.737	0.257	1	Yes	0.660	0.222	0.89	Yes	1.00	**2.88**
		$U_1 - L_1$			-----	-719.42	-515	532	-101	108	-656	-147	52	-65	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.166	0.99	Yes	0.771	0.226	1.00	Yes	1.00	**4.38**
		$U_2 - L_2$			-----	-585.38	-496	494	-69	78	-61	54	109	47	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.085	0.87	Yes	0.746	0.254	1.00	Yes	1.00	**4.36**
		$U_3 - L_3$			-----	-487.92	-245	252	-36	42	80	194	27	135	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.111	0.95	Yes	0.765	0.230	1.00	Yes	1.00	**4.00**
		$U_4 - L_4$			40.41	-326.27	-235	229	14	1	-41	149	-101	63	0.073	0.343	0.42	Yes	0.040	0.189	0.23	Yes	0.740	0.103	0.85	Yes	0.690	0.300	1.00	Yes	1.00	**4.16**
		$U_5 - L_5$			166.25	-315.76	-243	254	115	-106	-45	170	-109	96	0.299	0.375	0.68	Yes	0.164	0.206	0.38	Yes	0.713	0.124	0.84	Yes	0.668	0.325	1.00	Yes	1.00	**5.57**
		$U_6 - L_6$			358.66	-235.20	-233	232	213	-223	12	165	-132	93	0.645	0.345	1.00	Yes	0.355	0.190	0.55	Yes	0.529	0.100	0.63	Yes	0.498	0.297	0.80	Yes	1.00	**6.70**
		$U_7 - L_7$			-----	-229.00	-138	138	354	-396	-123	7	-135	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.517	0.185	0.71	Yes	0.485	0.507	1.00	Yes	1.00	**10.14**
		$U_8 - L_8$			-----	-464.50	33	-54	360	-370	-140	-111	-198	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.673	0.125	0.8	Yes	0.669	0.323	1.00	Yes	1.00	**3.76**
		$U_9 - L_9$			-----	-694.68	122	-149	579	-590	-162	-108	-226	-207	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.093	0.87	Yes	0.744	0.250	1.00	Yes	1.00	**4.58**
		$U_{10} - L_{10}$			-----	-796.82	153	-165	542	-565	-115	-82	-4	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.787	0.088	0.88	Yes	0.745	0.249	1.00	Yes	1.00	**4.82**
		$U_{11} - L_{11}$			-----	-821.97	172	-183	512	-520	-53	-66	-111	-41	-----	-----	-----	-----	-----	-----	-----	-----	0.827	0.079	0.91	Yes	0.769	0.230	1.00	Yes	1.00	**4.37**
		$U_{12} - L_{12}$			-----	-883.09	174	-157	525	-533	80	51	143	113	-----	-----	-----	-----	-----	-----	-----	-----	0.847	0.089	0.94	Yes	0.765	0.229	1.00	Yes	1.00	**4.32**
		$U_{13} - L_{13}$			-----	-745.70	242	-240	574	-560	-90	42	66	91	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.113	0.95	Yes	0.719	0.274	1.00	Yes	1.00	**3.29**
		$U_{14} - L_{14}$			-----	-1301.20	-492	453	598	-572	-129	26	40	87	-----	-----	-----	-----	-----	-----	-----	-----	0.952	0.042	1	Yes	0.863	0.106	0.97	Yes	1.00	**5.30**
		$U_{15} - L_{15}$			-----	-671.69	-547	543	-165	166	-738	-163	-77	-44	-----	-----	-----	-----	-----	-----	-----	-----	0.749	0.242	1	Yes	0.648	0.262	0.91	Yes	1.00	**3.80**
		$U_{16} - L_{16}$			-----	-719.91	-538	521	-122	91	-505	-312	-161	-82	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.154	0.99	Yes	0.772	0.228	1.00	Yes	1.00	**4.66**
		$U_{17} - L_{17}$			-----	-640.38	-546	535	-118	115	-139	-38	-93	-30	-----	-----	-----	-----	-----	-----	-----	-----	0.790	0.088	0.88	Yes	0.745	0.254	1.00	Yes	1.00	**4.46**
		$U_{18} - L_{18}$			-----	-577.54	-503	508	-90	91	-31	50	-78	-9	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.074	0.85	Yes	0.736	0.260	1.00	Yes	1.00	**4.41**
		$U_{19} - L_{19}$			-----	-468.02	-312	297	-40	47	-106	44	-156	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.704	0.099	0.81	Yes	0.699	0.300	1.00	Yes	1.00	**4.18**
		$U_{20} - L_{20}$			16.30	-369.41	-251	251	4	1	-73	80	-156	12	0.027	0.327	0.36	Yes	0.015	0.180	0.20	Yes	0.757	0.111	0.87	Yes	0.708	0.287	1.00	Yes	1.00	**4.17**
		$U_{21} - L_{21}$			75.48	-319.87	-240	248	52	-48	-43	87	-148	31	0.136	0.360	0.50	Yes	0.075	0.198	0.28	Yes	0.723	0.123	0.85	Yes	0.677	0.317	1.00	Yes	1.00	**4.45**
		$U_{22} - L_{22}$			33.04	-225.06	-399	405	340	-359	-35	32	-215	-80	0.059	0.580	0.64	Yes	0.033	0.319	0.36	Yes	0.506	0.188	0.7	Yes	0.476	0.518	1.00	Yes	1.00	**13.20**
		$U_{23} - L_{23}$			119.20	-320.05	-90	78	238	-248	-98	-51	-128	-124	0.214	0.354	0.57	Yes	0.118	0.194	0.32	Yes	0.723	0.132	0.86	Yes	0.677	0.317	1.00	Yes	1.00	**4.50**
		$U_{24} - L_{24}$			24.88	-377.18	-14	5	230	-237	-90	-62	-117	-102	0.041	0.301	0.35	Yes	0.022	0.166	0.19	Yes	0.773	0.109	0.89	Yes	0.723	0.271	1.00	Yes	1.00	**3.80**
		$U_{25} - L_{25}$			-----	-473.91	35	-51	296	-294	-98	-31	-13	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.713	0.084	0.8	Yes	0.708	0.285	1.00	Yes	1.00	**3.66**
		$U_{26} - L_{26}$			-----	-567.42	102	-110	505	-530	-163	-31	-125	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.094	0.85	Yes	0.723	0.271	1.00	Yes	1.00	**3.96**
		$U_{27} - L_{27}$			-----	-630.85	139	-140	550	-556	-151	-1	4	37	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.083	0.87	Yes	0.734	0.258	1.00	Yes	1.00	**3.85**
		$U_{28} - L_{28}$			-----	-712.41	135	-132	551	-547	-120	22	108	100	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.075	0.9	Yes	0.763	0.234	1.00	Yes	1.00	**3.90**
		$U_{29} - L_{29}$			-----	-713.41	202	-208	641	-629	-118	23	53	82	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.122	0.92	Yes	0.688	0.307	1.00	Yes	1.00	**4.04**
		$U_{30} - L_{30}$			-----	-1280.32	-533	473	583	-578	-183	-20	-100	-48	-----	-----	-----	-----	-----	-----	-----	-----	0.936	0.055	1	Yes	0.849	0.103	0.96	Yes	1.00	**5.44**
		$U_{31} - L_{31}$			-----	-724.90	-550	534	-176	172	-395	-177	-113	-56	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.187	1	Yes	0.699	0.263	0.97	Yes	1.00	**3.90**
		$U_{32} - L_{32}$			-----	-892.00	-519	503	-122	91	-281	-130	-186	-99	-----	-----	-----	-----	-----	-----	-----	-----	0.856	0.129	0.99	Yes	0.773	0.223	1.00	Yes	1.00	**5.26**
		$U_{33} - L_{33}$			-----	-837.71	-473	479	-163	141	-118	9	-143	-72	-----	-----	-----	-----	-----	-----	-----	-----	0.843	0.081	0.93	Yes	0.783	0.211	1.00	Yes	1.00	**4.91**
		$U_{34} - L_{34}$			-----	-796.00	-570	568	-113	128	-75	102	-183	-37	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.087	0.88	Yes	0.744	0.252	1.00	Yes	1.00	**5.90**
		$U_{35} - L_{35}$			-----	-694.61	-590	584	-106	127	-73	141	-175	45	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.073	0.85	Yes	0.744	0.250	1.00	Yes	1.00	**5.25**
		$U_{36} - L_{36}$			-----	-471.30	-353	359	-42	59	12	160	-142	71	-----	-----	-----	-----	-----	-----	-----	-----	0.683	0.096	0.78	Yes	0.679	0.314	1.00	Yes	1.00	**4.09**
		$U_{37} - L_{37}$			48.73	-42.40	-610	662	220	-243	-63	111	-199	-38	0.088	0.903	1.00	Yes	0.048	0.497	0.55	Yes	0.096	0.265	0.37	Yes	0.090	0.846	0.94	Yes	1.00	**17.15**
		$U_{38} - L_{38}$			350.48	-173.60	-240	241	168	-166	-101	-105	-153	-184	0.630	0.362	1.00	Yes	0.347	0.199	0.55	Yes	0.391	0.138	0.53	Yes	0.367	0.309	0.68	Yes	1.00	**5.49**
		$U_{39} - L_{39}$			167.08	-328.78	-133	120	214	-232	-135	-106	-132	-170	0.301	0.346	0.65	Yes	0.165	0.190	0.36	Yes	0.743	0.158	0.91	Yes	0.696	0.297	1.00	Yes	1.00	**5.13**
		$U_{40} - L_{40}$			52.87	-339.18	-31	8	219	-220	-107	-78	-36	-110	0.095	0.313	0.41	Yes	0.052	0.172	0.23	Yes	0.769	0.120	0.89	Yes	0.718	0.281	1.00	Yes	1.00	**3.95**
		$U_{41} - L_{41}$			-----	-486.92	39	-46	247	-259	-105	-42	-114	-101	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.105	0.94	Yes	0.764	0.236	1.00	Yes	1.00	**3.74**
		$U_{42} - L_{42}$			-----	-579.17	96	-106	495	-501	-85	-50	143	-12	-----	-----	-----	-----	-----	-----	-----	-----	0.776	0.090	0.87	Yes	0.738	0.256	1.00	Yes	1.00	**3.88**
		$U_{43} - L_{43}$			-----	-709.70	132	-149	537	-556	-43	-22	434	57	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.127	0.94	Yes	0.761	0.236	1.00	Yes	1.00	**3.96**
		$U_{44} - L_{44}$			-----	-681.16	189	-233	466	-589	-44	-7	485	82	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.178	1	Yes	0.730	0.250	0.98	Yes	1.00	**3.15**
	Structure 3	$U_0 - L_0$			-----	-554.19	-425	481	-102	166	-943	-124	-251	-33	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.261	1	Yes	0.645	0.223	0.87	Yes	1.00	**2.99**
		$U_1 - L_1$			-----	-664.35	-469	483	-109	116	-283	-29	5	-74	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.124	0.96	Yes	0.773	0.224	1.00	Yes	1.00	**4.48**
		$U_2 - L_2$			-----	-531.80	-457	454	-86	91	-9	63	88	34	-----	-----	-----	-----	-----	-----	-----	-----	0.779	0.081	0.86	Yes	0.740	0.259	1.00	Yes	1.00	**4.61**
		$U_3 - L_3$			-----	-440.08	-216	229	-32	43	-8	176	3	121	-----	-----	-----	-----	-----	-----	-----	-----	0.823	0.114	0.94	Yes	0.759	0.233	1.00	Yes	1.00	**3.88**
		$U_4 - L_4$			56.80	-321.28	-246	247	24	-14	-20	224	-163	81	0.102	0.381	0.49	Yes	0.056	0.209	0.27	Yes	0.724	0.116	0.85	Yes	0.680	0.316	1.00	Yes	1.00	**4.54**
		$U_5 - L_5$			209.58	-299.74	-275	284	140	-138	-122	160	-150	72	0.377	0.409	0.79	Yes	0.207	0.225	0.44	Yes	0.672	0.136	0.81	Yes	0.634	0.362	1.00	Yes	1.00	**6.33**
		$U_6 - L_6$			6.18	-224.93	-250	247	397	-403	-89	72	-234	-95	0.011	0.582	0.60	Yes	0.006	0.320	0.33	Yes	0.502	0.192	0.7	Yes	0.476	0.515	1.00	Yes	1.00	**10.38**
		$U_7 - L_7$			-----	-369.60	-3	-10	232	-253	-176	-132	-215	-190	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.155	0.91	Yes	0.708	0.289	1.00	Yes	1.00	**3.41**
		$U_8 - L_8$			-----	-511.16	44	-51	343	-341	-174	-125	-239	-220	-----	-----	-----	-----	-----	-----	-----	-----	0.738	0.135	0.88	Yes	0.701	0.293	1.00	Yes	1.00	**4.26**
		$U_9 - L_9$			-----	-654.57	100	-148	396	-496	-70	-77	-195	-135	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.106	0.9	Yes	0.762	0.230	1.00	Yes	1.00	**4.39**
		$U_{10} - L_{10}$			-----	-780.96	124	-111	392	-424	102	111	102	123	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.071	0.88	Yes	0.771	0.220	1.00	Yes	1.00	**4.62**
		$U_{11} - L_{11}$			-----	-649.61	183	-213	417	-471	-45	65	82	138	-----	-----	-----	-----	-----	-----	-----	-----	0.775	0.103	0.88	Yes	0.734	0.262	1.00	Yes	1.00	**2.90**
		$U_{12} - L_{12}$			-----	-1287.90	-378	401	403	-535	-38	21	70	80	-----	-----	-----	-----	-----	-----	-----	-----	0.930	0.043	0.98	Yes	0.893	0.100	1.00	Yes	1.00	**5.04**
		$U_{13} - L_{13}$			-----	-439.41	-301	324	-105	116	-157	-133	-104	-93	-----	-----	-----	-----	-----	-----	-----	-----	0.734	0.150	0.89	Yes	0.678	0.319	1.00	Yes	1.00	**2.97**
		$U_{14} - L_{14}$			-----	-513.84	-296	291	-64	56	-239	-127	-214	-213	-----	-----	-----	-----	-----	-----	-----	-----	0.778	0.132	0.92	Yes	0.737	0.259	1.00	Yes	1.00	**5.12**
		$U_{15} - L_{15}$			-----	-427.30	-239	251	-43	49	-159	7	-179	-95	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.114	0.89	Yes	0.737	0.255	1.00	Yes	1.00	**4.85**
		$U_{16} - L_{16}$			-----	-248.04	-365	346	71	-42	-41	74	-267	-166	-----	-----	-----	-----	-----	-----	-----	-----	0.545	0.186	0.74	Yes	0.525	0.467	1.00	Yes	1.00	**8.90**
		$U_{17} - L_{17}$			294.29	-233.11	-313	319	193	-216	-219	-94	-100	-190	0.529	0.471	1.00	Yes	0.291	0.259	0.55	Yes	0.511	0.154	0.67	Yes	0.493	0.407	0.91	Yes	1.00	**7.45**
		$U_{18} - L_{18}$			70.40	-287.34	-134	128	268	-304	18	-1	-209	-157	0.127	0.449	0.58	Yes	0.070	0.247	0.32	Yes	0.628	0.170	0.8	Yes	0.608	0.389	1.00	Yes	1.00	**6.07**
		$U_{19} - L_{19}$			29.70	-322.74	-41	29	245	-245	-171	-94	-6	-52	0.053	0.362	0.42	Yes	0.029	0.199	0.23	Yes	0.705	0.135	0.85	Yes	0.683	0.313	1.00	Yes	1.00	**4.14**
		$U_{20} - L_{20}$			-----	-334.43	43	-49	170	-225	-199	-64	224	72	-----	-----	-----	-----	-----	-----	-----	-----	0.747	0.165	0.92	Yes	0.708	0.288	1.00	Yes	1.00	**2.08**

Moment (End) Al Operating

Operating Loads - 5C1

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	$U_0 - L_1$			402.42	-68.69	-224	104	15	-14	-820	-174	-36	-16	0.528	0.469	1.00	Yes	0.319	0.258	0.58	Yes	0.117	0.323	0.45	Yes	0.106	0.262	0.37	Yes	1.00	**5.27**
		$U_1 - L_2$			376.39	-----	-74	40	-27	-42	53	-91	-782	-385	0.677	0.321	1.00	Yes	0.372	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.72**
		$U_2 - L_3$			314.40	-323.00	-54	41	-43	-92	-133	-360	-391	-197	0.565	0.231	0.80	Yes	0.311	0.127	0.44	Yes	0.743	0.252	1	Yes	0.683	0.118	0.81	Yes	1.00	**8.57**
		$U_3 - L_4$			-----	-381.10	17	-7	16	-67	-74	10	-220	-167	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.127	1	Yes	0.806	0.086	0.90	Yes	1.00	**4.29**
		$U_4 - L_4$			535.82	-----	-8	84	-125	-24	353	279	-75	-137	0.786	0.209	1.00	Yes	0.432	0.115	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.88**
		$U_5 - L_5$			704.24	-----	-181	224	-35	76	32	-95	186	93	0.833	0.161	1.00	Yes	0.458	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.04**
		$U_6 - L_5$			648.83	-----	-301	257	-77	85	320	128	294	169	0.767	0.229	1.00	Yes	0.422	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_6 - L_7$			649.68	-----	-107	311	-8	115	297	194	240	172	0.768	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_8 - L_8$			967.46	-----	-98	354	-4	136	481	193	106	116	0.773	0.219	1.00	Yes	0.479	0.123	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.54**
		$U_8 - L_{10}$			1046.22	-----	-293	288	-97	85	221	180	89	104	0.836	0.159	1.00	Yes	0.518	0.089	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.08**
		$U_{10} - L_{11}$			1024.46	-----	-221	217	-91	69	-181	-225	-9	-9	0.865	0.132	1.00	Yes	0.536	0.074	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.20**
		$U_{11} - L_{12}$			838.48	-----	-226	168	-105	-17	-354	-376	-127	-152	0.830	0.161	1.00	Yes	0.456	0.089	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{12} - L_{13}$			619.64	-----	-182	173	-56	2	-414	-382	-244	-259	0.755	0.240	1.00	Yes	0.475	0.136	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_{13} - L_{14}$			442.37	-35.68	-77	49	-12	-33	-312	-342	-291	-320	0.796	0.198	1.00	Yes	0.438	0.109	0.55	Yes	0.083	0.161	0.25	Yes	0.076	0.099	0.18	Yes	1.00	**3.92**
		$U_{15} - L_{14}$			270.55	-325.69	-59	19	73	-109	-238	-368	-194	-315	0.487	0.246	0.74	Yes	0.268	0.135	0.41	Yes	0.763	0.228	1	Yes	0.689	0.139	0.83	Yes	1.00	**5.95**
		$U_{16} - L_{15}$			419.21	-132.69	-123	90	22	-52	-225	-294	-159	-168	0.754	0.243	1.00	Yes	0.415	0.133	0.55	Yes	0.315	0.174	0.49	Yes	0.281	0.157	0.44	Yes	1.00	**4.96**
		$U_{17} - L_{16}$			535.60	-----	-146	108	-18	-14	-160	-256	-136	-134	0.785	0.208	1.00	Yes	0.432	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.98**
		$U_{18} - L_{17}$			653.24	-----	-334	265	-97	54	-147	-176	-99	-67	0.772	0.221	1.00	Yes	0.425	0.121	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.29**
		$U_{19} - L_{18}$			732.21	-----	-356	268	-87	63	-24	-125	-90	-13	0.793	0.203	1.00	Yes	0.436	0.112	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_{20} - L_{19}$			649.82	-----	-391	316	-127	106	-537	-134	0	35	0.704	0.289	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.70**
	Structure 2	$U_0 - L_1$			682.15	-----	-428	357	-62	71	-806	-79	-120	54	0.675	0.319	1.00	Yes	0.371	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.91**
		$U_1 - L_2$			802.35	-----	-398	343	-68	43	-16	-101	65	19	0.794	0.200	1.00	Yes	0.437	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.40**
		$U_2 - L_3$			651.58	-----	-317	263	-54	40	-185	-252	-70	-181	0.770	0.225	1.00	Yes	0.424	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_3 - L_4$			579.47	-----	-169	147	-43	-4	-343	-336	-319	-217	0.772	0.226	1.00	Yes	0.425	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.71**
		$U_4 - L_5$			414.08	-132.98	-119	97	12	-42	-347	-304	-216	-216	0.745	0.252	1.00	Yes	0.410	0.139	0.55	Yes	0.328	0.197	0.53	Yes	0.281	0.152	0.44	Yes	1.00	**4.75**
		$U_5 - L_6$			366.15	-303.92	-98	70	67	-108	-451	-328	-374	-256	0.659	0.269	0.93	Yes	0.362	0.148	0.52	Yes	0.718	0.273	1	Yes	0.643	0.138	0.79	Yes	1.00	**5.61**
		$U_6 - L_7$			34.22	-372.95	-19	-8	55	-94	-313	-268	-297	-264	0.056	0.189	0.25	Yes	0.031	0.104	0.14	Yes	0.798	0.196	1	Yes	0.714	0.107	0.83	Yes	1.00	**3.23**
		$U_8 - L_7$			613.58	-----	-176	145	-10	-20	-148	-279	-150	-233	0.782	0.214	1.00	Yes	0.492	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.58**
		$U_8 - L_8$			733.05	-----	-331	261	-94	24	-150	-219	-122	-143	0.794	0.205	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		$U_{10} - L_9$			837.26	-----	-305	243	-86	60	-89	-175	33	-24	0.828	0.168	1.00	Yes	0.456	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{11} - L_{10}$			906.26	-----	-347	304	-113	103	98	-49	161	77	0.826	0.169	1.00	Yes	0.454	0.093	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{12} - L_{11}$			855.22	-----	-359	343	-105	145	169	64	460	263	0.779	0.215	1.00	Yes	0.428	0.118	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{13} - L_{12}$			760.62	-----	-431	384	-178	173	291	148	272	154	0.752	0.244	1.00	Yes	0.414	0.134	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.20**
		$U_{14} - L_{13}$			757.18	-----	-271	434	-61	175	301	156	236	139	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.69**
		$U_{14} - L_{15}$			623.65	-----	-209	361	6	99	311	34	40	31	0.737	0.261	1.00	Yes	0.406	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.97**
		$U_{15} - L_{16}$			625.96	-----	-368	325	-108	101	245	63	59	66	0.740	0.252	1.00	Yes	0.407	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.41**
		$U_{16} - L_{17}$			753.83	-----	-350	348	-68	92	6	-10	4	1	0.816	0.181	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.25**
		$U_{17} - L_{18}$			682.63	-----	-292	300	-57	73	-95	-87	-64	-38	0.807	0.187	1.00	Yes	0.444	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{18} - L_{19}$			679.35	-----	-268	265	-58	43	-223	-174	-134	-93	0.803	0.192	1.00	Yes	0.442	0.106	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{19} - L_{20}$			604.98	-14.64	-186	195	-21	-4	-246	-218	-136	-137	0.771	0.224	1.00	Yes	0.424	0.126	0.56	Yes	0.024	0.101	0.13	Yes	0.022	0.174	0.20	Yes	1.00	**5.05**
		$U_{20} - L_{21}$			432.67	-66.95	-112	111	2	-23	-244	-198	-234	-166	0.778	0.213	1.00	Yes	0.428	0.117	0.55	Yes	0.159	0.113	0.28	Yes	0.142	0.143	0.29	Yes	1.00	**4.31**
		$U_{21} - L_{22}$			405.04	-339.08	-84	72	40	-85	-287	-307	-317	-293	0.728	0.201	0.93	Yes	0.401	0.111	0.52	Yes	0.801	0.195	1	Yes	0.717	0.109	0.83	Yes	1.00	**6.28**
		$U_{23} - L_{22}$			425.92	-350.84	-94	79	82	-107	-107	-286	-180	-282	0.766	0.219	0.99	Yes	0.421	0.120	0.55	Yes	0.836	0.163	1	Yes	0.742	0.136	0.88	Yes	1.00	**7.47**
		$U_{24} - L_{23}$			445.81	-92.14	-121	107	18	-32	-72	-135	-89	-86	0.802	0.194	1.00	Yes	0.441	0.107	0.55	Yes	0.220	0.063	0.29	Yes	0.195	0.155	0.35	Yes	1.00	**4.43**
		$U_{25} - L_{24}$			624.75	-----	-195	183	2	-8	-4	-114	30	-31	0.797	0.198	1.00	Yes	0.438	0.111	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_{26} - L_{25}$			690.57	-----	-282	269	-41	41	109	-25	99	42	0.816	0.179	1.00	Yes	0.449	0.099	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{27} - L_{26}$			670.52	-----	-306	296	-64	76	147	41	174	76	0.793	0.205	1.00	Yes	0.436	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{28} - L_{27}$			720.52	-----	-338	358	-81	101	211	101	184	108	0.780	0.218	1.00	Yes	0.429	0.120	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{29} - L_{28}$			621.97	-----	-378	340	-122	116	236	126	215	108	0.735	0.257	1.00	Yes	0.404	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.31**
		$U_{30} - L_{29}$			630.75	-----	-214	365	-36	125	227	124	176	100	0.746	0.248	1.00	Yes	0.410	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_{30} - L_{31}$			756.04	-----	-278	444	-17	127	260	-43	59	35	0.748	0.245	1.00	Yes	0.411	0.135	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{31} - L_{32}$			771.10	-----	-458	382	-123	127	104	-2	37	48	0.763	0.228	1.00	Yes	0.420	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.88**
		$U_{32} - L_{33}$			904.93	-----	-355	351	-124	124	-120	-106	-95	-82	0.824	0.167	1.00	Yes	0.453	0.092	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		$U_{33} - L_{34}$			901.25	-----	-330	322	-119	87	-282	-260	-181	-105	0.821	0.178	1.00	Yes	0.452	0.098	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.70**
		$U_{34} - L_{35}$			823.98	-----	-281	248	-97	51	-342	-339	-168	-208	0.815	0.181	1.00	Yes	0.448	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.99**
		$U_{35} - L_{36}$			712.12	-----	-301	262	-109	22	-439	-358	-393	-282	0.771	0.226	1.00	Yes	0.424	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{36} - L_{37}$			601.38	-45.22	-158	165	-23	-26	-379	-390	-365	-349	0.767	0.228	1.00	Yes	0.483	0.129	0.62	Yes	0.075	0.134	0.21	Yes	0.068	0.148	0.22	Yes	1.00	**5.22**
		$U_{38} - L_{37}$			69.74	-387.04	-33	-7	81	-104	-158	-254	-158	-244	0.114	0.185	0.30	Yes	0.062	0.102	0.17	Yes	0.836	0.159	1	Yes	0.741	0.119	0.87	Yes	1.00	**3.78**
		$U_{39} - L_{38}$			376.30	-334.60	-111	66	92	-120	-240	-280	-192	-198	0.677	0.234	0.92	Yes	0.372	0.129	0.51	Yes	0.797	0.196	1	Yes	0.708	0.153	0.87	Yes	1.00	**5.94**
		$U_{40} - L_{39}$			431.32	-113.68	-126	93	29	-49	-144	-206	-61	-96	0.776	0.220	1.00	Yes	0.427	0.121	0.55	Yes	0.272	0.134	0.41	Yes	0.241	0.161	0.41	Yes	1.00	**4.66**
		$U_{41} - L_{40}$			597.87	-----	-179	137	-25	-8	-71	-164	-65	-59	0.797	0.198	1.00	Yes	0.438	0.109	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{42} - L_{41}$			664.61	-----	-337	276	-66	43	-71	-106	-1	-1	0.786	0.210	1.00	Yes	0.432	0.116	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{43} - L_{42}$			799.91	-----	-396	320	-88	58	-68	-110	-7	-32	0.791	0.200	1.00	Yes	0.435	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_{44} - L_{43}$			776.34	-----	-396	374	-134	117	-320	-136	37	3	0.768	0.232	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.11**
	Structure 3	$U_0 - L_1$			603.61	-----	-424	311	-70	73	-745	-144	-133	49	0.654	0.339	1.00	Yes	0.360	0.187	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.67**
		$U_1 - L_2$			726.79	-----	-368	257	-88	55	-16	-115	37	12	0.787	0.207	1.00	Yes	0.433	0.114	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_2 - L_3$			651.72	-----	-308	268	-71	42	-187	-299	-72	-168	0.770	0.229	1.00	Yes	0.424	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		$U_3 - L_4$			524.12	-----	-135	112	-24	-18	-370	-390	-329	-234	0.769	0.228	1.00	Yes	0.423	0.125	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.53**
		$U_4 - L_5$			403.18	-219.98	-113	101	14	-59	-428	-361	-361	-248	0.725	0.268	1.00	Yes	0.399	0.147	0.55	Yes	0.521	0.233	0.76	Yes	0.465	0.144	0.61	Yes	1.00	**5.77**
		$U_5 - L_6$			226.33	-282.89	-43	11	36	-97	-400	-365	-606	-438	0.407	0.299	0.71	Yes	0.224	0.165	0.39	Yes	0.663	0.334	1	Yes	0.599	0.124	0.73	Yes	1.00	**4.60**
		$U_7 - L_6$			446.82	-72.12	-81	50	5	-36	-112	-290	-138	-261	0.804	0.188	1.00	Yes	0.442	0.103	0.55	Yes	0.168	0.121	0.29	Yes	0.153	0.104	0.26	Yes	1.00	**4.43**
		$U_8 - L_7$			640.02	-----	-190	155	-62	6	-173	-242	-185	-146	0.780	0.213	1.00	Yes	0.491	0.120	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.22**
		$U_8 - L_9$			858.14	-----	-254	137	-133	-5	-28	-200	-145	-96	0.849	0.148	1.00	Yes	0.467	0.081	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.03**
		$U_{10} - L_9$			1024.00	-----	-248	197	-75	67	86	-47	136	56	0.865	0.132	1.00	Yes	0.535	0.074	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.45**
		$U_{11} - L_{10}$			1006.30	-----	-309	266	-101	87	444	280	307	198	0.804	0.194	1.00	Yes	0.498	0.109	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.80**
		$U_{12} - L_{11}$			972.77	-----	-105	369	-13	141	398	284	281	211	0.778	0.215	1.00	Yes	0.482	0.121	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.48**
		$U_{13} - L_{12}$			657.93	-----	-88	307	-3	106	228	155	112	90	0.778	0.216	1.00	Yes	0.428	0.119	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.87**
		$U_{13} - L_{14}$			680.26	-----	-287	235	-70	76	128	76	95	120	0.804	0.187	1.00	Yes	0.442	0.103	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{14} - L_{15}$			687.64	-----	-163	233	-53	63	-136	-194	-269	-77	0.813	0.181	1.00	Yes	0.447	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.16**
		$U_{15} - L_{16}$			519.12	-----	-55	86	-62	-26	-215	-245	-643	-451	0.761	0.237	1.00	Yes	0.419	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.78**
		$U_{17} - L_{16}$			178.08	-94.73	31	20	-241	-291	128	16	-1047	-1032	0.320	0.675	1.00	Yes	0.176	0.371	0.55	Yes	0.217	0.426	0.65	Yes	0.200	0.372	0.58	Yes	1.00	**27.21**
		$U_{18} - L_{17}$			163.19	-380.22	-35	22	-23	-62	12	-192	-284	-60	0.294	0.162	0.46	Yes	0.161	0.089	0.26	Yes	0.875	0.121	1	Yes	0.805	0.079	0.89	Yes	1.00	**6.22**
		$U_{19} - L_{18}$			464.91	-33.41	-94	35	28	-41	53	-123	-74	-89	0.836	0.156	1.00	Yes	0.460	0.086	0.55	Yes	0.077	0.068	0.15	Yes	0.071	0.121	0.20	Yes	1.00	**5.73**
		$U_{20} - L_{19}$			405.15	-61.38	-192	120	-14	-3	-933	-63	40	-9	0.532	0.459	1.00	Yes	0.321	0.253	0.58	Yes	0.105	0.292	0.4	Yes	0.095	0.224	0.32	Yes	1.00	**6.00**

Moment (End) AI Operating

Operating Loads - 5C1

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	$U_0 - U_1$	43.41	-534.19	-169	124	373	-1162	-97	160	30	-868	0.050	0.423	0.48	Yes	0.034	0.289	0.33	Yes	0.727	0.212	0.94	Yes	0.720	0.276	1.00	Yes	1.00	**6.72**
		$U_1 - U_2$	75.05	-529.17	-90	146	-297	-769	-172	163	-128	-443	0.086	0.258	0.35	Yes	0.059	0.176	0.24	Yes	0.720	0.276	1	Yes	0.714	0.183	0.90	Yes	1.00	**4.05**
		$U_2 - U_3$	329.35	-555.91	-37	449	-367	-627	-135	206	-456	-533	0.378	0.239	0.62	Yes	0.255	0.157	0.42	Yes	0.756	0.236	1	Yes	0.750	0.149	0.90	Yes	1.00	**5.75**
		$U_3 - U_4$	588.29	-595.42	196	482	-398	-649	-242	-1	-360	-328	0.674	0.215	0.89	Yes	0.463	0.147	0.61	Yes	0.810	0.183	1	Yes	0.803	0.154	0.96	Yes	1.00	**6.18**
		$U_4 - U_5$	678.33	-588.09	301	524	-494	-412	-96	15	-551	464	0.778	0.218	1.00	Yes	0.534	0.149	0.69	Yes	0.800	0.188	0.99	Yes	0.793	0.125	0.92	Yes	1.00	**7.15**
		$U_5 - U_6$	731.31	-86.21	301	520	-338	175	102	152	-201	136	0.838	0.158	1.00	Yes	0.565	0.103	0.67	Yes	0.117	0.146	0.27	Yes	0.116	0.124	0.24	Yes	1.00	**5.41**
		$U_6 - U_7$	854.44	-----	398	213	332	-92	308	269	16	695	0.817	0.180	1.00	Yes	0.571	0.124	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.49**
		$U_7 - U_8$	863.55	-----	-691	2082	135	584	394	701	777	695	0.598	0.394	1.00	Yes	0.417	0.269	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.99**
		$U_8 - U_9$	763.87	-----	1048	-152	1849	-1130	250	449	480	-392	0.626	0.369	1.00	Yes	0.428	0.251	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.25**
		$U_9 - U_{10}$	631.21	-251.77	235	254	237	-833	2	307	73	-761	0.685	0.309	1.00	Yes	0.464	0.207	0.68	Yes	0.324	0.169	0.5	Yes	0.321	0.187	0.51	Yes	1.00	**7.40**
		$U_{10} - U_{11}$	90.60	-621.39	260	-164	166	-909	49	110	111	-535	0.098	0.290	0.39	Yes	0.065	0.187	0.26	Yes	0.800	0.168	0.97	Yes	0.793	0.204	1.00	Yes	1.00	**4.08**
		$U_{11} - U_{12}$	-----	-910.50	164	-201	58	-822	13	107	-41	-198	-----	-----	-----	-----	-----	-----	-----	-----	0.862	0.131	1	Yes	0.854	0.136	1.00	Yes	1.00	**3.09**
		$U_{12} - U_{13}$	-----	-1226.27	-44	-267	-238	-902	84	9	-44	-461	-----	-----	-----	-----	-----	-----	-----	-----	0.829	0.162	1	Yes	0.819	0.124	0.95	Yes	1.00	**3.42**
		$U_{13} - U_{14}$	-----	-1389.17	-196	-506	-483	-1392	-42	-7	-189	-186	-----	-----	-----	-----	-----	-----	-----	-----	0.805	0.191	1	Yes	0.796	0.154	0.95	Yes	1.00	**3.03**
		$U_{14} - U_{15}$	-----	-1433.07	-400	-288	-1031	-860	44	-275	-239	-17	-----	-----	-----	-----	-----	-----	-----	-----	0.830	0.168	1	Yes	0.822	0.114	0.94	Yes	1.00	**3.29**
		$U_{15} - U_{16}$	-----	-1444.46	-257	-430	-519	-1007	-34	-251	-307	70	-----	-----	-----	-----	-----	-----	-----	-----	0.837	0.157	1	Yes	0.828	0.111	0.94	Yes	1.00	**3.69**
		$U_{16} - U_{17}$	-----	-1445.69	-375	-192	-932	-699	14	-218	-72	362	-----	-----	-----	-----	-----	-----	-----	-----	0.838	0.157	1	Yes	0.829	0.103	0.94	Yes	1.00	**4.73**
		$U_{17} - U_{18}$	-----	-1113.96	-698	110	-301	-240	-60	-225	-301	567	-----	-----	-----	-----	-----	-----	-----	-----	0.883	0.117	1	Yes	0.872	0.114	0.99	Yes	1.00	**4.41**
		$U_{18} - U_{19}$	-----	-731.55	-683	115	-411	-56	102	-342	670	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.166	1	Yes	0.823	0.137	0.97	Yes	1.00	**4.27**
		$U_{19} - U_{20}$	-----	-655.67	-1262	603	-366	-227	-321	-117	330	-23	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.251	1	Yes	0.738	0.254	1.00	Yes	1.00	**12.88**
	Structure 2	$U_0 - U_1$	-----	-572.53	237	-289	1377	-1904	54	50	323	-711	-----	-----	-----	-----	-----	-----	-----	-----	0.680	0.159	0.84	Yes	0.676	0.323	1.00	Yes	1.00	**6.97**
		$U_1 - U_2$	-----	-813.27	-150	-313	-211	-1097	-23	26	42	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.791	0.204	1	Yes	0.785	0.166	0.96	Yes	1.00	**3.51**
		$U_2 - U_3$	-----	-1155.66	-137	-414	-198	-1346	-36	-54	50	-642	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.172	1	Yes	0.820	0.137	0.96	Yes	1.00	**3.46**
		$U_3 - U_4$	-----	-1359.77	-526	-525	-808	-1596	-121	-34	-260	-440	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.218	1	Yes	0.774	0.142	0.92	Yes	1.00	**3.12**
		$U_4 - U_5$	-----	-1478.42	-574	-530	-1004	-1758	-128	-78	-246	-646	-----	-----	-----	-----	-----	-----	-----	-----	0.765	0.229	1	Yes	0.759	0.146	0.91	Yes	1.00	**3.27**
		$U_5 - U_6$	-----	-1562.19	-541	63	-1391	-1313	-201	-37	-301	-627	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.189	1	Yes	0.802	0.115	0.92	Yes	1.00	**3.81**
		$U_6 - U_7$	-----	-1326.80	-243	-143	-941	-1507	-171	-73	-388	-386	-----	-----	-----	-----	-----	-----	-----	-----	0.761	0.229	1	Yes	0.755	0.134	0.89	Yes	1.00	**4.14**
		$U_7 - U_8$	-----	-1417.24	-314	-156	-909	-1166	-74	-172	-465	-11	-----	-----	-----	-----	-----	-----	-----	-----	0.813	0.185	1	Yes	0.807	0.104	0.92	Yes	1.00	**3.71**
		$U_8 - U_9$	-----	-1200.20	-314	265	-1293	-560	-7	-179	-452	99	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.172	1	Yes	0.814	0.137	0.96	Yes	1.00	**4.17**
		$U_9 - U_{10}$	427.99	-940.48	-2	631	-1250	-226	-110	-204	-663	-121	0.314	0.224	0.54	Yes	0.213	0.151	0.37	Yes	0.816	0.182	1	Yes	0.812	0.152	0.97	Yes	1.00	**5.56**
		$U_{10} - U_{11}$	944.77	-489.19	423	682	-754	-272	-166	-71	-770	444	0.798	0.200	1.00	Yes	0.543	0.133	0.68	Yes	0.489	0.159	0.65	Yes	0.486	0.106	0.60	Yes	1.00	**7.38**
		$U_{11} - U_{12}$	698.77	-----	-1942	1466	-478	58	-487	-1061	-658	548	0.590	0.403	1.00	Yes	0.396	0.269	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**15.19**
		$U_{12} - U_{13}$	1150.70	-----	608	196	540	-766	423	541	-84	1233	0.777	0.214	1.00	Yes	0.554	0.148	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.25**
		$U_{13} - U_{14}$	1143.26	-----	-927	3819	-36	1486	399	1101	858	1058	0.562	0.429	1.00	Yes	0.398	0.282	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.59**
		$U_{14} - U_{15}$	1260.20	-----	2401	-62	3470	-1192	536	650	828	12	0.620	0.378	1.00	Yes	0.439	0.248	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.60**
		$U_{15} - U_{16}$	1341.13	-----	139	414	-21	-1265	181	426	-24	-473	0.811	0.184	1.00	Yes	0.577	0.124	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.69**
		$U_{16} - U_{17}$	1061.08	-----	670	217	653	-1068	-29	318	-102	-729	0.782	0.211	1.00	Yes	0.520	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.89**
		$U_{17} - U_{18}$	781.32	-204.63	502	275	206	-945	-60	295	-99	-351	0.784	0.212	1.00	Yes	0.522	0.140	0.67	Yes	0.243	0.174	0.42	Yes	0.242	0.160	0.41	Yes	1.00	**5.17**
		$U_{18} - U_{19}$	669.33	-623.01	654	208	363	-1232	3	178	-183	-771	0.672	0.322	1.00	Yes	0.441	0.206	0.65	Yes	0.740	0.249	0.99	Yes	0.736	0.209	0.95	Yes	1.00	**6.36**
		$U_{19} - U_{20}$	274.41	-731.36	297	128	-220	-997	-54	143	-182	-323	0.257	0.203	0.47	Yes	0.171	0.133	0.31	Yes	0.812	0.183	1	Yes	0.807	0.160	0.97	Yes	1.00	**4.20**
		$U_{20} - U_{21}$	115.61	-846.15	-66	94	-435	-981	-94	-6	23	-587	0.090	0.206	0.30	Yes	0.063	0.135	0.20	Yes	0.778	0.219	1	Yes	0.772	0.142	0.92	Yes	1.00	**4.51**
		$U_{21} - U_{22}$	60.43	-804.95	-76	-27	-483	-1242	-206	-115	-329	-174	0.047	0.216	0.27	Yes	0.033	0.145	0.18	Yes	0.740	0.258	1	Yes	0.735	0.180	0.92	Yes	1.00	**4.38**
		$U_{22} - U_{23}$	104.30	-858.57	2	-71	-676	-898	-34	-153	-274	110	0.081	0.160	0.25	Yes	0.057	0.107	0.17	Yes	0.789	0.208	1	Yes	0.784	0.130	0.92	Yes	1.00	**4.07**
		$U_{23} - U_{24}$	204.09	-898.51	-121	232	-695	-720	5	-76	-451	185	0.158	0.153	0.32	Yes	0.111	0.101	0.22	Yes	0.826	0.169	1	Yes	0.820	0.104	0.93	Yes	1.00	**5.02**
		$U_{24} - U_{25}$	789.24	-680.09	507	669	-437	-934	-16	12	-495	796	0.740	0.257	1.00	Yes	0.491	0.168	0.66	Yes	0.755	0.204	0.96	Yes	0.750	0.149	0.90	Yes	1.00	**10.33**
		$U_{25} - U_{26}$	798.48	-218.32	278	734	-316	-217	27	-18	-458	392	0.802	0.192	1.00	Yes	0.526	0.123	0.65	Yes	0.259	0.148	0.41	Yes	0.258	0.125	0.39	Yes	1.00	**7.89**
		$U_{26} - U_{27}$	-----	-385.74	-2270	1663	-1094	-906	-1247	-634	-2217	1559	-----	-----	-----	-----	-----	-----	-----	-----	0.458	0.537	1	Yes	0.456	0.385	0.85	Yes	1.00	**27.33**
		$U_{27} - U_{28}$	929.29	-----	-1237	1684	226	-66	-285	-643	-35	910	0.685	0.307	1.00	Yes	0.456	0.202	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**11.83**
		$U_{28} - U_{29}$	1343.81	-----	93	281	343	-772	-94	246	1	1147	0.812	0.185	1.00	Yes	0.578	0.127	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.34**
		$U_{29} - U_{30}$	1155.21	-----	-484	3728	114	1495	574	1195	1040	1220	0.568	0.428	1.00	Yes	0.402	0.282	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.42**
		$U_{30} - U_{31}$	1223.69	-----	2360	-234	3663	-1544	600	599	827	-140	0.602	0.396	1.00	Yes	0.426	0.260	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.45**
		$U_{31} - U_{32}$	1214.13	-----	88	361	-198	-912	206	391	93	-614	0.820	0.173	1.00	Yes	0.584	0.119	0.71	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.93**
		$U_{32} - U_{33}$	882.15	-124.37	605	165	403	-1046	5	230	176	-813	0.745	0.247	1.00	Yes	0.501	0.164	0.67	Yes	0.124	0.130	0.26	Yes	0.124	0.148	0.28	Yes	1.00	**5.39**
		$U_{33} - U_{34}$	757.56	-786.75	556	251	118	-1506	-35	247	-166	-649	0.640	0.292	0.94	Yes	0.435	0.190	0.63	Yes	0.787	0.203	0.99	Yes	0.782	0.212	1.00	Yes	1.00	**6.64**
		$U_{34} - U_{35}$	155.77	-963.10	428	-158	27	-1359	42	55	-13	-521	0.114	0.222	0.34	Yes	0.077	0.150	0.23	Yes	0.836	0.160	1	Yes	0.831	0.165	1.00	Yes	1.00	**4.15**
		$U_{35} - U_{36}$	-----	-1208.89	127	-444	-316	-1472	-18	100	89	-324	-----	-----	-----	-----	-----	-----	-----	-----	0.826	0.174	1	Yes	0.820	0.156	0.98	Yes	1.00	**3.40**
		$U_{36} - U_{37}$	-----	-1425.96	-271	-296	-920	-1328	-20	-116	106	-281	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.178	1	Yes	0.812	0.118	0.94	Yes	1.00	**3.18**
		$U_{37} - U_{38}$	-----	-1429.58	-177	-403	-669	-1402	-92	-192	-388	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.180	1	Yes	0.814	0.125	0.94	Yes	1.00	**3.20**
		$U_{38} - U_{39}$	-----	-1587.41	-131	-619	-901	-1607	12	-203	-339	-16	-----	-----	-----	-----	-----	-----	-----	-----	0.821	0.178	1	Yes	0.815	0.133	0.95	Yes	1.00	**3.35**
		$U_{39} - U_{40}$	-----	-1581.68	-619	-512	-1444	-1302	26	-104	-291	179	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.181	1	Yes	0.812	0.120	0.94	Yes	1.00	**3.61**
		$U_{40} - U_{41}$	-----	-1427.19	-485	-478	-1007	-1201	110	-142	134	358	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1	Yes	0.813	0.107	0.92	Yes	1.00	**4.21**
		$U_{41} - U_{42}$	-----	-1220.57	-1213	95	-925	-399	63	-218	-211	431	-----	-----	-----	-----	-----	-----	-----	-----	0.871	0.125	1	Yes	0.866	0.123	0.99	Yes	1.00	**4.80**
		$U_{42} - U_{43}$	-----	-876.41	-904	46	-369	-131	-86	-435	54	252	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.143	1	Yes	0.846	0.137	0.99	Yes	1.00	**4.99**
		$U_{43} - U_{44}$	-----	-626.38	-1396	732	-147	-262	-378	-171	-123	-129	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.251	1	Yes	0.740	0.237	0.98	Yes	1.00	**11.13**
	Structure 3	$U_0 - U_1$	-----	-584.39	357	-296	1548	-1674	86	74	444	-963	-----	-----	-----	-----	-----	-----	-----	-----	0.663	0.216	0.88	Yes	0.657	0.337	1.00	Yes	1.00	**9.07**
		$U_1 - U_2$	-----	-703.54	-81	-227	-17	-791	-21	5	-22	-408	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.196	1	Yes	0.792	0.159	0.96	Yes	1.00	**3.39**
		$U_2 - U_3$	-----	-1032.47	-55	-239	46	-840	-34	-57	-71	-683	-----	-----	-----	-----	-----	-----	-----	-----	0.818	0.176	1	Yes	0.808	0.137	0.95	Yes	1.00	**3.45**
		$U_3 - U_4$	-----	-1360.92	-220	-365	-484	-1327	-110	-33	-214	-486	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.207	1	Yes	0.780	0.146	0.93	Yes	1.00	**3.84**
		$U_4 - U_5$	-----	-1376.19	-436	-116	-663	-973	-94	-42	-315	-717	-----	-----	-----	-----	-----	-----	-----	-----	0.797	0.198	1	Yes	0.789	0.107	0.90	Yes	1.00	**3.96**
		$U_5 - U_6$	-----	-1350.38	-260	-384	-567	-1340	-185	-152	-357	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.210	1	Yes	0.774	0.148	0.93	Yes	1.00	**3.13**
		$U_6 - U_7$	-----	-1414.29	-490	-147	-1124	-740	-117	-298	-361	-49	-----	-----	-----	-----	-----	-----	-----	-----	0.820	0.174	1	Yes	0.811	0.124	0.94	Yes	1.00	**3.66**
		$U_7 - U_8$	-----	-1234.73	-185	132	-543	-633	-80	-310	-417	129	-----	-----	-----	-----	-----	-----	-----	-----	0.835	0.157	1	Yes	0.825	0.087	0.92	Yes	1.00	**6.53**
		$U_8 - U_9$	-----	-899.25	-97	296	-623	-126	-229	-185	-545	330	-----	-----	-----	-----	-----	-----	-----	-----	0.851	0.142	1	Yes	0.844	0.103	0.95	Yes	1.00	**4.87**
		$U_9 - U_{10}$	-----	-599.68	-1037	437	-800	96	-202	-413	-317	310	-----	-----	-----	-----	-----	-----	-----	-----	0.772	0.185	0.96	Yes	0.765	0.232	1.00	Yes	1.00	**7.79**
		$U_{10} - U_{11}$	591.21	-----	-317	447	401	-88	-390	-197	-347	1553	0.641	0.350	1.00	Yes	0.434	0.234	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**10.38**
		$U_{11} - U_{12}$	780.08	-----	-623	1725	-96	668	4	521	506	499	0.639	0.353	1.00	Yes	0.437	0.240	0.68	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.23**
		$U_{12} - U_{13}$	949.17	-----	1133	-4	1916	-861	64	460	273	-301	0.658	0.337	1.00	Yes	0.459	0.230	0.69	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.40**
		$U_{13} - U_{14}$	866.40	-----	229	374	90	-464	-109	387	-188	-463	0.829	0.162	1.00	Yes	0.579	0.112	0.70	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.35**
		$U_{14} - U_{15}$	623.96	-313.56	451	219	237	-669	-57	256	-135	-700	0.715	0.277	1.00	Yes	0.482	0.183	0.67	Yes	0.427	0.225	0.66	Yes	0.423	0.159	0.59	Yes	1.00	**5.22**
		$U_{15} - U_{16}$	370.41	-594.77	313	159	-171	-818	-74	226	12	102	0.425	0.233	0.66	Yes	0.291	0.160	0.46	Yes	0.809	0.177	0.99	Yes	0.802	0.195	1.00	Yes	1.00	**4.81**
		$U_{16} - U_{17}$	407.47	-617.49	404	81	-325	-675	210	-45	42	294	0.467	0.210	0.68	Yes	0.321	0.144	0.47	Yes	0.840	0.156	1	Yes	0.833	0.160	1.00	Yes	1.00	**5.34**
		$U_{17} - U_{18}$	188.16	-591.77	314	-149	-185	-739	85	38	-156	241	0.216	0.216	0.44	Yes	0.145	0.141	0.29	Yes	0.805	0.187	1	Yes	0.798	0.176	0.98	Yes	1.00	**5.10**
		$U_{18} - U_{19}$	-----	-555.82	-12	-66	-543	-272	194	-203	-124	427	-----	-----	-----	-----	-----	-----	-----	-----	0.756	0.236	1	Yes	0.750	0.129	0.88	Yes	1.00	**4.47**
		$U_{19} - U_{20}$	-----	-444.45	-142	103	-645	-738	-975	-112	1254	-288	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.390	1	Yes	0.599	0.175	0.78	Yes	1.00	**12.62**

Moment (End) AI Operating

Operating Loads - 5C1

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			27.03	-128.82	-220	86	654	-1466	67	245	-656	-2411	0.041	0.958	1.00	Yes	0.024	0.571	0.60	Yes	0.234	0.696	0.93	Yes	0.232	0.440	0.68	Yes	1.00	**16.04**
		L_1 - L_2			400.79	-62.80	-27	87	75	-866	411	-189	-570	436	0.613	0.382	1.00	Yes	0.374	0.252	0.63	Yes	0.114	0.226	0.35	Yes	0.113	0.260	0.38	Yes	1.00	**5.84**
		L_2 - L_3			640.47	-192.17	-1	131	-526	-679	-194	141	426	-591	0.737	0.259	1.00	Yes	0.426	0.153	0.58	Yes	0.263	0.245	0.51	Yes	0.260	0.164	0.43	Yes	1.00	**5.27**
		L_3 - L_4			679.44	-396.01	49	442	-335	-662	351	-268	-50	-15	0.782	0.216	1.00	Yes	0.464	0.138	0.61	Yes	0.541	0.200	0.75	Yes	0.536	0.160	0.70	Yes	1.00	**5.75**
		L_4 - L_5			31.32	-564.82	105	469	-358	199	-73	200	85	-373	0.041	0.191	0.24	Yes	0.024	0.122	0.15	Yes	0.868	0.125	1	Yes	0.861	0.124	0.99	Yes	1.00	**3.15**
		L_5 - L_6			-----	-749.54	125	591	-157	297	162	-240	23	-217	-----	-----	-----	-----	-----	-----	-----	-----	0.874	0.123	1	Yes	0.865	0.131	1.00	Yes	1.00	**3.00**
		L_6 - L_7			-----	-1109.84	-279	387	15	-364	260	793	-576	-929	-----	-----	-----	-----	-----	-----	-----	-----	0.903	0.095	1	Yes	0.893	0.061	0.96	Yes	1.00	**5.89**
		L_7 - L_8			-----	-1237.59	-125	1288	-6	606	360	560	492	249	-----	-----	-----	-----	-----	-----	-----	-----	0.794	0.206	1	Yes	0.784	0.171	0.96	Yes	1.00	**4.19**
		L_8 - L_9			-----	-1123.31	891	-2	1270	-218	205	315	193	-140	-----	-----	-----	-----	-----	-----	-----	-----	0.720	0.276	1	Yes	0.711	0.168	0.88	Yes	1.00	**4.01**
		L_9 - L_{10}			-----	-1040.17	139	135	871	-994	430	-294	-48	697	-----	-----	-----	-----	-----	-----	-----	-----	0.846	0.080	0.93	Yes	0.837	0.156	1.00	Yes	1.00	**9.43**
		L_{10} - L_{11}			-----	-526.98	493	-61	316	-736	-274	44	-155	-797	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.140	0.96	Yes	0.803	0.195	1.00	Yes	1.00	**6.26**
		L_{11} - L_{12}			481.94	-120.44	364	-227	291	-814	131	-92	-890	206	0.624	0.371	1.00	Yes	0.374	0.237	0.62	Yes	0.185	0.196	0.39	Yes	0.183	0.215	0.40	Yes	1.00	**4.62**
		L_{12} - L_{13}			1048.18	-----	69	-150	-379	-609	-159	121	5	-508	0.827	0.167	1.00	Yes	0.529	0.102	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.51**
		L_{13} - L_{14}			1313.62	-----	194	-519	107	-1488	147	20	-153	204	0.773	0.222	1.00	Yes	0.500	0.136	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.21**
		L_{14} - L_{15}			1571.56	-----	-569	-153	-1474	-657	-153	163	-102	-761	0.768	0.231	1.00	Yes	0.499	0.141	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.36**
		L_{15} - L_{16}			1698.40	-----	-302	-368	-869	-1324	119	-136	-95	41	0.830	0.169	1.00	Yes	0.533	0.098	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.38**
		L_{16} - L_{17}			1218.70	-----	-1073	250	-798	-201	469	384	-277	-738	0.771	0.223	1.00	Yes	0.500	0.139	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.23**
		L_{17} - L_{18}			922.62	-----	-665	228	-492	-183	-36	-120	-484	-283	0.803	0.190	1.00	Yes	0.514	0.116	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.31**
		L_{18} - L_{19}			394.96	-----	-899	547	-431	161	37	232	-99	-597	0.604	0.394	1.00	Yes	0.409	0.251	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.09**
		L_{19} - L_{20}			36.91	-320.58	-1100	624	-168	56	-125	-28	141	31	0.062	0.392	0.46	Yes	0.039	0.235	0.28	Yes	0.643	0.221	0.87	Yes	0.638	0.359	1.00	Yes	1.00	**12.73**
	Structure 2	L_0 - L_1			55.73	-299.77	-71	-112	766	-2321	38	131	-573	-1990	0.068	0.799	0.87	Yes	0.040	0.501	0.55	Yes	0.431	0.563	1	Yes	0.428	0.472	0.91	Yes	1.00	**14.66**
		L_1 - L_2			472.58	-----	164	-295	672	-1553	165	-80	-434	639	0.574	0.421	1.00	Yes	0.341	0.268	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.77**
		L_2 - L_3			987.01	-----	-59	-247	65	-1073	-75	153	-76	-599	0.778	0.219	1.00	Yes	0.510	0.133	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.85**
		L_3 - L_4			1292.80	-----	-19	-481	-75	-1492	188	-18	-774	279	0.760	0.236	1.00	Yes	0.511	0.148	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
		L_4 - L_5			1742.07	-----	-420	-337	-840	-1596	-101	159	416	-452	0.812	0.181	1.00	Yes	0.538	0.109	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.96**
		L_5 - L_6			1860.14	-----	-208	-444	-645	-1959	198	-97	89	393	0.798	0.198	1.00	Yes	0.536	0.121	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.85**
		L_6 - L_7			1881.49	-----	-532	-171	-1878	-1384	-164	222	259	-535	0.796	0.198	1.00	Yes	0.529	0.117	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		L_7 - L_8			1461.25	-129.88	-254	475	-1156	-765	236	-135	-345	60	0.838	0.156	1.00	Yes	0.550	0.093	0.65	Yes	0.088	0.126	0.22	Yes	0.088	0.128	0.22	Yes	1.00	**5.08**
		L_8 - L_9			1040.47	-807.60	195	835	-901	-97	-38	215	-315	-1517	0.728	0.264	1.00	Yes	0.490	0.171	0.67	Yes	0.670	0.187	0.86	Yes	0.665	0.122	0.79	Yes	1.00	**8.15**
		L_9 - L_{10}			308.01	-803.57	-197	960	-605	54	249	-237	-616	-566	0.275	0.228	0.51	Yes	0.160	0.139	0.30	Yes	0.850	0.113	0.97	Yes	0.844	0.154	1.00	Yes	1.00	**5.84**
		L_{10} - L_{11}			189.11	-495.85	-1850	1464	-850	59	1015	647	-552	-2235	0.189	0.624	0.82	Yes	0.111	0.381	0.50	Yes	0.586	0.408	1	Yes	0.582	0.324	0.91	Yes	1.00	**16.61**
		L_{11} - L_{12}			-----	-1031.84	-71	1113	-296	679	72	-352	158	-218	-----	-----	-----	-----	-----	-----	-----	-----	0.853	0.122	0.98	Yes	0.846	0.152	1.00	Yes	1.00	**3.71**
		L_{12} - L_{13}			-----	-1265.33	-323	-81	-195	-1424	-137	291	-599	-837	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.222	1	Yes	0.763	0.143	0.91	Yes	1.00	**6.08**
		L_{13} - L_{14}			-----	-1461.16	-1112	2938	-405	1258	279	321	735	620	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.218	0.96	Yes	0.735	0.257	1.00	Yes	1.00	**5.44**
		L_{14} - L_{15}			-----	-1283.45	1542	-471	2759	-1167	429	394	149	-28	-----	-----	-----	-----	-----	-----	-----	-----	0.652	0.342	1	Yes	0.646	0.241	0.89	Yes	1.00	**3.33**
		L_{15} - L_{16}			-----	-1485.34	-796	368	-616	-950	225	-360	-623	-189	-----	-----	-----	-----	-----	-----	-----	-----	0.896	0.096	1	Yes	0.888	0.094	0.99	Yes	1.00	**8.06**
		L_{16} - L_{17}			-----	-1160.16	1201	64	1251	-780	-411	-10	-92	-658	-----	-----	-----	-----	-----	-----	-----	-----	0.852	0.138	1	Yes	0.845	0.154	1.00	Yes	1.00	**5.92**
		L_{17} - L_{18}			-----	-839.87	538	244	683	-736	129	-221	-370	265	-----	-----	-----	-----	-----	-----	-----	-----	0.888	0.072	0.97	Yes	0.882	0.118	1.00	Yes	1.00	**4.57**
		L_{18} - L_{19}			-----	-642.03	719	35	299	-628	-211	60	2	-420	-----	-----	-----	-----	-----	-----	-----	-----	0.861	0.115	0.98	Yes	0.856	0.139	1.00	Yes	1.00	**4.66**
		L_{19} - L_{20}			606.12	-570.60	569	196	293	-1154	152	-192	-70	574	0.687	0.311	1.00	Yes	0.406	0.195	0.61	Yes	0.765	0.160	0.93	Yes	0.760	0.223	0.99	Yes	1.00	**6.57**
		L_{20} - L_{21}			975.24	-356.05	475	-50	-526	-1158	-193	67	453	-465	0.778	0.219	1.00	Yes	0.510	0.132	0.65	Yes	0.336	0.168	0.51	Yes	0.334	0.169	0.51	Yes	1.00	**6.43**
		L_{21} - L_{22}			896.42	-23.68	-23	-178	-480	-1761	138	-159	-184	81	0.715	0.277	1.00	Yes	0.478	0.173	0.66	Yes	0.022	0.230	0.26	Yes	0.022	0.257	0.28	Yes	1.00	**4.77**
		L_{22} - L_{23}			904.81	-130.58	-265	158	-1328	-768	-46	217	105	-762	0.722	0.276	1.00	Yes	0.483	0.175	0.66	Yes	0.123	0.220	0.35	Yes	0.123	0.194	0.32	Yes	1.00	**5.01**
		L_{23} - L_{24}			985.19	-452.02	-5	573	-1115	-793	179	-145	-443	-22	0.786	0.210	1.00	Yes	0.515	0.127	0.65	Yes	0.427	0.150	0.58	Yes	0.424	0.163	0.59	Yes	1.00	**7.50**
		L_{24} - L_{25}			292.44	-641.22	263	579	-615	-137	-99	147	-110	-1253	0.331	0.310	0.65	Yes	0.196	0.190	0.39	Yes	0.860	0.137	1	Yes	0.855	0.119	0.98	Yes	1.00	**7.42**
		L_{25} - L_{26}			83.29	-638.51	27	727	-259	184	100	-164	-45	-89	0.094	0.166	0.26	Yes	0.054	0.098	0.16	Yes	0.856	0.104	0.96	Yes	0.851	0.140	1.00	Yes	1.00	**4.59**
		L_{26} - L_{27}			-----	-780.43	-883	1096	-176	123	685	525	-263	-806	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.171	1	Yes	0.820	0.175	1.00	Yes	1.00	**8.45**
		L_{27} - L_{28}			-----	-1124.08	-408	1424	-121	697	344	-146	197	-114	-----	-----	-----	-----	-----	-----	-----	-----	0.825	0.139	0.97	Yes	0.819	0.176	1.00	Yes	1.00	**5.47**
		L_{28} - L_{29}			-----	-1377.12	91	-249	-230	-1566	-82	315	-382	-656	-----	-----	-----	-----	-----	-----	-----	-----	0.831	0.162	1	Yes	0.824	0.156	0.98	Yes	1.00	**6.18**
		L_{29} - L_{30}			-----	-1462.97	-1268	2923	-560	1301	231	357	752	847	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.217	0.96	Yes	0.736	0.255	1.00	Yes	1.00	**5.37**
		L_{30} - L_{31}			-----	-1319.42	1714	-521	2584	-1000	480	421	142	17	-----	-----	-----	-----	-----	-----	-----	-----	0.670	0.328	1	Yes	0.664	0.226	0.89	Yes	1.00	**2.45**
		L_{31} - L_{32}			-----	-1465.07	-475	168	-227	-937	228	-276	110	398	-----	-----	-----	-----	-----	-----	-----	-----	0.884	0.114	1	Yes	0.876	0.093	0.97	Yes	1.00	**6.09**
		L_{32} - L_{33}			-----	-1047.85	1014	-70	927	-709	-324	27	37	-380	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.112	0.98	Yes	0.859	0.138	1.00	Yes	1.00	**4.17**
		L_{33} - L_{34}			-----	-735.09	601	27	681	-742	92	-150	-193	400	-----	-----	-----	-----	-----	-----	-----	-----	0.869	0.071	0.95	Yes	0.863	0.130	1.00	Yes	1.00	**3.77**
		L_{34} - L_{35}			303.93	-752.22	834	-101	497	-1301	-215	95	314	-808	0.271	0.305	0.58	Yes	0.158	0.187	0.35	Yes	0.795	0.124	0.92	Yes	0.790	0.208	1.00	Yes	1.00	**6.76**
		L_{35} - L_{36}			953.84	-445.64	652	-75	390	-1461	175	-148	-1367	355	0.667	0.326	1.00	Yes	0.449	0.208	0.66	Yes	0.369	0.163	0.54	Yes	0.367	0.197	0.57	Yes	1.00	**6.84**
		L_{36} - L_{37}			1357.30	-----	349	-226	-534	-1592	-211	147	416	-498	0.778	0.217	1.00	Yes	0.511	0.129	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{37} - L_{38}			1790.15	-----	-305	-624	-1183	-2334	113	-179	-562	95	0.758	0.240	1.00	Yes	0.504	0.142	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.10**
		L_{38} - L_{39}			1806.93	-----	-586	-217	-1966	-1191	-104	172	76	-796	0.775	0.224	1.00	Yes	0.520	0.139	0.66	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.27**
		L_{39} - L_{40}			1798.35	-----	-420	-305	-1329	-1425	130	-118	-40	306	0.838	0.155	1.00	Yes	0.555	0.093	0.65	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.47**
		L_{40} - L_{41}			1289.45	-----	-1180	207	-1361	-322	374	371	-118	-875	0.765	0.232	1.00	Yes	0.516	0.150	0.67	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.15**
		L_{41} - L_{42}			1004.06	-----	-967	329	-665	-251	165	-7	-428	-95	0.802	0.189	1.00	Yes	0.527	0.111	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.49**
		L_{42} - L_{43}			546.80	-----	-1264	639	-559	86	318	434	-86	-398	0.664	0.329	1.00	Yes	0.395	0.209	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**9.54**
		L_{43} - L_{44}			113.60	-274.58	-2978	1249	30	-115	1219	356	-78	-23	0.138	0.806	0.95	Yes	0.082	0.513	0.60	Yes	0.395	0.529	0.93	Yes	0.392	0.606	1.00	Yes	1.00	**26.89**
	Structure 3	L_0 - L_1			-----	-409.27	36	-169	434	-864	27	122	-123	-558	-----	-----	-----	-----	-----	-----	-----	-----	0.743	0.242	0.99	Yes	0.737	0.259	1.00	Yes	1.00	**5.85**
		L_1 - L_2			206.34	-3.71	177	-211	897	-1549	159	-66	-398	1018	0.316	0.676	1.00	Yes	0.214	0.430	0.65	Yes	0.007	0.608	0.62	Yes	0.007	0.465	0.48	Yes	1.00	**10.50**
		L_2 - L_3			840.11	-----	-21	-204	167	-893	-65	166	28	-744	0.732	0.267	1.00	Yes	0.468	0.163	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**8.06**
		L_3 - L_4			1167.82	-----	25	-403	121	-1314	192	1	-39	713	0.738	0.256	1.00	Yes	0.479	0.159	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.92**
		L_4 - L_5			1674.29	-----	-386	-233	-1145	-1071	-48	216	431	-550	0.818	0.177	1.00	Yes	0.525	0.105	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		L_5 - L_6			1545.75	-----	-141	-449	-268	-1732	248	-37	174	442	0.755	0.240	1.00	Yes	0.491	0.146	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		L_6 - L_7			1222.28	-----	-1487	391	-960	-255	583	307	-208	-859	0.719	0.276	1.00	Yes	0.466	0.171	0.64	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.34**
		L_7 - L_8			1124.19	-101.59	-79	206	-510	-398	155	-171	-123	34	0.887	0.111	1.00	Yes	0.567	0.066	0.64	Yes	0.095	0.097	0.2	Yes	0.094	0.091	0.19	Yes	1.00	**6.77**
		L_8 - L_9			464.22	-----	-835	527	-496	114	367	272	-179	-986	0.601	0.393	1.00	Yes	0.361	0.251	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.89**
		L_9 - L_{10}			-----	-562.36	-63	525	-463	204	144	-154	-85	-202	-----	-----	-----	-----	-----	-----	-----	-----	0.865	0.075	0.94	Yes	0.857	0.139	1.00	Yes	1.00	**5.25**
		L_{10} - L_{11}			-----	-968.80	-564	776	-95	-272	438	813	-792	-1772	-----	-----	-----	-----	-----	-----	-----	-----	0.789	0.208	1	Yes	0.780	0.122	0.91	Yes	1.00	**7.93**
		L_{11} - L_{12}			-----	-1258.78	-161	1259	-23	614	79	292	399	119	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.187	1	Yes	0.797	0.167	0.97	Yes	1.00	**4.70**
		L_{12} - L_{13}			-----	-1120.99	958	-9	1336	-192	-129	66	-108	-244	-----	-----	-----	-----	-----	-----	-----	-----	0.719	0.277	1	Yes	0.710	0.177	0.89	Yes	1.00	**2.96**
		L_{13} - L_{14}			-----	-1129.73	64	245	402	-558	275	-302	-451	86	-----	-----	-----	-----	-----	-----	-----	-----	0.920	0.040	0.97	Yes	0.909	0.088	1.00	Yes	1.00	**5.98**
		L_{14} - L_{15}			-----	-730.74	572	109	335	-327	-258	84	199	-368	-----	-----	-----	-----	-----	-----	-----	-----	0.866	0.130	1	Yes	0.857	0.129	0.99	Yes	1.00	**3.91**
		L_{15} - L_{16}			168.53	-529.80	467	123	346	-710	259	-213	-306	241	0.218	0.242	0.47	Yes	0.131	0.158	0.29	Yes	0.815	0.146	0.97	Yes	0.807	0.188	1.00	Yes	1.00	**4.14**
		L_{16} - L_{17}			655.56	-167.51	296	-60	-453	-633	-173	189	54	-561	0.754	0.243	1.00	Yes	0.448	0.154	0.61	Yes	0.229	0.183	0.42	Yes	0.227	0.153	0.38	Yes	1.00	**4.39**
		L_{17} - L_{18}			683.96	-96.85	65	-88	-529	-779	106	-110	19	31	0.787	0.206	1.00	Yes	0.455	0.124	0.58	Yes	0.132	0.219	0.36	Yes	0.131	0.188	0.32	Yes	1.00	**5.81**
		L_{18} - L_{19}			346.46	-----	-778	157	-240	-189	186	413	91	-1068	0.530	0.463	1.00	Yes	0.323	0.300	0.63	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.07**
		L_{19} - L_{20}			80.70	-93.77	-1439	1384	363	-474	-2071	-563	219	60	0.124	0.876	1.00	Yes	0.073	0.523	0.60	Yes	0.170	0.712	0.89	Yes	0.169	0.432	0.61	Yes	1.00	**34.03**

Operating Loads - 5C1

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	$U_0 - L_0$			-----	-280.68	-100	158	-11	49	-1006	-323	206	66	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.370	1	Yes	0.594	0.202	0.80	Yes	1.00	**1.73**
		$U_1 - L_1$			58.62	-319.11	-250	248	57	-48	-718	-259	631	208	0.105	0.527	0.64	Yes	0.058	0.290	0.35	Yes	0.697	0.273	0.98	Yes	0.675	0.319	1.00	Yes	1.00	**5.45**
		$U_2 - L_2$			131.14	-214.75	-140	178	116	-130	-1809	-597	883	247	0.236	0.751	0.99	Yes	0.130	0.413	0.55	Yes	0.469	0.530	1	Yes	0.454	0.227	0.69	Yes	1.00	**6.71**
		$U_3 - L_3$			258.84	-104.40	-109	118	204	-242	-454	-58	761	171	0.466	0.529	1.00	Yes	0.256	0.291	0.55	Yes	0.229	0.266	0.5	Yes	0.221	0.309	0.53	Yes	1.00	**12.11**
		$U_4 - L_4$			-----	-186.15	56	-64	265	-260	1062	336	-1871	-854	-----	-----	-----	-----	-----	-----	-----	-----	0.409	0.589	1	Yes	0.394	0.338	0.74	Yes	1.00	**8.45**
		$U_5 - L_5$			-----	-362.20	78	-84	180	-204	1078	612	-64	142	-----	-----	-----	-----	-----	-----	-----	-----	0.655	0.335	1	Yes	0.625	0.207	0.84	Yes	1.00	**3.57**
		$U_6 - L_6$			-----	-399.51	76	-63	199	-207	1651	790	636	365	-----	-----	-----	-----	-----	-----	-----	-----	0.605	0.392	1	Yes	0.573	0.181	0.76	Yes	1.00	**3.24**
		$U_7 - L_7$			-----	-388.80	98	-111	262	-281	1202	296	470	183	-----	-----	-----	-----	-----	-----	-----	-----	0.650	0.349	1	Yes	0.600	0.277	0.88	Yes	1.00	**3.14**
		$U_8 - L_8$			-----	-1223.50	-423	501	224	-274	-1024	-617	-251	-160	-----	-----	-----	-----	-----	-----	-----	-----	0.886	0.110	1	Yes	0.851	0.093	0.95	Yes	1.00	**5.97**
		$U_9 - L_9$			-----	-654.69	-410	450	-231	256	-263	-25	827	317	-----	-----	-----	-----	-----	-----	-----	-----	0.781	0.214	1	Yes	0.739	0.250	0.99	Yes	1.00	**2.86**
		$U_{10} - L_{10}$			-----	-779.46	-396	433	-165	144	-470	-29	683	304	-----	-----	-----	-----	-----	-----	-----	-----	0.807	0.185	1	Yes	0.769	0.224	1.00	Yes	1.00	**4.39**
		$U_{11} - L_{11}$			-----	-629.06	-327	441	-166	217	-1058	-127	635	368	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.243	1	Yes	0.732	0.205	0.94	Yes	1.00	**3.85**
		$U_{12} - L_{12}$			-----	-524.16	-320	328	-137	137	-425	5	687	361	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.225	0.99	Yes	0.719	0.280	1.00	Yes	1.00	**4.92**
		$U_{13} - L_{13}$			-----	-373.43	-214	241	-68	90	-530	86	16	59	-----	-----	-----	-----	-----	-----	-----	-----	0.755	0.242	1	Yes	0.715	0.276	1.00	Yes	1.00	**4.53**
		$U_{14} - L_{14}$			-----	-191.15	-240	254	120	-122	-40	-581	-1920	-672	-----	-----	-----	-----	-----	-----	-----	-----	0.427	0.565	1	Yes	0.404	0.325	0.73	Yes	1.00	**12.54**
		$U_{15} - L_{15}$			18.31	-272.98	-21	16	203	-222	438	87	-1126	-230	0.033	0.610	0.65	Yes	0.018	0.336	0.36	Yes	0.612	0.380	1	Yes	0.578	0.284	0.87	Yes	1.00	**5.87**
		$U_{16} - L_{16}$			-----	-321.45	46	-51	239	-249	474	107	-559	-100	-----	-----	-----	-----	-----	-----	-----	-----	0.724	0.243	0.97	Yes	0.680	0.318	1.00	Yes	1.00	**4.47**
		$U_{17} - L_{17}$			-----	-420.31	80	-93	204	-222	506	201	110	106	-----	-----	-----	-----	-----	-----	-----	-----	0.786	0.213	1	Yes	0.725	0.225	0.96	Yes	1.00	**3.10**
		$U_{18} - L_{18}$			-----	-533.77	175	-182	434	-448	683	174	-71	-19	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.184	0.97	Yes	0.742	0.254	1.00	Yes	1.00	**4.04**
		$U_{19} - L_{19}$			-----	-650.78	181	-194	490	-512	590	117	-164	-4	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.159	0.98	Yes	0.757	0.237	1.00	Yes	1.00	**5.01**
		$U_{20} - L_{20}$			-----	-542.25	232	-278	387	-465	434	57	258	34	-----	-----	-----	-----	-----	-----	-----	-----	0.792	0.202	1	Yes	0.694	0.246	0.95	Yes	1.00	**3.11**
	Structure 2	$U_0 - L_0$			-----	-624.44	-310	459	-160	266	-1036	-176	42	7	-----	-----	-----	-----	-----	-----	-----	-----	0.748	0.249	1	Yes	0.669	0.195	0.87	Yes	1.00	**2.08**
		$U_1 - L_1$			-----	-711.76	-547	547	-203	210	-286	28	631	161	-----	-----	-----	-----	-----	-----	-----	-----	0.814	0.147	0.97	Yes	0.763	0.232	1.00	Yes	1.00	**3.73**
		$U_2 - L_2$			-----	-594.36	-433	456	-150	165	-560	156	626	283	-----	-----	-----	-----	-----	-----	-----	-----	0.796	0.177	0.98	Yes	0.757	0.233	1.00	Yes	1.00	**3.42**
		$U_3 - L_3$			-----	-459.29	-219	234	-70	81	145	264	551	262	-----	-----	-----	-----	-----	-----	-----	-----	0.782	0.215	1	Yes	0.720	0.213	0.94	Yes	1.00	**3.15**
		$U_4 - L_4$			-----	-322.90	-195	203	-12	23	-252	126	569	231	-----	-----	-----	-----	-----	-----	-----	-----	0.732	0.263	1	Yes	0.683	0.260	0.95	Yes	1.00	**4.07**
		$U_5 - L_5$			83.24	-263.10	-147	173	68	-62	-1069	25	564	178	0.150	0.530	0.68	Yes	0.082	0.292	0.38	Yes	0.594	0.400	1	Yes	0.557	0.221	0.78	Yes	1.00	**5.72**
		$U_6 - L_6$			349.67	-94.06	-124	130	198	-204	-329	13	-380	-262	0.629	0.371	1.00	Yes	0.346	0.204	0.55	Yes	0.212	0.162	0.38	Yes	0.199	0.261	0.46	Yes	1.00	**8.84**
		$U_7 - L_7$			-----	-175.17	15	-18	355	-409	79	-233	-1790	-479	-----	-----	-----	-----	-----	-----	-----	-----	0.396	0.598	1	Yes	0.371	0.522	0.90	Yes	1.00	**12.38**
		$U_8 - L_8$			-----	-473.49	155	-174	331	-355	539	56	-486	-98	-----	-----	-----	-----	-----	-----	-----	-----	0.687	0.173	0.86	Yes	0.682	0.310	1.00	Yes	1.00	**3.54**
		$U_9 - L_9$			-----	-691.55	278	-278	576	-589	1160	623	-550	-32	-----	-----	-----	-----	-----	-----	-----	-----	0.770	0.220	0.99	Yes	0.741	0.250	1.00	Yes	1.00	**4.49**
		$U_{10} - L_{10}$			-----	-750.84	234	-234	506	-530	1190	708	-224	166	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.258	1	Yes	0.702	0.234	0.94	Yes	1.00	**4.42**
		$U_{11} - L_{11}$			-----	-730.67	227	-220	453	-457	1193	676	399	474	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.683	0.202	0.89	Yes	1.00	**3.54**
		$U_{12} - L_{12}$			-----	-720.08	186	-168	413	-406	1506	652	930	495	-----	-----	-----	-----	-----	-----	-----	-----	0.691	0.307	1	Yes	0.624	0.177	0.81	Yes	1.00	**3.48**
		$U_{13} - L_{13}$			-----	-612.04	223	-221	483	-472	1291	296	405	180	-----	-----	-----	-----	-----	-----	-----	-----	0.682	0.317	1	Yes	0.590	0.231	0.83	Yes	1.00	**3.52**
		$U_{14} - L_{14}$			-----	-1224.04	-608	564	480	-461	-668	-539	776	-68	-----	-----	-----	-----	-----	-----	-----	-----	0.895	0.101	1	Yes	0.812	0.108	0.92	Yes	1.00	**7.48**
		$U_{15} - L_{15}$			-----	-675.36	-602	575	-260	252	-102	-6	769	84	-----	-----	-----	-----	-----	-----	-----	-----	0.753	0.242	1	Yes	0.651	0.288	0.94	Yes	1.00	**4.30**
		$U_{16} - L_{16}$			-----	-700.98	-548	532	-201	168	35	143	817	175	-----	-----	-----	-----	-----	-----	-----	-----	0.810	0.182	1	Yes	0.751	0.232	0.99	Yes	1.00	**3.85**
		$U_{17} - L_{17}$			-----	-647.80	-521	525	-193	194	-671	90	594	193	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.168	0.97	Yes	0.754	0.244	1.00	Yes	1.00	**3.90**
		$U_{18} - L_{18}$			-----	-579.81	-482	500	-151	157	6	134	623	212	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.167	0.95	Yes	0.739	0.256	1.00	Yes	1.00	**4.08**
		$U_{19} - L_{19}$			-----	-481.68	-290	288	-82	84	-290	117	519	192	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.168	0.9	Yes	0.719	0.279	1.00	Yes	1.00	**3.90**
		$U_{20} - L_{20}$			-----	-362.79	-195	207	-36	40	-660	-25	518	179	-----	-----	-----	-----	-----	-----	-----	-----	0.744	0.253	1	Yes	0.695	0.236	0.94	Yes	1.00	**3.99**
		$U_{21} - L_{21}$			39.75	-319.57	-235	251	30	-20	-126	110	-122	-175	0.071	0.372	0.45	Yes	0.039	0.205	0.25	Yes	0.722	0.147	0.87	Yes	0.676	0.321	1.00	Yes	1.00	**6.49**
		$U_{22} - L_{22}$			-----	-211.99	-245	256	314	-347	-699	-722	-1510	-693	-----	-----	-----	-----	-----	-----	-----	-----	0.477	0.521	1	Yes	0.449	0.443	0.90	Yes	1.00	**16.88**
		$U_{23} - L_{23}$			-----	-321.38	8	-11	224	-242	524	165	-603	-43	-----	-----	-----	-----	-----	-----	-----	-----	0.726	0.268	1	Yes	0.680	0.309	0.99	Yes	1.00	**4.46**
		$U_{24} - L_{24}$			-----	-369.39	49	-54	224	-232	584	203	50	84	-----	-----	-----	-----	-----	-----	-----	-----	0.757	0.236	1	Yes	0.708	0.265	0.98	Yes	1.00	**3.61**
		$U_{25} - L_{25}$			-----	-475.40	96	-98	298	-297	588	223	-78	120	-----	-----	-----	-----	-----	-----	-----	-----	0.715	0.183	0.9	Yes	0.710	0.287	1.00	Yes	1.00	**3.54**
		$U_{26} - L_{26}$			-----	-575.28	165	-173	496	-520	708	300	48	240	-----	-----	-----	-----	-----	-----	-----	-----	0.767	0.189	0.96	Yes	0.733	0.266	1.00	Yes	1.00	**3.96**
		$U_{27} - L_{27}$			-----	-635.42	197	-201	553	-558	770	313	398	430	-----	-----	-----	-----	-----	-----	-----	-----	0.784	0.193	0.98	Yes	0.740	0.259	1.00	Yes	1.00	**4.39**
		$U_{28} - L_{28}$			-----	-608.49	154	-128	454	-438	1676	561	720	372	-----	-----	-----	-----	-----	-----	-----	-----	0.703	0.291	1	Yes	0.652	0.193	0.85	Yes	1.00	**3.90**
		$U_{29} - L_{29}$			-----	-590.60	151	-156	546	-533	1444	195	302	151	-----	-----	-----	-----	-----	-----	-----	-----	0.658	0.336	1	Yes	0.569	0.261	0.84	Yes	1.00	**5.02**
		$U_{30} - L_{30}$			-----	-1184.83	-574	507	282	-295	-552	-361	470	-180	-----	-----	-----	-----	-----	-----	-----	-----	0.900	0.091	1	Yes	0.815	0.106	0.93	Yes	1.00	**6.04**
		$U_{31} - L_{31}$			-----	-717.07	-545	524	-305	298	-251	34	511	95	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.199	1	Yes	0.691	0.261	0.96	Yes	1.00	**3.20**
		$U_{32} - L_{32}$			-----	-846.79	-455	450	-218	190	-691	4	612	186	-----	-----	-----	-----	-----	-----	-----	-----	0.812	0.183	1	Yes	0.734	0.195	0.93	Yes	1.00	**3.64**
		$U_{33} - L_{33}$			-----	-823.45	-508	502	-247	230	-158	182	553	233	-----	-----	-----	-----	-----	-----	-----	-----	0.828	0.159	0.99	Yes	0.770	0.224	1.00	Yes	1.00	**4.27**
		$U_{34} - L_{34}$			-----	-808.50	-525	546	-244	239	-711	-17	486	212	-----	-----	-----	-----	-----	-----	-----	-----	0.799	0.182	0.99	Yes	0.756	0.241	1.00	Yes	1.00	**4.88**
		$U_{35} - L_{35}$			-----	-685.84	-541	563	-254	269	-1174	-110	630	378	-----	-----	-----	-----	-----	-----	-----	-----	0.763	0.228	1	Yes	0.735	0.239	0.98	Yes	1.00	**4.59**
		$U_{36} - L_{36}$			-----	-475.70	-330	352	-134	157	-32	140	207	155	-----	-----	-----	-----	-----	-----	-----	-----	0.690	0.122	0.82	Yes	0.685	0.308	1.00	Yes	1.00	**4.54**
		$U_{37} - L_{37}$			-----	-203.47	-283	318	19	-15	-1220	-548	-1089	-354	-----	-----	-----	-----	-----	-----	-----	-----	0.460	0.540	1	Yes	0.431	0.406	0.84	Yes	1.00	**11.40**
		$U_{38} - L_{38}$			222.83	-164.90	-137	139	161	-172	29	-352	-1298	-347	0.401	0.595	1.00	Yes	0.220	0.327	0.55	Yes	0.371	0.362	0.74	Yes	0.349	0.219	0.57	Yes	1.00	**8.16**
		$U_{39} - L_{39}$			52.36	-295.31	-49	43	195	-217	527	154	-833	-94	0.094	0.518	0.62	Yes	0.052	0.285	0.34	Yes	0.667	0.326	1	Yes	0.625	0.277	0.91	Yes	1.00	**5.51**
		$U_{40} - L_{40}$			-----	-325.68	32	-40	213	-218	599	172	-171	-20	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.256	1	Yes	0.689	0.278	0.97	Yes	1.00	**3.80**
		$U_{41} - L_{41}$			-----	-461.06	85	-94	233	-246	579	192	97	104	-----	-----	-----	-----	-----	-----	-----	-----	0.785	0.211	1	Yes	0.723	0.224	0.95	Yes	1.00	**3.15**
		$U_{42} - L_{42}$			-----	-577.40	166	-176	492	-499	668	170	219	118	-----	-----	-----	-----	-----	-----	-----	-----	0.773	0.172	0.95	Yes	0.736	0.255	1.00	Yes	1.00	**4.10**
		$U_{43} - L_{43}$			-----	-706.63	185	-203	534	-554	621	187	414	216	-----	-----	-----	-----	-----	-----	-----	-----	0.808	0.153	0.97	Yes	0.757	0.235	1.00	Yes	1.00	**4.93**
		$U_{44} - L_{44}$			-----	-668.23	248	-305	469	-600	541	92	578	98	-----	-----	-----	-----	-----	-----	-----	-----	0.800	0.194	1	Yes	0.716	0.255	0.98	Yes	1.00	**4.17**
	Structure 3	$U_0 - L_0$			-----	-543.84	-264	388	-133	231	-529	-69	107	14	-----	-----	-----	-----	-----	-----	-----	-----	0.777	0.217	1	Yes	0.681	0.199	0.89	Yes	1.00	**1.92**
		$U_1 - L_1$			-----	-648.52	-523	510	-207	206	-58	128	623	144	-----	-----	-----	-----	-----	-----	-----	-----	0.809	0.164	0.98	Yes	0.755	0.243	1.00	Yes	1.00	**3.88**
		$U_2 - L_2$			-----	-542.67	-398	415	-158	169	-269	190	662	307	-----	-----	-----	-----	-----	-----	-----	-----	0.795	0.195	0.99	Yes	0.755	0.235	1.00	Yes	1.00	**3.47**
		$U_3 - L_3$			-----	-407.41	-177	199	-69	84	-379	186	565	271	-----	-----	-----	-----	-----	-----	-----	-----	0.762	0.230	1	Yes	0.703	0.202	0.91	Yes	1.00	**2.75**
		$U_4 - L_4$			-----	-300.16	-203	214	-32	38	-794	68	613	224	-----	-----	-----	-----	-----	-----	-----	-----	0.676	0.319	1	Yes	0.635	0.274	0.91	Yes	1.00	**4.54**
		$U_5 - L_5$			79.43	-279.83	-213	233	63	-52	-920	14	-220	-158	0.143	0.564	0.71	Yes	0.079	0.310	0.39	Yes	0.627	0.369	1	Yes	0.592	0.298	0.89	Yes	1.00	**7.91**
		$U_6 - L_6$			-----	-183.28	-60	59	297	-316	163	-332	-1916	-738	-----	-----	-----	-----	-----	-----	-----	-----	0.409	0.590	1	Yes	0.388	0.404	0.80	Yes	1.00	**11.14**
		$U_7 - L_7$			-----	-367.13	83	-101	227	-254	529	16	-333	-50	-----	-----	-----	-----	-----	-----	-----	-----	0.742	0.219	0.97	Yes	0.703	0.290	1.00	Yes	1.00	**3.55**
		$U_8 - L_8$			-----	-501.83	148	-146	325	-327	943	436	-523	-133	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.269	1	Yes	0.689	0.279	0.97	Yes	1.00	**4.07**
		$U_9 - L_9$			-----	-604.73	181	-227	365	-460	1245	740	305	369	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.269	1	Yes	0.704	0.214	0.92	Yes	1.00	**3.97**
		$U_{10} - L_{10}$			-----	-604.89	153	-141	303	-316	1859	955	977	628	-----	-----	-----	-----	-----	-----	-----	-----	0.627	0.365	1	Yes	0.597	0.164	0.77	Yes	1.00	**3.42**
		$U_{11} - L_{11}$			-----	-587.67	190	-222	383	-432	1289	574	576	392	-----	-----	-----	-----	-----	-----	-----	-----	0.701	0.291	1	Yes	0.664	0.240	0.91	Yes	1.00	**3.33**
		$U_{12} - L_{12}$			-----	-1130.77	-337	353	301	-408	-1565	-542	683	182	-----	-----	-----	-----	-----	-----	-----	-----	0.816	0.174	1	Yes	0.784	0.076	0.86	Yes	1.00	**6.18**
		$U_{13} - L_{13}$			-----	-441.98	-268	287	-154	167	-752	-69	633	151	-----	-----	-----	-----	-----	-----	-----	-----	0.739	0.258	1	Yes	0.682	0.283	0.97	Yes	1.00	**2.44**
		$U_{14} - L_{14}$			-----	-497.98	-267	285	-100	84	-31	25	850	279	-----	-----	-----	-----	-----	-----	-----	-----	0.754	0.245	1	Yes	0.714	0.249	0.97	Yes	1.00	**4.40**
		$U_{15} - L_{15}$			-----	-406.06	-198	225	-79	84	-686	-126	785	256	-----	-----	-----	-----	-----	-----	-----	-----	0.735	0.259	1	Yes	0.701	0.228	0.93	Yes	1.00	**4.74**
		$U_{16} - L_{16}$			-----	-199.58	-380	368	-6	23	-64	-695	-1694	-941	-----	-----	-----	-----	-----	-----	-----	-----	0.439	0.557	1	Yes	0.422	0.485	0.91	Yes	1.00	**17.55**
		$U_{17} - L_{17}$			172.50	-155.44	-172	192	113	-132	452	163	-1513	-557	0.310	0.683	1.00	Yes	0.171	0.376	0.55	Yes	0.341	0.449	0.79	Yes	0.329	0.245	0.58	Yes	1.00	**8.35**
		$U_{18} - L_{18}$			108.97	-275.27	-115	124	220	-259	464	147	-1127	-512	0.196	0.658	0.86	Yes	0.108	0.362	0.47	Yes	0.602	0.397	1	Yes	0.582	0.332	0.92	Yes	1.00	**7.43**
		$U_{19} - L_{19}$			8.79	-329.32	-38	22	228	-236	418	216	131	86	0.016	0.423	0.44	Yes	0.009	0.233	0.25	Yes	0.720	0.209	0.93	Yes	0.697	0.302	1.00	Yes	1.00	**5.57**
		$U_{20} - L_{20}$			-----	-322.88	75	-85	195	-242	602	193	288	92	-----	-----	-----	-----	-----	-----	-----	-----	0.721	0.273	1	Yes	0.683	0.310	1.00	Yes	1.00	**3.20**

Operating Loads - 5C1

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	$U_0 - L_1$	433.86	-39.67	-100	59	3	-12	-1232	-483	76	149	0.569	0.427	1.00	Yes	0.344	0.235	0.58	Yes	0.068	0.349	0.42	Yes	0.061	0.117	0.18	Yes	1.00	**4.58**
		$U_1 - L_2$	307.93	-----	-73	23	-20	-27	-299	-78	-1190	-418	0.554	0.437	1.00	Yes	0.305	0.241	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.67**
		$U_2 - L_3$	130.79	-197.60	-46	-2	-38	-71	-29	-148	-1746	-399	0.235	0.596	0.84	Yes	0.129	0.328	0.46	Yes	0.455	0.538	1	Yes	0.418	0.090	0.51	Yes	1.00	**9.04**
		$U_3 - L_4$	-----	-284.73	38	1	-55	-137	889	553	-254	-516	-----	-----	-----	-----	-----	-----	-----	-----	0.651	0.348	1	Yes	0.602	0.176	0.78	Yes	1.00	**10.48**
		$U_4 - L_4$	519.86	-----	4	102	-94	19	-85	182	-179	561	0.762	0.234	1.00	Yes	0.419	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**7.74**
		$U_4 - L_5$	683.34	-----	-196	223	-44	103	-189	308	-250	31	0.808	0.183	1.00	Yes	0.444	0.101	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.11**
		$U_5 - L_5$	606.72	-----	-262	248	-27	82	-324	69	-717	-51	0.717	0.280	1.00	Yes	0.395	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.18**
		$U_5 - L_7$	649.62	-----	-93	312	34	76	-144	97	-288	-224	0.768	0.230	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.24**
		$U_6 - L_7$	955.58	-----	-81	372	-22	174	-227	-271	546	172	0.764	0.235	1.00	Yes	0.473	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.88**
		$U_8 - L_{10}$	1012.87	-----	-301	262	-123	116	-375	-409	364	142	0.810	0.187	1.00	Yes	0.502	0.105	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.00**
		$U_{10} - L_{11}$	951.85	-----	-227	194	-95	90	-561	-617	85	-98	0.804	0.186	1.00	Yes	0.498	0.106	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.71**
		$U_{11} - L_{12}$	712.25	-----	-218	96	-169	24	-426	-422	-1274	-746	0.705	0.292	1.00	Yes	0.388	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.30**
		$U_{12} - L_{13}$	543.67	-----	-183	131	-113	48	-271	-492	-911	-373	0.663	0.337	1.00	Yes	0.417	0.194	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.57**
		$U_{13} - L_{14}$	346.21	-----	-70	27	-37	-28	-85	-188	-978	-377	0.623	0.372	1.00	Yes	0.342	0.205	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.95**
		$U_{15} - L_{14}$	390.18	-279.99	-104	11	34	-116	-254	-487	397	-166	0.702	0.290	1.00	Yes	0.386	0.159	0.55	Yes	0.656	0.326	0.99	Yes	0.592	0.148	0.75	Yes	1.00	**12.77**
		$U_{16} - L_{15}$	408.41	-----	-146	93	-26	-7	-181	83	-253	-128	0.735	0.259	1.00	Yes	0.404	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.01**
		$U_{17} - L_{16}$	525.64	-----	-143	98	-47	24	-336	-60	-304	-104	0.771	0.224	1.00	Yes	0.424	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{18} - L_{17}$	621.74	-----	-333	254	-132	90	-346	36	-402	-110	0.735	0.261	1.00	Yes	0.404	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_{19} - L_{18}$	691.66	-----	-335	253	-133	97	-360	-92	-460	-204	0.749	0.247	1.00	Yes	0.412	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.47**
		$U_{20} - L_{19}$	698.11	-----	-385	327	-178	142	-181	-2	-274	-140	0.756	0.242	1.00	Yes	0.416	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.86**
	Structure 2	$U_0 - L_1$	679.22	-----	-278	306	-100	128	-1197	-363	-156	5	0.672	0.321	1.00	Yes	0.370	0.177	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_1 - L_2$	741.02	-----	-390	302	-157	112	-399	-538	159	-18	0.733	0.261	1.00	Yes	0.403	0.144	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.51**
		$U_2 - L_3$	594.87	-----	-313	248	-112	84	-302	-614	138	-17	0.703	0.288	1.00	Yes	0.387	0.159	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.27**
		$U_3 - L_4$	564.59	-----	-176	126	-44	18	-361	-370	200	33	0.753	0.238	1.00	Yes	0.414	0.131	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_4 - L_5$	376.20	-70.27	-131	86	11	-24	-291	-515	268	56	0.677	0.316	1.00	Yes	0.372	0.174	0.55	Yes	0.173	0.180	0.36	Yes	0.149	0.167	0.32	Yes	1.00	**5.66**
		$U_5 - L_6$	250.81	-226.14	-76	29	44	-104	-313	-200	-1412	-208	0.451	0.541	1.00	Yes	0.248	0.298	0.55	Yes	0.534	0.317	0.86	Yes	0.479	0.133	0.62	Yes	1.00	**7.21**
		$U_6 - L_7$	-----	-364.30	1	-41	39	-99	81	-84	-588	-91	-----	-----	-----	-----	-----	-----	-----	-----	0.780	0.214	1	Yes	0.698	0.113	0.82	Yes	1.00	**3.41**
		$U_8 - L_7$	592.50	-----	-187	149	-90	47	-280	14	336	-199	0.755	0.236	1.00	Yes	0.476	0.133	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.61**
		$U_8 - L_9$	733.00	-----	-337	255	-172	120	-202	-29	-135	-53	0.794	0.206	1.00	Yes	0.437	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.85**
		$U_{10} - L_9$	829.08	-----	-310	253	-157	129	-120	197	-216	-55	0.820	0.176	1.00	Yes	0.451	0.097	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.09**
		$U_{11} - L_{10}$	886.14	-----	-342	308	-177	163	-199	229	-319	11	0.807	0.189	1.00	Yes	0.444	0.104	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.08**
		$U_{12} - L_{11}$	850.47	-----	-332	348	-131	175	-526	218	-561	60	0.775	0.224	1.00	Yes	0.426	0.123	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.82**
		$U_{13} - L_{12}$	712.62	-----	-399	371	-159	163	-484	68	-686	-55	0.705	0.288	1.00	Yes	0.388	0.158	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.80**
		$U_{14} - L_{13}$	765.68	-----	-263	443	-9	113	-17	141	-228	-233	0.757	0.240	1.00	Yes	0.417	0.132	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{14} - L_{15}$	596.13	-----	-192	343	-20	164	105	-286	533	245	0.705	0.291	1.00	Yes	0.388	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.76**
		$U_{15} - L_{16}$	605.35	-----	-356	326	-174	162	182	-324	428	104	0.716	0.279	1.00	Yes	0.394	0.154	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.94**
		$U_{16} - L_{17}$	694.27	-----	-327	354	-125	151	41	-322	374	111	0.752	0.243	1.00	Yes	0.414	0.133	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{17} - L_{18}$	645.79	-----	-284	281	-108	123	-33	-396	361	91	0.763	0.233	1.00	Yes	0.420	0.128	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.55**
		$U_{18} - L_{19}$	651.26	-----	-277	269	-74	87	-182	-376	302	89	0.770	0.225	1.00	Yes	0.423	0.124	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.64**
		$U_{19} - L_{20}$	581.65	-----	-191	165	-34	39	-262	-411	310	97	0.742	0.255	1.00	Yes	0.408	0.145	0.56	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.90**
		$U_{20} - L_{21}$	380.30	-----	-113	101	-27	-2	-139	-203	-572	-88	0.684	0.310	1.00	Yes	0.376	0.171	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.16**
		$U_{21} - L_{22}$	218.50	-202.22	-51	57	-1	-91	297	69	-1534	-368	0.393	0.561	0.96	Yes	0.216	0.308	0.53	Yes	0.478	0.512	1	Yes	0.428	0.116	0.55	Yes	1.00	**7.91**
		$U_{23} - L_{22}$	390.56	-84.87	-106	56	-11	-39	-257	-104	542	-142	0.702	0.292	1.00	Yes	0.386	0.160	0.55	Yes	0.202	0.216	0.42	Yes	0.180	0.135	0.32	Yes	1.00	**6.27**
		$U_{24} - L_{23}$	426.21	-----	-122	107	-16	15	-184	69	-257	-64	0.767	0.231	1.00	Yes	0.422	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.16**
		$U_{25} - L_{24}$	597.59	-----	-189	179	-38	46	-188	55	-303	-84	0.762	0.231	1.00	Yes	0.419	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.44**
		$U_{26} - L_{25}$	669.42	-----	-282	278	-77	95	-54	214	-256	-59	0.791	0.206	1.00	Yes	0.435	0.113	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.34**
		$U_{27} - L_{26}$	646.85	-----	-279	294	-105	124	-272	187	-343	-9	0.765	0.229	1.00	Yes	0.421	0.126	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.75**
		$U_{28} - L_{27}$	670.61	-----	-303	341	-93	147	-385	250	-558	45	0.726	0.267	1.00	Yes	0.399	0.147	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.92**
		$U_{29} - L_{28}$	568.85	-----	-329	320	-91	106	-354	83	-730	-37	0.673	0.319	1.00	Yes	0.370	0.175	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.06**
		$U_{30} - L_{29}$	622.30	-----	-192	359	39	63	-133	77	-268	-303	0.736	0.258	1.00	Yes	0.405	0.142	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.29**
		$U_{30} - L_{31}$	727.04	-----	-256	429	-68	222	27	-484	420	183	0.719	0.271	1.00	Yes	0.396	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.73**
		$U_{31} - L_{32}$	742.32	-----	-431	377	-234	214	-154	-425	306	73	0.734	0.264	1.00	Yes	0.404	0.145	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**2.91**
		$U_{32} - L_{33}$	844.26	-----	-339	338	-160	192	-189	-573	285	59	0.769	0.222	1.00	Yes	0.423	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.46**
		$U_{33} - L_{34}$	871.42	-----	-326	294	-176	152	-428	-426	87	-99	0.794	0.197	1.00	Yes	0.437	0.108	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{34} - L_{35}$	781.82	-----	-291	234	-155	121	-389	-576	2	-143	0.773	0.221	1.00	Yes	0.425	0.122	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.02**
		$U_{35} - L_{36}$	662.15	-----	-298	229	-188	100	-331	-281	-758	-337	0.717	0.277	1.00	Yes	0.394	0.152	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.13**
		$U_{36} - L_{37}$	540.78	-----	-171	134	-82	22	-118	-539	-770	-270	0.690	0.310	1.00	Yes	0.434	0.178	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.37**
		$U_{38} - L_{37}$	-----	-338.23	-24	-29	30	-86	-333	-167	526	-309	-----	-----	-----	-----	-----	-----	-----	-----	0.731	0.264	1	Yes	0.648	0.098	0.75	Yes	1.00	**4.22**
		$U_{39} - L_{38}$	435.47	-142.74	-133	64	39	-77	-159	-39	-67	-63	0.783	0.216	1.00	Yes	0.431	0.119	0.55	Yes	0.340	0.171	0.52	Yes	0.302	0.170	0.48	Yes	1.00	**8.56**
		$U_{40} - L_{39}$	398.97	-19.55	-132	91	-3	-11	-277	108	-383	-103	0.718	0.279	1.00	Yes	0.395	0.154	0.55	Yes	0.047	0.163	0.21	Yes	0.041	0.168	0.21	Yes	1.00	**4.96**
		$U_{41} - L_{40}$	561.18	-----	-176	126	-54	28	-292	-48	-416	-182	0.748	0.248	1.00	Yes	0.411	0.136	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.68**
		$U_{42} - L_{41}$	627.66	-----	-323	264	-118	88	-402	-19	-403	-172	0.742	0.256	1.00	Yes	0.408	0.141	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.77**
		$U_{43} - L_{42}$	769.89	-----	-378	309	-133	100	-372	-58	-375	-195	0.762	0.232	1.00	Yes	0.419	0.127	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.68**
		$U_{44} - L_{43}$	808.56	-----	-375	375	-158	151	-105	64	-170	13	0.800	0.200	1.00	Yes	0.440	0.110	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.29**
	Structure 3	$U_0 - L_1$	569.01	-----	-283	264	-80	105	-1424	-208	-150	1	0.616	0.379	1.00	Yes	0.339	0.208	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.28**
		$U_1 - L_2$	653.26	-----	-341	240	-159	109	-395	-703	161	-43	0.708	0.290	1.00	Yes	0.389	0.160	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.19**
		$U_2 - L_3$	596.43	-----	-310	247	-121	83	-416	-645	141	-21	0.705	0.292	1.00	Yes	0.388	0.161	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.99**
		$U_3 - L_4$	508.08	-----	-140	97	-38	16	-466	-441	176	-11	0.745	0.250	1.00	Yes	0.410	0.138	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.27**
		$U_4 - L_5$	316.06	-39.80	-111	76	-36	-14	-281	-371	-988	-196	0.568	0.428	1.00	Yes	0.313	0.236	0.55	Yes	0.094	0.249	0.35	Yes	0.084	0.142	0.23	Yes	1.00	**5.89**
		$U_5 - L_6$	126.63	-258.10	-38	-16	16	-112	-75	-70	-1356	-376	0.228	0.536	0.77	Yes	0.125	0.295	0.43	Yes	0.605	0.385	1	Yes	0.546	0.143	0.69	Yes	1.00	**6.77**
		$U_7 - L_6$	452.38	-----	-93	41	-28	-8	-178	-218	-148	-112	0.814	0.182	1.00	Yes	0.447	0.100	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.96**
		$U_8 - L_7$	643.26	-----	-209	162	-89	57	-167	104	80	-78	0.784	0.216	1.00	Yes	0.493	0.121	0.62	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.75**
		$U_8 - L_9$	768.71	-----	-237	114	-143	51	-145	88	848	275	0.760	0.237	1.00	Yes	0.418	0.130	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.26**
		$U_{10} - L_9$	1000.70	-----	-236	204	-91	98	-255	329	-206	53	0.845	0.152	1.00	Yes	0.523	0.086	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**5.81**
		$U_{11} - L_{10}$	987.08	-----	-286	281	-65	100	-258	197	-649	-190	0.789	0.210	1.00	Yes	0.489	0.119	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.19**
		$U_{12} - L_{11}$	965.57	-----	-83	369	21	117	80	354	-460	-172	0.772	0.223	1.00	Yes	0.478	0.125	0.61	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.85**
		$U_{12} - L_{13}$	614.76	-----	-89	293	-19	143	-129	-381	573	269	0.727	0.271	1.00	Yes	0.400	0.149	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**3.93**
		$U_{13} - L_{14}$	620.25	-----	-287	230	-113	115	-536	-431	453	159	0.733	0.261	1.00	Yes	0.403	0.143	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**4.00**
		$U_{14} - L_{15}$	626.86	-----	-180	195	-53	98	-778	-601	325	98	0.741	0.252	1.00	Yes	0.408	0.139	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.06**
		$U_{15} - L_{16}$	373.27	-----	-3	98	-99	-8	558	308	-1502	-852	0.547	0.451	1.00	Yes	0.301	0.248	0.55	Yes	-----	-----	-----	-----	-----	-----	-----	-----	1.00	**6.66**
		$U_{17} - L_{16}$	-----	-316.92	58	-8	-51	-81	-190	35	615	7	-----	-----	-----	-----	-----	-----	-----	-----	0.725	0.270	1	Yes	0.671	0.104	0.78	Yes	1.00	**7.35**
		$U_{18} - L_{17}$	210.55	-214.52	-77	5	-62	-53	-323	-225	1371	-178	0.379	0.495	0.88	Yes	0.208	0.272	0.49	Yes	0.494	0.501	1	Yes	0.454	0.098	0.56	Yes	1.00	**10.34**
		$U_{19} - L_{18}$	441.32	-130.43	-87	16	23	-23	-317	-283	-200	-114	0.794	0.203	1.00	Yes	0.437	0.111	0.55	Yes	0.299	0.187	0.49	Yes	0.276	0.111	0.39	Yes	1.00	**6.62**
		$U_{20} - L_{19}$	602.25	-28.70	-125	82	-27	1	-244	-24	-62	13	0.790	0.208	1.00	Yes	0.477	0.115	0.60	Yes	0.049	0.117	0.17	Yes	0.044	0.146	0.20	Yes	1.00	**6.82**

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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
North Truss - Upper Chord / Structure 1	U_0 - U_1	4.03	-7.05	2.17	2.17	-1.50	-1.50					1.24	0.90	4.03	2.42	-----	Vehicle	-7.05	-1.67	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**37.34**	**62.24**	**53.01**	**88.35**
	U_1 - U_2	3.66	-3.76	2.48	2.48	-0.42	-0.42					1.24	0.90	3.66	2.76	-----	Vehicle	-3.76	-0.46	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**32.76**	**54.60**	**195.41**	**325.69**
	U_2 - U_3	2.55	-7.28	1.82	1.82	-0.86	-0.86					1.24	0.90	2.55	2.02	-----	Vehicle	-7.28	-0.96	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**45.15**	**75.24**	**91.89**	**153.15**
	U_3 - U_4	2.05	-4.84	1.36	1.36	-1.46	-1.46					1.24	0.90	2.05	1.51	-----	Vehicle	-4.84	-1.63	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**60.67**	**101.12**	**55.20**	**92.01**
	U_4 - U_5	2.25	-4.26	0.83	0.83	-1.86	-1.86					1.24	0.90	2.25	0.92	-----	Vehicle	-4.26	-2.07	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**99.40**	**165.67**	**43.51**	**72.52**
	U_5 - U_6	3.34	-7.20	0.23	0.23	-2.03	-2.03					1.24	0.90	3.34	0.26	-----	Vehicle	-7.20	-2.26	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**348.36**	**580.60**	**39.09**	**65.15**
	U_6 - U_7	6.22	-5.16	1.01	1.01	-1.51	-1.51					1.24	0.90	6.22	1.12	-----	Vehicle	-5.16	-1.68	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**161.98**	**269.97**	**108.73**	**181.21**
	U_7 - U_8	-2.11	-14.70	0.06	0.06	-5.53	-5.53					1.24	0.90	-2.11	0.07	-----	Vehicle	-14.70	-6.15	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**3660.85**	**6101.42**	**38.77**	**64.62**
	U_8 - U_9	15.50	2.88	4.25	4.25	-0.18	-0.18					1.20	0.90	15.50	4.58	-----	Vehicle	2.88	-0.19	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**21.58**	**35.97**	**566.48**	**944.13**
	U_9 - U_{10}	6.69	-6.01	1.68	1.68	-0.49	-0.49					1.20	0.90	6.69	1.81	-----	Vehicle	-6.01	-0.53	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**49.02**	**81.70**	**168.74**	**281.23**
	U_{10} - U_{11}	9.67	-1.66	3.02	3.02	-0.10	-0.10					1.20	0.90	9.67	3.25	-----	Vehicle	-1.66	-0.11	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**26.75**	**44.58**	**859.64**	**1432.74**
	U_{11} - U_{12}	7.40	-2.11	2.48	2.48	-0.21	-0.21					1.20	0.90	7.40	2.68	-----	Vehicle	-2.11	-0.23	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**44.52**	**74.20**	**532.99**	**888.32**
	U_{12} - U_{13}	9.24	-6.21	2.33	2.33	-0.67	-0.67					1.20	0.90	9.24	2.51	-----	Vehicle	-6.21	-0.72	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**129.49**	**215.82**	**453.92**	**756.53**
	U_{13} - U_{14}	6.34	-2.26	3.63	3.63	-0.61	-0.61					1.20	0.90	6.34	3.91	-----	Vehicle	-2.26	-0.66	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**97.77**	**162.96**	**585.56**	**975.94**
	U_{14} - U_{15}	3.46	-4.65	1.61	1.61	-2.73	-2.73					1.20	0.90	3.46	1.73	-----	Vehicle	-4.65	-2.94	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**222.13**	**370.22**	**130.45**	**217.41**
	U_{15} - U_{16}	9.23	-5.79	2.07	2.07	-1.87	-1.87					1.20	0.90	9.23	2.23	-----	Vehicle	-5.79	-2.01	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**170.77**	**284.61**	**190.47**	**317.45**
	U_{16} - U_{17}	2.63	-6.22	1.19	1.19	-2.68	-2.68					1.20	0.90	2.63	1.28	-----	Vehicle	-6.22	-2.89	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**301.00**	**501.67**	**132.26**	**220.44**
	U_{17} - U_{18}	5.96	-9.96	0.42	0.42	-2.53	-2.53					1.20	0.90	5.96	0.46	-----	Vehicle	-9.96	-2.72	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**615.85**	**1026.42**	**102.04**	**170.07**
	U_{18} - U_{19}	3.04	-6.68	0.59	0.59	-2.19	-2.19					1.20	0.90	3.04	0.64	-----	Vehicle	-6.68	-2.36	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**166.40**	**277.33**	**44.13**	**73.55**
	U_{19} - U_{20}	-1.83	-11.18	1.10	1.10	-4.21	-4.21					1.20	0.90	-1.83	1.19	-----	Vehicle	-11.18	-4.54	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**92.17**	**153.61**	**22.38**	**37.30**
	U_0 - U_1	10.02	-6.16	2.96	2.96	-0.52	-0.52					1.18	0.90	10.02	3.15	-----	Vehicle	-6.16	-0.55	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**33.82**	**56.37**	**197.14**	**328.57**
	U_1 - U_2	9.17	-4.67	2.70	2.70	-0.43	-0.43					1.18	0.90	9.17	2.87	-----	Vehicle	-4.67	-0.46	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**76.56**	**127.60**	**487.04**	**811.74**
	U_2 - U_3	8.60	-2.60	4.28	4.28	-0.42	-0.42					1.18	0.90	8.60	4.56	-----	Vehicle	-2.60	-0.45	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**35.93**	**59.89**	**374.33**	**623.88**
	U_3 - U_4	8.30	-7.59	3.04	3.04	-1.23	-1.23					1.18	0.90	8.30	3.24	-----	Vehicle	-7.59	-1.30	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**114.31**	**190.51**	**284.36**	**473.94**
	U_4 - U_5	5.53	-4.81	3.91	3.91	-1.36	-1.36					1.18	0.90	5.53	4.17	-----	Vehicle	-4.81	-1.44	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**107.32**	**178.86**	**309.83**	**516.38**
	U_5 - U_6	2.61	-7.66	3.13	3.13	-2.82	-2.82					1.18	0.90	2.61	3.33	-----	Vehicle	-7.66	-3.00	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**134.76**	**224.61**	**148.79**	**247.98**
	U_6 - U_7	6.14	-9.62	3.66	3.66	-2.00	-2.00					1.18	0.90	6.14	3.90	-----	Vehicle	-9.62	-2.13	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**95.43**	**159.04**	**173.77**	**289.62**
	U_7 - U_8	8.07	-7.40	1.60	1.60	-3.99	-3.99					1.18	0.90	8.07	1.70	-----	Vehicle	-7.40	-4.25	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**218.23**	**363.71**	**87.38**	**145.63**
	U_8 - U_9	4.03	-10.39	1.58	1.58	-3.41	-3.41					1.18	0.90	4.03	1.68	-----	Vehicle	-10.39	-3.63	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**188.86**	**314.77**	**86.18**	**143.63**
	U_9 - U_{10}	2.04	-9.48	0.62	0.62	-2.88	-2.88					1.18	0.90	2.04	0.66	-----	Vehicle	-9.48	-3.06	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**196.58**	**327.63**	**41.04**	**68.40**
	U_{10} - U_{11}	4.39	-9.86	0.71	0.71	-2.80	-2.80					1.18	0.90	4.39	0.76	-----	Vehicle	-9.86	-2.98	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**169.87**	**283.11**	**42.09**	**70.16**
	U_{11} - U_{12}	3.80	-11.57	0.87	0.87	-3.21	-3.21					1.18	0.90	3.80	0.93	-----	Vehicle	-11.57	-3.41	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**138.92**	**231.53**	**36.47**	**60.79**
	U_{12} - U_{13}	9.58	-8.07	1.90	1.90	-1.35	-1.35					1.18	0.90	9.58	2.03	-----	Vehicle	-8.07	-1.44	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**136.21**	**227.02**	**192.11**	**320.18**
	U_{13} - U_{14}	-8.42	-23.99	0.32	0.32	-7.69	-7.69					1.18	0.90	-8.42	0.34	-----	Vehicle	-23.99	-8.19	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1182.96**	**1971.59**	**46.37**	**77.28**
	U_{14} - U_{15}	20.62	5.04	6.80	6.80	-0.40	-0.40					1.17	0.90	20.62	7.15	-----	Vehicle	5.04	-0.42	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**53.38**	**88.97**	**946.28**	**1577.13**
	U_{15} - U_{16}	6.58	-9.91	2.07	2.07	-1.37	-1.37					1.17	0.90	6.58	2.17	-----	Vehicle	-9.91	-1.44	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**144.93**	**241.55**	**217.12**	**361.86**
	U_{16} - U_{17}	8.97	-2.82	3.37	3.37	-0.25	-0.25					1.17	0.90	8.97	3.55	-----	Vehicle	-2.82	-0.26	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**46.12**	**76.86**	**643.62**	**1072.70**
	U_{17} - U_{18}	8.01	-5.78	3.11	3.11	-0.41	-0.41					1.17	0.90	8.01	3.27	-----	Vehicle	-5.78	-0.43	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**32.99**	**54.98**	**253.07**	**421.78**
	U_{18} - U_{19}	8.40	-4.13	3.24	3.24	-0.38	-0.38					1.17	0.90	8.40	3.41	-----	Vehicle	-4.13	-0.40	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**31.53**	**52.56**	**276.24**	**460.41**
	U_{19} - U_{20}	5.53	-4.62	2.19	2.19	-0.73	-0.73					1.17	0.90	5.53	2.30	-----	Vehicle	-4.62	-0.77	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**55.67**	**92.78**	**167.72**	**279.53**
	U_{20} - U_{21}	6.82	-6.42	3.46	3.46	-1.30	-1.30					1.17	0.90	6.82	3.64	-----	Vehicle	-6.42	-1.37	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**65.99**	**109.98**	**175.07**	**291.78**
	U_{21} - U_{22}	6.17	-6.84	2.96	2.96	-1.10	-1.10					1.17	0.90	6.17	3.12	-----	Vehicle	-6.84	-1.16	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**77.15**	**128.58**	**207.70**	**346.16**
	U_{22} - U_{23}	7.10	-6.07	1.57	1.57	-2.96	-2.96					1.17	0.90	7.10	1.65	-----	Vehicle	-6.07	-3.12	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**145.25**	**242.09**	**77.14**	**128.57**
	U_{23} - U_{24}	6.42	-6.83	2.49	2.49	-2.50	-2.50					1.17	0.90	6.42	2.62	-----	Vehicle	-6.83	-2.63	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**91.65**	**152.74**	**91.30**	**152.16**
	U_{24} - U_{25}	4.41	-5.74	0.87	0.87	-2.32	-2.32					1.17	0.90	4.41	0.92	-----	Vehicle	-5.74	-2.44	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**140.03**	**233.38**	**52.47**	**87.45**
	U_{25} - U_{26}	4.63	-7.90	0.94	0.94	-2.92	-2.92					1.17	0.90	4.63	0.99	-----	Vehicle	-7.90	-3.07	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**110.73**	**184.54**	**35.13**	**58.55**
	U_{26} - U_{27}	6.07	-7.72	1.06	1.06	-3.03	-3.03					1.17	0.90	6.07	1.11	-----	Vehicle	-7.72	-3.19	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**98.19**	**163.66**	**33.89**	**56.48**
	U_{27} - U_{28}	3.92	-7.87	0.86	0.86	-2.78	-2.78					1.17	0.90	3.92	0.91	-----	Vehicle	-7.87	-2.92	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**183.69**	**306.16**	**56.21**	**93.68**
	U_{28} - U_{29}	9.25	-7.25	1.97	1.97	-2.14	-2.14					1.17	0.90	9.25	2.08	-----	Vehicle	-7.25	-2.25	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**150.99**	**251.64**	**140.13**	**233.56**
	U_{29} - U_{30}	-2.24	-17.81	0.33	0.33	-7.81	-7.81					1.17	0.90	-2.24	0.35	-----	Vehicle	-17.81	-8.22	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1125.65**	**1876.08**	**46.65**	**77.75**
	U_{30} - U_{31}	19.02	3.44	7.02	7.02	-0.50	-0.50					1.18	0.90	19.02	7.48	-----	Vehicle	3.44	-0.53	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**51.19**	**85.31**	**747.38**	**1245.63**
	U_{31} - U_{32}	7.21	-10.44	1.79	1.79	-1.56	-1.56					1.18	0.90	7.21	1.91	-----	Vehicle	-10.44	-1.66	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**145.40**	**242.33**	**166.29**	**277.16**
	U_{32} - U_{33}	10.43	-4.94	3.52	3.52	-0.24	-0.24					1.18	0.90	10.43	3.74	-----	Vehicle	-4.94	-0.25	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**33.44**	**55.73**	**513.34**	**855.56**
	U_{33} - U_{34}	8.67	-5.58	2.76	2.76	-0.31	-0.31					1.18	0.90	8.67	2.93	-----	Vehicle	-5.58	-0.32	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**43.02**	**71.71**	**394.34**	**657.24**
	U_{34} - U_{35}	8.17	-3.35	3.42	3.42	-0.37	-0.37					1.18	0.90	8.17	3.64	-----	Vehicle	-3.35	-0.40	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**34.78**	**57.97**	**327.57**	**545.95**
	U_{35} - U_{36}	9.30	-5.12	4.12	4.12	-0.66	-0.66					1.18	0.90	9.30	4.38	-----	Vehicle	-5.12	-0.70	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**71.51**	**119.19**	**452.51**	**754.18**
	U_{36} - U_{37}	6.76	-8.71	3.95	3.95	-0.95	-0.95					1.18	0.90	6.76	4.21	-----	Vehicle	-8.71	-1.02	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**88.26**	**147.11**	**364.48**	**607.47**
	U_{37} - U_{38}	10.16	-5.61	2.63	2.63	-3.34	-3.34					1.18	0.90	10.16	2.80	-----	Vehicle	-5.61	-3.56	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**131.90**	**219.84**	**104.66**	**174.44**
	U_{38} - U_{39}	7.26	-3.01	4.00	4.00	-1.72	-1.72					1.18	0.90	7.26	4.26	-----	Vehicle	-3.01	-1.83	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**104.66**	**174.43**	**245.03**	**408.38**
	U_{39} - U_{40}	5.16	-5.17	2.36	2.36	-3.02	-3.02					1.18	0.90	5.16	2.51	-----	Vehicle	-5.17	-3.22	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**178.45**	**297.41**	**139.15**	**231.92**
	U_{40} - U_{41}	8.09	-7.79	1.58	1.58	-3.46	-3.46					1.18	0.90	8.09	1.68	-----	Vehicle	-7.79	-3.69	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**220.29**	**367.16**	**100.56**	**167.60**
	U_{41} - U_{42}	3.96	-7.24	1.07	1.07	-3.96	-3.96					1.18	0.90	3.96	1.14	-----	Vehicle	-7.24	-4.22	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**146.08**	**243.46**	**39.00**	**65.00**
	U_{42} - U_{43}	5.30	-8.54	0.76	0.76	-2.27	-2.27					1.18	0.90	5.30	0.81	-----	Vehicle	-8.54	-2.41	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**274.45**	**457.42**	**91.29**	**152.14**
	U_{43} - U_{44}	6.34	-9.84	1.10	1.10	-5.40	-5.40					1.18	0.90	6.34	1.17	-----	Vehicle	-9.84	-5.75	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**93.01**	**155.01**	**18.56**	**30.93**
Structure 3	U_0 - U_1	7.32	-2.03	2.43	2.43	-0.53	-0.53					1.20	0.90	7.32	2.62	-----	Vehicle	-2.03	-0.57	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**39.63**	**66.05**	**187.24**	**312.07**
	U_1 - U_2	6.45	-3.27	2.41	2.41	-0.16	-0.16					1.20	0.90	6.45	2.60	-----	Vehicle	-3.27	-0.17	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**40.21**	**67.01**	**627.68**	**1046.14**
	U_2 - U_3	9.46	-6.46	2.80	2.80	-0.31	-0.31					1.20	0.90	9.46	3.02	-----	Vehicle	-6.46	-0.33	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**92.19**	**153.65**	**851.18**	**1418.64**
	U_3 - U_4	5.96	-2.88	2.75	2.75	-0.40	-0.40					1.20	0.90	5.96	2.96	-----	Vehicle	-2.88	-0.43	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**129.19**	**215.31**	**903.41**	**1505.68**
	U_4 - U_5	5.42	-9.60	2.65	2.65	-0.91	-0.91					1.20	0.90	5.42	2.86	-----	Vehicle	-9.60	-0.98	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**134.02**	**223.37**	**389.74**	**649.57**
	U_5 - U_6	5.10	-3.00	2.80	2.80	-1.45	-1.45					1.20	0.90	5.10	3.02	-----	Vehicle	-3.00	-1.56	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**127.05**	**211.75**	**246.74**	**411.23**
	U_6 - U_7	2.12	-6.47	1.52	1.52	-3.07	-3.07					1.20	0.90	2.12	1.63	-----	Vehicle	-6.47	-3.30	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**235.82**	**393.03**	**115.77**	**192.96**
	U_7 - U_8	7.00	-8.45	0.89	0.89	-1.97	-1.97					1.20	0.90	7.00	0.96	-----	Vehicle	-8.45	-2.13	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**338.55**	**564.25**	**152.90**	**254.83**
	U_8 - U_9	2.51	-7.01	0.56	0.56	-2.49	-2.49					1.20	0.90	2.51	0.60	-----	Vehicle	-7.01	-2.69	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**203.79**	**339.65**	**44.45**	**74.08**
	U_9 - U_{10}	2.56	-8.76	0.22	0.22	-2.96	-2.96					1.20	0.90	2.56	0.24	-----	Vehicle	-8.76	-3.19	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**382.82**	**638.03**	**27.41**	**45.68**
	U_{10} - U_{11}	5.86	-6.85	0.52	0.52	-1.75	-1.75					1.20	0.90	5.86	0.56	-----	Vehicle	-6.85	-1.89	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**160.09**	**266.82**	**46.95**	**78.26**
	U_{11} - U_{12}	-1.36	-13.98	0.06	0.06	-4.86	-4.86					1.20	0.90	-1.36	0.06	-----	Vehicle	-13.98	-5.24	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**1743.50**	**2905.83**	**19.05**	**31.76**
	U_{12} - U_{13}	11.54	-1.05	4.79	4.79	-0.23	-0.23					1.24	0.90	11.54	5.33	-----	Vehicle	-1.05	-0.26	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**45.09**	**75.16**	**955.20**	**1592.01**
	U_{13} - U_{14}	4.46	-6.92	1.

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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
North Truss - Lower Chord																																	
Structure 1	L_0 - L_1	8.29	-6.54	1.99	1.99	-0.38	-0.38					1.24	0.90	8.29	2.21	-----	Vehicle	-6.54	-0.42	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**45.70**	**76.16**	**242.57**	**404.29**
	L_1 - L_2	13.57	-7.41	2.24	2.24	-0.44	-0.44					1.24	0.90	13.57	2.49	-----	Vehicle	-7.41	-0.48	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**39.26**	**65.44**	**209.71**	**349.52**
	L_2 - L_3	8.55	-7.89	1.57	1.57	-0.61	-0.61					1.24	0.90	8.55	1.75	-----	Vehicle	-7.89	-0.67	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**90.54**	**150.89**	**235.75**	**392.91**
	L_3 - L_4	10.78	-10.72	1.54	1.54	-1.11	-1.11					1.24	0.90	10.78	1.71	-----	Vehicle	-10.72	-1.23	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**91.99**	**153.32**	**127.90**	**213.17**
	L_4 - L_5	8.11	-17.42	0.12	0.12	-2.45	-2.45					1.24	0.90	8.11	0.13	-----	Vehicle	-17.42	-2.73	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**1038.39**	**1730.66**	**46.65**	**77.76**
	L_5 - L_6	5.24	-12.36	0.01	0.01	-1.69	-1.69					1.24	0.90	5.24	0.01	-----	Vehicle	-12.36	-1.88	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**25781.43**	**42969.05**	**104.46**	**174.09**
	L_6 - L_7	8.00	-14.21	0.99	0.99	-2.13	-2.13					1.24	0.90	8.00	1.10	-----	Vehicle	-14.21	-2.37	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**288.03**	**480.05**	**132.55**	**220.92**
	L_7 - L_8	-2.07	-18.23	0.00	0.00	-5.18	-5.18					1.24	0.90	-2.07	0.00	-----	Vehicle	-18.23	-5.76	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**128598.54**	**214330.90**	**72.39**	**120.66**
	L_8 - L_9	18.91	4.31	4.94	4.94	0.00	0.00					1.20	0.90	18.91	5.33	-----	Vehicle	4.31	0.00	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**78.26**	**130.43**	**99900.50**	**166500.83**
	L_9 - L_{10}	15.84	-6.96	1.84	1.84	-1.09	-1.09					1.20	0.90	15.84	1.99	-----	Vehicle	-6.96	-1.18	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**157.39**	**262.32**	**270.16**	**450.27**
	L_{10} - L_{11}	13.53	-2.36	2.46	2.46	0.00	0.00					1.20	0.90	13.53	2.65	-----	Vehicle	-2.36	0.00	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**49.00**	**81.66**	**42166.02**	**70276.70**
	L_{11} - L_{12}	19.25	-6.84	2.16	2.16	-0.13	-0.13					1.20	0.90	19.25	2.32	-----	Vehicle	-6.84	-0.14	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**54.31**	**90.52**	**953.89**	**1589.82**
	L_{12} - L_{13}	12.12	-8.55	1.37	1.37	-0.44	-0.44					1.20	0.90	12.12	1.47	-----	Vehicle	-8.55	-0.48	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**178.73**	**297.89**	**555.20**	**925.34**
	L_{13} - L_{14}	22.27	-6.22	3.88	3.88	-0.31	-0.31					1.20	0.90	22.27	4.18	-----	Vehicle	-6.22	-0.34	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**89.16**	**148.60**	**1140.79**	**1901.32**
	L_{14} - L_{15}	10.80	-20.25	0.63	0.63	-2.53	-2.53					1.20	0.90	10.80	0.67	-----	Vehicle	-20.25	-2.73	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**701.22**	**1168.70**	**171.28**	**285.47**
	L_{15} - L_{16}	11.52	-8.07	1.27	1.27	-1.35	-1.35					1.20	0.90	11.52	1.37	-----	Vehicle	-8.07	-1.45	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**344.77**	**574.62**	**326.97**	**544.96**
	L_{16} - L_{17}	4.39	-17.69	0.24	0.24	-2.78	-2.78					1.20	0.90	4.39	0.25	-----	Vehicle	-17.69	-3.00	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**1382.66**	**2304.44**	**114.71**	**191.19**
	L_{17} - L_{18}	6.80	-13.02	0.22	0.22	-2.14	-2.14					1.20	0.90	6.80	0.24	-----	Vehicle	-13.02	-2.31	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**970.66**	**1617.77**	**99.80**	**166.33**
	L_{18} - L_{19}	5.40	-17.11	0.18	0.18	-2.22	-2.22					1.20	0.90	5.40	0.20	-----	Vehicle	-17.11	-2.39	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**523.69**	**872.82**	**40.03**	**66.72**
	L_{19} - L_{20}	8.88	-11.26	0.13	0.13	-2.10	-2.10					1.20	0.90	8.88	0.14	-----	Vehicle	-11.26	-2.26	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**735.23**	**1225.39**	**43.88**	**73.13**
Structure 2	L_0 - L_1	8.18	-2.11	2.21	2.21	-0.27	-0.27					1.18	0.90	8.18	2.36	-----	Vehicle	-2.11	-0.29	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**58.63**	**97.71**	**488.00**	**813.33**
	L_1 - L_2	10.03	-0.24	2.10	2.10	-0.26	-0.26					1.18	0.90	10.03	2.24	-----	Vehicle	-0.24	-0.28	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**61.20**	**102.00**	**516.44**	**860.74**
	L_2 - L_3	7.20	-1.56	2.57	2.57	-0.33	-0.33					1.18	0.90	7.20	2.74	-----	Vehicle	-1.56	-0.35	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**94.20**	**156.99**	**748.60**	**1247.67**
	L_3 - L_4	11.38	-0.50	2.52	2.52	-0.26	-0.26					1.18	0.90	11.38	2.68	-----	Vehicle	-0.50	-0.28	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**138.56**	**230.94**	**1349.96**	**2249.94**
	L_4 - L_5	6.29	-6.01	2.25	2.25	-1.26	-1.26					1.18	0.90	6.29	2.39	-----	Vehicle	-6.01	-1.34	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**205.94**	**343.24**	**368.89**	**614.81**
	L_5 - L_6	10.14	-2.08	2.86	2.86	-0.47	-0.47					1.18	0.90	10.14	3.05	-----	Vehicle	-2.08	-0.50	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**177.51**	**295.84**	**1096.80**	**1828.00**
	L_6 - L_7	3.45	-8.48	2.05	2.05	-2.22	-2.22					1.18	0.90	3.45	2.18	-----	Vehicle	-8.48	-2.36	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**253.43**	**422.38**	**233.27**	**388.78**
	L_7 - L_8	3.58	-10.31	0.85	0.85	-2.75	-2.75					1.18	0.90	3.58	0.90	-----	Vehicle	-10.31	-2.93	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**430.63**	**717.71**	**130.75**	**217.92**
	L_8 - L_9	0.48	-13.07	0.15	0.15	-2.82	-2.82					1.18	0.90	0.48	0.16	-----	Vehicle	-13.07	-3.00	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**1885.53**	**3142.54**	**99.22**	**165.37**
	L_9 - L_{10}	1.68	-14.60	0.42	0.42	-2.55	-2.55					1.18	0.90	1.68	0.45	-----	Vehicle	-14.60	-2.72	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**490.90**	**818.17**	**78.71**	**131.18**
	L_{10} - L_{11}	3.92	-15.22	0.42	0.42	-2.75	-2.75					1.18	0.90	3.92	0.45	-----	Vehicle	-15.22	-2.93	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**417.47**	**695.79**	**62.03**	**103.38**
	L_{11} - L_{12}	1.30	-14.23	0.07	0.07	-2.51	-2.51					1.18	0.90	1.30	0.08	-----	Vehicle	-14.23	-2.67	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**3883.52**	**6472.54**	**111.55**	**185.91**
	L_{12} - L_{13}	6.61	-7.28	2.20	2.20	-2.04	-2.04					1.18	0.90	6.61	2.34	-----	Vehicle	-7.28	-2.17	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**190.51**	**317.52**	**205.11**	**341.84**
	L_{13} - L_{14}	-16.93	-26.03	0.19	0.19	-8.77	-8.77					1.18	0.90	-16.93	0.20	-----	Vehicle	-26.03	-9.34	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**2806.33**	**4677.22**	**57.07**	**95.12**
	L_{14} - L_{15}	25.44	16.49	8.23	8.23	-0.17	-0.17					1.17	0.90	25.44	8.66	-----	Vehicle	16.49	-0.18	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**61.58**	**102.63**	**3140.95**	**5234.92**
	L_{15} - L_{16}	1.92	-10.98	1.64	1.64	-2.57	-2.57					1.17	0.90	1.92	1.72	-----	Vehicle	-10.98	-2.70	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**260.15**	**433.58**	**163.89**	**273.14**
	L_{16} - L_{17}	14.35	-0.89	2.68	2.68	-0.27	-0.27					1.17	0.90	14.35	2.82	-----	Vehicle	-0.89	-0.28	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**122.75**	**204.59**	**1248.24**	**2080.40**
	L_{17} - L_{18}	10.22	-3.50	2.71	2.71	-0.40	-0.40					1.17	0.90	10.22	2.85	-----	Vehicle	-3.50	-0.42	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**75.95**	**126.59**	**527.94**	**879.90**
	L_{18} - L_{19}	9.38	-1.77	2.41	2.41	-0.39	-0.39					1.17	0.90	9.38	2.54	-----	Vehicle	-1.77	-0.41	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**60.47**	**100.78**	**382.97**	**638.28**
	L_{19} - L_{20}	12.39	-6.31	1.83	1.83	-0.18	-0.18					1.17	0.90	12.39	1.93	-----	Vehicle	-6.31	-0.19	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**78.73**	**131.21**	**833.55**	**1389.25**
	L_{20} - L_{21}	8.96	-3.52	2.52	2.52	-0.84	-0.84					1.17	0.90	8.96	2.65	-----	Vehicle	-3.52	-0.88	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**95.51**	**159.18**	**289.98**	**483.31**
	L_{21} - L_{22}	9.68	-4.49	3.25	3.25	-0.46	-0.46					1.17	0.90	9.68	3.41	-----	Vehicle	-4.49	-0.49	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**73.98**	**123.30**	**524.91**	**874.86**
	L_{22} - L_{23}	4.66	-10.03	1.00	1.00	-2.82	-2.82					1.17	0.90	4.66	1.05	-----	Vehicle	-10.03	-2.96	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**243.67**	**406.11**	**85.21**	**142.02**
	L_{23} - L_{24}	3.70	-6.40	1.07	1.07	-2.22	-2.22					1.17	0.90	3.70	1.12	-----	Vehicle	-6.40	-2.33	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**227.77**	**379.61**	**109.18**	**181.97**
	L_{24} - L_{25}	-0.87	-1.56	0.27	0.27	-2.00	-2.00					1.17	0.90	-0.87	0.28	-----	Vehicle	-1.56	-2.10	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**572.20**	**953.67**	**75.31**	**125.52**
	L_{25} - L_{26}	-3.04	-3.58	0.49	0.49	-2.29	-2.29					1.17	0.90	-3.04	0.52	-----	Vehicle	-3.58	-2.41	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**311.97**	**519.95**	**65.16**	**108.60**
	L_{26} - L_{27}	-1.83	-2.61	0.33	0.33	-3.00	-3.00					1.17	0.90	-1.83	0.34	-----	Vehicle	-2.61	-3.15	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**654.26**	**1090.43**	**70.13**	**116.88**
	L_{27} - L_{28}	-4.05	-5.16	0.42	0.42	-2.93	-2.93					1.17	0.90	-4.05	0.44	-----	Vehicle	-5.16	-3.09	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**818.91**	**1364.84**	**114.08**	**190.13**
	L_{28} - L_{29}	3.03	1.87	2.06	2.06	-1.60	-1.60					1.17	0.90	3.03	2.16	-----	Vehicle	1.87	-1.68	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**206.72**	**344.54**	**267.35**	**445.58**
	L_{29} - L_{30}	-16.84	-17.95	0.36	0.36	-8.69	-8.69					1.17	0.90	-16.84	0.38	-----	Vehicle	-17.95	-9.14	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**1466.91**	**2444.84**	**58.82**	**98.03**
	L_{30} - L_{31}	17.64	16.51	8.33	8.33	-0.32	-0.32					1.18	0.90	17.64	8.86	-----	Vehicle	16.51	-0.34	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**60.69**	**101.15**	**1659.97**	**2766.61**
	L_{31} - L_{32}	-0.36	-1.54	1.62	1.62	-2.55	-2.55					1.18	0.90	-0.36	1.73	-----	Vehicle	-1.54	-2.71	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**259.92**	**433.20**	**165.44**	**275.73**
	L_{32} - L_{33}	5.29	4.30	2.59	2.59	-0.08	-0.08					1.18	0.90	5.29	2.76	-----	Vehicle	4.30	-0.09	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**109.96**	**183.27**	**3543.13**	**5905.22**
	L_{33} - L_{34}	3.87	3.17	2.42	2.42	-0.40	-0.40					1.18	0.90	3.87	2.58	-----	Vehicle	3.17	-0.43	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**73.19**	**121.98**	**449.13**	**748.55**
	L_{34} - L_{35}	4.21	3.54	2.78	2.78	-0.34	-0.34					1.18	0.90	4.21	2.96	-----	Vehicle	3.54	-0.36	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**74.30**	**123.84**	**620.82**	**1034.70**
	L_{35} - L_{36}	4.37	3.40	2.82	2.82	-0.20	-0.20					1.18	0.90	4.37	3.00	-----	Vehicle	3.40	-0.21	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**100.96**	**168.27**	**1451.19**	**2418.65**
	L_{36} - L_{37}	2.06	0.88	2.93	2.93	-0.34	-0.34					1.18	0.90	2.06	3.12	-----	Vehicle	0.88	-0.36	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**61.98**	**103.30**	**541.14**	**901.89**
	L_{37} - L_{38}	3.79	2.22	3.19	3.19	-1.63	-1.63					1.18	0.90	3.79	3.40	-----	Vehicle	2.22	-1.73	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**162.85**	**271.42**	**321.28**	**535.46**
	L_{38} - L_{39}	-1.73	-3.35	0.63	0.63	-2.51	-2.51					1.18	0.90	-1.73	0.67	-----	Vehicle	-3.35	-2.67	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**822.97**	**1371.61**	**204.19**	**340.31**
	L_{39} - L_{40}	1.42	-0.10	1.38	1.38	-1.78	-1.78					1.18	0.90	1.42	1.47	-----	Vehicle	-0.10	-1.90	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**338.60**	**564.33**	**262.16**	**436.94**
	L_{40} - L_{41}	-3.01	-4.16	0.30	0.30	-2.91	-2.91					1.18	0.90	-3.01	0.32	-----	Vehicle	-4.16	-3.10	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**1190.05**	**1983.42**	**121.21**	**202.02**
	L_{41} - L_{42}	-1.55	-2.29	0.42	0.42	-2.69	-2.69					1.18	0.90	-1.55	0.45	-----	Vehicle	-2.29	-2.86	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**590.20**	**983.67**	**91.23**	**152.05**
	L_{42} - L_{43}	-3.17	-3.75	0.30	0.30	-2.54	-2.54					1.18	0.90	-3.17	0.32	-----	Vehicle	-3.75	-2.70	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**230.75**	**384.58**	**25.65**	**42.75**
	L_{43} - L_{44}	-3.25	-3.76	0.27	0.27	-2.57	-2.57					1.18	0.90	-3.25	0.29	-----	Vehicle	-3.76	-2.73	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**506.48**	**844.13**	**51.54**	**85.90**
Structure 3	L_0 - L_1	6.90	-2.96	1.92	1.92	-0.12	-0.12					1.20	0.90	6.90	2.07	-----	Vehicle	-2.96	-0.12	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**49.23**	**82.06**	**840.62**	**1401.03**
	L_1 - L_2	10.33	-2.13	1.91	1.91	-0.14	-0.14					1.20	0.90	10.33	2.06	-----	Vehicle	-2.13	-0.15	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**48.41**	**80.69**	**719.50**	**1199.17**
	L_2 - L_3	8.48	-3.27	1.92	1.92	-0.17	-0.17					1.20	0.90	8.48	2.07	-----	Vehicle	-3.27	-0.19	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**112.82**	**188.03**	**1275.55**	**2125.92**
	L_3 - L_4	10.92	-0.17	2.41	2.41	-0.17	-0.17					1.20	0.90	10.92	2.59	-----	Vehicle	-0.17	-0.18	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**134.17**	**223.61**	**1933.27**	**3222.11**
	L_4 - L_5	3.28	-6.17	1.79	1.79	-1.08	-1.08					1.20	0.90	3.28	1.93	-----	Vehicle	-6.17	-1.17	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**247.59**	**412.65**	**406.68**	**677.80**
	L_5 - L_6	10.07	-2.62	2.99	2.99	-0.34	-0.34					1.20	0.90	10.07	3.23	-----	Vehicle	-2.62	-0.37	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**146.61**	**244.36**	**1298.58**	**2164.29**
	L_6 - L_7	-0.48	-11.65	0.44	0.44	-3.64	-3.64					1.20	0.90	-0.48	0.47	-----	Vehicle	-11.65	-3.93	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**814.80**	**1358.01**	**96.58**	**160.97**
	L_7 - L_8	3.36	-6.18	0.53	0.53	-1.26	-1.26					1.20	0.90	3.36	0.57	-----	Vehicle	-6.18	-1.36	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**473.98**	**789.97**	**196.09**	**326.82**
	L_8 - L_9	1.47	-11.13	0.11	0.11	-2.20	-2.20					1.20	0.90	1.47	0.12	-----	Vehicle	-11.13	-2.38	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**1154.49**	**1924.16**	**55.18**	**91.97**
	L_9 - L_{10}	-0.54	-9.03	0.00	0.00	-2.47	-2.47					1.20	0.90	-0.54	0.00	-----	Vehicle	-9.03	-2.66	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**128115.75**	**213526.25**	**49.75**	**82.92**
	L_{10} - L_{11}	2.22	-10.62	0.92	0.92	-2.26	-2.26					1.20	0.90	2.22	1.00	-----	Vehicle	-10.62	-2.44	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**322.48**	**537.47**	**129.46**	**215.77**
	L_{11} - L_{12}	-6.24	-14.06	0.02	0.02	-5.42	-5.42					1.20	0.90	-6.24	0.02	-----	Vehicle	-14.06	-5.84	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**26711.55**	**44519.25**	**71.88**	**119.80**
	L_{12} - L_{13}	12.41	3.95	4.75	4.75	-0.02	-0.02					1.24	0.90	12.41	5.29	-----	Vehicle	3.95	-0.02	-----	Vehicle	15.00	1.62

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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 - Verticals	Structure 1	U_0 - L_0	-3.17	-3.17	0.44	0.44	-2.12	-2.12					1.24	0.90	-3.17	0.49	-----	Vehicle	-3.17	-2.36	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**238.32**	**397.20**	**47.54**	**79.23**
		U_0 - L_1	-0.96	-0.96	0.56	0.56	-2.13	-2.13					1.24	0.90	-0.96	0.62	-----	Vehicle	-0.96	-2.37	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**184.18**	**306.97**	**47.80**	**79.67**
		U_0 - L_2	0.27	0.27	0.62	0.62	-1.65	-1.65					1.24	0.90	0.27	0.69	-----	Vehicle	0.27	-1.84	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**164.99**	**274.99**	**62.02**	**103.37**
		U_0 - L_3	1.48	1.48	0.75	0.75	-0.89	-0.89					1.24	0.90	1.48	0.83	-----	Vehicle	1.48	-1.00	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**136.06**	**226.77**	**115.48**	**192.46**
		U_0 - L_4	2.22	2.22	1.12	1.12	-0.29	-0.29					1.24	0.90	2.22	1.24	-----	Vehicle	2.22	-0.33	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**90.56**	**150.93**	**354.91**	**591.52**
		U_0 - L_5	2.71	2.71	1.60	1.60	0.00	0.00					1.24	0.90	2.71	1.78	-----	Vehicle	2.71	0.00	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**76.94**	**128.23**	**31523.72**	**52539.53**
		U_0 - L_6	2.52	2.52	1.76	1.76	-0.06	-0.06					1.24	0.90	2.52	1.95	-----	Vehicle	2.52	-0.06	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**62.49**	**104.15**	**1938.69**	**3231.15**
		U_0 - L_7	2.77	2.77	1.57	1.57	-0.04	-0.04					1.24	0.90	2.77	1.75	-----	Vehicle	2.77	-0.05	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**70.82**	**118.04**	**2788.16**	**4646.94**
		U_0 - L_8	-0.17	-0.17	1.50	1.50	-1.17	-1.17					1.24	0.90	-0.17	1.67	-----	Vehicle	-0.17	-1.30	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**132.45**	**220.75**	**169.68**	**282.81**
		U_0 - L_9	-4.89	-4.89	0.13	0.13	-1.74	-1.74					1.20	0.90	-4.89	0.14	-----	Vehicle	-4.89	-1.87	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**1037.11**	**1728.52**	**75.04**	**125.06**
		U_{10} - L_{10}	-4.01	-4.01	0.13	0.13	-1.94	-1.94					1.20	0.90	-4.01	0.14	-----	Vehicle	-4.01	-2.09	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**1759.70**	**2932.83**	**112.04**	**186.74**
		U_{11} - L_{11}	-5.48	-5.48	0.03	0.03	-2.33	-2.33					1.20	0.90	-5.48	0.03	-----	Vehicle	-5.48	-2.51	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**5741.26**	**9568.77**	**66.46**	**110.77**
		U_{12} - L_{12}	-3.87	-3.87	0.14	0.14	-1.84	-1.84					1.20	0.90	-3.87	0.15	-----	Vehicle	-3.87	-1.98	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**973.34**	**1622.23**	**71.30**	**118.84**
		U_{13} - L_{13}	-2.32	-2.32	0.27	0.27	-1.44	-1.44					1.20	0.90	-2.32	0.29	-----	Vehicle	-2.32	-1.55	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**436.58**	**727.63**	**79.70**	**132.84**
		U_{14} - L_{14}	-1.13	-1.13	0.50	0.50	-0.82	-0.82					1.20	0.90	-1.13	0.53	-----	Vehicle	-1.13	-0.89	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**214.95**	**358.25**	**127.92**	**213.19**
		U_{15} - L_{15}	0.33	0.33	1.07	1.07	-0.42	-0.42					1.20	0.90	0.33	1.15	-----	Vehicle	0.33	-0.45	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**98.77**	**164.62**	**251.68**	**419.47**
		U_{16} - L_{16}	1.29	1.29	1.11	1.11	-0.22	-0.22					1.20	0.90	1.29	1.20	-----	Vehicle	1.29	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**94.47**	**157.46**	**484.06**	**806.76**
		U_{17} - L_{17}	1.86	1.86	1.29	1.29	-0.18	-0.18					1.20	0.90	1.86	1.39	-----	Vehicle	1.86	-0.19	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**99.27**	**165.45**	**732.92**	**1221.53**
		U_{18} - L_{18}	3.24	3.24	1.88	1.88	-0.21	-0.21					1.20	0.90	3.24	2.03	-----	Vehicle	3.24	-0.23	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**69.99**	**116.66**	**641.06**	**1068.43**
		U_{19} - L_{19}	2.88	2.88	1.65	1.65	-0.16	-0.16					1.20	0.90	2.88	1.77	-----	Vehicle	2.88	-0.17	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**94.90**	**158.16**	**1001.96**	**1669.93**
		U_{20} - L_{20}	2.24	2.24	0.96	0.96	-0.07	-0.07					1.20	0.90	2.24	1.04	-----	Vehicle	2.24	-0.07	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**162.98**	**271.63**	**2372.44**	**3954.06**
	Structure 2	U_0 - L_0	-2.38	-2.38	0.13	0.13	-1.01	-1.01					1.18	0.90	-2.38	0.14	-----	Vehicle	-2.38	-1.08	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1330.13**	**2216.88**	**170.67**	**284.46**
		U_1 - L_1	-2.50	-2.50	0.20	0.20	-1.34	-1.34					1.18	0.90	-2.50	0.21	-----	Vehicle	-2.50	-1.43	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**900.73**	**1501.22**	**129.07**	**215.12**
		U_2 - L_2	-2.86	-2.86	0.28	0.28	-1.70	-1.70					1.18	0.90	-2.86	0.30	-----	Vehicle	-2.86	-1.81	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**517.66**	**862.76**	**84.18**	**140.30**
		U_3 - L_3	-1.82	-1.82	0.22	0.22	-1.10	-1.10					1.18	0.90	-1.82	0.23	-----	Vehicle	-1.82	-1.17	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**664.92**	**1108.19**	**129.66**	**216.10**
		U_4 - L_4	-1.16	-1.16	0.28	0.28	-1.08	-1.08					1.18	0.90	-1.16	0.30	-----	Vehicle	-1.16	-1.15	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**384.88**	**641.46**	**98.40**	**163.99**
		U_5 - L_5	-0.32	-0.32	0.36	0.36	-0.98	-0.98					1.18	0.90	-0.32	0.38	-----	Vehicle	-0.32	-1.04	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**299.70**	**499.50**	**109.34**	**182.24**
		U_6 - L_6	0.40	0.40	0.51	0.51	-0.82	-0.82					1.18	0.90	0.40	0.54	-----	Vehicle	0.40	-0.87	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**211.67**	**352.78**	**131.38**	**218.97**
		U_7 - L_7	1.09	1.09	0.65	0.65	-0.33	-0.33					1.18	0.90	1.09	0.69	-----	Vehicle	1.09	-0.36	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**164.61**	**274.35**	**322.54**	**537.57**
		U_8 - L_8	2.68	2.68	1.54	1.54	-0.27	-0.27					1.18	0.90	2.68	1.64	-----	Vehicle	2.68	-0.29	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**73.27**	**122.11**	**424.38**	**707.29**
		U_9 - L_9	4.62	4.62	2.38	2.38	-0.11	-0.11					1.18	0.90	4.62	2.53	-----	Vehicle	4.62	-0.12	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**72.14**	**120.24**	**1564.94**	**2608.24**
		U_{10} - L_{10}	4.05	4.05	2.06	2.06	-0.02	-0.02					1.18	0.90	4.05	2.20	-----	Vehicle	4.05	-0.02	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**106.42**	**177.37**	**11800.90**	**19668.17**
		U_{11} - L_{11}	3.61	3.61	1.71	1.71	-0.06	-0.06					1.18	0.90	3.61	1.82	-----	Vehicle	3.61	-0.06	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**128.90**	**214.83**	**3861.48**	**6435.80**
		U_{12} - L_{12}	2.81	2.81	1.51	1.51	-0.18	-0.18					1.18	0.90	2.81	1.61	-----	Vehicle	2.81	-0.19	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**162.41**	**270.69**	**1395.55**	**2325.92**
		U_{13} - L_{13}	2.75	2.75	1.26	1.26	-0.13	-0.13					1.18	0.90	2.75	1.34	-----	Vehicle	2.75	-0.13	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**172.61**	**287.69**	**1768.85**	**2948.09**
		U_{14} - L_{14}	0.70	0.70	0.87	0.87	-0.82	-0.82					1.18	0.90	0.70	0.93	-----	Vehicle	0.70	-0.87	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**245.12**	**408.53**	**262.88**	**438.14**
		U_{15} - L_{15}	-1.74	-1.74	0.11	0.11	-0.87	-0.87					1.17	0.90	-1.74	0.12	-----	Vehicle	-1.74	-0.92	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1294.87**	**2158.11**	**166.81**	**278.02**
		U_{16} - L_{16}	-1.62	-1.62	0.17	0.17	-1.20	-1.20					1.17	0.90	-1.62	0.17	-----	Vehicle	-1.62	-1.27	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1074.21**	**1790.35**	**145.80**	**243.00**
		U_{17} - L_{17}	-2.53	-2.53	0.18	0.18	-1.54	-1.54					1.17	0.90	-2.53	0.19	-----	Vehicle	-2.53	-1.62	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**905.91**	**1509.85**	**103.87**	**173.12**
		U_{18} - L_{18}	-2.65	-2.65	0.29	0.29	-1.88	-1.88					1.17	0.90	-2.65	0.30	-----	Vehicle	-2.65	-1.98	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**512.58**	**854.29**	**77.18**	**128.64**
		U_{19} - L_{19}	-1.79	-1.79	0.24	0.24	-1.23	-1.23					1.17	0.90	-1.79	0.25	-----	Vehicle	-1.79	-1.29	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**557.58**	**929.30**	**106.69**	**177.81**
		U_{20} - L_{20}	-1.24	-1.24	0.29	0.29	-1.22	-1.22					1.17	0.90	-1.24	0.30	-----	Vehicle	-1.24	-1.28	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**415.75**	**692.92**	**96.90**	**161.50**
		U_{21} - L_{21}	-0.83	-0.83	0.31	0.31	-1.09	-1.09					1.17	0.90	-0.83	0.32	-----	Vehicle	-0.83	-1.15	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**353.48**	**589.13**	**98.74**	**164.57**
		U_{22} - L_{22}	-0.04	-0.04	0.58	0.58	-0.65	-0.65					1.17	0.90	-0.04	0.61	-----	Vehicle	-0.04	-0.68	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**187.25**	**312.09**	**166.47**	**277.46**
		U_{23} - L_{23}	0.80	0.80	1.05	1.05	-0.44	-0.44					1.17	0.90	0.80	1.11	-----	Vehicle	0.80	-0.46	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**102.41**	**170.69**	**250.24**	**417.07**
		U_{24} - L_{24}	1.40	1.40	1.27	1.27	-0.34	-0.34					1.17	0.90	1.40	1.34	-----	Vehicle	1.40	-0.36	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**93.10**	**155.16**	**353.46**	**589.10**
		U_{25} - L_{25}	1.60	1.60	1.48	1.48	-0.31	-0.31					1.17	0.90	1.60	1.56	-----	Vehicle	1.60	-0.32	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**88.86**	**148.10**	**436.57**	**727.61**
		U_{26} - L_{26}	2.43	2.43	2.17	2.17	-0.38	-0.38					1.17	0.90	2.43	2.28	-----	Vehicle	2.43	-0.40	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**67.02**	**111.70**	**392.59**	**654.32**
		U_{27} - L_{27}	2.17	2.17	1.94	1.94	-0.26	-0.26					1.17	0.90	2.17	2.04	-----	Vehicle	2.17	-0.27	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**82.59**	**137.65**	**628.78**	**1047.97**
		U_{28} - L_{28}	1.53	1.53	1.60	1.60	-0.16	-0.16					1.17	0.90	1.53	1.69	-----	Vehicle	1.53	-0.17	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**109.38**	**182.30**	**1114.42**	**1857.37**
		U_{29} - L_{29}	1.55	1.55	1.19	1.19	-0.08	-0.08					1.17	0.90	1.55	1.25	-----	Vehicle	1.55	-0.08	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**122.37**	**203.95**	**1891.05**	**3151.76**
		U_{30} - L_{30}	-0.10	-0.10	0.89	0.89	-0.72	-0.72					1.18	0.90	-0.10	0.95	-----	Vehicle	-0.10	-0.76	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**240.94**	**401.56**	**298.51**	**497.51**
		U_{31} - L_{31}	-1.79	-1.79	0.14	0.14	-0.89	-0.89					1.18	0.90	-1.79	0.15	-----	Vehicle	-1.79	-0.95	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**1586.82**	**2644.69**	**245.01**	**408.35**
		U_{32} - L_{32}	-1.78	-1.78	0.18	0.18	-1.16	-1.16					1.18	0.90	-1.78	0.19	-----	Vehicle	-1.78	-1.24	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**1369.22**	**2282.03**	**211.37**	**352.28**
		U_{33} - L_{33}	-2.46	-2.46	0.10	0.10	-1.46	-1.46					1.18	0.90	-2.46	0.11	-----	Vehicle	-2.46	-1.56	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**2233.21**	**3722.01**	**150.75**	**251.25**
		U_{34} - L_{34}	-2.82	-2.82	0.06	0.06	-1.78	-1.78					1.18	0.90	-2.82	0.07	-----	Vehicle	-2.82	-1.90	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**3605.22**	**6008.69**	**123.79**	**206.32**
		U_{35} - L_{35}	-3.37	-3.37	0.13	0.13	-2.25	-2.25					1.18	0.90	-3.37	0.14	-----	Vehicle	-3.37	-2.39	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1365.39**	**2275.66**	**76.70**	**127.83**
		U_{36} - L_{36}	-1.93	-1.93	0.17	0.17	-1.56	-1.56					1.18	0.90	-1.93	0.18	-----	Vehicle	-1.93	-1.66	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**699.57**	**1165.94**	**72.56**	**120.93**
		U_{37} - L_{37}	-0.91	-0.91	0.25	0.25	-0.74	-0.74					1.18	0.90	-0.91	0.26	-----	Vehicle	-0.91	-0.78	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**433.99**	**723.31**	**144.84**	**241.40**
		U_{38} - L_{38}	-0.45	-0.45	0.68	0.68	-0.74	-0.74					1.18	0.90	-0.45	0.72	-----	Vehicle	-0.45	-0.79	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**157.89**	**263.16**	**144.60**	**241.00**
		U_{39} - L_{39}	0.16	0.16	0.91	0.91	-0.40	-0.40					1.18	0.90	0.16	0.97	-----	Vehicle	0.16	-0.43	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**117.48**	**195.80**	**268.02**	**446.70**
		U_{40} - L_{40}	0.80	0.80	1.18	1.18	-0.32	-0.32					1.18	0.90	0.80	1.25	-----	Vehicle	0.80	-0.34	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**90.55**	**150.91**	**338.25**	**563.75**
		U_{41} - L_{41}	1.35	1.35	1.26	1.26	-0.26	-0.26					1.18	0.90	1.35	1.34	-----	Vehicle	1.35	-0.28	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**113.45**	**189.09**	**545.54**	**909.24**
		U_{42} - L_{42}	2.23	2.23	2.01	2.01	-0.35	-0.35					1.18	0.90	2.23	2.14	-----	Vehicle	2.23	-0.38	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**71.49**	**119.15**	**414.00**	**690.00**
		U_{43} - L_{43}	2.14	2.14	1.83	1.83	-0.26	-0.26					1.18	0.90	2.14	1.94	-----	Vehicle	2.14	-0.28	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**94.76**	**157.93**	**674.77**	**1124.61**
		U_{44} - L_{44}	1.70	1.70	1.06	1.06	-0.13	-0.13					1.18	0.90	1.70	1.12	-----	Vehicle	1.70	-0.14	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**164.09**	**273.48**	**1379.45**	**2299.09**
	Structure 3	U_0 - L_0	-1.87	-1.87	0.07	0.07	-1.04	-1.04					1.20	0.90	-1.87	0.07	-----	Vehicle	-1.87	-1.12	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2334.51**	**3890.84**	**150.64**	**251.07**
		U_1 - L_1	-2.09	-2.09	0.11	0.11	-1.24	-1.24					1.20	0.90	-2.09	0.11	-----	Vehicle	-2.09	-1.34	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1498.78**	**2497.97**	**126.24**	**210.41**
		U_2 - L_2	-2.61	-2.61	0.16	0.16	-1.51	-1.51					1.20	0.90	-2.61	0.17	-----	Vehicle	-2.61	-1.63	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**832.78**	**1387.96**	**87.25**	**145.42**
		U_3 - L_3	-1.48	-1.48	0.14	0.14	-1.07	-1.07					1.20	0.90	-1.48	0.15	-----	Vehicle	-1.48	-1.15	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**959.41**	**1599.01**	**119.73**	**199.54**
		U_4 - L_4	-1.08	-1.08	0.19	0.19	-1.08	-1.08					1.20	0.90	-1.08	0.20	-----	Vehicle	-1.08	-1.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**571.90**	**953.17**	**97.65**	**162.76**
		U_5 - L_5	-0.23	-0.23	0.33	0.33	-1.00	-1.00					1.20	0.90	-0.23	0.36	-----	Vehicle	-0.23	-1.08	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**318.03**	**530.05**	**105.75**	**176.25**
		U_6 - L_6	0.90	0.90	0.69	0.69	-0.61	-0.61					1.20	0.90	0.90	0.74	-----	Vehicle	0.90	-0.66	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**152.57**	**254.29**	**173.65**	**289.41**
		U_7 - L_7	1.97	1.97	1.47	1.47	-0.31	-0.31					1.20	0.90	1.97	1.58	-----	Vehicle	1.97	-0.34	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**78.27**	**130.45**	**376.98**	**628.29**
		U_8 - L_8	3.44	3.44	2.01	2.01	-0.18	-0.18					1.20	0.90	3.44	2.17	-----	Vehicle	3.44	-0.19	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**65.25**	**108.76**	**758.71**	**1264.52**
		U_9 - L_9	4.72	4.72	2.64	2.64	0.00	0.00					1.20	0.90	4.72	2.84	-----	Vehicle	4.72	0.00	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**58.83**	**98.05**	**80166.17**	**133610.28**
		U_{10} - L_{10}	3.92	3.92	2.43	2.43	-0.06	-

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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 $Load_{min}$																				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
North Truss - Diagonals	Structure 1	U_0 - L_1	-0.26	-0.76	0.10	0.10	-0.57	-0.57					1.24	0.90	-0.26	0.11	-----	Vehicle	-0.76	-0.63	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**492.38**	**820.63**	**86.44**	**144.06**
		U_1 - L_2	0.21	-0.09	0.08	0.08	-0.21	-0.21					1.24	0.90	0.21	0.09	-----	Vehicle	-0.09	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1328.89**	**2214.82**	**482.98**	**804.97**
		U_2 - L_3	0.24	-0.07	0.10	0.10	-0.14	-0.14					1.24	0.90	0.24	0.11	-----	Vehicle	-0.07	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1065.74**	**1776.24**	**731.46**	**1219.09**
		U_3 - L_4	0.40	0.09	0.11	0.11	-0.02	-0.02					1.24	0.90	0.40	0.12	-----	Vehicle	0.09	-0.02	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**920.91**	**1534.85**	**5394.08**	**8990.13**
		U_4 - L_4	-0.25	-0.59	0.02	0.02	-0.20	-0.20					1.24	0.90	-0.25	0.02	-----	Vehicle	-0.59	-0.22	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**6567.02**	**10945.03**	**618.50**	**1030.83**
		U_6 - L_5	-1.06	-1.52	0.00	0.00	-0.61	-0.61					1.24	0.90	-1.06	0.00	-----	Vehicle	-1.52	-0.68	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**129826.10**	**216376.83**	**209.18**	**348.63**
		U_7 - L_6	-1.31	-1.77	0.02	0.02	-0.96	-0.96					1.24	0.90	-1.31	0.02	-----	Vehicle	-1.77	-1.06	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**6497.91**	**10829.84**	**134.20**	**223.67**
		U_8 - L_7	-0.76	-1.25	0.03	0.03	-0.63	-0.63					1.24	0.90	-0.76	0.03	-----	Vehicle	-1.25	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**4630.70**	**7717.83**	**204.42**	**340.70**
		U_9 - L_9	-0.94	-1.86	0.08	0.08	-0.54	-0.54					1.20	0.90	-0.94	0.09	-----	Vehicle	-1.86	-0.59	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2061.07**	**3435.11**	**304.58**	**507.64**
		U_{10} - L_{10}	-1.58	-2.42	0.08	0.08	-0.79	-0.79					1.20	0.90	-1.58	0.09	-----	Vehicle	-2.42	-0.85	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2040.25**	**3400.42**	**209.75**	**349.59**
		U_{10} - L_{11}	-1.35	-2.21	0.04	0.04	-0.59	-0.59					1.20	0.90	-1.35	0.05	-----	Vehicle	-2.21	-0.64	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**3187.91**	**5313.18**	**222.45**	**370.75**
		U_{11} - L_{12}	-1.02	-1.50	0.03	0.03	-0.58	-0.58					1.20	0.90	-1.02	0.03	-----	Vehicle	-1.50	-0.63	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**6087.52**	**10145.87**	**268.62**	**447.69**
		U_{12} - L_{13}	-0.89	-1.60	0.06	0.06	-0.50	-0.50					1.20	0.90	-0.89	0.07	-----	Vehicle	-1.60	-0.54	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1799.96**	**2999.94**	**229.00**	**381.66**
		U_{13} - L_{14}	-0.18	-0.51	0.10	0.10	-0.21	-0.21					1.20	0.90	-0.18	0.10	-----	Vehicle	-0.51	-0.22	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1114.47**	**1857.45**	**507.16**	**845.26**
		U_{15} - L_{14}	0.39	0.05	0.16	0.16	-0.15	-0.15					1.20	0.90	0.39	0.18	-----	Vehicle	0.05	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**643.65**	**1072.75**	**700.68**	**1167.81**
		U_{16} - L_{15}	-0.16	-0.50	0.11	0.11	-0.32	-0.32					1.20	0.90	-0.16	0.12	-----	Vehicle	-0.50	-0.34	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**962.36**	**1603.94**	**331.74**	**552.90**
		U_{17} - L_{16}	-0.37	-0.76	0.08	0.08	-0.47	-0.47					1.20	0.90	-0.37	0.09	-----	Vehicle	-0.76	-0.51	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1631.66**	**2719.43**	**273.50**	**455.83**
		U_{18} - L_{17}	-1.43	-1.90	0.11	0.11	-0.87	-0.87					1.20	0.90	-1.43	0.12	-----	Vehicle	-1.90	-0.94	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1220.50**	**2034.17**	**151.49**	**252.48**
		U_{19} - L_{18}	-1.43	-1.96	0.09	0.09	-0.89	-0.89					1.20	0.90	-1.43	0.10	-----	Vehicle	-1.96	-0.96	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1616.50**	**2694.16**	**159.17**	**265.29**
		U_{20} - L_{19}	-0.81	-1.39	0.05	0.05	-0.60	-0.60					1.20	0.90	-0.81	0.05	-----	Vehicle	-1.39	-0.64	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3120.02**	**5200.04**	**238.36**	**397.26**
	Structure 2	U_0 - L_1	-1.46	-2.01	0.11	0.11	-0.77	-0.77					1.18	0.90	-1.46	0.11	-----	Vehicle	-2.01	-0.82	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1486.38**	**2477.30**	**204.87**	**341.45**
		U_1 - L_2	-1.39	-1.93	0.14	0.14	-0.87	-0.87					1.18	0.90	-1.39	0.15	-----	Vehicle	-1.93	-0.92	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1146.37**	**1910.61**	**182.74**	**304.56**
		U_2 - L_3	-1.30	-1.78	0.16	0.16	-0.85	-0.85					1.18	0.90	-1.30	0.17	-----	Vehicle	-1.78	-0.91	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**844.02**	**1406.70**	**157.45**	**262.42**
		U_3 - L_4	-0.57	-0.98	0.12	0.12	-0.50	-0.50					1.18	0.90	-0.57	0.13	-----	Vehicle	-0.98	-0.53	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1157.93**	**1929.89**	**284.28**	**473.80**
		U_4 - L_5	-0.10	-0.45	0.11	0.11	-0.35	-0.35					1.18	0.90	-0.10	0.11	-----	Vehicle	-0.45	-0.38	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1011.05**	**1685.08**	**301.87**	**503.12**
		U_5 - L_6	0.26	-0.08	0.16	0.16	-0.27	-0.27					1.18	0.90	0.26	0.17	-----	Vehicle	-0.08	-0.29	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**652.23**	**1087.05**	**390.77**	**651.28**
		U_6 - L_7	0.47	0.08	0.22	0.22	-0.16	-0.16					1.18	0.90	0.47	0.23	-----	Vehicle	0.08	-0.17	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**538.32**	**897.20**	**754.25**	**1257.08**
		U_8 - L_7	-0.31	-1.10	0.14	0.14	-0.36	-0.36					1.18	0.90	-0.31	0.15	-----	Vehicle	-1.10	-0.38	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**706.34**	**1177.23**	**272.04**	**453.40**
		U_9 - L_8	-1.36	-1.87	0.09	0.09	-0.78	-0.78					1.18	0.90	-1.36	0.10	-----	Vehicle	-1.87	-0.83	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1549.47**	**2582.45**	**185.35**	**308.92**
		U_{10} - L_9	-1.34	-1.84	0.04	0.04	-0.80	-0.80					1.18	0.90	-1.34	0.04	-----	Vehicle	-1.84	-0.85	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4584.59**	**7640.98**	**198.58**	**330.97**
		U_{11} - L_{10}	-1.60	-2.16	0.02	0.02	-0.89	-0.89					1.18	0.90	-1.60	0.02	-----	Vehicle	-2.16	-0.95	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**9729.81**	**16216.35**	**193.75**	**322.92**
		U_{12} - L_{11}	-1.61	-2.20	0.04	0.04	-0.91	-0.91					1.18	0.90	-1.61	0.04	-----	Vehicle	-2.20	-0.96	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**4271.69**	**7119.49**	**190.94**	**318.24**
		U_{13} - L_{12}	-1.62	-2.23	0.11	0.11	-0.94	-0.94					1.18	0.90	-1.62	0.11	-----	Vehicle	-2.23	-1.00	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1487.23**	**2478.71**	**168.20**	**280.34**
		U_{14} - L_{13}	-0.88	-1.51	0.13	0.13	-0.64	-0.64					1.18	0.90	-0.88	0.14	-----	Vehicle	-1.51	-0.68	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1261.43**	**2102.39**	**247.06**	**411.76**
		U_{15} - L_{15}	-0.27	-0.82	0.09	0.09	-0.45	-0.45					1.17	0.90	-0.27	0.09	-----	Vehicle	-0.82	-0.48	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1592.13**	**2653.56**	**301.56**	**502.59**
		U_{15} - L_{16}	-0.82	-1.35	0.11	0.11	-0.70	-0.70					1.17	0.90	-0.82	0.12	-----	Vehicle	-1.35	-0.73	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1236.39**	**2060.65**	**195.40**	**325.67**
		U_{16} - L_{17}	-0.97	-1.52	0.08	0.08	-0.77	-0.77					1.17	0.90	-0.97	0.09	-----	Vehicle	-1.52	-0.81	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1817.00**	**3028.33**	**190.03**	**316.72**
		U_{17} - L_{18}	-1.04	-1.53	0.10	0.10	-0.78	-0.78					1.17	0.90	-1.04	0.10	-----	Vehicle	-1.53	-0.82	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1401.69**	**2336.15**	**174.23**	**290.38**
		U_{18} - L_{19}	-0.98	-1.46	0.12	0.12	-0.75	-0.75					1.17	0.90	-0.98	0.12	-----	Vehicle	-1.46	-0.79	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1163.80**	**1939.67**	**181.74**	**302.89**
		U_{19} - L_{20}	-0.28	-1.03	0.11	0.11	-0.52	-0.52					1.17	0.90	-0.28	0.12	-----	Vehicle	-1.03	-0.55	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**903.11**	**1505.18**	**188.52**	**314.20**
		U_{20} - L_{21}	-0.23	-0.57	0.10	0.10	-0.36	-0.36					1.17	0.90	-0.23	0.11	-----	Vehicle	-0.57	-0.38	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1064.00**	**1773.34**	**296.90**	**494.84**
		U_{21} - L_{22}	0.04	-0.30	0.16	0.16	-0.22	-0.22					1.17	0.90	0.04	0.17	-----	Vehicle	-0.30	-0.23	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**664.89**	**1108.16**	**485.32**	**808.87**
		U_{23} - L_{22}	0.07	-0.27	0.20	0.20	-0.20	-0.20					1.17	0.90	0.07	0.21	-----	Vehicle	-0.27	-0.21	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**552.85**	**921.42**	**538.52**	**897.53**
		U_{24} - L_{23}	-0.17	-0.52	0.13	0.13	-0.34	-0.34					1.17	0.90	-0.17	0.13	-----	Vehicle	-0.52	-0.36	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**867.96**	**1446.60**	**317.01**	**528.36**
		U_{25} - L_{24}	-0.29	-1.06	0.13	0.13	-0.53	-0.53					1.17	0.90	-0.29	0.13	-----	Vehicle	-1.06	-0.55	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**782.28**	**1303.81**	**187.77**	**312.94**
		U_{26} - L_{25}	-0.69	-1.19	0.15	0.15	-0.78	-0.78					1.17	0.90	-0.69	0.16	-----	Vehicle	-1.19	-0.82	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**914.44**	**1524.07**	**174.48**	**290.80**
		U_{27} - L_{26}	-0.78	-1.29	0.12	0.12	-0.81	-0.81					1.17	0.90	-0.78	0.13	-----	Vehicle	-1.29	-0.85	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1115.58**	**1859.30**	**168.36**	**280.61**
		U_{28} - L_{27}	-0.72	-1.28	0.10	0.10	-0.86	-0.86					1.17	0.90	-0.72	0.11	-----	Vehicle	-1.28	-0.91	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1427.48**	**2379.13**	**168.86**	**281.43**
		U_{29} - L_{28}	-0.68	-1.22	0.07	0.07	-0.83	-0.83					1.17	0.90	-0.68	0.07	-----	Vehicle	-1.22	-0.87	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2078.12**	**3463.54**	**164.74**	**274.57**
		U_{30} - L_{29}	-0.22	-0.79	0.06	0.06	-0.52	-0.52					1.17	0.90	-0.22	0.07	-----	Vehicle	-0.79	-0.55	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2139.04**	**3565.06**	**261.66**	**436.09**
		U_{30} - L_{31}	-0.49	-1.12	0.12	0.12	-0.51	-0.51					1.18	0.90	-0.49	0.12	-----	Vehicle	-1.12	-0.54	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1367.35**	**2278.91**	**314.38**	**523.97**
		U_{31} - L_{32}	-1.09	-1.69	0.15	0.15	-0.76	-0.76					1.18	0.90	-1.09	0.16	-----	Vehicle	-1.69	-0.81	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1098.10**	**1830.17**	**209.16**	**348.60**
		U_{32} - L_{33}	-1.17	-1.76	0.10	0.10	-0.81	-0.81					1.18	0.90	-1.17	0.11	-----	Vehicle	-1.76	-0.86	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1731.64**	**2886.07**	**214.15**	**356.91**
		U_{33} - L_{34}	-1.34	-1.87	0.08	0.08	-0.85	-0.85					1.18	0.90	-1.34	0.09	-----	Vehicle	-1.87	-0.90	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2160.37**	**3600.62**	**203.98**	**339.97**
		U_{34} - L_{35}	-1.13	-1.62	0.04	0.04	-0.80	-0.80					1.18	0.90	-1.13	0.04	-----	Vehicle	-1.62	-0.85	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3910.83**	**6518.04**	**198.49**	**330.82**
		U_{35} - L_{36}	-1.11	-1.61	0.08	0.08	-0.82	-0.82					1.18	0.90	-1.11	0.08	-----	Vehicle	-1.61	-0.87	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1841.90**	**3069.83**	**175.80**	**293.00**
		U_{36} - L_{37}	-0.27	-1.04	0.10	0.10	-0.43	-0.43					1.18	0.90	-0.27	0.10	-----	Vehicle	-1.04	-0.46	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1022.51**	**1704.19**	**227.09**	**378.48**
		U_{38} - L_{37}	0.40	0.00	0.24	0.24	-0.12	-0.12					1.18	0.90	0.40	0.26	-----	Vehicle	0.00	-0.12	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**483.10**	**805.16**	**1022.79**	**1704.64**
		U_{39} - L_{38}	0.27	-0.08	0.21	0.21	-0.23	-0.23					1.18	0.90	0.27	0.22	-----	Vehicle	-0.08	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**519.23**	**865.39**	**469.61**	**782.68**
		U_{40} - L_{39}	0.01	-0.35	0.10	0.10	-0.33	-0.33					1.18	0.90	0.01	0.11	-----	Vehicle	-0.35	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1060.51**	**1767.51**	**323.99**	**539.99**
		U_{41} - L_{40}	-0.30	-0.73	0.13	0.13	-0.51	-0.51					1.18	0.90	-0.30	0.13	-----	Vehicle	-0.73	-0.54	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1147.46**	**1912.43**	**279.55**	**465.92**
		U_{42} - L_{41}	-0.81	-1.29	0.17	0.17	-0.90	-0.90					1.18	0.90	-0.81	0.18	-----	Vehicle	-1.29	-0.96	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**807.18**	**1345.30**	**149.03**	**248.38**
		U_{43} - L_{42}	-0.95	-1.50	0.15	0.15	-1.01	-1.01					1.18	0.90	-0.95	0.16	-----	Vehicle	-1.50	-1.08	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1040.52**	**1734.20**	**157.13**	**261.89**
		U_{44} - L_{43}	-1.00	-1.57	0.07	0.07	-0.69	-0.69					1.18	0.90	-1.00	0.08	-----	Vehicle	-1.57	-0.74	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2225.98**	**3709.97**	**229.51**	**382.52**
	Structure 3	U_0 - L_1	-1.06	-1.63	0.05	0.05	-0.85	-0.85					1.20	0.90	-1.06	0.05	-----	Vehicle	-1.63	-0.91	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**3123.13**	**5205.22**	**168.04**	**280.07**
		U_1 - L_2	-1.16	-1.67	0.07	0.07	-0.74	-0.74					1.20	0.90	-1.16	0.07	-----	Vehicle	-1.67	-0.80	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2145.04**	**3575.06**	**192.34**	**320.57**
		U_2 - L_3	-1.32	-1.78	0.09	0.09	-0.82	-0.82					1.20	0.90	-1.32	0.10	-----	Vehicle	-1.78	-0.88	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1442.94**	**2404.91**	**161.75**	**269.58**
		U_3 - L_4	-0.36	-0.74	0.07	0.07	-0.45	-0.45					1.20	0.90	-0.36	0.08	-----	Vehicle	-0.74	-0.49	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1790.17**	**2983.61**	**283.81**	**473.02**
		U_4 - L_5	-0.13	-0.47	0.09	0.09	-0.33	-0.33					1.20	0.90	-0.13	0.10	-----	Vehicle	-0.47	-0.35	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1150.51**	**1917.52**	**323.65**	**539.42**
		U_5 - L_6	0.35	0.02	0.15	0.15	-0.18	-0.18					1.20	0.90	0.35	0.17	-----	Vehicle	0.02	-0.19	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**685.59**	**1142.65**	**597.66**	**996.11**
		U_7 - L_6	-0.07	-0.41	0.11	0.11	-0.17	-0.17					1.20	0.90	-0.07	0.12	-----	Vehicle	-0.41	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**970.77**	**1617.96**	**632.00**	**1053.33**
		U_8 - L_7	-0.58	-1.31	0.06	0.06	-0.49	-0.49					1.20	0.90	-0.58	0.06	-----	Vehicle	-1.31	-0.53	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1917.08**	**3195.14**	**233.55**	**389.25**
		U_9 - L_8	-0.75	-1.24	0.02	0.02	-0.59	-0.59					1.20	0.90	-0.75	0.02	-----	Vehicle	-1.24	-0.64	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**8784.52**	**14640.87**	**266.58**	**444.30**
		U_{10} - L_9	-0.89	-1.77	0.01	0.01	-0.65	-0.65					1.20	0.90	-0.89	0.01	-----	Vehicle	-1.77	-0.70	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**19090.31**	**31817.18**	**202.69**	**337.81**
		U_{11} - L_{10}	-1.27	-2.15	0.02	0.02	-0.94	-0.94					1.20	0.90	-1.27	0.02	-----	Vehicle	-2.15	-1.01	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**8356.39**	**13927.31**	**176.15**	**293.58**
		U_{12} - L_{11}	-0.73	-1.69	0.10	0.10	-0.65	-0.65					1.20	0.90	-0.73	0.10	-----	Vehicle	-1.69	-0.70	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**1756.12**	**2926

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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 $Load_{min}$																				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 - Upper Chord	Structure 1	U_0 - U_1	4.56	-6.52	4.02	4.02	-2.49	-2.49					1.24	0.75	4.56	3.72	-----	Vehicle	-6.52	-2.31	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**24.17**	**40.28**	**38.40**	**64.00**
		U_1 - U_2	3.38	-4.04	2.32	2.32	-0.90	-0.90					1.24	0.75	3.38	2.15	-----	Vehicle	-4.04	-0.83	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**42.24**	**70.41**	**108.54**	**180.91**
		U_2 - U_3	2.36	-7.47	2.38	2.38	-1.36	-1.36					1.24	0.75	2.36	2.21	-----	Vehicle	-7.47	-1.26	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**41.42**	**69.03**	**69.91**	**116.52**
		U_3 - U_4	2.44	-4.45	2.21	2.21	-2.01	-2.01					1.24	0.75	2.44	2.05	-----	Vehicle	-4.45	-1.87	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**44.55**	**74.24**	**48.21**	**80.36**
		U_4 - U_5	2.34	-4.17	1.42	1.42	-2.09	-2.09					1.24	0.75	2.34	1.32	-----	Vehicle	-4.17	-1.93	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**69.20**	**115.33**	**46.66**	**77.76**
		U_5 - U_6	4.24	-6.30	0.62	0.62	-2.54	-2.54					1.24	0.75	4.24	0.57	-----	Vehicle	-6.30	-2.35	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**157.60**	**262.66**	**37.80**	**63.00**
		U_6 - U_7	6.32	-5.06	1.83	1.83	-1.75	-1.75					1.24	0.75	6.32	1.69	-----	Vehicle	-5.06	-1.62	-----	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**107.33**	**178.88**	**112.58**	**187.64**
		U_7 - U_8	-0.91	-13.50	0.02	0.02	-5.90	-5.90					1.24	0.75	-0.91	0.02	-----	Vehicle	-13.50	-5.47	-----	Vehicle	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**15717.58**	**26195.96**	**43.70**	**72.83**
		U_8 - U_9	14.68	2.06	5.25	5.25	-0.14	-0.14					1.20	0.75	14.68	4.72	-----	Vehicle	2.06	-0.13	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**21.06**	**35.10**	**863.93**	**1439.88**
		U_9 - U_{10}	6.72	-5.99	2.15	2.15	-0.48	-0.48					1.20	0.75	6.72	1.93	-----	Vehicle	-5.99	-0.43	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**45.93**	**76.55**	**208.04**	**346.74**
		U_{10} - U_{11}	8.58	-2.74	3.20	3.20	-0.15	-0.15					1.20	0.75	8.58	2.88	-----	Vehicle	-2.74	-0.14	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**30.47**	**50.78**	**667.12**	**1111.87**
		U_{11} - U_{12}	6.93	-2.59	2.60	2.60	-0.54	-0.54					1.20	0.75	6.93	2.34	-----	Vehicle	-2.59	-0.49	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**51.16**	**85.27**	**250.77**	**417.95**
		U_{12} - U_{13}	8.34	-7.12	3.58	3.58	-0.84	-0.84					1.20	0.75	8.34	3.21	-----	Vehicle	-7.12	-0.76	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**101.23**	**168.72**	**430.26**	**717.10**
		U_{13} - U_{14}	6.26	-2.33	4.10	4.10	-1.73	-1.73					1.20	0.75	6.26	3.68	-----	Vehicle	-2.33	-1.56	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**103.97**	**173.28**	**247.59**	**412.65**
		U_{14} - U_{15}	3.31	-4.79	2.78	2.78	-3.34	-3.34					1.20	0.75	3.31	2.50	-----	Vehicle	-4.79	-3.00	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**153.99**	**256.64**	**127.71**	**212.85**
		U_{15} - U_{16}	9.98	-5.04	3.30	3.30	-2.65	-2.65					1.20	0.75	9.98	2.97	-----	Vehicle	-5.04	-2.38	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**128.33**	**213.88**	**161.17**	**268.61**
		U_{16} - U_{17}	2.83	-6.01	2.02	2.02	-2.86	-2.86					1.20	0.75	2.83	1.81	-----	Vehicle	-6.01	-2.57	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**212.11**	**353.51**	**149.26**	**248.76**
		U_{17} - U_{18}	6.87	-9.04	0.86	0.86	-3.05	-3.05					1.20	0.75	6.87	0.77	-----	Vehicle	-9.04	-2.74	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**361.09**	**601.81**	**101.64**	**169.40**
		U_{18} - U_{19}	2.90	-6.82	0.96	0.96	-2.34	-2.34					1.20	0.75	2.90	0.86	-----	Vehicle	-6.82	-2.10	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**123.44**	**205.73**	**49.59**	**82.65**
		U_{19} - U_{20}	1.99	-7.35	2.64	2.64	-2.89	-2.89					1.20	0.75	1.99	2.37	-----	Vehicle	-7.35	-2.60	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**45.15**	**75.25**	**39.98**	**66.63**
	Structure 2	U_0 - U_1	12.40	-3.78	3.91	3.91	-1.94	-1.94					1.18	0.75	12.40	3.47	-----	Vehicle	-3.78	-1.72	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**30.34**	**50.57**	**64.19**	**106.98**
		U_1 - U_2	8.38	-5.46	3.26	3.26	-0.50	-0.50					1.18	0.75	8.38	2.89	-----	Vehicle	-5.46	-0.44	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**76.26**	**127.10**	**503.41**	**839.02**
		U_2 - U_3	8.24	-2.95	4.96	4.96	-0.55	-0.55					1.18	0.75	8.24	4.40	-----	Vehicle	-2.95	-0.48	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**37.29**	**62.15**	**345.73**	**576.21**
		U_3 - U_4	7.92	-7.97	3.72	3.72	-2.60	-2.60					1.18	0.75	7.92	3.30	-----	Vehicle	-7.97	-2.30	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**112.43**	**187.38**	**160.93**	**268.21**
		U_4 - U_5	5.54	-4.79	5.56	5.56	-2.22	-2.22					1.18	0.75	5.54	4.93	-----	Vehicle	-4.79	-1.97	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**90.70**	**151.17**	**226.96**	**378.27**
		U_5 - U_6	2.70	-7.57	3.69	3.69	-3.91	-3.91					1.18	0.75	2.70	3.27	-----	Vehicle	-7.57	-3.47	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**137.23**	**228.71**	**128.43**	**214.04**
		U_6 - U_7	5.85	-9.91	5.21	5.21	-3.11	-3.11					1.18	0.75	5.85	4.62	-----	Vehicle	-9.91	-2.76	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**80.52**	**134.20**	**133.82**	**223.03**
		U_7 - U_8	8.61	-6.86	2.45	2.45	-5.37	-5.37					1.18	0.75	8.61	2.17	-----	Vehicle	-6.86	-4.76	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**170.34**	**283.90**	**77.98**	**129.96**
		U_8 - U_9	3.73	-10.69	2.65	2.65	-3.22	-3.22					1.18	0.75	3.73	2.35	-----	Vehicle	-10.69	-2.85	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**134.88**	**224.80**	**109.56**	**182.60**
		U_9 - U_{10}	2.20	-9.32	1.23	1.23	-3.50	-3.50					1.18	0.75	2.20	1.09	-----	Vehicle	-9.32	-3.10	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**118.91**	**198.18**	**40.54**	**67.56**
		U_{10} - U_{11}	4.11	-10.14	1.68	1.68	-2.56	-2.56					1.18	0.75	4.11	1.49	-----	Vehicle	-10.14	-2.27	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**86.50**	**144.17**	**55.11**	**91.85**
		U_{11} - U_{12}	3.90	-11.48	1.32	1.32	-3.32	-3.32					1.18	0.75	3.90	1.17	-----	Vehicle	-11.48	-2.95	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**109.95**	**183.26**	**42.23**	**70.39**
		U_{12} - U_{13}	9.71	-7.93	2.63	2.63	-1.78	-1.78					1.18	0.75	9.71	2.33	-----	Vehicle	-7.93	-1.57	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**118.31**	**197.18**	**175.77**	**292.96**
		U_{13} - U_{14}	-10.77	-26.35	0.37	0.37	-8.52	-8.52					1.18	0.75	-10.77	0.32	-----	Vehicle	-26.35	-7.56	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1237.23**	**2062.05**	**50.08**	**83.47**
		U_{14} - U_{15}	23.41	7.84	9.40	9.40	-0.62	-0.62					1.17	0.75	23.41	8.24	-----	Vehicle	7.84	-0.54	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**46.15**	**76.92**	**735.04**	**1225.07**
		U_{15} - U_{16}	7.06	-9.43	2.55	2.55	-2.39	-2.39					1.17	0.75	7.06	2.24	-----	Vehicle	-9.43	-2.10	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**140.73**	**234.56**	**149.41**	**249.01**
		U_{16} - U_{17}	8.63	-3.17	4.22	4.22	-0.45	-0.45					1.17	0.75	8.63	3.70	-----	Vehicle	-3.17	-0.39	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**44.23**	**73.72**	**425.29**	**708.82**
		U_{17} - U_{18}	8.38	-5.41	3.29	3.29	-0.84	-0.84					1.17	0.75	8.38	2.89	-----	Vehicle	-5.41	-0.74	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**37.29**	**62.16**	**148.70**	**247.84**
		U_{18} - U_{19}	8.11	-4.42	3.57	3.57	-0.61	-0.61					1.17	0.75	8.11	3.13	-----	Vehicle	-4.42	-0.54	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**34.45**	**57.42**	**204.97**	**341.61**
		U_{19} - U_{20}	5.79	-4.35	2.93	2.93	-1.58	-1.58					1.17	0.75	5.79	2.56	-----	Vehicle	-4.35	-1.38	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**49.88**	**83.14**	**93.15**	**155.25**
		U_{20} - U_{21}	6.65	-6.59	4.21	4.21	-1.51	-1.51					1.17	0.75	6.65	3.69	-----	Vehicle	-6.59	-1.32	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**65.11**	**108.52**	**181.46**	**302.44**
		U_{21} - U_{22}	6.33	-6.69	3.22	3.22	-2.75	-2.75					1.17	0.75	6.33	2.82	-----	Vehicle	-6.69	-2.41	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**85.20**	**142.00**	**99.41**	**165.68**
		U_{22} - U_{23}	6.91	-6.27	3.17	3.17	-3.26	-3.26					1.17	0.75	6.91	2.78	-----	Vehicle	-6.27	-2.85	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**86.29**	**143.81**	**84.19**	**140.32**
		U_{23} - U_{24}	7.16	-6.08	2.99	2.99	-3.15	-3.15					1.17	0.75	7.16	2.62	-----	Vehicle	-6.08	-2.76	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**91.48**	**152.47**	**87.10**	**145.16**
		U_{24} - U_{25}	4.32	-5.83	1.77	1.77	-2.73	-2.73					1.17	0.75	4.32	1.55	-----	Vehicle	-5.83	-2.39	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**83.05**	**138.42**	**53.46**	**89.10**
		U_{25} - U_{26}	4.60	-7.93	1.67	1.67	-3.29	-3.29					1.17	0.75	4.60	1.47	-----	Vehicle	-7.93	-2.88	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**74.99**	**124.99**	**37.40**	**62.33**
		U_{26} - U_{27}	5.15	-8.64	1.84	1.84	-2.77	-2.77					1.17	0.75	5.15	1.61	-----	Vehicle	-8.64	-2.43	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**67.98**	**113.29**	**44.20**	**73.66**
		U_{27} - U_{28}	3.24	-8.55	1.28	1.28	-3.42	-3.42					1.17	0.75	3.24	1.12	-----	Vehicle	-8.55	-3.00	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**148.81**	**248.02**	**54.60**	**91.00**
		U_{28} - U_{29}	8.81	-7.68	3.37	3.37	-2.46	-2.46					1.17	0.75	8.81	2.95	-----	Vehicle	-7.68	-2.16	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**106.34**	**177.24**	**145.59**	**242.65**
		U_{29} - U_{30}	-7.76	-23.33	0.32	0.32	-8.88	-8.88					1.17	0.75	-7.76	0.28	-----	Vehicle	-23.33	-7.78	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**1439.66**	**2399.44**	**48.86**	**81.43**
		U_{30} - U_{31}	24.20	8.63	8.78	8.78	-0.69	-0.69					1.18	0.75	24.20	7.79	-----	Vehicle	8.63	-0.61	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**48.72**	**81.20**	**657.14**	**1095.23**
		U_{31} - U_{32}	7.18	-10.46	2.47	2.47	-2.19	-2.19					1.18	0.75	7.18	2.19	-----	Vehicle	-10.46	-1.94	-----	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**126.73**	**211.21**	**141.88**	**236.46**
		U_{32} - U_{33}	10.91	-4.46	3.84	3.84	-0.20	-0.20					1.18	0.75	10.91	3.41	-----	Vehicle	-4.46	-0.18	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**36.65**	**61.08**	**714.70**	**1191.16**
		U_{33} - U_{34}	9.22	-5.03	2.79	2.79	-0.63	-0.63					1.18	0.75	9.22	2.47	-----	Vehicle	-5.03	-0.56	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**50.90**	**84.84**	**229.32**	**382.20**
		U_{34} - U_{35}	9.09	-2.43	4.18	4.18	-0.64	-0.64					1.18	0.75	9.09	3.71	-----	Vehicle	-2.43	-0.57	-----	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**33.98**	**56.63**	**228.84**	**381.40**
		U_{35} - U_{36}	10.27	-4.15	4.12	4.12	-1.38	-1.38					1.18	0.75	10.27	3.65	-----	Vehicle	-4.15	-1.22	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**85.72**	**142.86**	**258.60**	**431.01**
		U_{36} - U_{37}	6.69	-8.78	5.29	5.29	-1.97	-1.97					1.18	0.75	6.69	4.69	-----	Vehicle	-8.78	-1.75	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**79.17**	**131.94**	**211.78**	**352.97**
		U_{37} - U_{38}	10.53	-5.24	3.84	3.84	-4.92	-4.92					1.18	0.75	10.53	3.40	-----	Vehicle	-5.24	-4.36	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**108.48**	**180.80**	**85.37**	**142.29**
		U_{38} - U_{39}	8.00	-2.27	5.40	5.40	-2.09	-2.09					1.18	0.75	8.00	4.79	-----	Vehicle	-2.27	-1.86	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**93.12**	**155.20**	**241.87**	**403.12**
		U_{39} - U_{40}	5.61	-4.72	2.97	2.97	-4.83	-4.83					1.18	0.75	5.61	2.64	-----	Vehicle	-4.72	-4.28	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**169.69**	**282.82**	**104.58**	**174.30**
		U_{40} - U_{41}	7.75	-8.14	3.15	3.15	-3.93	-3.93					1.18	0.75	7.75	2.79	-----	Vehicle	-8.14	-3.49	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**132.84**	**221.40**	**106.19**	**176.98**
		U_{41} - U_{42}	3.50	-7.70	1.71	1.71	-4.33	-4.33					1.18	0.75	3.50	1.52	-----	Vehicle	-7.70	-3.84	-----	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**109.78**	**182.96**	**42.74**	**71.24**
		U_{42} - U_{43}	4.07	-9.77	0.96	0.96	-2.90	-2.90					1.18	0.75	4.07	0.85	-----	Vehicle	-9.77	-2.57	-----	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**262.15**	**436.91**	**85.24**	**142.07**
		U_{43} - U_{44}	6.60	-9.58	2.66	2.66	-3.61	-3.61					1.18	0.75	6.60	2.36	-----	Vehicle	-9.58	-3.21	-----	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**46.10**	**76.83**	**33.34**	**55.57**
	Structure 3	U_0 - U_1	8.84	-0.50	3.50	3.50	-1.95	-1.95					1.20	0.75	8.84	3.14	-----	Vehicle	-0.50	-1.75	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**32.76**	**54.60**	**61.50**	**102.49**
		U_1 - U_2	5.80	-3.92	2.47	2.47	-0.17	-0.17					1.20	0.75	5.80	2.22	-----	Vehicle	-3.92	-0.16	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**47.13**	**78.56**	**681.05**	**1135.09**
		U_2 - U_3	8.91	-7.00	3.55	3.55	-0.45	-0.45					1.20	0.75	8.91	3.19	-----	Vehicle	-7.00	-0.40	-----	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**87.34**	**145.57**	**691.49**	**1152.48**
		U_3 - U_4	5.49	-3.35	3.13	3.13	-1.11	-1.11					1.20	0.75	5.49	2.82	-----	Vehicle	-3.35	-1.00	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**136.08**	**226.80**	**384.46**	**640.77**
		U_4 - U_5	5.50	-9.53	3.28	3.28	-1.91	-1.91					1.20	0.75	5.50	2.94	-----	Vehicle	-9.53	-1.71	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**130.14**	**216.90**	**222.22**	**370.37**
		U_5 - U_6	4.95	-3.15	3.55	3.55	-2.68	-2.68					1.20	0.75	4.95	3.19	-----	Vehicle	-3.15	-2.41	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**120.13**	**200.22**	**159.83**	**266.39**
		U_6 - U_7	2.39	-6.20	2.58	2.58	-3.31	-3.31					1.20	0.75	2.39	2.31	-----	Vehicle	-6.20	-2.98	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**166.36**	**277.27**	**128.62**	**214.37**
		U_7 - U_8	7.38	-8.07	1.55	1.55	-2.98	-2.98					1.20	0.75	7.38	1.39	-----	Vehicle	-8.07	-2.68	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**234.50**	**390.83**	**121.38**	**202.30**
		U_8 - U_9	2.59	-6.93	1.14	1.14	-2.40	-2.40					1.20	0.75	2.59	1.02	-----	Vehicle	-6.93	-2.15	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**119.75**	**199.58**	**55.49**	**92.49**
		U_9 - U_{10}	2.81	-8.52	0.54	0.54	-2.93	-2.93					1.20	0.75	2.81	0.49	-----	Vehicle	-8.52	-2.63	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**187.35**	**312.25**	**33.35**	**55.58**
		U_{10} - U_{11}	5.83	-6.88	0.96	0.96	-1.74	-1.74					1.20	0.75	5.83	0.86	-----	Vehicle	-6.88	-1.56	-----	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**104.02**	**173.37**	**56.85**	**94.75**
		U_{11} - U_{12}	-2.18	-14.80	0.05	0.05	-5.31	-5.31					1.20	0.75	-2.18	0.04	-----	Vehicle	-14.80	-4.77	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**2708.78**	**4514.63**	**20.83**	**34.72**
		U_{12} - U_{13}	12.98	0.39	6.23	6.23	-0.02	-0.02					1.24	0.75	12.98	5.78	-----	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: 5C1
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	2.29	2.29	-0.39	-0.39					1.24	0.75	4.20	2.13	-----	Vehicle	-2.36	-0.36	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**48.64**	**81.07**	**289.06**	**481.76**
		L_1 - L_2	5.75	-2.53	2.17	2.17	-0.75	-0.75					1.24	0.75	5.75	2.02	-----	Vehicle	-2.53	-0.69	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**50.87**	**84.78**	**150.77**	**251.29**
		L_2 - L_3	2.73	-3.85	2.06	2.06	-1.03	-1.03					1.24	0.75	2.73	1.91	-----	Vehicle	-3.85	-0.96	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**84.96**	**141.61**	**168.48**	**280.81**
		L_3 - L_4	3.90	-4.48	2.18	2.18	-1.58	-1.58					1.24	0.75	3.90	2.02	-----	Vehicle	-4.48	-1.47	-----	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	**79.82**	**133.04**	**109.90**	**183.16**
		L_4 - L_5	1.53	-7.85	0.61	0.61	-2.38	-2.38					1.24	0.75	1.53	0.57	-----	Vehicle	-7.85	-2.21	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**241.10**	**401.83**	**60.28**	**100.46**
		L_5 - L_6	1.34	-7.19	0.15	0.15	-2.20	-2.20					1.24	0.75	1.34	0.14	-----	Vehicle	-7.19	-2.04	-----	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	**1441.37**	**2402.29**	**98.09**	**163.48**
		L_6 - L_7	3.62	-6.82	0.95	0.95	-1.89	-1.89					1.24	0.75	3.62	0.88	-----	Vehicle	-6.82	-1.75	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**365.09**	**608.49**	**181.74**	**302.90**
		L_7 - L_8	-6.36	-14.66	0.05	0.05	-6.01	-6.01					1.24	0.75	-6.36	0.05	-----	Vehicle	-14.66	-5.58	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**9504.65**	**15841.09**	**75.19**	**125.32**
		L_8 - L_9	15.52	7.55	6.04	6.04	-0.12	-0.12					1.20	0.75	15.52	5.43	-----	Vehicle	7.55	-0.11	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**77.20**	**128.66**	**4082.08**	**6803.47**
		L_9 - L_{10}	10.29	-2.64	2.11	2.11	-1.01	-1.01					1.20	0.75	10.29	1.90	-----	Vehicle	-2.64	-0.90	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**166.49**	**277.48**	**354.42**	**590.70**
		L_{10} - L_{11}	8.89	0.36	2.58	2.58	0.00	0.00					1.20	0.75	8.89	2.31	-----	Vehicle	0.36	0.00	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**57.23**	**95.39**	**153616.69**	**256027.82**
		L_{11} - L_{12}	11.21	-1.42	2.11	2.11	-0.42	-0.42					1.20	0.75	11.21	1.90	-----	Vehicle	-1.42	-0.38	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**69.14**	**115.24**	**364.65**	**607.75**
		L_{12} - L_{13}	6.02	-3.53	2.18	2.18	-0.55	-0.55					1.20	0.75	6.02	1.96	-----	Vehicle	-3.53	-0.50	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**136.16**	**226.93**	**539.78**	**899.63**
		L_{13} - L_{14}	11.62	0.44	3.99	3.99	-0.91	-0.91					1.20	0.75	11.62	3.58	-----	Vehicle	0.44	-0.82	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**105.88**	**176.46**	**470.66**	**784.44**
		L_{14} - L_{15}	2.83	-9.85	1.46	1.46	-2.81	-2.81					1.20	0.75	2.83	1.31	-----	Vehicle	-9.85	-2.53	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**365.11**	**608.52**	**187.19**	**311.98**
		L_{15} - L_{16}	6.71	-2.72	1.52	1.52	-2.03	-2.03					1.20	0.75	6.71	1.37	-----	Vehicle	-2.72	-1.82	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**347.11**	**578.52**	**262.25**	**437.08**
		L_{16} - L_{17}	-0.07	-11.08	0.39	0.39	-2.62	-2.62					1.20	0.75	-0.07	0.35	-----	Vehicle	-11.08	-2.35	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**1024.80**	**1708.00**	**147.75**	**246.25**
		L_{17} - L_{18}	3.82	-7.83	0.28	0.28	-2.18	-2.18					1.20	0.75	3.82	0.25	-----	Vehicle	-7.83	-1.96	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**932.30**	**1553.84**	**119.43**	**199.04**
		L_{18} - L_{19}	1.59	-10.77	0.16	0.16	-1.99	-1.99					1.20	0.75	1.59	0.14	-----	Vehicle	-10.77	-1.78	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**739.98**	**1233.31**	**55.79**	**92.98**
		L_{19} - L_{20}	2.58	-7.20	0.09	0.09	-2.16	-2.16					1.20	0.75	2.58	0.08	-----	Vehicle	-7.20	-1.94	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**1263.69**	**2106.14**	**52.37**	**87.29**
	Structure 2	L_0 - L_1	7.47	-2.52	2.54	2.54	-0.36	-0.36					1.18	0.75	7.47	2.25	-----	Vehicle	-2.52	-0.32	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**61.54**	**102.56**	**442.08**	**736.80**
		L_1 - L_2	11.63	-2.16	2.42	2.42	-0.38	-0.38					1.18	0.75	11.63	2.15	-----	Vehicle	-2.16	-0.33	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**63.43**	**105.71**	**426.22**	**710.37**
		L_2 - L_3	8.06	-2.93	2.84	2.84	-0.31	-0.31					1.18	0.75	8.06	2.52	-----	Vehicle	-2.93	-0.28	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**102.38**	**170.64**	**941.42**	**1569.03**
		L_3 - L_4	12.24	-1.94	2.55	2.55	-0.41	-0.41					1.18	0.75	12.24	2.27	-----	Vehicle	-1.94	-0.37	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**163.71**	**272.84**	**1031.72**	**1719.54**
		L_4 - L_5	9.46	-8.43	3.23	3.23	-1.49	-1.49					1.18	0.75	9.46	2.86	-----	Vehicle	-8.43	-1.33	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**171.57**	**285.95**	**371.05**	**618.42**
		L_5 - L_6	11.40	-2.08	2.83	2.83	-1.11	-1.11					1.18	0.75	11.40	2.51	-----	Vehicle	-2.08	-0.99	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**215.27**	**358.78**	**552.74**	**921.24**
		L_6 - L_7	4.02	-9.79	2.97	2.97	-2.60	-2.60					1.18	0.75	4.02	2.64	-----	Vehicle	-9.79	-2.31	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**209.57**	**349.28**	**237.77**	**396.28**
		L_7 - L_8	4.78	-10.27	1.05	1.05	-3.66	-3.66					1.18	0.75	4.78	0.93	-----	Vehicle	-10.27	-3.25	-----	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	**416.68**	**694.47**	**118.01**	**196.68**
		L_8 - L_9	0.58	-13.59	0.65	0.65	-2.56	-2.56					1.18	0.75	0.58	0.58	-----	Vehicle	-13.59	-2.27	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**525.77**	**876.29**	**130.68**	**217.79**
		L_9 - L_{10}	-0.11	-10.43	0.66	0.66	-2.67	-2.67					1.18	0.75	-0.11	0.58	-----	Vehicle	-10.43	-2.37	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**382.59**	**637.64**	**91.33**	**152.22**
		L_{10} - L_{11}	-0.07	-12.28	0.54	0.54	-2.43	-2.43					1.18	0.75	-0.07	0.48	-----	Vehicle	-12.28	-2.16	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**399.82**	**666.37**	**85.12**	**141.87**
		L_{11} - L_{12}	1.07	-14.66	0.10	0.10	-2.55	-2.55					1.18	0.75	1.07	0.09	-----	Vehicle	-14.66	-2.26	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**3415.99**	**5693.32**	**131.64**	**219.41**
		L_{12} - L_{13}	6.89	-6.84	2.57	2.57	-1.72	-1.72					1.18	0.75	6.89	2.28	-----	Vehicle	-6.84	-1.53	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**195.26**	**325.44**	**291.66**	**486.11**
		L_{13} - L_{14}	-19.00	-32.90	0.45	0.45	-10.13	-10.13					1.18	0.75	-19.00	0.40	-----	Vehicle	-32.90	-8.99	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**1405.67**	**2342.78**	**58.82**	**98.04**
		L_{14} - L_{15}	32.02	18.24	10.62	10.62	-0.54	-0.54					1.17	0.75	32.02	9.31	-----	Vehicle	18.24	-0.47	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**56.84**	**94.74**	**1184.01**	**1973.35**
		L_{15} - L_{16}	2.21	-10.14	1.74	1.74	-2.70	-2.70					1.17	0.75	2.21	1.53	-----	Vehicle	-10.14	-2.37	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**293.08**	**488.46**	**187.26**	**312.10**
		L_{16} - L_{17}	13.39	-0.69	3.20	3.20	-0.29	-0.29					1.17	0.75	13.39	2.80	-----	Vehicle	-0.69	-0.25	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**123.75**	**206.25**	**1414.59**	**2357.65**
		L_{17} - L_{18}	9.56	-2.17	2.66	2.66	-0.53	-0.53					1.17	0.75	9.56	2.33	-----	Vehicle	-2.17	-0.47	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**93.10**	**155.16**	**474.48**	**790.80**
		L_{18} - L_{19}	8.70	-1.33	2.57	2.57	-0.70	-0.70					1.17	0.75	8.70	2.26	-----	Vehicle	-1.33	-0.61	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**68.15**	**113.58**	**258.90**	**431.49**
		L_{19} - L_{20}	9.27	-3.28	2.12	2.12	-0.54	-0.54					1.17	0.75	9.27	1.86	-----	Vehicle	-3.28	-0.47	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**82.71**	**137.85**	**334.80**	**558.01**
		L_{20} - L_{21}	7.20	-3.21	3.04	3.04	-1.08	-1.08					1.17	0.75	7.20	2.67	-----	Vehicle	-3.21	-0.95	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**95.29**	**158.82**	**271.10**	**451.84**
		L_{21} - L_{22}	8.50	-2.78	3.18	3.18	-1.49	-1.49					1.17	0.75	8.50	2.79	-----	Vehicle	-2.78	-1.30	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**90.79**	**151.32**	**196.78**	**327.97**
		L_{22} - L_{23}	2.93	-8.09	1.90	1.90	-2.79	-2.79					1.17	0.75	2.93	1.66	-----	Vehicle	-8.09	-2.45	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**154.38**	**257.30**	**103.68**	**172.81**
		L_{23} - L_{24}	3.61	-6.79	1.14	1.14	-2.75	-2.75					1.17	0.75	3.61	1.00	-----	Vehicle	-6.79	-2.41	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	**256.13**	**426.88**	**105.44**	**175.74**
		L_{24} - L_{25}	3.13	-9.39	0.53	0.53	-1.98	-1.98					1.17	0.75	3.13	0.47	-----	Vehicle	-9.39	-1.74	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**336.25**	**560.41**	**88.22**	**147.03**
		L_{25} - L_{26}	1.67	-8.33	0.68	0.68	-2.47	-2.47					1.17	0.75	1.67	0.60	-----	Vehicle	-8.33	-2.17	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	**265.42**	**442.37**	**71.03**	**118.39**
		L_{26} - L_{27}	1.60	-10.07	0.66	0.66	-2.74	-2.74					1.17	0.75	1.60	0.57	-----	Vehicle	-10.07	-2.40	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**385.97**	**643.29**	**90.05**	**150.09**
		L_{27} - L_{28}	0.95	-13.04	0.26	0.26	-2.98	-2.98					1.17	0.75	0.95	0.23	-----	Vehicle	-13.04	-2.61	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	**1531.80**	**2553.00**	**132.97**	**221.62**
		L_{28} - L_{29}	8.62	-3.57	2.57	2.57	-1.49	-1.49					1.17	0.75	8.62	2.25	-----	Vehicle	-3.57	-1.31	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**197.29**	**328.82**	**341.30**	**568.84**
		L_{29} - L_{30}	-17.40	-30.90	0.65	0.65	-10.35	-10.35					1.17	0.75	-17.40	0.57	-----	Vehicle	-30.90	-9.08	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**985.48**	**1642.47**	**58.41**	**97.34**
		L_{30} - L_{31}	30.59	16.41	10.17	10.17	-0.72	-0.72					1.18	0.75	30.59	9.03	-----	Vehicle	16.41	-0.64	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	**58.75**	**97.92**	**876.59**	**1460.98**
		L_{31} - L_{32}	5.57	-8.34	1.99	1.99	-2.73	-2.73					1.18	0.75	5.57	1.77	-----	Vehicle	-8.34	-2.42	-----	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	**252.27**	**420.45**	**183.66**	**306.09**
		L_{32} - L_{33}	14.28	-1.54	2.68	2.68	-0.10	-0.10					1.18	0.75	14.28	2.37	-----	Vehicle	-1.54	-0.09	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	**125.64**	**209.40**	**3481.75**	**5802.92**
		L_{33} - L_{34}	11.19	-1.33	2.33	2.33	-0.42	-0.42					1.18	0.75	11.19	2.07	-----	Vehicle	-1.33	-0.38	-----	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	**88.90**	**148.17**	**505.10**	**841.83**
		L_{34} - L_{35}	10.35	-0.01	3.05	3.05	-0.60	-0.60					1.18	0.75	10.35	2.71	-----	Vehicle	-0.01	-0.53	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	**80.00**	**133.33**	**418.16**	**696.93**
		L_{35} - L_{36}	12.98	-1.23	2.66	2.66	-0.54	-0.54					1.18	0.75	12.98	2.36	-----	Vehicle	-1.23	-0.48	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	**125.92**	**209.87**	**632.44**	**1054.06**
		L_{36} - L_{37}	10.09	-4.97	3.66	3.66	-0.82	-0.82					1.18	0.75	10.09	3.25	-----	Vehicle	-4.97	-0.72	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	**58.12**	**96.87**	**264.92**	**441.54**
		L_{37} - L_{38}	10.82	-3.01	3.22	3.22	-2.49	-2.49					1.18	0.75	10.82	2.86	-----	Vehicle	-3.01	-2.21	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	**192.00**	**320.01**	**250.09**	**416.82**
		L_{38} - L_{39}	2.38	-11.08	1.63	1.63	-2.47	-2.47					1.18	0.75	2.38	1.44	-----	Vehicle	-11.08	-2.20	-----	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	**378.12**	**630.20**	**245.98**	**409.97**
		L_{39} - L_{40}	9.28	-8.60	1.56	1.56	-2.62	-2.62					1.18	0.75	9.28	1.39	-----	Vehicle	-8.60	-2.33	-----	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	**354.30**	**590.51**	**211.30**	**352.16**
		L_{40} - L_{41}	1.61	-12.52	0.55	0.55	-2.61	-2.61					1.18	0.75	1.61	0.49	-----	Vehicle	-12.52	-2.32	-----	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	**774.68**	**1291.13**	**159.94**	**266.56**
		L_{41} - L_{42}	3.29	-7.64	0.48	0.48	-2.81	-2.81					1.18	0.75	3.29	0.43	-----	Vehicle	-7.64	-2.49	-----	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	**606.37**	**1010.61**	**103.51**	**172.51**
		L_{42} - L_{43}	1.35	-12.36	0.35	0.35	-2.21	-2.21					1.18	0.75	1.35	0.31	-----	Vehicle	-12.36	-1.96	-----	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	**226.52**	**377.54**	**32.65**	**54.42**
		L_{43} - L_{44}	1.52	-8.38	0.26	0.26	-2.50	-2.50					1.18	0.75	1.52	0.23	-----	Vehicle	-8.38	-2.22	-----	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	**611.70**	**1019.51**	**62.20**	**103.67**
	Structure 3	L_0 - L_1	6.56	-3.30	2.00	2.00	-0.14	-0.14					1.20	0.75	6.56	1.80	-----	Vehicle	-3.30	-0.12	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**56.77**	**94.62**	**832.95**	**1388.24**
		L_1 - L_2	10.13	-2.33	2.00	2.00	-0.18	-0.18					1.20	0.75	10.13	1.79	-----	Vehicle	-2.33	-0.16	-----	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	**55.72**	**92.87**	**665.27**	**1108.79**
		L_2 - L_3	7.92	-3.84	2.25	2.25	-0.15	-0.15					1.20	0.75	7.92	2.02	-----	Vehicle	-3.84	-0.13	-----	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	**115.74**	**192.89**	**1788.40**	**2980.67**
		L_3 - L_4	10.42	-0.67	2.52	2.52	-0.24	-0.24					1.20	0.75	10.42	2.26	-----	Vehicle	-0.67	-0.22	-----	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	**153.91**	**256.51**	**1641.89**	**2736.49**
		L_4 - L_5	3.19	-6.26	2.25	2.25	-1.43	-1.43					1.20	0.75	3.19	2.02	-----	Vehicle	-6.26	-1.28	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**236.10**	**393.51**	**371.19**	**618.65**
		L_5 - L_6	10.01	-2.69	3.15	3.15	-1.01	-1.01					1.20	0.75	10.01	2.83	-----	Vehicle	-2.69	-0.90	-----	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	**167.18**	**278.63**	**527.64**	**879.40**
		L_6 - L_7	-0.14	-11.31	1.20	1.20	-3.53	-3.53					1.20	0.75	-0.14	1.08	-----	Vehicle	-11.31	-3.18	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	**359.22**	**598.70**	**119.51**	**199.18**
		L_7 - L_8	3.69	-5.85	0.68	0.68	-1.99	-1.99					1.20	0.75	3.69	0.61	-----	Vehicle	-5.85	-1.79	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	**438.80**	**731.34**	**149.14**	**248.57**
		L_8 - L_9	1.43	-11.17	0.46	0.46	-2.04	-2.04					1.20	0.75	1.43	0.41	-----	Vehicle	-11.17	-1.84	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**334.99**	**558.32**	**71.42**	**119.04**
		L_9 - L_{10}	-0.27	-8.76	0.03	0.03	-2.41	-2.41					1.20	0.75	-0.27	0.03	-----	Vehicle	-8.76	-2.17	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	**4798.69**	**7997.81**	**61.21**	**102.02**
		L_{10} - L_{11}	2.24	-10.60	0.90	0.90	-1.98	-1.98					1.20	0.75	2.24	0.81	-----	Vehicle	-10.60	-1.78	-----	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	**395.09**	**658.49**	**177.21**	**295.35**
		L_{11} - L_{12}	-7.73	-15.55	0.04	0.04	-6.10	-6.10					1.20	0.75	-7.73	0.04	-----	Vehicle	-15.55	-5.48	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	**11751.31**	**19585.51**	**76.47**	**127.46**
		L_{12} - L_{13}	14.02	5.56	6.19	6.19	-0.02	-0.02					1.24	0.75	14.02	5.74	-----	Vehicle	5.56

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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 $Load_{min}$																			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 - Verticals	Structure 1	U_0 - L_0	-1.75	-1.75	0.47	0.47	-2.43	-2.43					1.24	0.75	-1.75	0.44	-----	Vehicle	-1.75	-2.26	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	261.73	436.22	50.04	83.40
		U_1 - L_1	-0.62	-0.62	0.46	0.46	-2.25	-2.25					1.24	0.75	-0.62	0.43	-----	Vehicle	-0.62	-2.09	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	268.69	447.81	54.46	90.76
		U_2 - L_2	0.44	0.44	0.50	0.50	-1.66	-1.66					1.24	0.75	0.44	0.46	-----	Vehicle	0.44	-1.54	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	247.76	412.93	74.31	123.86
		U_3 - L_3	1.39	1.39	0.97	0.97	-1.25	-1.25					1.24	0.75	1.39	0.90	-----	Vehicle	1.39	-1.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	125.28	208.80	99.38	165.63
		U_4 - L_4	1.88	1.88	1.27	1.27	-0.54	-0.54					1.24	0.75	1.88	1.17	-----	Vehicle	1.88	-0.50	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	96.14	160.23	228.21	380.34
		U_5 - L_5	2.05	2.05	1.59	1.59	-0.11	-0.11					1.24	0.75	2.05	1.47	-----	Vehicle	2.05	-0.10	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	93.35	155.58	1437.04	2395.06
		U_6 - L_6	2.06	2.06	1.64	1.64	-0.08	-0.08					1.24	0.75	2.06	1.52	-----	Vehicle	2.06	-0.08	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	80.32	133.87	1662.21	2770.36
		U_7 - L_7	2.38	2.38	1.46	1.46	-0.01	-0.01					1.24	0.75	2.38	1.35	-----	Vehicle	2.38	-0.01	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	91.74	152.90	19561.03	32601.72
		U_8 - L_8	-0.39	-0.39	1.49	1.49	-1.18	-1.18					1.24	0.75	-0.39	1.38	-----	Vehicle	-0.39	-1.10	-----	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	159.78	266.30	200.92	334.86
		U_9 - L_9	-4.56	-4.56	0.09	0.09	-1.98	-1.98					1.20	0.75	-4.56	0.08	-----	Vehicle	-4.56	-1.78	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	1915.40	3192.33	79.31	132.19
		U_{10} - L_{10}	-3.59	-3.59	0.03	0.03	-1.89	-1.89					1.20	0.75	-3.59	0.02	-----	Vehicle	-3.59	-1.70	-----	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	9843.71	16406.18	137.80	229.67
		U_{11} - L_{11}	-4.40	-4.40	0.04	0.04	-2.18	-2.18					1.20	0.75	-4.40	0.04	-----	Vehicle	-4.40	-1.96	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	4927.84	8213.07	85.35	142.24
		U_{12} - L_{12}	-3.21	-3.21	0.33	0.33	-1.93	-1.93					1.20	0.75	-3.21	0.30	-----	Vehicle	-3.21	-1.74	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	490.64	817.74	81.58	135.97
		U_{13} - L_{13}	-1.86	-1.86	0.44	0.44	-1.47	-1.47					1.20	0.75	-1.86	0.39	-----	Vehicle	-1.86	-1.32	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	323.25	538.75	93.91	156.51
		U_{14} - L_{14}	-0.98	-0.98	0.66	0.66	-0.96	-0.96					1.20	0.75	-0.98	0.59	-----	Vehicle	-0.98	-0.86	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	194.19	323.66	131.81	219.68
		U_{15} - L_{15}	0.02	0.02	1.06	1.06	-0.65	-0.65					1.20	0.75	0.02	0.95	-----	Vehicle	0.02	-0.58	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	119.62	199.37	195.89	326.49
		U_{16} - L_{16}	0.93	0.93	1.09	1.09	-0.37	-0.37					1.20	0.75	0.93	0.98	-----	Vehicle	0.93	-0.34	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	116.30	193.84	341.96	569.93
		U_{17} - L_{17}	1.41	1.41	1.13	1.13	-0.13	-0.13					1.20	0.75	1.41	1.02	-----	Vehicle	1.41	-0.12	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	135.71	226.19	1195.19	1991.98
		U_{18} - L_{18}	2.69	2.69	1.70	1.70	-0.12	-0.12					1.20	0.75	2.69	1.52	-----	Vehicle	2.69	-0.11	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	93.37	155.62	1338.39	2230.65
		U_{19} - L_{19}	2.33	2.33	1.37	1.37	-0.08	-0.08					1.20	0.75	2.33	1.23	-----	Vehicle	2.33	-0.07	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	136.60	227.67	2298.88	3831.46
		U_{20} - L_{20}	2.00	2.00	1.04	1.04	-0.04	-0.04					1.20	0.75	2.00	0.93	-----	Vehicle	2.00	-0.04	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	181.39	302.31	4331.39	7218.98
	Structure 2	U_0 - L_0	-1.99	-1.99	0.19	0.19	-1.27	-1.27					1.18	0.75	-1.99	0.17	-----	Vehicle	-1.99	-1.13	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	1131.33	1885.55	163.70	272.83
		U_1 - L_1	-2.54	-2.54	0.24	0.24	-1.40	-1.40					1.18	0.75	-2.54	0.21	-----	Vehicle	-2.54	-1.24	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	878.32	1463.87	147.91	246.51
		U_2 - L_2	-2.56	-2.56	0.32	0.32	-1.65	-1.65					1.18	0.75	-2.56	0.28	-----	Vehicle	-2.56	-1.46	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	548.74	914.56	104.64	174.40
		U_3 - L_3	-1.64	-1.64	0.23	0.23	-1.03	-1.03					1.18	0.75	-1.64	0.20	-----	Vehicle	-1.64	-0.92	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	765.57	1275.96	165.35	275.58
		U_4 - L_4	-1.05	-1.05	0.32	0.32	-1.09	-1.09					1.18	0.75	-1.05	0.28	-----	Vehicle	-1.05	-0.97	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	402.64	671.07	117.17	195.28
		U_5 - L_5	-0.25	-0.25	0.49	0.49	-0.93	-0.93					1.18	0.75	-0.25	0.43	-----	Vehicle	-0.25	-0.83	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	264.28	440.47	137.59	229.32
		U_6 - L_6	0.42	0.42	0.68	0.68	-0.87	-0.87					1.18	0.75	0.42	0.60	-----	Vehicle	0.42	-0.77	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	189.17	315.28	148.07	246.78
		U_7 - L_7	1.07	1.07	0.70	0.70	-0.42	-0.42					1.18	0.75	1.07	0.62	-----	Vehicle	1.07	-0.37	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	182.33	303.88	307.04	511.73
		U_8 - L_8	2.63	2.63	1.63	1.63	-0.50	-0.50					1.18	0.75	2.63	1.45	-----	Vehicle	2.63	-0.44	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	83.14	138.57	277.42	462.37
		U_9 - L_9	4.75	4.75	2.18	2.18	-0.40	-0.40					1.18	0.75	4.75	1.93	-----	Vehicle	4.75	-0.35	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	94.65	157.76	537.45	895.75
		U_{10} - L_{10}	4.10	4.10	1.85	1.85	-0.21	-0.21					1.18	0.75	4.10	1.64	-----	Vehicle	4.10	-0.19	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	142.38	237.30	1257.45	2095.75
		U_{11} - L_{11}	3.59	3.59	1.52	1.52	-0.09	-0.09					1.18	0.75	3.59	1.34	-----	Vehicle	3.59	-0.08	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	174.19	290.31	3161.77	5269.62
		U_{12} - L_{12}	2.93	2.93	1.35	1.35	-0.12	-0.12					1.18	0.75	2.93	1.20	-----	Vehicle	2.93	-0.11	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	217.77	362.95	2424.17	4040.28
		U_{13} - L_{13}	3.04	3.04	1.19	1.19	-0.09	-0.09					1.18	0.75	3.04	1.06	-----	Vehicle	3.04	-0.08	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	219.68	366.13	2917.84	4863.07
		U_{14} - L_{14}	0.58	0.58	0.81	0.81	-0.88	-0.88					1.18	0.75	0.58	0.72	-----	Vehicle	0.58	-0.78	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	317.51	529.18	293.45	489.09
		U_{15} - L_{15}	-2.18	-2.18	0.14	0.14	-1.05	-1.05					1.17	0.75	-2.18	0.12	-----	Vehicle	-2.18	-0.92	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	1295.14	2158.57	165.99	276.65
		U_{16} - L_{16}	-1.90	-1.90	0.14	0.14	-1.28	-1.28					1.17	0.75	-1.90	0.12	-----	Vehicle	-1.90	-1.12	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	1531.53	2552.55	164.93	274.89
		U_{17} - L_{17}	-2.63	-2.63	0.20	0.20	-1.50	-1.50					1.17	0.75	-2.63	0.18	-----	Vehicle	-2.63	-1.31	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	969.01	1615.01	128.53	214.21
		U_{18} - L_{18}	-2.76	-2.76	0.28	0.28	-1.72	-1.72					1.17	0.75	-2.76	0.24	-----	Vehicle	-2.76	-1.51	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	644.34	1073.89	100.96	168.27
		U_{19} - L_{19}	-1.74	-1.74	0.24	0.24	-1.17	-1.17					1.17	0.75	-1.74	0.21	-----	Vehicle	-1.74	-1.03	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	668.96	1114.93	134.50	224.17
		U_{20} - L_{20}	-1.31	-1.31	0.37	0.37	-1.15	-1.15					1.17	0.75	-1.31	0.32	-----	Vehicle	-1.31	-1.01	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	392.69	654.49	123.21	205.35
		U_{21} - L_{21}	-0.84	-0.84	0.47	0.47	-1.03	-1.03					1.17	0.75	-0.84	0.41	-----	Vehicle	-0.84	-0.91	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	277.98	463.31	125.37	208.94
		U_{22} - L_{22}	-0.11	-0.11	0.66	0.66	-0.74	-0.74					1.17	0.75	-0.11	0.58	-----	Vehicle	-0.11	-0.65	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	196.91	328.18	175.44	292.40
		U_{23} - L_{23}	0.63	0.63	1.07	1.07	-0.59	-0.59					1.17	0.75	0.63	0.94	-----	Vehicle	0.63	-0.51	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	121.28	202.13	223.09	371.82
		U_{24} - L_{24}	1.17	1.17	1.19	1.19	-0.41	-0.41					1.17	0.75	1.17	1.04	-----	Vehicle	1.17	-0.36	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	119.66	199.43	347.78	579.64
		U_{25} - L_{25}	1.72	1.72	1.28	1.28	-0.27	-0.27					1.17	0.75	1.72	1.12	-----	Vehicle	1.72	-0.24	-----	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	122.96	204.93	587.76	979.61
		U_{26} - L_{26}	2.90	2.90	1.95	1.95	-0.27	-0.27					1.17	0.75	2.90	1.71	-----	Vehicle	2.90	-0.23	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	89.35	148.91	668.92	1114.86
		U_{27} - L_{27}	2.83	2.83	1.73	1.73	-0.19	-0.19					1.17	0.75	2.83	1.52	-----	Vehicle	2.83	-0.17	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	110.86	184.77	1030.93	1718.21
		U_{28} - L_{28}	2.23	2.23	1.51	1.51	-0.13	-0.13					1.17	0.75	2.23	1.32	-----	Vehicle	2.23	-0.11	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	139.58	232.63	1678.02	2796.70
		U_{29} - L_{29}	2.36	2.36	1.19	1.19	-0.07	-0.07					1.17	0.75	2.36	1.05	-----	Vehicle	2.36	-0.06	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	146.25	243.75	2650.16	4416.93
		U_{30} - L_{30}	0.03	0.03	0.90	0.90	-0.79	-0.79					1.18	0.75	0.03	0.79	-----	Vehicle	0.03	-0.70	-----	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	287.10	478.49	326.91	544.85
		U_{31} - L_{31}	-2.50	-2.50	0.15	0.15	-1.08	-1.08					1.18	0.75	-2.50	0.13	-----	Vehicle	-2.50	-0.95	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	1828.68	3047.80	243.29	405.49
		U_{32} - L_{32}	-2.25	-2.25	0.13	0.13	-1.20	-1.20					1.18	0.75	-2.25	0.12	-----	Vehicle	-2.25	-1.06	-----	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	2255.40	3759.00	246.17	410.29
		U_{33} - L_{33}	-2.93	-2.93	0.03	0.03	-1.33	-1.33					1.18	0.75	-2.93	0.03	-----	Vehicle	-2.93	-1.18	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	7891.27	13152.12	198.16	330.26
		U_{34} - L_{34}	-3.45	-3.45	0.16	0.16	-1.70	-1.70					1.18	0.75	-3.45	0.14	-----	Vehicle	-3.45	-1.51	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	1711.15	2851.92	155.29	258.82
		U_{35} - L_{35}	-4.24	-4.24	0.33	0.33	-2.02	-2.02					1.18	0.75	-4.24	0.29	-----	Vehicle	-4.24	-1.79	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	642.27	1070.46	102.29	170.48
		U_{36} - L_{36}	-2.42	-2.42	0.36	0.36	-1.50	-1.50					1.18	0.75	-2.42	0.32	-----	Vehicle	-2.42	-1.33	-----	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	387.84	646.40	90.26	150.44
		U_{37} - L_{37}	-1.22	-1.22	0.38	0.38	-0.74	-0.74					1.18	0.75	-1.22	0.34	-----	Vehicle	-1.22	-0.66	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	340.44	567.39	172.35	287.25
		U_{38} - L_{38}	-0.80	-0.80	0.86	0.86	-0.85	-0.85					1.18	0.75	-0.80	0.77	-----	Vehicle	-0.80	-0.75	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	149.57	249.28	151.12	251.87
		U_{39} - L_{39}	-0.09	-0.09	0.98	0.98	-0.52	-0.52					1.18	0.75	-0.09	0.87	-----	Vehicle	-0.09	-0.46	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	131.49	219.16	246.12	410.20
		U_{40} - L_{40}	0.85	0.85	1.13	1.13	-0.36	-0.36					1.18	0.75	0.85	1.00	-----	Vehicle	0.85	-0.32	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	113.34	188.91	354.70	591.16
		U_{41} - L_{41}	1.61	1.61	1.14	1.14	-0.22	-0.22					1.18	0.75	1.61	1.01	-----	Vehicle	1.61	-0.19	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	150.11	250.18	804.66	1341.10
		U_{42} - L_{42}	2.80	2.80	1.79	1.79	-0.28	-0.28					1.18	0.75	2.80	1.59	-----	Vehicle	2.80	-0.25	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	95.91	159.85	623.25	1038.74
		U_{43} - L_{43}	2.84	2.84	1.55	1.55	-0.20	-0.20					1.18	0.75	2.84	1.38	-----	Vehicle	2.84	-0.18	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	133.65	222.76	1049.75	1749.58
		U_{44} - L_{44}	2.62	2.62	1.14	1.14	-0.12	-0.12					1.18	0.75	2.62	1.01	-----	Vehicle	2.62	-0.11	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	182.33	303.88	1728.33	2880.55
	Structure 3	U_0 - L_0	-1.54	-1.54	0.07	0.07	-1.11	-1.11					1.20	0.75	-1.54	0.07	-----	Vehicle	-1.54	-1.00	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	2571.27	4285.45	169.57	282.62
		U_1 - L_1	-2.02	-2.02	0.11	0.11	-1.18	-1.18					1.20	0.75	-2.02	0.10	-----	Vehicle	-2.02	-1.06	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	1798.11	2996.84	158.70	264.50
		U_2 - L_2	-2.23	-2.23	0.15	0.15	-1.48	-1.48					1.20	0.75	-2.23	0.13	-----	Vehicle	-2.23	-1.33	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	1092.19	1820.32	107.20	178.67
		U_3 - L_3	-1.20	-1.20	0.12	0.12	-1.02	-1.02					1.20	0.75	-1.20	0.10	-----	Vehicle	-1.20	-0.91	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	1338.20	2230.33	151.07	251.78
		U_4 - L_4	-0.86	-0.86	0.31	0.31	-1.01	-1.01					1.20	0.75	-0.86	0.28	-----	Vehicle	-0.86	-0.91	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	415.33	692.21	124.85	208.09
		U_5 - L_5	-0.15	-0.15	0.54	0.54	-1.01	-1.01					1.20	0.75	-0.15	0.49	-----	Vehicle	-0.15	-0.91	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	234.37	390.62	125.57	209.28
		U_6 - L_6	0.83	0.83	0.92	0.92	-0.72	-0.72					1.20	0.75	0.83	0.83	-----	Vehicle	0.83	-0.64	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	137.51	229.18	177.80	296.34
		U_7 - L_7	1.75	1.75	1.50	1.50	-0.54	-0.54					1.20	0.75	1.75	1.35	-----	Vehicle	1.75	-0.49	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	92.32	153.87	260.26	433.77
		U_8 - L_8	3.18	3.18	1.97	1.97	-0.45	-0.45					1.20	0.75	3.18	1.77	-----	Vehicle	3.18	-0.40	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	80.14	133.57	362.98	604.97
		U_9 - L_9	4.50	4.50	2.42	2.42	-0.15	-0.15					1.20	0.75	4.50	2.17	-----	Vehicle	4.50	-0.13	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	76.99	128.32	1281.70	2136.17
		U_{10} - L_{10}	3.82	3.82	2.15	2.15	-0.09	-0.09				

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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 $Load_{min}$																				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	0.13	0.13	-0.79	-0.79					1.24	0.75	-0.01	0.12	-----	Vehicle	-0.51	-0.73	-----	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**457.82**	**763.04**	**74.72**	**124.53**
		U_1 - L_2	0.22	-0.08	0.06	0.06	-0.22	-0.22					1.24	0.75	0.22	0.06	-----	Vehicle	-0.08	-0.21	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**2012.89**	**3354.82**	**555.99**	**926.65**
		U_2 - L_3	0.25	-0.05	0.09	0.09	-0.13	-0.13					1.24	0.75	0.25	0.09	-----	Vehicle	-0.05	-0.12	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1334.38**	**2223.97**	**960.11**	**1600.19**
		U_3 - L_4	0.41	0.09	0.13	0.13	-0.05	-0.05					1.24	0.75	0.41	0.12	-----	Vehicle	0.09	-0.05	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**958.31**	**1597.19**	**2277.52**	**3795.87**
		U_4 - L_4	-0.19	-0.52	0.05	0.05	-0.21	-0.21					1.24	0.75	-0.19	0.05	-----	Vehicle	-0.52	-0.19	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2993.69**	**4989.49**	**727.93**	**1213.21**
		U_4 - L_5	-0.74	-1.19	0.06	0.06	-0.56	-0.56					1.24	0.75	-0.74	0.06	-----	Vehicle	-1.19	-0.52	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2509.34**	**4182.24**	**277.08**	**461.81**
		U_5 - L_6	-1.07	-1.54	0.00	0.00	-0.85	-0.85					1.24	0.75	-1.07	0.00	-----	Vehicle	-1.54	-0.79	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**77897.60**	**129829.33**	**180.46**	**300.76**
		U_6 - 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	**77751.44**	**129585.73**	**260.79**	**434.65**
		U_8 - L_9	-0.89	-1.81	0.07	0.07	-0.63	-0.63					1.20	0.75	-0.89	0.07	-----	Vehicle	-1.81	-0.57	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2743.84**	**4573.06**	**314.09**	**523.48**
		U_8 - L_{10}	-1.43	-2.27	0.03	0.03	-0.83	-0.83					1.20	0.75	-1.43	0.02	-----	Vehicle	-2.27	-0.75	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**8026.46**	**13377.43**	**237.93**	**396.54**
		U_{10} - L_{11}	-1.02	-1.87	0.01	0.01	-0.58	-0.58					1.20	0.75	-1.02	0.01	-----	Vehicle	-1.87	-0.52	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**22921.35**	**38202.24**	**274.25**	**457.08**
		U_{11} - L_{12}	-0.81	-1.29	0.05	0.05	-0.56	-0.56					1.20	0.75	-0.81	0.04	-----	Vehicle	-1.29	-0.51	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3795.74**	**6326.24**	**334.62**	**557.70**
		U_{12} - L_{13}	-0.67	-1.39	0.13	0.13	-0.48	-0.48					1.20	0.75	-0.67	0.11	-----	Vehicle	-1.39	-0.43	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1087.35**	**1812.24**	**287.22**	**478.70**
		U_{13} - L_{14}	-0.13	-0.46	0.13	0.13	-0.23	-0.23					1.20	0.75	-0.13	0.12	-----	Vehicle	-0.46	-0.21	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**969.57**	**1615.95**	**550.53**	**917.55**
		U_{15} - L_{14}	0.38	0.05	0.22	0.22	-0.17	-0.17					1.20	0.75	0.38	0.20	-----	Vehicle	0.05	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**573.19**	**955.32**	**729.65**	**1216.09**
		U_{16} - L_{15}	-0.04	-0.39	0.17	0.17	-0.30	-0.30					1.20	0.75	-0.04	0.15	-----	Vehicle	-0.39	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**755.69**	**1259.48**	**426.49**	**710.82**
		U_{17} - L_{16}	-0.22	-0.61	0.11	0.11	-0.43	-0.43					1.20	0.75	-0.22	0.10	-----	Vehicle	-0.61	-0.38	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1418.16**	**2363.59**	**360.72**	**601.19**
		U_{18} - L_{17}	-1.16	-1.63	0.08	0.08	-0.77	-0.77					1.20	0.75	-1.16	0.07	-----	Vehicle	-1.63	-0.69	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2145.65**	**3576.08**	**206.31**	**343.85**
		U_{19} - L_{18}	-1.07	-1.60	0.09	0.09	-0.77	-0.77					1.20	0.75	-1.07	0.08	-----	Vehicle	-1.60	-0.69	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1937.12**	**3228.53**	**221.01**	**368.34**
		U_{20} - L_{19}	-1.08	-1.67	0.04	0.04	-0.75	-0.75					1.20	0.75	-1.08	0.03	-----	Vehicle	-1.67	-0.67	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4926.01**	**8210.01**	**228.35**	**380.58**
	Structure 2	U_0 - L_1	-1.14	-1.70	0.16	0.16	-1.05	-1.05					1.18	0.75	-1.14	0.14	-----	Vehicle	-1.70	-0.94	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1195.16**	**1991.93**	**180.74**	**301.23**
		U_1 - L_2	-1.31	-1.85	0.17	0.17	-0.88	-0.88					1.18	0.75	-1.31	0.15	-----	Vehicle	-1.85	-0.78	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1166.86**	**1944.76**	**216.61**	**361.01**
		U_2 - L_3	-1.13	-1.60	0.18	0.18	-0.79	-0.79					1.18	0.75	-1.13	0.16	-----	Vehicle	-1.60	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**900.26**	**1500.44**	**203.41**	**339.01**
		U_3 - L_4	-0.50	-0.90	0.12	0.12	-0.48	-0.48					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	**1459.73**	**2432.88**	**360.64**	**601.06**
		U_4 - L_5	-0.05	-0.40	0.14	0.14	-0.33	-0.33					1.18	0.75	-0.05	0.13	-----	Vehicle	-0.40	-0.29	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**905.42**	**1509.03**	**393.47**	**655.78**
		U_5 - L_6	0.27	-0.07	0.23	0.23	-0.27	-0.27					1.18	0.75	0.27	0.21	-----	Vehicle	-0.07	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**553.25**	**922.08**	**477.66**	**796.10**
		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	0.19	0.19	-0.36	-0.36					1.18	0.75	-0.31	0.17	-----	Vehicle	-1.10	-0.32	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**620.11**	**1033.51**	**324.63**	**541.05**
		U_8 - L_8	-1.34	-1.86	0.19	0.19	-0.75	-0.75					1.18	0.75	-1.34	0.17	-----	Vehicle	-1.86	-0.67	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**910.27**	**1517.12**	**229.22**	**382.04**
		U_{10} - L_9	-1.44	-1.94	0.14	0.14	-0.71	-0.71					1.18	0.75	-1.44	0.12	-----	Vehicle	-1.94	-0.63	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1395.80**	**2326.33**	**268.83**	**448.06**
		U_{11} - L_{10}	-1.67	-2.23	0.09	0.09	-0.80	-0.80					1.18	0.75	-1.67	0.08	-----	Vehicle	-2.23	-0.71	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2473.10**	**4121.83**	**260.12**	**433.53**
		U_{12} - L_{11}	-1.62	-2.22	0.08	0.08	-0.79	-0.79					1.18	0.75	-1.62	0.07	-----	Vehicle	-2.22	-0.70	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2660.48**	**4434.14**	**263.09**	**438.49**
		U_{13} - L_{12}	-1.77	-2.38	0.06	0.06	-0.87	-0.87					1.18	0.75	-1.77	0.05	-----	Vehicle	-2.38	-0.77	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3161.42**	**5269.04**	**219.19**	**365.31**
		U_{14} - L_{13}	-1.00	-1.63	0.08	0.08	-0.61	-0.61					1.18	0.75	-1.00	0.07	-----	Vehicle	-1.63	-0.54	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2404.03**	**4006.72**	**311.35**	**518.92**
		U_{14} - L_{15}	-0.47	-1.03	0.09	0.09	-0.54	-0.54					1.17	0.75	-0.47	0.08	-----	Vehicle	-1.03	-0.47	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1768.26**	**2947.09**	**304.33**	**507.21**
		U_{15} - L_{16}	-1.08	-1.61	0.10	0.10	-0.80	-0.80					1.17	0.75	-1.08	0.08	-----	Vehicle	-1.61	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1735.40**	**2892.34**	**204.80**	**341.34**
		U_{16} - L_{17}	-1.08	-1.63	0.10	0.10	-0.79	-0.79					1.17	0.75	-1.08	0.09	-----	Vehicle	-1.63	-0.69	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1784.71**	**2974.51**	**221.58**	**369.31**
		U_{17} - L_{18}	-1.09	-1.58	0.12	0.12	-0.74	-0.74					1.17	0.75	-1.09	0.10	-----	Vehicle	-1.58	-0.65	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1433.66**	**2389.44**	**221.22**	**368.71**
		U_{18} - L_{19}	-0.94	-1.42	0.13	0.13	-0.69	-0.69					1.17	0.75	-0.94	0.11	-----	Vehicle	-1.42	-0.61	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1287.24**	**2145.40**	**236.11**	**393.52**
		U_{19} - L_{20}	-0.31	-1.06	0.13	0.13	-0.49	-0.49					1.17	0.75	-0.31	0.11	-----	Vehicle	-1.06	-0.43	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**931.51**	**1552.51**	**243.90**	**406.50**
		U_{20} - L_{21}	-0.23	-0.57	0.15	0.15	-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	**845.68**	**1409.47**	**383.69**	**639.48**
		U_{21} - L_{22}	0.03	-0.31	0.20	0.20	-0.23	-0.23					1.17	0.75	0.03	0.17	-----	Vehicle	-0.31	-0.20	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**666.97**	**1111.62**	**567.10**	**945.17**
		U_{23} - L_{22}	0.11	-0.23	0.21	0.21	-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	**613.21**	**1022.02**	**615.73**	**1026.22**
		U_{24} - L_{23}	-0.12	-0.47	0.16	0.16	-0.33	-0.33					1.17	0.75	-0.12	0.14	-----	Vehicle	-0.47	-0.28	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**798.52**	**1330.87**	**399.25**	**665.42**
		U_{25} - L_{24}	-0.19	-0.96	0.15	0.15	-0.49	-0.49					1.17	0.75	-0.19	0.13	-----	Vehicle	-0.96	-0.43	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**778.75**	**1297.91**	**242.55**	**404.25**
		U_{26} - L_{25}	-0.84	-1.33	0.14	0.14	-0.70	-0.70					1.17	0.75	-0.84	0.12	-----	Vehicle	-1.33	-0.61	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1159.84**	**1933.06**	**233.17**	**388.61**
		U_{27} - L_{26}	-1.01	-1.51	0.10	0.10	-0.74	-0.74					1.17	0.75	-1.01	0.09	-----	Vehicle	-1.51	-0.65	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1681.79**	**2802.98**	**220.99**	**368.32**
		U_{28} - L_{27}	-1.07	-1.63	0.08	0.08	-0.80	-0.80					1.17	0.75	-1.07	0.07	-----	Vehicle	-1.63	-0.70	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2103.31**	**3505.52**	**219.91**	**366.52**
		U_{29} - L_{28}	-1.12	-1.67	0.06	0.06	-0.79	-0.79					1.17	0.75	-1.12	0.05	-----	Vehicle	-1.67	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2794.81**	**4658.02**	**205.27**	**342.12**
		U_{29} - L_{29}	-0.53	-1.09	0.05	0.05	-0.53	-0.53					1.17	0.75	-0.53	0.04	-----	Vehicle	-1.09	-0.46	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3575.81**	**5959.69**	**308.26**	**513.77**
		U_{30} - L_{31}	-0.77	-1.41	0.11	0.11	-0.62	-0.62					1.18	0.75	-0.77	0.09	-----	Vehicle	-1.41	-0.55	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1795.98**	**2993.30**	**309.07**	**515.12**
		U_{31} - L_{32}	-1.50	-2.10	0.11	0.11	-0.86	-0.86					1.18	0.75	-1.50	0.10	-----	Vehicle	-2.10	-0.76	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1704.99**	**2841.65**	**220.68**	**367.80**
		U_{32} - L_{33}	-1.42	-2.00	0.06	0.06	-0.80	-0.80					1.18	0.75	-1.42	0.05	-----	Vehicle	-2.00	-0.71	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3818.96**	**6364.94**	**260.96**	**434.94**
		U_{33} - L_{34}	-1.55	-2.08	0.03	0.03	-0.79	-0.79					1.18	0.75	-1.55	0.03	-----	Vehicle	-2.08	-0.70	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**6180.30**	**10300.50**	**263.88**	**439.80**
		U_{34} - L_{35}	-1.39	-1.88	0.09	0.09	-0.72	-0.72					1.18	0.75	-1.39	0.08	-----	Vehicle	-1.88	-0.64	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2188.51**	**3647.51**	**264.41**	**440.69**
		U_{35} - L_{36}	-1.38	-1.88	0.15	0.15	-0.73	-0.73					1.18	0.75	-1.38	0.14	-----	Vehicle	-1.88	-0.65	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1142.44**	**1904.06**	**236.11**	**393.51**
		U_{36} - L_{37}	-0.43	-1.20	0.18	0.18	-0.39	-0.39					1.18	0.75	-0.43	0.16	-----	Vehicle	-1.20	-0.35	-----	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**651.38**	**1085.63**	**296.44**	**494.07**
		U_{38} - L_{37}	0.53	0.13	0.26	0.26	-0.15	-0.15					1.18	0.75	0.53	0.23	-----	Vehicle	0.13	-0.13	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**539.40**	**899.00**	**941.54**	**1569.23**
		U_{39} - L_{38}	0.39	0.04	0.23	0.23	-0.27	-0.27					1.18	0.75	0.39	0.21	-----	Vehicle	0.04	-0.24	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**550.53**	**917.55**	**476.17**	**793.61**
		U_{40} - L_{39}	0.07	-0.29	0.15	0.15	-0.33	-0.33					1.18	0.75	0.07	0.14	-----	Vehicle	-0.29	-0.29	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**839.81**	**1399.68**	**394.90**	**658.17**
		U_{41} - L_{40}	-0.36	-0.78	0.12	0.12	-0.48	-0.48					1.18	0.75	-0.36	0.11	-----	Vehicle	-0.78	-0.42	-----	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1434.66**	**2391.10**	**360.81**	**601.34**
		U_{42} - L_{41}	-1.06	-1.54	0.15	0.15	-0.78	-0.78					1.18	0.75	-1.06	0.13	-----	Vehicle	-1.54	-0.69	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1115.73**	**1859.55**	**206.59**	**344.32**
		U_{43} - L_{42}	-1.22	-1.77	0.13	0.13	-0.85	-0.85					1.18	0.75	-1.22	0.11	-----	Vehicle	-1.77	-0.75	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1515.51**	**2525.85**	**225.12**	**375.20**
		U_{44} - L_{43}	-1.57	-2.14	0.09	0.09	-0.81	-0.81					1.18	0.75	-1.57	0.08	-----	Vehicle	-2.14	-0.72	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2141.22**	**3568.69**	**235.40**	**392.33**
	Structure 3	U_0 - L_1	-0.75	-1.32	0.07	0.07	-0.96	-0.96					1.20	0.75	-0.75	0.06	-----	Vehicle	-1.32	-0.86	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2532.16**	**4220.27**	**177.74**	**296.23**
		U_1 - L_2	-1.05	-1.57	0.08	0.08	-0.74	-0.74					1.20	0.75	-1.05	0.07	-----	Vehicle	-1.57	-0.67	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2298.53**	**3830.88**	**229.35**	**382.26**
		U_2 - L_3	-1.08	-1.54	0.10	0.10	-0.78	-0.78					1.20	0.75	-1.08	0.09	-----	Vehicle	-1.54	-0.70	-----	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1675.76**	**2792.93**	**204.00**	**340.01**
		U_3 - L_4	-0.22	-0.60	0.09	0.09	-0.42	-0.42					1.20	0.75	-0.22	0.08	-----	Vehicle	-0.60	-0.37	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**1736.84**	**2894.74**	**369.38**	**615.64**
		U_4 - L_5	-0.08	-0.42	0.15	0.15	-0.30	-0.30					1.20	0.75	-0.08	0.14	-----	Vehicle	-0.42	-0.27	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**824.56**	**1374.26**	**426.42**	**710.71**
		U_5 - L_6	0.35	0.03	0.21	0.21	-0.18	-0.18					1.20	0.75	0.35	0.19	-----	Vehicle	0.03	-0.16	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**592.02**	**986.70**	**697.52**	**1162.53**
		U_7 - L_6	-0.05	-0.39	0.13	0.13	-0.20	-0.20					1.20	0.75	-0.05	0.12	-----	Vehicle	-0.39	-0.18	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**961.82**	**1603.04**	**620.93**	**1034.89**
		U_8 - L_7	-0.51	-1.25	0.13	0.13	-0.49	-0.49					1.20	0.75	-0.51	0.12	-----	Vehicle	-1.25	-0.44	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**1053.33**	**1755.56**	**280.35**	**467.25**
		U_8 - L_8	-0.70	-1.19	0.07	0.07	-0.61	-0.61					1.20	0.75	-0.70	0.07	-----	Vehicle	-1.19	-0.55	-----	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2598.82**	**4331.36**	**310.46**	**517.44**
		U_{10} - L_9	-0.88	-1.76	0.05	0.05	-0.58	-0.58					1.20	0.75	-0.88	0.04	-----	Vehicle	-1.76	-0.52	-----	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**3485.88**	**5809.80**	**272.49**	**454.15**
		U_{11} - L_{10}	-1.33	-2.21	0.01	0.01	-0.88	-0.88					1.20	0.75	-1.33	0.00	-----	Vehicle	-2.21	-0.79	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**40119.47**	**66865.78**	**224.24**	**373.74**
		U_{12} - L_{11}	-0.81	-1.77	0.07	0.07	-0.64	-0.64					1.20	0.75	-0.81	0.06	-----	Vehicle	-1.77	-0.57	-----	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**2781.27**	**4635.45**	**311.

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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	1.90	1.90	-1.39	-1.39	0.75	0.75	-0.19	-0.19	1.24	0.90	8.19	2.12	0.75	Pedestrian	-2.89	-1.55	-0.19	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**40.89**	**51.11**	**58.65**	**97.75**
	U_1 - U_2	2.96	-4.47	1.17	1.17	-0.33	-0.33	0.07	0.07	-0.06	-0.06	1.24	0.90	2.96	1.30	0.07	Vehicle	-4.47	-0.37	-0.06	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**69.85**	**116.41**	**242.24**	**403.74**
	U_2 - U_3	2.48	-7.36	0.78	0.78	-0.55	-0.55	0.07	0.07	-0.09	-0.09	1.24	0.90	2.48	0.87	0.07	Vehicle	-7.36	-0.61	-0.09	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**104.56**	**174.27**	**144.80**	**241.34**
	U_3 - U_4	1.94	-4.95	0.64	0.64	-0.50	-0.50	0.00	0.00	-0.05	-0.05	1.24	0.90	1.94	0.72	-----	Vehicle	-4.95	-0.56	-0.05	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**127.75**	**212.92**	**161.30**	**268.83**
	U_4 - U_5	1.94	-4.56	0.24	0.24	-0.91	-0.91	0.00	0.00	-0.15	-0.15	1.24	0.90	1.94	0.27	-----	Vehicle	-4.56	-1.02	-0.15	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**341.37**	**568.94**	**88.66**	**147.76**
	U_5 - U_6	3.13	-7.41	0.28	0.28	-1.25	-1.25	0.00	0.00	-0.25	-0.25	1.24	0.90	3.13	0.32	-----	Vehicle	-7.41	-1.39	-0.25	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**287.42**	**479.04**	**63.66**	**106.10**
	U_6 - U_7	6.57	-4.82	0.66	0.66	-0.61	-0.61	0.03	0.03	-0.09	-0.09	1.24	0.90	6.57	0.73	0.03	Vehicle	-4.82	-0.68	-0.09	Vehicle	14.00	0.75	2	9.33	5	73.85	92.32	1	401.94	401.9	**248.62**	**414.36**	**267.16**	**445.26**
	U_7 - U_8	-2.87	-15.47	0.73	0.73	-2.14	-2.14	0.00	0.00	-0.80	-0.80	1.24	0.90	-2.87	0.81	-----	Vehicle	-15.47	-2.38	-0.80	Pedestrian	14.00	1.00	2	7.00	5	73.85	92.32	1	535.92	535.9	**308.58**	**514.30**	**99.65**	**124.56**
	U_8 - U_9	17.77	5.14	3.01	3.01	-0.27	-0.27	0.85	0.85	0.00	0.00	1.20	0.90	17.77	3.24	0.85	Vehicle	5.14	-0.29	-----	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**30.07**	**50.12**	**388.08**	**646.80**
	U_9 - U_{10}	7.55	-5.15	1.30	1.30	-0.18	-0.18	0.20	0.20	-0.04	-0.04	1.20	0.90	7.55	1.40	0.20	Vehicle	-5.15	-0.19	-0.04	Vehicle	14.00	0.38	2	18.67	5	73.85	92.32	1	200.97	201.0	**62.85**	**104.74**	**472.50**	**787.50**
	U_{10} - U_{11}	10.27	-1.06	1.69	1.69	-0.05	-0.05	0.37	0.37	0.00	0.00	1.20	0.90	10.27	1.82	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	**47.64**	**79.39**	**1743.67**	**2906.12**
	U_{11} - U_{12}	8.07	-1.44	1.62	1.62	-0.02	-0.02	0.26	0.26	0.00	0.00	1.20	0.90	8.07	1.75	0.26	Vehicle	-1.44	-0.02	-----	Vehicle	14.00	0.50	2	14.00	5	73.85	92.32	1	267.96	268.0	**67.86**	**113.11**	**4952.22**	**8253.69**
	U_{12} - U_{13}	9.20	-6.26	1.33	1.33	-0.26	-0.26	0.20	0.20	0.00	0.00	1.20	0.90	9.20	1.44	0.20	Vehicle	-6.26	-0.28	-----	Vehicle	14.00	1.33	2	5.24	5	73.85	92.32	1	715.3575	715.4	**225.88**	**376.47**	**1177.97**	**1963.28**
	U_{13} - U_{14}	7.06	-1.54	1.71	1.71	-0.05	-0.05	0.17	0.17	0.00	0.00	1.20	0.90	7.06	1.84	0.17	Vehicle	-1.54	-0.05	-----	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**207.20**	**345.34**	**7151.88**	**11919.80**
	U_{14} - U_{15}	2.68	-5.43	0.69	0.69	-1.43	-1.43	0.02	0.02	-0.11	-0.11	1.20	0.90	2.68	0.74	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	**518.84**	**864.73**	**247.86**	**413.10**
	U_{15} - U_{16}	9.21	-5.82	0.98	0.98	-0.87	-0.87	0.06	0.06	-0.12	-0.12	1.20	0.90	9.21	1.06	0.06	Vehicle	-5.82	-0.94	-0.12	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**359.07**	**598.45**	**407.82**	**679.71**
	U_{16} - U_{17}	2.12	-6.72	0.36	0.36	-1.28	-1.28	0.01	0.01	-0.14	-0.14	1.20	0.90	2.12	0.39	0.01	Vehicle	-6.72	-1.38	-0.14	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**997.96**	**1663.26**	**277.99**	**463.31**
	U_{17} - U_{18}	5.43	-10.49	0.41	0.41	-1.42	-1.42	0.03	0.03	-0.26	-0.26	1.20	0.90	5.43	0.44	0.03	Vehicle	-10.49	-1.53	-0.26	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**636.15**	**1060.25**	**181.76**	**302.93**
	U_{18} - U_{19}	1.81	-7.91	0.11	0.11	-1.30	-1.30	0.02	0.02	-0.28	-0.28	1.20	0.90	1.81	0.12	0.02	Vehicle	-7.91	-1.40	-0.28	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**903.27**	**1505.44**	**73.70**	**122.84**
	U_{19} - U_{20}	1.62	-7.72	0.18	0.18	-1.14	-1.14	0.02	0.02	-0.22	-0.22	1.20	0.90	1.62	0.19	0.02	Vehicle	-7.72	-1.23	-0.22	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**561.94**	**936.57**	**84.05**	**140.08**
	Structure 2																																	
	U_0 - U_1	18.71	2.53	3.09	3.09	-1.88	-1.88	0.86	0.86	-0.13	-0.13	1.18	0.90	18.71	3.29	0.86	Vehicle	2.53	-2.01	-0.13	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**30.83**	**51.39**	**56.91**	**94.85**
	U_1 - U_2	9.39	-4.45	1.76	1.76	-0.22	-0.22	0.13	0.13	-0.03	-0.03	1.18	0.90	9.39	1.88	0.13	Vehicle	-4.45	-0.23	-0.03	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**116.94**	**194.90**	**967.89**	**1613.15**
	U_2 - U_3	9.93	-1.26	2.08	2.08	-0.42	-0.42	0.32	0.32	-0.07	-0.07	1.18	0.90	9.93	2.21	0.32	Vehicle	-1.26	-0.45	-0.07	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**73.60**	**122.66**	**374.33**	**623.89**
	U_3 - U_4	8.70	-7.19	2.03	2.03	-0.23	-0.23	0.11	0.11	-0.03	-0.03	1.18	0.90	8.70	2.16	0.11	Vehicle	-7.19	-0.25	-0.03	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**171.04**	**285.06**	**1508.98**	**2514.96**
	U_4 - U_5	5.86	-4.47	1.83	1.83	-0.66	-0.66	0.14	0.14	-0.05	-0.05	1.18	0.90	5.86	1.95	0.14	Vehicle	-4.47	-0.71	-0.05	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**229.42**	**382.37**	**633.48**	**1055.80**
	U_5 - U_6	1.29	-8.98	1.10	1.10	-1.26	-1.26	0.00	0.00	-0.15	-0.15	1.18	0.90	1.29	1.17	-----	Vehicle	-8.98	-1.34	-0.15	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**383.32**	**638.87**	**332.87**	**554.79**
	U_6 - U_7	6.54	-9.22	1.52	1.52	-1.19	-1.19	0.09	0.09	0.00	0.00	1.18	0.90	6.54	1.62	0.09	Vehicle	-9.22	-1.26	-----	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**229.11**	**381.85**	**293.19**	**488.64**
	U_7 - U_8	6.96	-8.51	0.83	0.83	-1.54	-1.54	0.00	0.00	-0.18	-0.18	1.18	0.90	6.96	0.88	-----	Vehicle	-8.51	-1.64	-0.18	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**422.67**	**704.45**	**226.01**	**376.68**
	U_8 - U_9	2.04	-12.38	0.45	0.45	-2.02	-2.02	0.00	0.00	-0.25	-0.25	1.18	0.90	2.04	0.48	-----	Vehicle	-12.38	-2.15	-0.25	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**657.66**	**1096.11**	**144.64**	**241.07**
	U_9 - U_{10}	-0.19	-11.71	0.47	0.47	-1.81	-1.81	0.00	0.00	-0.31	-0.31	1.18	0.90	-0.19	0.50	-----	Vehicle	-11.71	-1.93	-0.31	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**261.70**	**436.17**	**64.58**	**107.63**
	U_{10} - U_{11}	3.22	-11.03	0.36	0.36	-1.51	-1.51	0.00	0.00	-0.20	-0.20	1.18	0.90	3.22	0.38	-----	Vehicle	-11.03	-1.61	-0.20	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**337.78**	**562.97**	**77.46**	**129.11**
	U_{11} - U_{12}	1.81	-13.56	0.37	0.37	-1.73	-1.73	0.02	0.02	-0.32	-0.32	1.18	0.90	1.81	0.39	0.02	Vehicle	-13.56	-1.85	-0.32	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**332.60**	**554.33**	**66.81**	**111.34**
	U_{12} - U_{13}	10.30	-7.34	1.27	1.27	-0.67	-0.67	0.06	0.06	-0.06	-0.06	1.18	0.90	10.30	1.35	0.06	Vehicle	-7.34	-0.71	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**203.35**	**338.92**	**390.89**	**651.48**
	U_{13} - U_{14}	-14.76	-30.33	1.40	1.40	-3.19	-3.19	0.00	0.00	-0.99	-0.99	1.18	0.90	-14.76	1.49	-----	Vehicle	-30.33	-3.40	-0.99	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**271.38**	**452.30**	**110.67**	**184.46**
	U_{14} - U_{15}	28.72	13.15	4.21	4.21	-0.80	-0.80	0.97	0.97	0.00	0.00	1.17	0.90	28.72	4.42	0.97	Vehicle	13.15	-0.84	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**85.21**	**142.02**	**480.74**	**801.23**
	U_{15} - U_{16}	7.66	-8.84	1.66	1.66	-0.46	-0.46	0.10	0.10	-0.07	-0.07	1.17	0.90	7.66	1.75	0.10	Vehicle	-8.84	-0.48	-0.07	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**179.87**	**299.79**	**648.44**	**1080.73**
	U_{16} - U_{17}	10.20	-1.59	1.98	1.98	-0.21	-0.21	0.27	0.27	-0.02	-0.02	1.17	0.90	10.20	2.08	0.27	Vehicle	-1.59	-0.23	-0.02	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**78.32**	**130.54**	**746.13**	**1243.56**
	U_{17} - U_{18}	9.53	-4.26	1.84	1.84	-0.22	-0.22	0.21	0.21	-0.04	-0.04	1.17	0.90	9.53	1.94	0.21	Vehicle	-4.26	-0.23	-0.04	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**55.11**	**91.85**	**469.18**	**781.96**
	U_{18} - U_{19}	9.52	-3.01	1.88	1.88	-0.31	-0.31	0.25	0.25	-0.01	-0.01	1.17	0.90	9.52	1.98	0.25	Vehicle	-3.01	-0.32	-0.01	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**54.08**	**90.14**	**345.37**	**575.62**
	U_{19} - U_{20}	6.34	-3.80	1.45	1.45	-0.15	-0.15	0.11	0.11	0.00	0.00	1.17	0.90	6.34	1.53	0.11	Vehicle	-3.80	-0.15	0.00	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**83.47**	**139.12**	**846.40**	**1410.66**
	U_{20} - U_{21}	7.04	-6.20	1.23	1.23	-0.86	-0.86	0.17	0.17	0.00	0.00	1.17	0.90	7.04	1.29	0.17	Vehicle	-6.20	-0.91	-----	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**185.61**	**309.36**	**264.98**	**441.64**
	U_{21} - U_{22}	6.53	-6.48	1.58	1.58	-0.35	-0.35	0.06	0.06	-0.02	-0.02	1.17	0.90	6.53	1.66	0.06	Vehicle	-6.48	-0.37	-0.02	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**144.72**	**241.20**	**650.30**	**1083.84**
	U_{22} - U_{23}	6.59	-6.58	0.56	0.56	-1.32	-1.32	0.03	0.03	-0.07	-0.07	1.17	0.90	6.59	0.59	0.03	Vehicle	-6.58	-1.39	-0.07	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**409.68**	**682.80**	**172.35**	**287.26**
	U_{23} - U_{24}	5.44	-7.80	0.87	0.87	-1.26	-1.26	0.02	0.02	-0.22	-0.22	1.17	0.90	5.44	0.91	0.02	Vehicle	-7.80	-1.32	-0.22	Vehicle	17.00	0.81	2	10.46	5	73.85	92.32	1	528.7425	528.7	**263.95**	**439.92**	**180.99**	**301.65**
	U_{24} - U_{25}	3.86	-6.29	0.54	0.54	-1.27	-1.27	0.01	0.01	-0.10	-0.10	1.17	0.90	3.86	0.57	0.01	Vehicle	-6.29	-1.34	-0.10	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**225.96**	**376.60**	**95.60**	**159.33**
	U_{25} - U_{26}	2.64	-9.89	0.32	0.32	-1.59	-1.59	0.03	0.03	-0.27	-0.27	1.17	0.90	2.64	0.34	0.03	Vehicle	-9.89	-1.67	-0.27	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**327.80**	**546.33**	**63.86**	**106.44**
	U_{26} - U_{27}	4.46	-9.33	0.42	0.42	-1.51	-1.51	0.03	0.03	-0.19	-0.19	1.17	0.90	4.46	0.44	0.03	Vehicle	-9.33	-1.59	-0.19	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**250.02**	**416.71**	**67.42**	**112.36**
	U_{27} - U_{28}	1.06	-10.73	0.61	0.61	-1.70	-1.70	0.03	0.03	-0.29	-0.29	1.17	0.90	1.06	0.64	0.03	Vehicle	-10.73	-1.79	-0.29	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**261.83**	**436.38**	**90.81**	**151.34**
	U_{28} - U_{29}	9.64	-6.86	1.19	1.19	-0.77	-0.77	0.04	0.04	-0.06	-0.06	1.17	0.90	9.64	1.25	0.04	Vehicle	-6.86	-0.81	-0.06	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**251.33**	**418.88**	**387.84**	**646.40**
	U_{29} - U_{30}	-12.69	-28.27	1.39	1.39	-3.24	-3.24	0.00	0.00	-0.96	-0.96	1.17	0.90	-12.69	1.47	-----	Vehicle	-28.27	-3.41	-0.96	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**273.98**	**456.63**	**110.53**	**184.22**
	U_{30} - U_{31}	31.65	16.08	4.52	4.52	-0.54	-0.54	1.05	1.05	0.00	0.00	1.18	0.90	31.65	4.81	1.05	Vehicle	16.08	-0.57	-----	Vehicle	17.00	1.31	2	6.48	5	73.85	92.32	1	854.1225	854.1	**78.04**	**130.06**	**703.74**	**1172.90**
	U_{31} - U_{32}	8.09	-9.55	1.20	1.20	-0.48	-0.48	0.09	0.09	-0.06	-0.06	1.18	0.90	8.09	1.28	0.09	Vehicle	-9.55	-0.51	-0.06	Vehicle	17.00	0.94	2	9.07	5	73.85	92.32	1	610.0875	610.1	**216.59**	**360.99**	**537.52**	**895.87**
	U_{32} - U_{33}	13.14	-2.23	1.90	1.90	-0.16	-0.16	0.30	0.30	-0.01	-0.01	1.18	0.90	13.14	2.02	0.30	Vehicle	-2.23	-0.17	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**61.03**	**101.71**	**744.89**	**1241.48**
	U_{33} - U_{34}	11.33	-2.92	1.98	1.98	-0.12	-0.12	0.22	0.22	-0.01	-0.01	1.18	0.90	11.33	2.11	0.22	Vehicle	-2.92	-0.13	-0.01	Vehicle	17.00	0.44	2	19.43	5	73.85	92.32	1	284.7075	284.7	**59.11**	**98.51**	**1023.31**	**1705.52**
	U_{34} - U_{35}	11.30	-0.22	2.00	2.00	-0.05	-0.05	0.29	0.29	0.00	0.00	1.18	0.90	11.30	2.12	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	**58.67**	**97.79**	**2283.22**	**3805.36**
	U_{35} - U_{36}	12.24	-2.18	1.93	1.93	-0.14	-0.14	0.25	0.25	0.00	0.00	1.18	0.90	12.24	2.05	0.25	Vehicle	-2.18	-0.15	-----	Vehicle	17.00	1.06	2	8.00	5	73.85	92.32	1	691.4325	691.4	**151.96**	**253.27**	**2087.42**	**3479.03**
	U_{36} - U_{37}	7.78	-7.69	1.77	1.77	-0.69	-0.69	0.13	0.13	0.00	0.00	1.18	0.90	7.78	1.88	0.13	Vehicle	-7.69	-0.73	0.00	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**197.08**	**328.47**	**505.50**	**842.50**
	U_{37} - U_{38}	9.81	-5.96	1.48	1.48	-1.14	-1.14	0.03	0.03	-0.09	-0.09	1.18	0.90	9.81	1.57	0.03	Vehicle	-5.96	-1.21	-0.09	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**234.68**	**391.14**	**306.37**	**510.62**
	U_{38} - U_{39}	8.20	-2.06	1.24	1.24	-0.99	-0.99	0.13	0.13	0.00	0.00	1.18	0.90	8.20	1.32	0.13	Vehicle	-2.06	-1.06	-----	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**338.61**	**564.35**	**425.82**	**709.70**
	U_{39} - U_{40}	3.71	-6.62	1.27	1.27	-1.64	-1.64	0.06	0.06	-0.20	-0.20	1.18	0.90	3.71	1.36	0.06	Vehicle	-6.62	-1.75	-0.20	Vehicle	17.00	1.50	2	5.67	5	73.85	92.32	1	976.14	976.1	**330.50**	**550.84**	**255.59**	**425.98**
	U_{40} - U_{41}	7.22	-8.66	0.70	0.70	-1.41	-1.41	0.02	0.02	-0.07	-0.07	1.18	0.90	7.22	0.74	0.02	Vehicle	-8.66	-1.50	-0.07	Vehicle	17.00	1.25	2	6.80	5	73.85	92.32	1	813.45	813.5	**499.36**	**832.27**	**246.28**	**410.46**
	U_{41} - U_{42}	1.01	-10.18	0.39	0.39	-1.90	-1.90	0.06	0.06	-0.30	-0.30	1.18	0.90	1.01	0.42	0.06	Vehicle	-10.18	-2.02	-0.30	Vehicle	17.00	0.56	2	15.11	5	73.85	92.32	1	366.0525	366.1	**401.29**	**668.82**	**80.50**	**134.16**
	U_{42} - U_{43}	3.31	-10.54	0.23	0.23	-1.51	-1.51	0.02	0.02	-0.20	-0.20	1.18	0.90	3.31	0.24	0.02	Vehicle	-10.54	-1.61	-0.20	Vehicle	17.00	0.75	2	11.33	5	73.85	92.32	1	488.07	488.1	**932.05**	**1553.42**	**136.00**	**226.67**
	U_{43} - U_{44}	4.39	-11.79	0.42	0.42	-1.56	-1.56	0.08	0.08	-0.37	-0.37	1.18	0.90	4.39	0.45	0.08	Vehicle	-11.79	-1.66	-0.37	Vehicle	17.00	0.38	2	22.67	5	73.85	92.32	1	244.035	244.0	**246.57**	**410.95**	**63.60**	**105.99**
	Structure 3																																	
	U_0 - U_1	14.18	4.83	2.29	2.29	-1.15	-1.15	0.84	0.84	-0.05	-0.05	1.20	0.90	14.18	2.47	0.84	Pedestrian	4.83	-1.24	-0.05	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**40.20**	**50.25**	**89.61**	**149.35**
	U_1 - U_2	6.82	-2.91	1.58	1.58	-0.14	-0.14	0.18	0.18	-0.02	-0.02	1.20	0.90	6.82	1.70	0.18	Vehicle	-2.91	-0.15	-0.02	Vehicle	14.00	0.44	2	16.00	5	73.85	92.32	1	234.465	234.5	**61.08**	**101.81**	**726.10**	**1210.16**
	U_2 - U_3	10.42	-5.49	1.63	1.63	-0.19	-0.19	0.29	0.29	-0.03	-0.03	1.20	0.90	10.42	1.75	0.29	Vehicle	-5.49	-0.20	-0.03	Vehicle	14.00	1.15	2	6.10	5	73.85	92.32	1	614.8725	614.9	**158.21**	**263.68**	**1398.64**	**2331.07**
	U_3 - U_4	6.43	-2.41	1.51	1.51	-0.14	-0.14	0.16	0.16	-0.02	-0.02	1.20	0.90	6.43	1.63	0.16	Vehicle	-2.41	-0.15	-0.02	Vehicle	14.00	1.56	2	4.48	5	73.85	92.32	1	837.375	837.4	**235.17**	**391.95**	**2497.27**	**4162.12**
	U_4 - U_5	5.41	-9.62	1.17	1.17	-1.03

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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
South Truss - Lower Chord																																			
Structure 1	L_0 - L_1	4.43	-2.13	1.28	1.28	-0.27	-0.27	0.18	0.18	-0.05	-0.05	1.24	0.90	4.43	1.43	0.18	Vehicle	-2.13	-0.31	-0.05	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	72.30	120.49	343.31	572.19
	L_1 - L_2	6.00	-2.28	1.12	1.12	-0.46	-0.46	0.19	0.19	-0.09	-0.09	1.24	0.90	6.00	1.25	0.19	Vehicle	-2.28	-0.51	-0.09	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	82.06	136.76	206.11	343.52
	L_2 - L_3	2.92	-3.66	0.62	0.62	-0.49	-0.49	0.04	0.04	-0.05	-0.05	1.24	0.90	2.92	0.69	0.04	Vehicle	-3.66	-0.54	-0.05	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	233.98	389.97	296.81	494.69
	L_3 - L_4	3.19	-5.19	0.66	0.66	-0.44	-0.44	0.02	0.02	-0.10	-0.10	1.24	0.90	3.19	0.74	0.02	Vehicle	-5.19	-0.49	-0.10	Vehicle	15.00	0.62	2	12.14	5	73.85	92.32	1	354.8556	354.9	219.96	366.60	329.48	549.13
	L_4 - L_5	1.06	-8.32	0.19	0.19	-1.26	-1.26	0.00	0.00	-0.22	-0.22	1.24	0.90	1.06	0.21	-----	Vehicle	-8.32	-1.40	-0.22	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	658.88	1098.14	94.99	158.31
	L_5 - L_6	-0.11	-8.64	0.01	0.01	-0.93	-0.93	0.00	0.00	-0.28	-0.28	1.24	0.90	-0.11	0.02	-----	Vehicle	-8.64	-1.03	-0.28	Vehicle	15.00	0.77	2	9.74	5	73.85	92.32	1	442.134	442.1	13096.70	21827.84	192.71	321.18
	L_6 - L_7	4.46	-5.99	0.82	0.82	-0.96	-0.96	0.18	0.18	-0.20	-0.20	1.24	0.90	4.46	0.91	0.18	Vehicle	-5.99	-1.07	-0.20	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	349.65	582.75	296.92	494.87
	L_7 - L_8	-9.36	-17.66	0.66	0.66	-2.64	-2.64	0.00	0.00	-1.06	-1.06	1.24	0.90	-9.36	0.74	-----	Vehicle	-17.66	-2.94	-1.06	Pedestrian	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	589.60	982.67	138.96	173.70
	L_8 - L_9	18.84	10.87	2.99	2.99	-0.52	-0.52	1.10	1.10	0.00	0.00	1.20	0.90	18.84	3.22	1.10	Pedestrian	10.87	-0.56	-----	Vehicle	15.00	1.62	2	4.64	5	73.85	92.32	1	927.9072	927.9	128.61	160.76	776.98	1294.97
	L_9 - L_{10}	11.17	-1.76	1.49	1.49	-0.50	-0.50	0.27	0.27	-0.14	-0.14	1.20	0.90	11.17	1.61	0.27	Vehicle	-1.76	-0.54	-0.14	Vehicle	15.00	1.22	2	6.17	5	73.85	92.32	1	698.2272	698.2	196.03	326.71	598.21	997.02
	L_{10} - L_{11}	10.70	2.17	1.44	1.44	-0.01	-0.01	0.41	0.41	0.00	0.00	1.20	0.90	10.70	1.55	0.41	Vehicle	2.17	-0.01	-----	Vehicle	15.00	0.52	2	14.42	5	73.85	92.32	1	298.584	298.6	84.92	141.53	9924.66	16541.10
	L_{11} - L_{12}	12.21	-0.42	1.41	1.41	-0.04	-0.04	0.26	0.26	0.00	0.00	1.20	0.90	12.21	1.52	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	85.65	142.74	3357.36	5595.61
	L_{12} - L_{13}	6.63	-2.92	0.74	0.74	-0.22	-0.22	0.13	0.13	0.00	0.00	1.20	0.90	6.63	0.79	0.13	Vehicle	-2.92	-0.24	-----	Vehicle	15.00	1.02	2	7.35	5	73.85	92.32	1	585.684	585.7	335.17	558.62	1112.00	1853.33
	L_{13} - L_{14}	12.80	1.62	2.03	2.03	-0.09	-0.09	0.31	0.31	0.00	0.00	1.20	0.90	12.80	2.18	0.31	Vehicle	1.62	-0.09	-----	Vehicle	15.00	1.46	2	5.15	5	73.85	92.32	1	836.8965	836.9	173.31	288.85	4176.13	6960.22
	L_{14} - L_{15}	1.98	-10.69	0.26	0.26	-1.75	-1.75	0.05	0.05	-0.21	-0.21	1.20	0.90	1.98	0.28	0.05	Vehicle	-10.69	-1.88	-0.21	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	1697.97	2829.94	251.05	418.41
	L_{15} - L_{16}	5.99	-3.43	0.61	0.61	-0.53	-0.53	0.03	0.03	-0.07	-0.07	1.20	0.90	5.99	0.66	0.03	Vehicle	-3.43	-0.57	-0.07	Vehicle	15.00	1.81	2	4.15	5	73.85	92.32	1	1037.8665	1037.9	718.14	1196.90	842.60	1404.33
	L_{16} - L_{17}	-0.84	-11.84	0.16	0.16	-1.49	-1.49	0.02	0.02	-0.20	-0.20	1.20	0.90	-0.84	0.18	0.02	Vehicle	-11.84	-1.61	-0.20	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	2007.41	3345.68	216.07	360.12
	L_{17} - L_{18}	2.19	-9.46	0.13	0.13	-1.06	-1.06	0.03	0.03	-0.24	-0.24	1.20	0.90	2.19	0.14	0.03	Vehicle	-9.46	-1.14	-0.24	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	1732.25	2887.09	204.69	341.16
	L_{18} - L_{19}	0.84	-11.52	0.11	0.11	-1.11	-1.11	0.02	0.02	-0.26	-0.26	1.20	0.90	0.84	0.11	0.02	Vehicle	-11.52	-1.20	-0.26	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	923.09	1538.49	82.50	137.51
	L_{19} - L_{20}	1.28	-8.50	0.09	0.09	-0.96	-0.96	0.02	0.02	-0.32	-0.32	1.20	0.90	1.28	0.09	0.02	Vehicle	-8.50	-1.03	-0.32	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	1148.33	1913.88	97.69	162.82
Structure 2	L_0 - L_1	8.88	-1.10	1.60	1.60	-0.22	-0.22	0.23	0.23	-0.03	-0.03	1.18	0.90	8.88	1.70	0.23	Vehicle	-1.10	-0.24	-0.03	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	80.98	134.97	605.39	1008.98
	L_1 - L_2	13.41	-0.38	1.67	1.67	-0.28	-0.28	0.25	0.25	-0.04	-0.04	1.18	0.90	13.41	1.78	0.25	Vehicle	-0.38	-0.30	-0.04	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	76.05	126.75	477.57	795.95
	L_2 - L_3	9.63	-1.36	1.39	1.39	-0.33	-0.33	0.25	0.25	-0.05	-0.05	1.18	0.90	9.63	1.48	0.25	Vehicle	-1.36	-0.35	-0.05	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	173.75	289.59	751.23	1252.06
	L_3 - L_4	13.25	-0.94	1.77	1.77	-0.33	-0.33	0.21	0.21	-0.05	-0.05	1.18	0.90	13.25	1.88	0.21	Vehicle	-0.94	-0.35	-0.05	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	197.08	328.47	1075.13	1791.88
	L_4 - L_5	9.60	-8.29	1.01	1.01	-0.77	-0.77	0.07	0.07	-0.04	-0.04	1.18	0.90	9.60	1.08	0.07	Vehicle	-8.29	-0.82	-0.04	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	456.73	761.22	600.05	1000.08
	L_5 - L_6	11.25	-2.22	1.54	1.54	-0.44	-0.44	0.12	0.12	-0.06	-0.06	1.18	0.90	11.25	1.64	0.12	Vehicle	-2.22	-0.47	-0.06	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	328.82	548.03	1158.66	1931.10
	L_6 - L_7	3.51	-10.30	0.77	0.77	-1.62	-1.62	0.00	0.00	-0.07	-0.07	1.18	0.90	3.51	0.82	-----	Vehicle	-10.30	-1.72	-0.07	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	674.66	1124.43	318.71	531.18
	L_7 - L_8	2.60	-12.44	0.38	0.38	-1.28	-1.28	0.00	0.00	-0.24	-0.24	1.18	0.90	2.60	0.40	-----	Vehicle	-12.44	-1.36	-0.24	Vehicle	18.00	1.23	2	7.35	5	73.85	92.32	1	844.074	844.1	966.66	1611.11	280.16	466.94
	L_8 - L_9	-0.35	-14.52	0.18	0.18	-1.72	-1.72	0.00	0.00	-0.19	-0.19	1.18	0.90	-0.35	0.19	0.00	Vehicle	-14.52	-1.83	-0.19	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	1594.82	2658.04	162.50	270.83
	L_9 - L_{10}	-2.85	-13.17	0.14	0.14	-1.45	-1.45	0.00	0.00	-0.34	-0.34	1.18	0.90	-2.85	0.14	-----	Vehicle	-13.17	-1.54	-0.34	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	1549.21	2582.01	138.98	231.64
	L_{10} - L_{11}	-0.58	-12.80	0.41	0.41	-1.62	-1.62	0.05	0.05	-0.23	-0.23	1.18	0.90	-0.58	0.44	0.05	Vehicle	-12.80	-1.72	-0.23	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	435.78	726.31	106.31	177.18
	L_{11} - L_{12}	-1.75	-17.48	0.08	0.08	-1.32	-1.32	0.00	0.00	-0.37	-0.37	1.18	0.90	-1.75	0.09	-----	Vehicle	-17.48	-1.40	-0.37	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	3613.77	6022.95	210.97	351.61
	L_{12} - L_{13}	8.95	-4.77	1.78	1.78	-0.96	-0.96	0.30	0.30	-0.17	-0.17	1.18	0.90	8.95	1.89	0.30	Vehicle	-4.77	-1.02	-0.17	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	234.32	390.54	438.51	730.85
	L_{13} - L_{14}	-25.08	-38.97	1.65	1.65	-4.45	-4.45	0.00	0.00	-1.43	-1.43	1.18	0.90	-25.08	1.76	-----	Vehicle	-38.97	-4.74	-1.43	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	320.45	534.08	110.87	184.79
	L_{14} - L_{15}	38.11	24.33	4.34	4.34	-1.52	-1.52	1.40	1.40	0.00	0.00	1.17	0.90	38.11	4.57	1.40	Vehicle	24.33	-1.60	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	115.11	191.85	351.70	586.17
	L_{15} - L_{16}	2.20	-10.15	1.30	1.30	-1.17	-1.17	0.09	0.09	-0.29	-0.29	1.17	0.90	2.20	1.37	0.09	Vehicle	-10.15	-1.23	-0.29	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	326.46	544.10	359.36	598.93
	L_{16} - L_{17}	15.46	1.39	1.71	1.71	-0.24	-0.24	0.38	0.38	0.00	0.00	1.17	0.90	15.46	1.80	0.38	Vehicle	1.39	-0.25	-----	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	191.79	319.64	1415.59	2359.31
	L_{17} - L_{18}	10.48	-1.25	1.77	1.77	-0.32	-0.32	0.22	0.22	-0.08	-0.08	1.17	0.90	10.48	1.86	0.22	Vehicle	-1.25	-0.34	-0.08	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	116.49	194.16	658.99	1098.31
	L_{18} - L_{19}	10.20	0.17	1.39	1.39	-0.30	-0.30	0.27	0.27	0.00	0.00	1.17	0.90	10.20	1.46	0.27	Vehicle	0.17	-0.31	-----	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	104.77	174.62	507.49	845.81
	L_{19} - L_{20}	9.84	-2.71	1.37	1.37	-0.18	-0.18	0.12	0.12	-0.03	-0.03	1.17	0.90	9.84	1.44	0.12	Vehicle	-2.71	-0.19	-0.03	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	106.45	177.42	826.48	1377.46
	L_{20} - L_{21}	7.95	-2.45	0.95	0.95	-0.66	-0.66	0.16	0.16	0.00	0.00	1.17	0.90	7.95	1.00	0.16	Vehicle	-2.45	-0.70	-----	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	254.55	424.25	367.76	612.94
	L_{21} - L_{22}	8.88	-2.40	1.85	1.85	-0.38	-0.38	0.16	0.16	-0.05	-0.05	1.17	0.90	8.88	1.94	0.16	Vehicle	-2.40	-0.39	-0.05	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	130.16	216.93	651.26	1085.44
	L_{22} - L_{23}	2.01	-9.01	0.43	0.43	-1.82	-1.82	0.06	0.06	-0.18	-0.18	1.17	0.90	2.01	0.46	0.06	Vehicle	-9.01	-1.92	-0.18	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	563.25	938.74	131.83	219.71
	L_{23} - L_{24}	1.86	-8.53	0.46	0.46	-1.03	-1.03	0.00	0.00	-0.20	-0.20	1.17	0.90	1.86	0.49	-----	Vehicle	-8.53	-1.08	-0.20	Vehicle	18.00	0.81	2	11.08	5	73.85	92.32	1	559.845	559.8	530.44	884.06	234.40	390.67
	L_{24} - L_{25}	2.80	-9.72	0.16	0.16	-1.34	-1.34	0.03	0.03	-0.11	-0.11	1.17	0.90	2.80	0.17	0.03	Vehicle	-9.72	-1.41	-0.11	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	928.81	1548.01	108.65	181.08
	L_{25} - L_{26}	-0.70	-10.70	0.32	0.32	-1.28	-1.28	0.00	0.00	-0.30	-0.30	1.17	0.90	-0.70	0.34	-----	Vehicle	-10.70	-1.34	-0.30	Vehicle	18.00	0.50	2	18.00	5	73.85	92.32	1	344.52	344.5	473.54	789.24	113.49	189.14
	L_{26} - L_{27}	1.32	-10.35	0.42	0.42	-1.63	-1.63	0.05	0.05	-0.19	-0.19	1.17	0.90	1.32	0.44	0.05	Vehicle	-10.35	-1.71	-0.19	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	506.82	844.70	126.50	210.83
	L_{27} - L_{28}	-2.21	-16.20	0.25	0.25	-1.51	-1.51	0.00	0.00	-0.41	-0.41	1.17	0.90	-2.21	0.26	-----	Vehicle	-16.20	-1.59	-0.41	Vehicle	18.00	1.12	2	8.06	5	73.85	92.32	1	769.428	769.4	1366.11	2276.85	216.84	361.40
	L_{28} - L_{29}	11.79	-0.40	1.65	1.65	-0.78	-0.78	0.27	0.27	-0.04	-0.04	1.17	0.90	11.79	1.73	0.27	Vehicle	-0.40	-0.82	-0.04	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	255.31	425.51	548.49	914.15
	L_{29} - L_{30}	-25.96	-39.46	1.45	1.45	-4.59	-4.59	0.00	0.00	-1.47	-1.47	1.17	0.90	-25.96	1.53	-----	Vehicle	-39.46	-4.83	-1.47	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	369.04	615.07	108.65	181.08
	L_{30} - L_{31}	38.82	24.63	4.31	4.31	-1.27	-1.27	1.43	1.43	0.00	0.00	1.18	0.90	38.82	4.59	1.43	Vehicle	24.63	-1.35	-----	Vehicle	18.00	1.73	2	5.22	5	73.85	92.32	1	1188.594	1188.6	114.39	190.65	416.31	693.85
	L_{31} - L_{32}	6.18	-7.73	1.33	1.33	-1.16	-1.16	0.15	0.15	-0.25	-0.25	1.18	0.90	6.18	1.41	0.15	Vehicle	-7.73	-1.23	-0.25	Vehicle	18.00	1.41	2	6.37	5	73.85	92.32	1	973.269	973.3	315.08	525.13	360.89	601.48
	L_{32} - L_{33}	16.95	1.13	1.51	1.51	-0.18	-0.18	0.34	0.34	0.00	0.00	1.18	0.90	16.95	1.61	0.34	Vehicle	1.13	-0.19	-----	Vehicle	18.00	0.96	2	9.33	5	73.85	92.32	1	664.6365	664.6	184.48	307.47	1577.86	2629.77
	L_{33} - L_{34}	12.91	0.40	1.69	1.69	-0.30	-0.30	0.24	0.24	-0.04	-0.04	1.18	0.90	12.91	1.80	0.24	Vehicle	0.40	-0.32	-0.04	Vehicle	18.00	0.60	2	15.00	5	73.85	92.32	1	413.424	413.4	101.62	169.36	598.14	996.90
	L_{34} - L_{35}	12.86	2.50	1.67	1.67	-0.10	-0.10	0.31	0.31	0.00	0.00	1.18	0.90	12.86	1.77	0.31	Vehicle	2.50	-0.10	-----	Vehicle	18.00	0.70	2	12.86	5	73.85	92.32	1	482.328	482.3	121.08	201.80	2192.63	3654.38
	L_{35} - L_{36}	14.48	0.27	1.55	1.55	-0.13	-0.13	0.19	0.19	0.00	0.00	1.18	0.90	14.48	1.65	0.19	Vehicle	0.27	-0.14	-----	Vehicle	18.00	0.96	2	9.37	5	73.85	92.32	1	661.7655	661.8	179.81	299.69	2141.96	3569.93
	L_{36} - L_{37}	11.87	-3.19	1.45	1.45	-0.30	-0.30	0.19	0.19	0.00	0.00	1.18	0.90	11.87	1.54	0.19	Vehicle	-3.19	-0.32	-----	Vehicle	18.00	1.23	1	14.69	5	73.85	92.32	1	422.037	422.0	121.56	202.60	607.89	1013.15
	L_{37} - L_{38}	10.52	-3.30	1.45	1.45	-0.59	-0.59	0.10	0.10	0.00	0.00	1.18	0.90	10.52	1.54	0.10	Vehicle	-3.30	-0.63	-----	Vehicle	18.00	1.75	2	5.16	5	73.85	92.32	1	1202.949	1202.9	356.53	594.21	880.69	1467.82
	L_{38} - L_{39}	1.68	-11.78	0.35	0.35	-1.55	-1.55	0.05	0.05	-0.12	-0.12	1.18	0.90	1.68	0.37	0.05	Vehicle	-11.78	-1.65	-0.12	Vehicle	18.00	1.72	2	5.24	5	73.85	92.32	1	1184.2875	1184.3	1459.92	2433.21	326.30	543.83
	L_{39} - L_{40}	7.67	-10.20	0.59	0.59	-0.94	-0.94	0.05	0.05	-0.12	-0.12	1.18	0.90	7.67	0.62	0.05	Vehicle	-10.20	-1.00	-0.12	Vehicle	18.00	1.56	2	5.76	5	73.85	92.32	1	1076.625	1076.6	790.40	1317.33	490.90	818.17
	L_{40} - L_{41}	0.89	-13.24	0.27	0.27	-1.57	-1.57	0.03	0.03	-0.16	-0.16	1.18	0.90	0.89	0.28	0.03	Vehicle	-13.24	-1.67	-0.16	Vehicle	18.00	1.19	2	7.57	5	73.85	92.32	1	819.6705	819.7	1338.94	2231.57	222.13	370.22
	L_{41} - L_{42}	1.02	-9.90	0.31	0.31	-1.26	-1.26	0.05	0.05	-0.24	-0.24	1.18	0.90	1.02	0.33	0.05	Vehicle	-9.90	-1.34	-0.24	Vehicle	18.00	0.83	2	10.91	5	73.85	92.32	1	568.458	568.5	793.05	1321.75	191.75	319.59
	L_{42} - L_{43}	0.59	-13.12	0.21	0.21	-1.20	-1.20	0.03	0.03	-0.22	-0.22	1.18	0.90	0.59	0.22	0.03	Vehicle	-13.12	-1.28	-0.22	Vehicle	18.00	0.45	1	40.00	5	73.85	92.32	1	155.034	155.0	319.98	533.30	49.80	83.00
	L_{43} - L_{44}	-0.09	-9.99	0.21	0.21	-1.12	-1.12	0.03	0.03	-0.29	-0.29	1.18	0.90	-0.09	0.22	0.03	Vehicle	-9.99	-1.19	-0.29	Vehicle	18.00	0.45	2	20.00	5	73.85	92.32	1	310.068	310.1	655.92	1093.19	114.98	191.64
Structure 3	L_0 - L_1	7.56	-2.30	1.30	1.30	-0.10	-0.10	0.22	0.22	-0.01	-0.01	1.20	0.90	7.56	1.40	0.22	Vehicle	-2.30	-0.11	-0.01	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	72.45	120.75	990.19	1650.31
	L_1 - L_2	11.66	-0.81	1.40	1.40	-0.15	-0.15	0.27	0.27	-0.02	-0.02	1.20	0.90	11.66	1.51	0.27	Vehicle	-0.81	-0.16	-0.02	Vehicle	15.00	0.40	2	18.75	5	73.85	92.32	1	229.68	229.7	65.45	109.09	656.84	1094.73
	L_2 - L_3	9.44	-2.32	1.21	1.21	-0.16	-0.16	0.25	0.25	-0.03	-0.03	1.20	0.90	9.44	1.30	0.25	Vehicle	-2.32	-0.17	-0.03	Vehicle	15.00	0.90	2	8.33	5	73.85	92.32	1	516.78	516.8	178.93	298.21	1383.19	2305.31
	L_3 - L_4	11.46	0.38	1.54	1.54	-0.21	-0.21	0.24	0.24	-0.02	-0.02	1.20	0.90	11.46	1.66	0.24	Vehicle	0.38	-0.22	-0.02	Vehicle	15.00	1.34	2	5.61	5	73.85	92.32	1	767.9925	768.0	209.06	348.43	1581.53	2635.89
	L_4 - L_5	3.42	-6.02	0.75	0.75	-0.71	-0.71	0.04	0.04	-0.03	-0.03	1.20

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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
Structure 1	U_0 - L_0	-1.56	-1.56	0.28	0.28	-1.48	-1.48	0.04	0.04	-0.12	-0.12	1.24	0.90	-1.56	0.31	0.04	Vehicle	-1.56	-1.65	-0.12	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**370.18**	**616.96**	**68.60**	**114.34**
	U_1 - L_1	-1.45	-1.45	0.58	0.58	-1.37	-1.37	0.12	0.12	-0.33	-0.33	1.24	0.90	-1.45	0.65	0.12	Vehicle	-1.45	-1.53	-0.33	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**177.97**	**296.62**	**74.04**	**123.40**
	U_2 - L_2	0.31	0.31	0.52	0.52	-0.77	-0.77	0.11	0.11	-0.16	-0.16	1.24	0.90	0.31	0.58	0.11	Vehicle	0.31	-0.85	-0.16	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**196.30**	**327.17**	**133.95**	**223.25**
	U_3 - L_3	1.69	1.69	0.40	0.40	-0.39	-0.39	0.09	0.09	-0.04	-0.04	1.24	0.90	1.69	0.44	0.09	Vehicle	1.69	-0.44	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**255.74**	**426.23**	**263.65**	**439.41**
	U_4 - L_4	2.57	2.57	0.69	0.69	-0.05	-0.05	0.16	0.16	0.00	0.00	1.24	0.90	2.57	0.77	0.16	Vehicle	2.57	-0.06	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**146.88**	**244.80**	**1958.92**	**3264.87**
	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	0.94	0.23	Vehicle	2.90	-0.07	-----	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**145.13**	**241.89**	**1883.57**	**3139.29**
	U_6 - L_6	2.64	2.64	0.88	0.88	-0.18	-0.18	0.22	0.22	0.00	0.00	1.24	0.90	2.64	0.98	0.22	Vehicle	2.64	-0.20	-----	Vehicle	16.00	0.44	2	18.29	5	73.85	92.32	1	267.96	268.0	**125.19**	**208.65**	**618.18**	**1030.30**
	U_7 - L_7	2.84	2.84	0.66	0.66	-0.24	-0.24	0.23	0.23	0.00	0.00	1.24	0.90	2.84	0.74	0.23	Vehicle	2.84	-0.27	-----	Vehicle	16.25	0.44	2	18.57	5	73.85	92.32	1	272.14688	272.1	**168.12**	**280.19**	**468.66**	**781.10**
	U_8 - L_8	-0.84	-0.84	0.67	0.67	-0.88	-0.88	0.19	0.19	-0.19	-0.19	1.24	0.90	-0.84	0.74	0.19	Vehicle	-0.84	-0.98	-0.19	Vehicle	15.25	0.82	2	9.30	5	73.85	92.32	1	478.6914	478.7	**298.21**	**497.01**	**226.02**	**376.71**
	U_9 - L_9	-6.05	-6.05	0.06	0.06	-1.40	-1.40	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.05	0.06	-----	Vehicle	-6.05	-1.50	-0.38	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**2275.12**	**3791.86**	**93.03**	**155.04**
	U_{10} - L_{10}	-5.08	-5.08	0.06	0.06	-1.36	-1.36	0.00	0.00	-0.32	-0.32	1.20	0.90	-5.08	0.07	0.00	Vehicle	-5.08	-1.47	-0.32	Vehicle	16.16	0.83	2	9.75	5	73.85	92.32	1	512.74682	512.7	**3644.50**	**6074.16**	**158.84**	**264.74**
	U_{11} - L_{11}	-6.10	-6.10	0.01	0.01	-1.51	-1.51	0.00	0.00	-0.38	-0.38	1.20	0.90	-6.10	0.02	-----	Vehicle	-6.10	-1.63	-0.38	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**11507.24**	**19178.74**	**102.33**	**170.55**
	U_{12} - L_{12}	-4.35	-4.35	0.01	0.01	-1.09	-1.09	0.00	0.00	-0.26	-0.26	1.20	0.90	-4.35	0.01	-----	Vehicle	-4.35	-1.18	-0.26	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**13556.09**	**22593.49**	**119.59**	**199.32**
	U_{13} - L_{13}	-2.49	-2.49	0.09	0.09	-0.71	-0.71	0.00	0.00	-0.15	-0.15	1.20	0.90	-2.49	0.09	-----	Vehicle	-2.49	-0.77	-0.15	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**1382.70**	**2304.50**	**161.41**	**269.02**
	U_{14} - L_{14}	-1.05	-1.05	0.29	0.29	-0.35	-0.35	0.00	0.00	-0.05	-0.05	1.20	0.90	-1.05	0.31	-----	Vehicle	-1.05	-0.38	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**369.29**	**615.49**	**298.84**	**498.06**
	U_{15} - L_{15}	0.56	0.56	0.62	0.62	-0.15	-0.15	0.09	0.09	-0.04	-0.04	1.20	0.90	0.56	0.67	0.09	Vehicle	0.56	-0.16	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**169.83**	**283.04**	**702.56**	**1170.93**
	U_{16} - L_{16}	1.64	1.64	0.69	0.69	-0.14	-0.14	0.13	0.13	-0.03	-0.03	1.20	0.90	1.64	0.74	0.13	Vehicle	1.64	-0.15	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**152.86**	**254.76**	**784.46**	**1307.43**
	U_{17} - L_{17}	2.21	2.21	0.69	0.69	-0.11	-0.11	0.15	0.15	-0.02	-0.02	1.20	0.90	2.21	0.75	0.15	Vehicle	2.21	-0.12	-0.02	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**183.67**	**306.12**	**1214.21**	**2023.69**
	U_{18} - L_{18}	3.83	3.83	0.98	0.98	-0.13	-0.13	0.24	0.24	-0.02	-0.02	1.20	0.90	3.83	1.06	0.24	Vehicle	3.83	-0.13	-0.02	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**133.74**	**222.90**	**1084.72**	**1807.86**
	U_{19} - L_{19}	3.13	3.13	0.74	0.74	-0.08	-0.08	0.21	0.21	-0.02	-0.02	1.20	0.90	3.13	0.80	0.21	Vehicle	3.13	-0.09	-0.02	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**209.91**	**349.86**	**1921.05**	**3201.75**
	U_{20} - L_{20}	2.80	2.80	0.49	0.49	-0.05	-0.05	0.17	0.17	-0.01	-0.01	1.20	0.90	2.80	0.53	0.17	Vehicle	2.80	-0.05	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**318.03**	**530.05**	**3539.16**	**5898.60**
	U_0 - L_0	-2.52	-2.52	0.10	0.10	-0.74	-0.74	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.52	0.10	0.01	Vehicle	-2.52	-0.79	-0.09	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1810.88**	**3018.13**	**232.59**	**387.65**
	U_1 - L_1	-4.00	-4.00	0.22	0.22	-1.08	-1.08	0.03	0.03	-0.21	-0.21	1.18	0.90	-4.00	0.23	0.03	Vehicle	-4.00	-1.15	-0.21	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**809.59**	**1349.31**	**159.24**	**265.40**
	U_2 - L_2	-3.87	-3.87	0.28	0.28	-1.14	-1.14	0.04	0.04	-0.21	-0.21	1.18	0.90	-3.87	0.30	0.04	Vehicle	-3.87	-1.22	-0.21	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**521.51**	**869.18**	**124.96**	**208.27**
	U_3 - L_3	-2.33	-2.33	0.21	0.21	-0.75	-0.75	0.03	0.03	-0.13	-0.13	1.18	0.90	-2.33	0.23	0.03	Vehicle	-2.33	-0.79	-0.13	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**675.58**	**1125.96**	**190.28**	**317.13**
	U_4 - L_4	-1.45	-1.45	0.25	0.25	-0.67	-0.67	0.04	0.04	-0.11	-0.11	1.18	0.90	-1.45	0.26	0.04	Vehicle	-1.45	-0.72	-0.11	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**438.74**	**731.23**	**158.18**	**263.64**
	U_5 - L_5	-0.22	-0.22	0.24	0.24	-0.48	-0.48	0.04	0.04	-0.06	-0.06	1.18	0.90	-0.22	0.26	0.04	Vehicle	-0.22	-0.51	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**441.30**	**735.51**	**223.84**	**373.06**
	U_6 - L_6	0.74	0.74	0.36	0.36	-0.35	-0.35	0.04	0.04	-0.01	-0.01	1.18	0.90	0.74	0.38	0.04	Vehicle	0.74	-0.38	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**298.88**	**498.13**	**304.62**	**507.70**
	U_7 - L_7	1.65	1.65	0.44	0.44	-0.11	-0.11	0.07	0.07	0.00	0.00	1.18	0.90	1.65	0.47	0.07	Vehicle	1.65	-0.11	-----	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**239.15**	**398.59**	**1029.01**	**1715.02**
	U_8 - L_8	3.91	3.91	0.97	0.97	-0.07	-0.07	0.17	0.17	0.00	0.00	1.18	0.90	3.91	1.03	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	**115.37**	**192.29**	**1641.49**	**2735.82**
	U_9 - L_9	6.62	6.62	1.45	1.45	-0.04	-0.04	0.26	0.26	0.00	0.00	1.18	0.90	6.62	1.54	0.26	Vehicle	6.62	-0.04	-----	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**118.00**	**196.66**	**5084.70**	**8474.50**
	U_{10} - L_{10}	5.55	5.55	1.21	1.21	-0.10	-0.10	0.23	0.23	0.00	0.00	1.18	0.90	5.55	1.29	0.23	Vehicle	5.55	-0.11	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**180.98**	**301.64**	**2206.48**	**3677.47**
	U_{11} - L_{11}	4.64	4.64	0.98	0.98	-0.14	-0.14	0.19	0.19	0.00	0.00	1.18	0.90	4.64	1.05	0.19	Vehicle	4.64	-0.15	-----	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**223.11**	**371.85**	**1559.37**	**2598.95**
	U_{12} - L_{12}	3.46	3.46	0.76	0.76	-0.20	-0.20	0.16	0.16	-0.01	-0.01	1.18	0.90	3.46	0.81	0.16	Vehicle	3.46	-0.22	-0.01	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**320.94**	**534.90**	**1225.49**	**2042.48**
	U_{13} - L_{13}	3.45	3.45	0.54	0.54	-0.24	-0.24	0.14	0.14	0.00	0.00	1.18	0.90	3.45	0.58	0.14	Vehicle	3.45	-0.26	-----	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**402.25**	**670.41**	**919.10**	**1531.84**
	U_{14} - L_{14}	0.27	0.27	0.41	0.41	-0.59	-0.59	0.11	0.11	-0.10	-0.10	1.18	0.90	0.27	0.44	0.11	Vehicle	0.27	-0.62	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**523.79**	**872.98**	**366.10**	**610.17**
	U_{15} - L_{15}	-2.96	-2.96	0.07	0.07	-0.70	-0.70	0.00	0.00	-0.13	-0.13	1.17	0.90	-2.96	0.07	-----	Vehicle	-2.96	-0.73	-0.13	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2181.05**	**3635.09**	**208.53**	**347.56**
	U_{16} - L_{16}	-2.84	-2.84	0.11	0.11	-0.94	-0.94	0.03	0.03	-0.16	-0.16	1.17	0.90	-2.84	0.11	0.03	Vehicle	-2.84	-0.99	-0.16	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1678.71**	**2797.84**	**186.25**	**310.41**
	U_{17} - L_{17}	-3.71	-3.71	0.17	0.17	-1.09	-1.09	0.02	0.02	-0.19	-0.19	1.17	0.90	-3.71	0.17	0.02	Vehicle	-3.71	-1.15	-0.19	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**986.37**	**1643.94**	**145.93**	**243.22**
	U_{18} - L_{18}	-3.92	-3.92	0.24	0.24	-1.23	-1.23	0.02	0.02	-0.22	-0.22	1.17	0.90	-3.92	0.26	0.02	Vehicle	-3.92	-1.29	-0.22	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**610.08**	**1016.80**	**117.86**	**196.44**
	U_{19} - L_{19}	-2.44	-2.44	0.20	0.20	-0.80	-0.80	0.01	0.01	-0.14	-0.14	1.17	0.90	-2.44	0.21	0.01	Vehicle	-2.44	-0.84	-0.14	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**685.30**	**1142.17**	**163.36**	**272.27**
	U_{20} - L_{20}	-1.76	-1.76	0.22	0.22	-0.63	-0.63	0.00	0.00	-0.12	-0.12	1.17	0.90	-1.76	0.23	0.00	Vehicle	-1.76	-0.67	-0.12	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**548.07**	**913.46**	**186.46**	**310.76**
	U_{21} - L_{21}	-1.05	-1.05	0.23	0.23	-0.56	-0.56	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.05	0.24	-----	Vehicle	-1.05	-0.59	-0.09	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**482.29**	**803.82**	**193.53**	**322.55**
	U_{22} - L_{22}	0.13	0.13	0.39	0.39	-0.29	-0.29	0.05	0.05	-0.03	-0.03	1.17	0.90	0.13	0.41	0.05	Vehicle	0.13	-0.30	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**274.93**	**458.21**	**379.28**	**632.13**
	U_{23} - L_{23}	1.36	1.36	0.70	0.70	-0.25	-0.25	0.11	0.11	-0.02	-0.02	1.17	0.90	1.36	0.74	0.11	Vehicle	1.36	-0.26	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**153.09**	**255.16**	**440.21**	**733.68**
	U_{24} - L_{24}	2.07	2.07	0.78	0.78	-0.25	-0.25	0.14	0.14	-0.02	-0.02	1.17	0.90	2.07	0.82	0.14	Vehicle	2.07	-0.26	-0.02	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**151.87**	**253.11**	**484.71**	**807.84**
	U_{25} - L_{25}	2.70	2.70	0.86	0.86	-0.21	-0.21	0.16	0.16	-0.02	-0.02	1.17	0.90	2.70	0.90	0.16	Vehicle	2.70	-0.22	-0.02	Vehicle	15.75	0.50	2	15.75	5	73.85	92.32	1	301.455	301.5	**152.51**	**254.19**	**649.42**	**1082.37**
	U_{26} - L_{26}	4.21	4.21	1.27	1.27	-0.25	-0.25	0.23	0.23	-0.03	-0.03	1.17	0.90	4.21	1.34	0.23	Vehicle	4.21	-0.26	-0.03	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**113.56**	**189.27**	**593.70**	**989.50**
	U_{27} - L_{27}	3.88	3.88	1.05	1.05	-0.16	-0.16	0.20	0.20	-0.01	-0.01	1.17	0.90	3.88	1.10	0.20	Vehicle	3.88	-0.17	-0.01	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**152.40**	**253.99**	**998.97**	**1664.95**
	U_{28} - L_{28}	2.75	2.75	0.79	0.79	-0.21	-0.21	0.14	0.14	-0.02	-0.02	1.17	0.90	2.75	0.83	0.14	Vehicle	2.75	-0.22	-0.02	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**220.65**	**367.75**	**863.53**	**1439.22**
	U_{29} - L_{29}	2.82	2.82	0.52	0.52	-0.23	-0.23	0.13	0.13	0.00	0.00	1.17	0.90	2.82	0.55	0.13	Vehicle	2.82	-0.25	-----	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**276.75**	**461.24**	**636.17**	**1060.28**
	U_{30} - L_{30}	-0.53	-0.53	0.43	0.43	-0.56	-0.56	0.09	0.09	-0.10	-0.10	1.18	0.90	-0.53	0.45	0.09	Vehicle	-0.53	-0.60	-0.10	Vehicle	15.38	0.84	2	9.15	5	73.85	92.32	1	494.54698	494.5	**502.77**	**837.95**	**382.29**	**637.15**
	U_{31} - L_{31}	-3.70	-3.70	0.08	0.08	-0.71	-0.71	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.70	0.08	-----	Vehicle	-3.70	-0.75	-0.15	Vehicle	16.32	0.81	2	10.06	5	73.85	92.32	1	506.49034	506.5	**2878.53**	**4797.55**	**307.16**	**511.94**
	U_{32} - L_{32}	-3.62	-3.62	0.13	0.13	-0.86	-0.86	0.02	0.02	-0.16	-0.16	1.18	0.90	-3.62	0.13	0.02	Vehicle	-3.62	-0.91	-0.16	Vehicle	16.48	0.90	2	9.13	5	73.85	92.32	1	569.38897	569.4	**1975.13**	**3291.88**	**285.30**	**475.49**
	U_{33} - L_{33}	-4.59	-4.59	0.05	0.05	-1.03	-1.03	0.00	0.00	-0.18	-0.18	1.18	0.90	-4.59	0.05	-----	Vehicle	-4.59	-1.09	-0.18	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**4777.00**	**7961.67**	**213.37**	**355.62**
	U_{34} - L_{34}	-5.33	-5.33	0.02	0.02	-1.21	-1.21	0.00	0.00	-0.22	-0.22	1.18	0.90	-5.33	0.02	-----	Vehicle	-5.33	-1.29	-0.22	Vehicle	16.48	0.81	2	10.15	5	73.85	92.32	1	511.96897	512.0	**13231.54**	**22052.57**	**180.79**	**301.31**
	U_{35} - L_{35}	-6.23	-6.23	0.03	0.03	-1.35	-1.35	0.00	0.00	-0.25	-0.25	1.18	0.90	-6.23	0.04	-----	Vehicle	-6.23	-1.43	-0.25	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**5227.88**	**8713.14**	**126.74**	**211.24**
	U_{36} - L_{36}	-3.53	-3.53	0.06	0.06	-0.83	-0.83	0.00	0.00	-0.15	-0.15	1.18	0.90	-3.53	0.07	-----	Vehicle	-3.53	-0.88	-0.15	Vehicle	15.75	0.44	2	18.00	5	73.85	92.32	1	263.77313	263.8	**1817.70**	**3029.50**	**135.53**	**225.88**
	U_{37} - L_{37}	-1.47	-1.47	0.15	0.15	-0.37	-0.37	0.00	0.00	-0.06	-0.06	1.18	0.90	-1.47	0.16	-----	Vehicle	-1.47	-0.39	-0.06	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**729.36**	**1215.60**	**291.19**	**485.32**
	U_{38} - L_{38}	-0.52	-0.52	0.45	0.45	-0.27	-0.27	0.03	0.03	-0.04	-0.04	1.18	0.90	-0.52	0.48	0.03	Vehicle	-0.52	-0.28	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**238.16**	**396.93**	**403.10**	**671.83**
	U_{39} - L_{39}	0.56	0.56	0.59	0.59	-0.25	-0.25	0.07	0.07	-0.04	-0.04	1.18	0.90	0.56	0.63	0.07	Vehicle	0.56	-0.27	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**180.71**	**301.18**	**428.02**	**713.37**
	U_{40} - L_{40}	1.79	1.79	0.72	0.72	-0.25	-0.25	0.11	0.11	-0.04	-0.04	1.18	0.90	1.79	0.77	0.11	Vehicle	1.79	-0.26	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**146.56**	**244.26**	**439.52**	**732.53**
	U_{41} - L_{41}	2.59	2.59	0.75	0.75	-0.20	-0.20	0.13	0.13	-0.03	-0.03	1.18	0.90	2.59	0.80	0.13	Vehicle	2.59	-0.22	-0.03	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**188.82**	**314.70**	**709.41**	**1182.34**
	U_{42} - L_{42}	4.23	4.23	1.08	1.08	-0.26	-0.26	0.21	0.21	-0.04	-0.04	1.18	0.90	4.23	1.15	0.21	Vehicle	4.23	-0.28	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**132.07**	**220.12**	**566.42**	**944.03**
	U_{43} - L_{43}	3.86	3.86	0.84	0.84	-0.18	-0.18	0.19	0.19	-0.03	-0.03	1.18	0.90	3.86	0.89	0.19	Vehicle	3.86	-0.19	-0.03	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**206.06**	**343.43**	**1008.06**	**1680.10**
	U_{44} - L_{44}	3.42	3.42	0.54	0.54	-0.10	-0.10	0.14	0.14	-0.01	-0.01	1.18	0.90	3.42	0.57	0.14	Vehicle	3.42	-0.10	-0.01	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**322.08**	**536.79**	**1854.31**	**3090.52**
Structure 2	U_0 - L_0	-1.97	-1.97	0.05	0.05	-0.66	-0.66	0.01	0.01	-0.09	-0.09	1.20	0.90	-1.97	0.05	0.01	Vehicle	-1.97	-0.71	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**3240.88**	**5401.47**	**236.22**	**393.69**
	U_1 - L_1	-3.42	-3.42	0.12	0.12	-0.94	-0.94	0.02	0.02	-0.24	-0.24	1.20	0.90	-3.42	0.12	0.02	Vehicle	-3.42	-1.01	-0.24	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1387.89**	**2313.15**	**166.28**	**277.14**
	U_2 - L_2	-3.56	-3.56	0.15	0.15	-1.05	-1.05	0.03	0.03	-0.23	-0.23	1.20	0.90	-3.56	0.16	0.03

Columbia Parkway (HAM-471-0025)
AASHTO Manual for Condition Evaluation of Bridges (MCEB), Second Edition
Load Rating Analysis - Truss Spans
Loading: 5C1
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_1	0.34	-0.17	0.07	0.07	-0.41	-0.41	0.03	0.03	0.00	0.00	1.24	0.90	0.34	0.07	0.03	Pedestrian	-0.17	-0.46	0.00	Vehicle	10.00	0.31	2	16.00	5	73.85	92.32	1	119.625	119.6	**729.98**	**912.47**	**120.44**	**200.74**
	U_1 - L_2	0.05	-0.25	0.08	0.08	-0.13	-0.13	0.02	0.02	-0.05	-0.05	1.24	0.90	0.05	0.09	0.02	Vehicle	-0.25	-0.15	-0.05	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1233.91**	**2056.51**	**780.94**	**1301.57**
	U_2 - L_3	0.29	-0.01	0.08	0.08	-0.07	-0.07	0.02	0.02	-0.01	-0.01	1.24	0.90	0.29	0.09	0.02	Vehicle	-0.01	-0.08	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1278.51**	**2130.86**	**1442.73**	**2404.56**
	U_3 - L_4	0.44	0.13	0.07	0.07	-0.01	-0.01	0.01	0.01	0.00	0.00	1.24	0.90	0.44	0.08	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	**1439.43**	**2399.05**	**17084.93**	**28474.88**
	U_4 - L_4	-0.36	-0.70	0.01	0.01	-0.13	-0.13	0.00	0.00	-0.04	-0.04	1.24	0.90	-0.36	0.01	-----	Vehicle	-0.70	-0.14	-0.04	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**17832.78**	**29721.30**	**970.80**	**1617.99**
	U_5 - L_5	-1.05	-1.50	0.04	0.04	-0.35	-0.35	0.00	0.00	-0.10	-0.10	1.24	0.90	-1.05	0.05	-----	Vehicle	-1.50	-0.39	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**3090.92**	**5151.53**	**370.15**	**616.92**
	U_6 - L_6	-1.37	-1.84	0.13	0.13	-0.45	-0.45	0.00	0.00	-0.13	-0.13	1.24	0.90	-1.37	0.14	-----	Vehicle	-1.84	-0.50	-0.13	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1023.55**	**1705.92**	**286.30**	**477.17**
	U_7 - L_7	-0.71	-1.20	0.10	0.10	-0.27	-0.27	0.00	0.00	-0.08	-0.08	1.24	0.90	-0.71	0.11	-----	Vehicle	-1.20	-0.30	-0.08	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1364.57**	**2274.28**	**478.10**	**796.83**
	U_8 - L_8	-1.25	-2.17	0.05	0.05	-0.44	-0.44	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.25	0.06	0.01	Vehicle	-2.17	-0.47	-0.11	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**3213.83**	**5356.39**	**377.20**	**628.67**
	U_9 - L_{10}	-2.11	-2.95	0.02	0.02	-0.62	-0.62	0.00	0.00	-0.16	-0.16	1.20	0.90	-2.11	0.02	-----	Vehicle	-2.95	-0.67	-0.16	Vehicle	16.25	0.63	2	13.00	5	73.85	92.32	1	388.78125	388.8	**8820.77**	**14701.28**	**266.64**	**444.40**
	U_{10} - L_{11}	-1.43	-2.28	0.02	0.02	-0.42	-0.42	0.00	0.00	-0.10	-0.10	1.20	0.90	-1.43	0.02	-----	Vehicle	-2.28	-0.45	-0.10	Vehicle	16.25	0.50	2	16.25	5	73.85	92.32	1	311.025	311.0	**8929.07**	**14881.78**	**313.22**	**522.04**
	U_{11} - L_{12}	-1.21	-1.69	0.01	0.01	-0.36	-0.36	0.00	0.00	-0.09	-0.09	1.20	0.90	-1.21	0.01	-----	Vehicle	-1.69	-0.39	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**13198.40**	**21997.33**	**431.86**	**719.77**
	U_{12} - L_{13}	-0.93	-1.64	0.01	0.01	-0.29	-0.29	0.00	0.00	-0.07	-0.07	1.20	0.90	-0.93	0.01	-----	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	**10474.58**	**17457.64**	**396.48**	**660.80**
	U_{13} - L_{14}	-0.18	-0.52	0.05	0.05	-0.10	-0.10	0.00	0.00	-0.02	-0.02	1.20	0.90	-0.18	0.06	-----	Vehicle	-0.52	-0.10	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1997.65**	**3329.42**	**1098.83**	**1831.38**
	U_{15} - L_{14}	0.33	0.00	0.07	0.07	-0.09	-0.09	0.01	0.01	-0.01	-0.01	1.20	0.90	0.33	0.08	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	**1466.50**	**2444.17**	**1125.26**	**1875.43**
	U_{16} - L_{15}	-0.23	-0.58	0.05	0.05	-0.20	-0.20	0.01	0.01	-0.03	-0.03	1.20	0.90	-0.23	0.05	0.01	Vehicle	-0.58	-0.22	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**2302.26**	**3837.10**	**524.63**	**874.38**
	U_{17} - L_{16}	-0.54	-0.93	0.05	0.05	-0.28	-0.28	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.54	0.05	0.01	Vehicle	-0.93	-0.30	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2632.54**	**4387.57**	**459.41**	**765.69**
	U_{18} - L_{17}	-1.69	-2.17	0.07	0.07	-0.51	-0.51	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.69	0.07	0.01	Vehicle	-2.17	-0.55	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1976.48**	**3294.14**	**260.86**	**434.76**
	U_{19} - L_{18}	-1.52	-2.05	0.05	0.05	-0.44	-0.44	0.01	0.01	-0.11	-0.11	1.20	0.90	-1.52	0.05	0.01	Vehicle	-2.05	-0.48	-0.11	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2821.90**	**4703.16**	**319.67**	**532.78**
	U_{20} - L_{19}	-1.60	-2.18	0.03	0.03	-0.38	-0.38	0.01	0.01	-0.12	-0.12	1.20	0.90	-1.60	0.03	0.01	Vehicle	-2.18	-0.41	-0.12	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4798.67**	**7997.78**	**376.29**	**627.14**
	U_0 - L_1	-1.42	-1.97	0.08	0.08	-0.59	-0.59	0.01	0.01	-0.05	-0.05	1.18	0.90	-1.42	0.08	0.01	Vehicle	-1.97	-0.63	-0.05	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2111.92**	**3519.87**	**268.80**	**448.01**
	U_1 - L_2	-2.23	-2.78	0.15	0.15	-0.67	-0.67	0.02	0.02	-0.14	-0.14	1.18	0.90	-2.23	0.16	0.02	Vehicle	-2.78	-0.71	-0.14	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1045.23**	**1742.05**	**235.68**	**392.80**
	U_2 - L_3	-1.76	-2.23	0.16	0.16	-0.60	-0.60	0.03	0.03	-0.11	-0.11	1.18	0.90	-1.76	0.17	0.03	Vehicle	-2.23	-0.64	-0.11	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**840.39**	**1400.65**	**223.16**	**371.93**
	U_3 - L_4	-0.78	-1.19	0.12	0.12	-0.34	-0.34	0.02	0.02	-0.06	-0.06	1.18	0.90	-0.78	0.12	0.02	Vehicle	-1.19	-0.36	-0.06	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1249.56**	**2082.60**	**420.63**	**701.04**
	U_4 - L_5	-0.13	-0.47	0.09	0.09	-0.20	-0.20	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.13	0.10	0.01	Vehicle	-0.47	-0.22	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1190.95**	**1984.92**	**526.34**	**877.24**
	U_5 - L_6	0.36	0.01	0.12	0.12	-0.13	-0.13	0.01	0.01	-0.01	-0.01	1.18	0.90	0.36	0.12	0.01	Vehicle	0.01	-0.14	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**929.68**	**1549.47**	**836.90**	**1394.83**
	U_6 - L_7	0.65	0.25	0.14	0.14	-0.06	-0.06	0.02	0.02	0.00	0.00	1.18	0.90	0.65	0.15	0.02	Vehicle	0.25	-0.07	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**831.60**	**1386.00**	**1869.23**	**3115.38**
	U_8 - L_7	-0.66	-1.45	0.04	0.04	-0.25	-0.25	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.04	-----	Vehicle	-1.45	-0.27	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**2522.58**	**4204.30**	**387.22**	**645.36**
	U_8 - L_8	-2.06	-2.57	0.03	0.03	-0.52	-0.52	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.04	-----	Vehicle	-2.57	-0.56	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4425.58**	**7375.96**	**273.74**	**456.23**
	U_{10} - L_9	-2.06	-2.56	0.03	0.03	-0.51	-0.51	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.06	0.04	-----	Vehicle	-2.56	-0.54	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**4731.34**	**7885.57**	**309.71**	**516.19**
	U_{11} - L_{10}	-2.31	-2.86	0.07	0.07	-0.55	-0.55	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.31	0.07	-----	Vehicle	-2.86	-0.59	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**2659.60**	**4432.67**	**312.72**	**521.20**
	U_{12} - L_{11}	-2.13	-2.73	0.10	0.10	-0.51	-0.51	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.13	0.11	-----	Vehicle	-2.73	-0.54	-0.10	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**1719.93**	**2866.55**	**341.98**	**569.96**
	U_{13} - L_{12}	-2.09	-2.70	0.16	0.16	-0.45	-0.45	0.01	0.01	-0.10	-0.10	1.18	0.90	-2.09	0.17	0.01	Vehicle	-2.70	-0.48	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1011.84**	**1686.39**	**350.75**	**584.58**
	U_{14} - L_{13}	-1.09	-1.71	0.13	0.13	-0.29	-0.29	0.01	0.01	-0.07	-0.07	1.18	0.90	-1.09	0.13	0.01	Vehicle	-1.71	-0.30	-0.07	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1282.54**	**2137.57**	**556.98**	**928.31**
	U_{15} - L_{15}	-0.80	-1.36	0.06	0.06	-0.35	-0.35	0.02	0.02	-0.06	-0.06	1.17	0.90	-0.80	0.07	0.02	Vehicle	-1.36	-0.37	-0.06	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2178.24**	**3630.40**	**391.92**	**653.20**
	U_{16} - L_{16}	-1.69	-2.23	0.05	0.05	-0.56	-0.56	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.69	0.05	0.01	Vehicle	-2.23	-0.58	-0.10	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**2700.73**	**4501.22**	**244.15**	**406.91**
	U_{18} - L_{17}	-1.71	-2.26	0.07	0.07	-0.57	-0.57	0.01	0.01	-0.10	-0.10	1.17	0.90	-1.71	0.08	0.01	Vehicle	-2.26	-0.60	-0.10	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**2049.96**	**3416.60**	**254.52**	**424.21**
	U_{17} - L_{18}	-1.67	-2.16	0.09	0.09	-0.52	-0.52	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.67	0.09	0.00	Vehicle	-2.16	-0.55	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1565.01**	**2608.35**	**259.66**	**432.76**
	U_{19} - L_{19}	-1.45	-1.93	0.11	0.11	-0.50	-0.50	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.45	0.11	0.00	Vehicle	-1.93	-0.53	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1310.45**	**2184.09**	**269.72**	**449.54**
	U_{20} - L_{20}	-0.63	-1.37	0.09	0.09	-0.31	-0.31	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.63	0.10	-----	Vehicle	-1.37	-0.32	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1093.83**	**1823.06**	**319.48**	**532.46**
	U_{21} - L_{21}	-0.36	-0.70	0.08	0.08	-0.20	-0.20	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.36	0.08	-----	Vehicle	-0.70	-0.21	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1392.36**	**2320.60**	**542.70**	**904.50**
	U_{22} - L_{22}	0.02	-0.31	0.11	0.11	-0.11	-0.11	0.01	0.01	-0.02	-0.02	1.17	0.90	0.02	0.12	0.01	Vehicle	-0.31	-0.12	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**976.44**	**1627.40**	**974.95**	**1624.92**
	U_{23} - L_{22}	-0.05	-0.39	0.07	0.07	-0.14	-0.14	0.00	0.00	-0.02	-0.02	1.17	0.90	-0.05	0.07	0.00	Vehicle	-0.39	-0.15	-0.02	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1548.96**	**2581.61**	**751.20**	**1252.00**
	U_{24} - L_{23}	-0.39	-0.74	0.08	0.08	-0.23	-0.23	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.39	0.08	0.00	Vehicle	-0.74	-0.24	-0.04	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1357.75**	**2262.92**	**465.42**	**775.70**
	U_{25} - L_{24}	-0.62	-1.39	0.09	0.09	-0.34	-0.34	0.00	0.00	-0.06	-0.06	1.17	0.90	-0.62	0.10	0.00	Vehicle	-1.39	-0.35	-0.06	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1093.81**	**1823.01**	**292.83**	**488.05**
	U_{26} - L_{25}	-1.40	-1.89	0.10	0.10	-0.49	-0.49	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.40	0.11	0.00	Vehicle	-1.89	-0.51	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1348.72**	**2247.87**	**278.63**	**464.38**
	U_{27} - L_{26}	-1.57	-2.07	0.09	0.09	-0.49	-0.49	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.57	0.09	0.00	Vehicle	-2.07	-0.51	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1619.57**	**2699.29**	**278.42**	**464.03**
	U_{28} - L_{27}	-1.53	-2.09	0.10	0.10	-0.47	-0.47	0.00	0.00	-0.09	-0.09	1.17	0.90	-1.53	0.10	-----	Vehicle	-2.09	-0.50	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1489.86**	**2483.10**	**306.81**	**511.35**
	U_{29} - L_{28}	-1.40	-1.95	0.15	0.15	-0.39	-0.39	0.00	0.00	-0.08	-0.08	1.17	0.90	-1.40	0.16	-----	Vehicle	-1.95	-0.41	-0.08	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**899.16**	**1498.59**	**346.08**	**576.79**
	U_{30} - L_{29}	-0.59	-1.15	0.12	0.12	-0.23	-0.23	0.00	0.00	-0.04	-0.04	1.17	0.90	-0.59	0.12	0.00	Vehicle	-1.15	-0.25	-0.04	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1171.85**	**1953.08**	**584.18**	**973.64**
	U_{30} - L_{31}	-1.35	-1.98	0.08	0.08	-0.40	-0.40	0.01	0.01	-0.08	-0.08	1.18	0.90	-1.35	0.09	0.01	Vehicle	-1.98	-0.42	-0.08	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1910.30**	**3183.84**	**399.47**	**665.79**
	U_{31} - L_{32}	-2.47	-3.07	0.08	0.08	-0.59	-0.59	0.01	0.01	-0.12	-0.12	1.18	0.90	-2.47	0.08	0.01	Vehicle	-3.07	-0.63	-0.12	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**2039.23**	**3398.71**	**267.75**	**446.26**
	U_{32} - L_{33}	-2.33	-2.91	0.05	0.05	-0.57	-0.57	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.33	0.05	-----	Vehicle	-2.91	-0.61	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**3657.24**	**6095.40**	**302.27**	**503.78**
	U_{33} - L_{34}	-2.44	-2.97	0.04	0.04	-0.58	-0.58	0.00	0.00	-0.11	-0.11	1.18	0.90	-2.44	0.04	-----	Vehicle	-2.97	-0.62	-0.11	Vehicle	16.64	0.63	2	13.19	5	73.85	92.32	1	401.93388	401.9	**4181.20**	**6968.67**	**298.03**	**496.72**
	U_{34} - L_{35}	-2.15	-2.63	0.02	0.02	-0.51	-0.51	0.00	0.00	-0.10	-0.10	1.18	0.90	-2.15	0.02	-----	Vehicle	-2.63	-0.54	-0.10	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**8045.79**	**13409.66**	**310.85**	**518.08**
	U_{35} - L_{36}	-2.05	-2.55	0.02	0.02	-0.47	-0.47	0.00	0.00	-0.09	-0.09	1.18	0.90	-2.05	0.02	-----	Vehicle	-2.55	-0.50	-0.09	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**7302.06**	**12170.11**	**305.86**	**509.77**
	U_{36} - L_{37}	-0.66	-1.43	0.05	0.05	-0.23	-0.23	0.00	0.00	-0.04	-0.04	1.18	0.90	-0.66	0.06	-----	Vehicle	-1.43	-0.24	-0.04	Vehicle	15.75	0.38	2	21.00	5	73.85	92.32	1	226.09125	226.1	**1856.19**	**3093.66**	**430.11**	**716.84**
	U_{38} - L_{37}	0.55	0.15	0.10	0.10	-0.07	-0.07	0.02	0.02	0.00	0.00	1.18	0.90	0.55	0.10	0.02	Vehicle	0.15	-0.08	-----	Vehicle	16.00	0.44	2	18.06	5	73.85	92.32	1	271.32864	271.3	**1221.97**	**2036.62**	**1634.76**	**2724.60**
	U_{39} - L_{38}	0.25	-0.10	0.08	0.08	-0.16	-0.16	0.01	0.01	-0.01	-0.01	1.18	0.90	0.25	0.09	0.01	Vehicle	-0.10	-0.17	-0.01	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1320.65**	**2201.08**	**681.91**	**1136.51**
	U_{40} - L_{39}	-0.19	-0.54	0.08	0.08	-0.21	-0.21	0.01	0.01	-0.03	-0.03	1.18	0.90	-0.19	0.08	0.01	Vehicle	-0.54	-0.23	-0.03	Vehicle	15.86	0.41	2	19.48	5	73.85	92.32	1	247.09817	247.1	**1357.21**	**2262.01**	**503.82**	**839.70**
	U_{41} - L_{40}	-0.79	-1.21	0.10	0.10	-0.32	-0.32	0.02	0.02	-0.05	-0.05	1.18	0.90	-0.79	0.11	0.02	Vehicle	-1.21	-0.34	-0.05	Vehicle	16.32	0.53	2	15.43	5	73.85	92.32	1	330.48196	330.5	**1451.58**	**2419.30**	**448.36**	**747.26**
	U_{42} - L_{41}	-1.71	-2.19	0.13	0.13	-0.52	-0.52	0.02	0.02	-0.09	-0.09	1.18	0.90	-1.71	0.14	0.02	Vehicle	-2.19	-0.55	-0.09	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1023.42**	**1705.70**	**257.04**	**428.39**
	U_{43} - L_{42}	-1.87	-2.42	0.11	0.11	-0.50	-0.50	0.02	0.02	-0.11	-0.11	1.18	0.90	-1.87	0.12	0.02	Vehicle	-2.42	-0.54	-0.11	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1410.16**	**2350.26**	**314.17**	**523.61**
	U_{44} - L_{43}	-2.06	-2.63	0.08	0.08	-0.39	-0.39	0.01	0.01	-0.09	-0.09	1.18	0.90	-2.06	0.09	0.01	Vehicle	-2.63	-0.42	-0.09	Vehicle	16.48	0.58	2	14.11	5	73.85	92.32	1	368.41897	368.4	**1938.19**	**3230.31**	**402.60**	**671.00**
Structure 2	U_0 - L_1	-0.86	-1.43	0.03	0.03	-0.55	-0.55	0.00	0.00	-0.04	-0.04	1.20	0.90	-0.86	0.04	0.00	Vehicle	-1.43	-0.59	-0.04	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**4222.01**	**7036.68**	**259.63**	**432.72**
	U_1 - L_2	-1.89	-2.41	0.08	0.08	-0.57	-0.57	0.01	0.01	-0.14	-0.14	1.20	0.90	-1.89	0.08	0.01	Vehicle	-2.41	-0.61	-0.14	Vehicle	16.32	0.54	2	15.25	5	73.85	92.32	1	334.23034	334.2	**1896.38**	**3160.63**	**250.41**	**417.35**
	U_2 - L_3	-1.74	-2.20	0.09	0.09	-0.57	-0.57	0.02	0.02	-0.12	-0.12	1.20	0.90	-1.74	0.10	0.02	Vehicle	-2.20	-0.61	-0.12	Vehicle	16.16	0.50	2	16.03	5	73.85	92.32	1	311.77682	311.8	**1445.46**	**2409.11**	**233.22**	**388.70**
	U_3 - L_4	-0.53	-0.91	0.06	0.06	-0.28	-0.28	0.01	0.01	-0.06	-0.06	1.20	0.90	-0.53	0.07	0.01	Vehicle	-0.91	-0.30	-0.06	Vehicle	16.16	0.49	2	16.63	5	73.85	92.32	1	300.64193	300.6	**2114.61**	**3524.35**	**464.44**	**774.07**
	U_4 - L_5

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 **5C1**

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.63
Maximum Moment (End)	1.68
	Operating
Maximum Shear Force	26.96

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	$U_0 - U_1$	3.93	5.09	6.73	4.16	5.93	9.05	4.05	5.03	5.69	141.44	62.24	2241
		$U_1 - U_2$	2.44	3.55	4.05	4.16	4.66	4.87	2.43	3.47	4.06	87.65	54.60	1966
		$U_2 - U_3$	2.41	3.55	4.47	2.79	4.40	5.23	2.42	3.57	5.75	86.91	75.24	2709
		$U_3 - U_4$	3.00	4.57	6.17	3.69	5.81	6.78	3.00	5.21	6.18	108.04	92.01	3312
		$U_4 - U_5$	3.20	4.46	6.05	3.20	4.47	6.09	3.63	6.19	7.12	115.24	72.52	2611
		$U_5 - U_6$	3.88	5.07	5.16	3.90	4.90	5.07	4.42	9.63	5.42	139.84	65.15	2346
		$U_6 - U_7$	3.67	4.93	4.93	3.68	9.14	4.89	4.13	5.37	4.49	132.12	181.21	6524
		$U_7 - U_8$	4.21	5.40	4.79	3.37	5.29	7.17	6.58	7.81	6.02	121.45	64.82	2326
		$U_8 - U_9$	3.75	6.36	4.78	5.97	8.08	5.84	8.84	7.44	5.28	134.87	35.97	1295
		$U_9 - U_{10}$	4.60	7.07	7.72	23.88	34.99	20.78	4.69	7.38	7.38	165.56	81.70	2941
		$U_{10} - U_{11}$	3.48	4.50	4.10	4.63	7.52	6.29	3.46	4.49	4.08	124.68	44.58	1605
		$U_{11} - U_{12}$	2.41	3.78	2.95	4.75	4.94	3.83	2.43	3.78	3.09	86.65	74.20	2671
		$U_{12} - U_{13}$	2.51	3.79	3.26	3.52	4.86	4.19	2.51	3.81	3.42	90.33	215.82	7770
		$U_{13} - U_{14}$	2.58	3.76	3.03	3.16	4.26	3.49	2.47	3.73	3.03	88.78	162.96	5866
		$U_{14} - U_{15}$	2.53	3.58	2.98	2.48	3.78	2.97	2.58	4.06	3.22	89.28	217.41	7827
		$U_{15} - U_{16}$	2.27	3.40	3.26	2.27	3.73	3.26	2.55	6.00	3.67	81.83	284.61	10246
		$U_{16} - U_{17}$	2.57	3.62	3.76	2.57	4.67	3.90	5.41	6.54	4.72	92.51	220.44	7936
		$U_{17} - U_{18}$	2.52	3.15	3.82	3.63	3.15	3.89	3.51	4.11	4.37	90.61	170.07	6123
		$U_{18} - U_{19}$	2.67	3.28	4.18	2.54	3.02	4.37	2.90	6.05	4.26	91.44	73.55	2648
		$U_{19} - U_{20}$	5.97	7.87	11.97	5.98	6.77	11.81	6.28	9.35	12.90	215.06	37.30	1343
	Structure 2	$U_0 - U_1$	5.76	5.78	6.94	6.42	8.97	9.06	6.17	5.80	6.88	207.38	56.37	2029
		$U_1 - U_2$	3.36	3.28	3.49	4.09	5.84	4.10	3.36	3.45	3.49	118.22	127.60	4594
		$U_2 - U_3$	3.02	3.77	3.46	3.68	4.93	4.47	3.02	3.64	3.46	108.59	59.89	2156
		$U_3 - U_4$	2.52	3.82	3.21	2.94	4.66	4.24	2.65	3.76	3.12	90.61	190.51	6858
		$U_4 - U_5$	2.69	3.70	3.43	3.48	4.42	4.01	2.79	3.84	3.27	96.73	178.86	6439
		$U_5 - U_6$	3.13	3.78	3.44	3.31	4.10	3.60	2.76	3.75	3.81	99.36	224.61	8086
		$U_6 - U_7$	2.41	3.33	3.51	2.78	4.17	3.76	2.64	3.63	4.18	86.79	159.04	5726
		$U_7 - U_8$	2.45	3.33	3.51	2.45	3.33	4.27	2.75	4.01	3.71	88.07	145.63	5243
		$U_8 - U_9$	2.44	3.57	3.61	2.42	3.57	3.57	4.25	5.89	4.20	87.18	143.63	5171
		$U_9 - U_{10}$	2.86	3.96	4.88	2.87	3.95	4.88	5.20	7.19	5.56	102.80	68.40	2462
		$U_{10} - U_{11}$	3.83	5.63	6.47	3.83	5.64	6.44	4.69	8.75	7.36	137.70	70.16	2526
		$U_{11} - U_{12}$	4.37	5.51	5.24	4.37	5.53	5.16	16.86	17.45	15.19	157.22	60.79	2188
		$U_{12} - U_{13}$	5.30	7.82	6.36	5.20	6.12	6.10	5.53	11.54	8.25	187.04	227.02	8173
		$U_{13} - U_{14}$	6.28	6.51	5.21	4.83	6.06	7.03	6.95	7.80	5.67	173.87	77.28	2782
		$U_{14} - U_{15}$	5.23	7.57	6.20	8.36	8.03	4.85	8.35	6.86	4.60	165.51	88.97	3203
		$U_{15} - U_{16}$	6.47	9.55	8.04	9.49	8.72	9.69	5.65	7.67	6.69	203.33	241.55	8696
		$U_{16} - U_{17}$	5.05	6.87	6.07	27.55	25.97	33.51	5.05	6.66	5.91	181.64	76.86	2767
		$U_{17} - U_{18}$	3.95	5.85	5.16	11.10	13.01	5.46	3.67	5.96	5.18	132.30	54.98	1979
		$U_{18} - U_{19}$	4.69	5.71	6.06	5.69	7.74	7.02	4.68	6.52	6.34	168.55	52.56	1892
		$U_{19} - U_{20}$	3.62	4.79	4.20	4.06	5.38	5.31	3.41	4.79	4.20	122.77	92.78	3340
		$U_{20} - U_{21}$	3.46	4.54	4.13	4.00	5.63	4.53	3.41	4.71	4.48	122.81	109.98	3959
		$U_{21} - U_{22}$	2.76	4.11	3.79	3.10	4.83	4.23	2.90	4.29	4.38	99.29	128.58	4629
		$U_{22} - U_{23}$	2.69	3.94	3.79	2.69	3.90	3.77	3.01	4.56	4.07	96.70	128.57	4628
		$U_{23} - U_{24}$	3.01	4.05	4.31	3.01	4.07	4.28	4.62	6.48	5.01	108.42	152.16	5478
		$U_{24} - U_{25}$	3.21	4.24	5.00	3.53	4.58	5.00	4.45	5.95	10.33	115.70	87.45	3148
		$U_{25} - U_{26}$	3.96	5.13	6.70	3.96	5.15	6.81	7.02	7.58	7.94	142.70	58.55	2108
		$U_{26} - U_{27}$	4.03	5.93	4.98	4.05	6.06	5.03	13.64	14.67	27.34	145.02	56.48	2033
		$U_{27} - U_{28}$	5.52	6.74	6.67	5.46	6.86	6.78	36.30	30.42	11.84	196.57	93.68	3373
		$U_{28} - U_{29}$	7.38	10.59	8.48	5.95	12.86	15.82	9.52	10.16	7.35	214.34	233.56	8408
		$U_{29} - U_{30}$	7.14	7.52	4.03	5.49	6.70	8.51	7.25	8.16	5.31	145.00	77.75	2799
		$U_{30} - U_{31}$	6.05	7.29	6.11	9.22	7.59	5.79	10.86	7.02	4.45	160.09	85.31	3071
		$U_{31} - U_{32}$	5.95	7.34	6.92	9.92	7.02	6.48	5.47	6.84	5.95	196.82	242.33	8724
		$U_{32} - U_{33}$	4.58	5.35	5.52	21.39	17.89	19.55	4.32	5.81	5.39	155.54	55.73	2006
		$U_{33} - U_{34}$	4.76	6.80	6.62	5.43	8.27	7.49	4.79	7.11	6.65	172.17	71.71	2581
		$U_{34} - U_{35}$	3.93	4.73	4.07	5.27	6.49	5.46	4.06	4.76	4.11	141.61	57.97	2087
		$U_{35} - U_{36}$	3.27	4.29	3.43	4.58	5.62	3.74	3.27	4.22	3.40	117.69	119.19	4291
		$U_{36} - U_{37}$	3.36	3.78	3.20	3.55	4.67	3.58	3.20	3.78	3.18	114.39	147.11	5296
		$U_{37} - U_{38}$	3.42	3.64	3.19	3.09	3.64	3.20	3.43	4.45	3.18	111.20	174.44	6280
		$U_{38} - U_{39}$	3.33	3.95	3.15	3.10	3.95	3.14	4.58	5.42	3.35	111.55	174.43	6280
		$U_{39} - U_{40}$	3.08	3.41	3.22	3.64	3.46	3.15	3.36	5.34	3.61	110.84	231.92	8349
		$U_{40} - U_{41}$	2.87	3.26	3.37	2.87	3.25	3.37	3.36	3.84	4.21	103.32	167.60	6033
		$U_{41} - U_{42}$	3.08	3.49	4.07	3.08	3.49	4.22	4.96	5.27	4.77	110.95	65.00	2340
		$U_{42} - U_{43}$	3.36	3.69	4.82	3.36	3.78	5.19	8.11	7.02	5.00	120.87	152.14	5477
		$U_{43} - U_{44}$	6.06	6.70	9.90	5.88	6.24	9.90	6.05	9.60	11.13	211.75	30.93	1114
	Structure 3	$U_0 - U_1$	6.52	6.84	9.29	8.05	8.66	10.38	6.73	7.55	9.04	234.61	66.05	2378
		$U_1 - U_2$	2.93	3.16	3.46	3.22	4.56	4.54	2.93	3.16	3.39	105.47	67.01	2412
		$U_2 - U_3$	2.99	3.66	3.56	3.00	3.91	4.11	3.00	3.57	3.45	107.73	153.65	5531
		$U_3 - U_4$	2.97	4.24	4.01	4.55	5.84	4.76	3.06	4.33	3.83	106.98	215.31	7751
		$U_4 - U_5$	2.86	3.68	3.51	2.90	4.37	3.92	2.60	3.80	3.93	93.49	223.37	8041
		$U_5 - U_6$	2.55	3.63	3.13	2.88	4.54	4.31	2.47	4.24	3.13	89.07	211.75	7623
		$U_6 - U_7$	2.51	3.65	3.17	2.45	3.64	3.18	3.98	4.20	3.86	88.20	192.96	6946
		$U_7 - U_8$	2.47	3.42	3.53	2.46	3.44	3.51	4.08	4.42	6.53	88.64	254.83	9174
		$U_8 - U_9$	2.19	3.36	3.69	2.19	3.36	3.63	2.58	6.84	4.85	78.93	74.08	2667
		$U_9 - U_{10}$	2.63	3.90	5.84	2.63	3.89	5.84	4.38	6.80	7.77	94.65	45.68	1644
		$U_{10} - U_{11}$	5.19	6.95	7.48	5.24	10.17	7.44	17.35	24.80	10.37	186.92	78.26	2817
		$U_{11} - U_{12}$	5.14	6.30	3.97	4.67	6.80	7.50	7.61	6.99	5.25	142.83	31.76	1143
		$U_{12} - U_{13}$	4.38	5.38	5.56	7.42	9.11	6.03	4.11	5.23	4.44	147.96	75.16	2706
		$U_{13} - U_{14}$	3.85	5.27	5.45	4.03	5.76	5.23	3.85	5.34	5.39	138.42	194.54	7003
		$U_{14} - U_{15}$	3.93	5.42	5.24	4.25	10.27	5.61	3.82	4.97	5.24	137.54	58.36	2101
		$U_{15} - U_{16}$	3.68	4.46	4.81	5.32	6.21	5.58	4.28	4.97	4.79	132.41	67.61	2434
		$U_{16} - U_{17}$	4.02	4.63	4.87	4.26	5.17	4.85	4.28	5.62	5.34	144.54	75.06	2702
		$U_{17} - U_{18}$	2.70	3.31	3.93	2.70	3.29	3.97	3.23	4.26	5.11	97.25	75.80	2729
		$U_{18} - U_{19}$	2.50	3.20	4.11	2.50	3.22	4.36	6.57	5.71	4.49	89.92	72.70	2617
		$U_{19} - U_{20}$	4.46	4.75	8.47	5.39	6.00	7.25	6.06	7.13	12.62	160.70	26.96	970

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 **5C1**

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.63
Maximum Moment (End)	1.68
	Operating
Maximum Shear Force	26.96

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 - Lower Chord	Structure 1	L_2 - L_1	45.16	15.55	18.10	25.01	17.82	15.38	24.05	19.69	16.03	553.73	76.16	2742
		L_1 - L_2	3.64	4.19	4.17	3.71	4.88	5.98	3.75	5.79	5.83	131.20	65.44	2356
		L_2 - L_3	3.25	4.61	4.99	3.26	4.95	4.84	3.78	5.98	5.28	117.06	150.89	5432
		L_3 - L_4	3.15	4.46	4.49	3.13	4.48	4.47	3.60	5.87	5.75	112.69	153.32	5520
		L_4 - L_5	3.00	4.45	3.19	2.79	3.96	3.12	3.01	10.26	3.15	100.27	77.76	2799
		L_5 - L_6	2.92	4.39	3.01	2.89	4.44	3.00	2.90	4.43	3.00	104.09	174.09	6267
		L_6 - L_7	4.59	6.43	4.66	4.01	5.58	4.74	8.48	11.78	5.88	144.21	220.92	7953
		L_7 - L_8	4.38	5.51	3.01	4.30	6.08	3.68	4.58	5.72	4.12	108.49	120.66	4344
		L_8 - L_9	4.09	5.56	2.18	4.87	5.87	2.94	5.22	6.44	3.98	78.54	130.43	4696
		L_9 - L_{10}	6.38	10.07	5.49	8.06	11.82	8.24	5.75	9.71	9.48	197.47	262.32	9443
		L_{10} - L_{11}	3.93	6.23	6.23	3.96	10.97	6.88	3.80	6.19	6.26	136.78	81.66	2940
		L_{11} - L_{12}	4.22	4.32	4.23	5.30	5.69	4.53	5.24	6.97	4.61	152.05	90.52	3259
		L_{12} - L_{13}	4.40	4.91	4.50	4.42	5.19	4.74	4.81	6.18	4.50	158.37	297.89	10724
		L_{13} - L_{14}	3.80	4.62	3.80	3.56	4.68	4.90	4.35	5.72	4.21	128.15	148.60	5350
		L_{14} - L_{15}	3.98	5.19	4.34	4.35	5.20	4.52	4.02	5.17	4.34	143.42	285.47	10277
		L_{15} - L_{16}	4.40	5.41	6.07	4.85	6.19	6.11	4.42	5.36	6.37	158.41	544.96	19618
		L_{16} - L_{17}	4.45	4.95	5.61	4.72	5.27	5.77	6.18	6.92	6.23	160.31	191.19	6883
		L_{17} - L_{18}	6.31	5.68	7.68	6.21	5.79	7.26	10.10	7.61	8.27	204.39	166.33	5988
		L_{18} - L_{19}	5.67	5.13	5.09	9.31	4.92	7.92	7.31	6.72	8.01	177.12	66.72	2402
		L_{19} - L_{20}	4.39	14.48	7.63	5.30	15.16	12.36	4.70	15.05	14.19	157.95	73.13	2633
	Structure 2	L_2 - L_1	20.41	19.72	18.01	17.81	18.67	14.70	17.77	19.73	14.70	529.05	97.71	3518
		L_1 - L_2	5.61	4.99	5.91	6.70	7.38	7.79	6.36	5.81	7.77	179.74	102.00	3672
		L_2 - L_3	5.19	5.25	5.61	6.68	6.55	8.22	5.81	6.92	5.81	187.01	156.99	5652
		L_3 - L_4	4.32	5.14	4.78	6.04	6.12	5.57	4.83	6.02	4.87	155.55	230.94	8314
		L_4 - L_5	4.78	5.78	5.07	6.03	5.95	5.68	5.01	6.97	5.95	171.94	343.24	12357
		L_5 - L_6	4.33	5.32	4.65	4.66	6.12	4.65	4.46	7.08	4.80	155.70	295.84	10650
		L_6 - L_7	4.22	5.31	4.38	4.15	5.34	4.38	5.02	7.35	4.64	149.58	388.78	13996
		L_7 - L_8	3.81	5.42	5.00	3.78	5.31	4.86	4.94	6.46	5.08	136.12	217.92	7845
		L_8 - L_9	4.29	6.08	5.28	4.47	6.24	5.55	5.15	7.40	8.14	154.47	165.37	5953
		L_9 - L_{10}	5.16	7.26	5.70	4.91	6.61	5.63	5.41	7.59	5.82	176.87	131.18	4722
		L_{10} - L_{11}	3.49	4.74	3.46	3.33	4.48	3.46	13.82	18.78	16.66	119.86	103.38	3722
		L_{11} - L_{12}	4.36	5.64	3.63	4.26	5.44	3.68	9.05	12.62	3.70	130.62	185.91	6693
		L_{12} - L_{13}	6.58	6.92	5.57	5.35	6.82	5.52	5.45	9.53	6.20	192.58	317.52	11431
		L_{13} - L_{14}	4.19	6.11	3.50	5.75	7.13	4.54	4.52	6.50	5.43	125.92	95.12	3424
		L_{14} - L_{15}	5.61	5.57	3.92	6.52	6.14	4.48	5.52	6.54	3.33	119.88	102.63	3695
		L_{15} - L_{16}	5.29	7.80	4.43	5.38	7.11	7.28	5.06	7.86	8.13	159.46	273.14	9833
		L_{16} - L_{17}	4.43	6.42	3.46	7.16	10.57	5.53	4.43	6.33	5.91	124.61	204.59	7365
		L_{17} - L_{18}	3.48	4.80	4.61	11.35	17.78	7.75	3.25	4.84	4.56	117.10	126.59	4557
		L_{18} - L_{19}	3.26	4.74	4.66	3.21	9.20	4.66	3.26	4.67	4.66	115.62	100.78	3628
		L_{19} - L_{20}	4.36	6.14	6.03	6.59	6.72	6.48	4.28	6.04	6.56	153.95	131.21	4724
		L_{20} - L_{21}	5.87	6.58	5.92	5.88	7.18	6.81	7.75	9.29	6.43	211.20	159.18	5730
		L_{21} - L_{22}	4.35	5.37	4.53	4.59	5.81	4.53	5.48	5.57	4.82	156.46	123.30	4439
		L_{22} - L_{23}	4.46	5.42	5.02	4.47	5.62	5.29	4.48	6.11	5.01	160.44	142.02	5113
		L_{23} - L_{24}	6.29	6.97	7.51	6.42	7.13	7.30	6.45	7.50	7.46	226.38	181.97	6551
		L_{24} - L_{25}	6.26	6.75	6.81	5.85	6.00	6.57	6.54	6.78	7.44	210.51	125.52	4519
		L_{25} - L_{26}	4.99	5.22	4.60	4.57	4.87	4.59	12.02	12.90	4.63	164.46	108.60	3910
		L_{26} - L_{27}	4.62	5.55	5.06	5.02	5.00	4.67	5.23	13.86	8.38	166.49	116.88	4208
		L_{27} - L_{28}	4.38	7.16	4.28	7.32	6.96	6.15	4.75	9.62	5.48	154.22	190.13	6845
		L_{28} - L_{29}	4.69	8.81	5.60	6.66	7.77	7.51	4.05	9.06	6.22	145.71	344.54	12403
		L_{29} - L_{30}	3.94	5.67	3.89	10.99	8.00	5.02	7.61	7.04	5.44	140.14	98.03	3529
		L_{30} - L_{31}	6.11	6.30	2.79	7.82	6.69	3.53	7.34	7.18	2.49	89.81	101.15	3641
		L_{31} - L_{32}	8.14	7.90	5.00	6.51	8.53	7.01	11.56	7.52	5.83	180.08	275.73	9926
		L_{32} - L_{33}	6.25	5.64	4.18	10.36	15.52	3.92	6.00	5.83	4.20	141.07	183.27	6598
		L_{33} - L_{34}	5.37	4.74	4.04	19.93	25.73	9.52	4.76	4.64	3.77	135.83	121.98	4391
		L_{34} - L_{35}	6.55	7.01	6.91	6.95	7.22	7.11	6.26	6.63	6.74	225.45	123.84	4458
		L_{35} - L_{36}	5.54	5.86	5.82	5.43	8.18	7.88	6.67	7.92	6.83	195.51	168.27	6058
		L_{36} - L_{37}	4.92	5.69	5.15	5.03	5.66	5.14	4.70	5.61	5.08	169.16	103.30	3719
		L_{37} - L_{38}	4.34	5.54	5.08	5.17	6.51	5.75	4.41	5.97	5.09	156.31	271.42	9771
		L_{38} - L_{39}	4.75	5.73	5.29	4.91	6.05	5.44	5.48	5.78	5.26	171.11	340.31	12251
		L_{39} - L_{40}	4.40	5.52	6.15	4.66	5.90	6.15	4.38	5.40	6.47	157.85	436.94	15730
		L_{40} - L_{41}	4.26	5.04	5.78	4.33	5.17	5.82	6.44	7.87	6.17	153.53	202.02	7273
		L_{41} - L_{42}	5.15	5.53	7.23	5.18	5.61	7.67	8.01	8.23	8.66	185.36	152.05	5474
		L_{42} - L_{43}	6.07	5.93	8.87	6.15	6.19	9.00	8.10	7.74	9.56	213.34	42.75	1539
		L_{43} - L_{44}	11.54	23.75	23.21	11.69	18.73	16.28	11.69	23.23	26.96	415.50	85.90	3092
	Structure 3	L_2 - L_1	7.82	14.95	6.51	8.39	17.86	5.80	8.45	17.16	5.94	208.86	82.06	2954
		L_1 - L_2	5.83	4.45	5.19	11.96	5.40	11.36	9.13	5.37	10.51	160.27	80.69	2905
		L_2 - L_3	6.49	5.39	8.17	7.69	7.11	8.94	6.62	7.13	8.01	194.06	188.03	6769
		L_3 - L_4	5.27	5.44	5.79	5.92	7.54	7.85	5.01	5.30	5.92	180.45	223.61	8050
		L_4 - L_5	5.30	5.67	6.19	6.06	5.65	5.84	5.95	7.94	6.15	190.90	412.65	14856
		L_5 - L_6	3.81	5.03	4.72	4.02	5.14	4.77	3.94	5.31	4.89	136.99	244.36	8797
		L_6 - L_7	3.62	5.15	4.32	3.67	4.99	4.43	4.24	5.87	5.36	130.19	160.97	5795
		L_7 - L_8	3.78	5.04	5.44	3.82	5.11	5.46	3.81	5.82	6.77	136.05	326.82	11765
		L_8 - L_9	3.08	4.35	5.41	3.49	4.63	6.03	5.07	6.81	6.86	110.75	91.97	3311
		L_9 - L_{10}	4.82	6.46	5.28	4.44	5.86	5.15	4.84	12.43	5.28	160.00	82.92	2985
		L_{10} - L_{11}	6.42	10.61	6.68	6.93	8.37	8.50	7.39	11.80	7.91	231.27	215.77	7768
		L_{11} - L_{12}	3.65	5.60	3.98	5.29	6.98	5.77	3.95	6.46	4.67	131.36	119.80	4313
		L_{12} - L_{13}	3.98	5.33	3.13	5.27	5.59	4.23	5.86	5.79	2.98	107.29	132.52	4771
		L_{13} - L_{14}	3.99	6.18	4.69	7.59	10.75	8.11	3.95	6.48	6.00	142.16	258.11	9292
		L_{14} - L_{15}	2.75	4.34	3.90	2.75	4.43	4.01	2.72	4.81	4.06	97.88	174.10	6268
		L_{15} - L_{16}	2.62	4.46	4.16	2.62	7.60	4.38	2.55	4.07	4.14	91.80	85.13	3065
		L_{16} - L_{17}	3.19	4.25	4.47	4.52	5.28	4.97	3.19	4.23	4.40	114.67	155.95	5614
		L_{17} - L_{18}	3.30	4.33	4.90	3.63	4.95	5.01	3.28	4.13	5.83	118.08	153.75	5535
		L_{18} - L_{19}	3.53	4.57	5.63	3.51	4.54	6.03	4.72	5.62	7.12	126.48	68.34	2460
		L_{19} - L_{20}	15.12	23.19	36.09	15.85	21.91	26.92	14.47	28.17	34.03	520.92	73.71	2654

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 **5C1**

Controlling As-Built Rating

	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.63
Maximum Moment (End)	1.68
	Operating
Maximum Shear Force	26.96

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**												
		$U_0 - L_0$	1.72	1.40	1.62	1.89	2.17	1.73	1.86	1.88	1.73	90.34	79.23	2852
		$U_1 - L_1$	3.40	4.32	3.41	3.68	4.92	5.48	3.68	4.89	5.45	122.57	79.67	2868
		$U_2 - L_2$	4.69	6.34	4.48	5.45	7.09	6.70	5.44	7.09	6.70	161.41	103.37	3721
		$U_3 - L_3$	7.08	9.23	5.68	11.56	11.10	8.71	8.76	11.10	12.12	204.61	192.46	6929
		$U_4 - L_4$	4.44	5.47	4.97	8.98	9.20	8.40	8.99	9.20	8.42	159.87	150.93	5433
		$U_5 - L_5$	3.11	3.94	3.42	2.98	3.93	3.59	3.00	3.93	3.57	107.44	128.23	4616
		$U_6 - L_6$	2.68	4.14	3.23	2.70	3.91	3.22	2.72	3.91	3.22	96.45	104.15	3749
		$U_7 - L_7$	1.79	2.53	3.11	1.80	2.52	3.12	1.79	2.53	3.14	64.38	118.04	4249
		$U_8 - L_8$	3.72	4.51	3.55	3.90	5.33	6.00	3.92	5.33	5.99	127.65	220.75	7947
		$U_9 - L_9$	2.77	2.77	2.40	2.81	3.36	2.91	2.81	3.50	2.85	86.52	125.06	4502
		$U_{10} - L_{10}$	3.41	4.61	3.12	3.48	5.29	4.21	3.50	5.26	4.39	112.45	186.74	6723
		$U_{11} - L_{11}$	3.17	4.26	3.84	3.41	4.82	4.73	3.39	4.85	3.83	114.28	110.77	3988
		$U_{12} - L_{12}$	3.24	4.08	3.08	3.49	4.54	4.86	3.09	4.54	4.88	110.75	118.84	4278
		$U_{13} - L_{13}$	2.56	3.25	3.02	2.82	3.78	4.53	2.81	3.78	4.50	92.26	132.84	4782
		$U_{14} - L_{14}$	4.39	5.60	4.27	11.48	9.66	12.55	11.47	9.66	12.53	153.85	213.19	7675
		$U_{15} - L_{15}$	4.36	5.43	5.94	4.36	5.44	6.07	4.38	5.44	5.92	156.83	164.62	5926
		$U_{16} - L_{16}$	3.01	4.15	4.45	2.99	4.16	4.46	3.01	4.16	4.46	107.73	157.46	5668
		$U_{17} - L_{17}$	2.22	3.26	3.02	2.22	3.28	3.10	2.22	3.34	3.10	79.88	165.45	5956
		$U_{18} - L_{18}$	2.34	3.56	4.01	2.31	3.54	4.01	2.33	3.54	4.01	83.26	116.66	4200
		$U_{19} - L_{19}$	2.62	3.89	5.04	2.62	4.01	4.97	2.61	3.93	4.99	94.05	158.16	5694
		$U_{20} - L_{20}$	1.84	2.67	4.02	1.99	2.79	3.65	1.97	2.67	4.02	66.22	271.63	9779
	Structure 2												
		$U_0 - L_0$	3.04	2.73	2.05	3.04	2.87	2.08	3.05	2.87	2.07	73.89	284.46	10240
		$U_1 - L_1$	3.56	3.51	3.04	3.92	4.82	3.74	3.66	4.34	3.74	109.54	215.12	7744
		$U_2 - L_2$	3.09	3.92	2.84	3.36	4.33	3.47	3.36	4.33	3.47	102.09	140.30	5051
		$U_3 - L_3$	2.72	3.60	2.79	2.86	4.02	3.15	2.86	4.02	3.15	97.86	216.10	7780
		$U_4 - L_4$	2.89	3.74	2.89	3.23	4.16	4.08	3.21	4.16	4.05	104.16	163.99	5904
		$U_5 - L_5$	3.83	4.95	4.31	4.17	5.57	5.74	4.15	5.57	5.74	137.74	182.24	6561
		$U_6 - L_6$	5.42	6.66	5.07	6.83	7.90	7.97	6.84	6.75	8.79	182.46	218.97	7883
		$U_7 - L_7$	4.28	5.35	4.96	7.60	10.16	8.78	7.66	10.14	12.44	154.24	274.35	9877
		$U_8 - L_8$	3.22	3.79	3.54	3.21	3.76	3.54	3.21	3.76	3.54	115.54	122.11	4396
		$U_9 - L_9$	3.65	4.55	4.49	3.66	4.58	4.54	3.62	4.58	4.49	130.45	120.24	4329
		$U_{10} - L_{10}$	3.64	4.80	4.42	3.67	4.83	4.42	3.67	4.83	4.42	131.00	177.37	6385
		$U_{11} - L_{11}$	3.30	4.34	3.54	3.29	4.38	3.54	3.30	4.38	3.54	118.44	214.83	7734
		$U_{12} - L_{12}$	3.27	4.35	3.17	3.27	4.35	3.44	3.30	4.35	3.44	114.22	270.69	9745
		$U_{13} - L_{13}$	2.71	3.28	3.46	2.72	3.29	3.46	2.71	3.29	3.52	97.55	287.69	10357
		$U_{14} - L_{14}$	3.72	4.50	4.74	5.15	5.30	7.44	5.19	5.30	7.44	134.08	408.53	14707
		$U_{15} - L_{15}$	4.60	4.41	3.63	4.83	4.77	4.30	4.81	3.83	4.30	130.54	278.02	10009
		$U_{16} - L_{16}$	3.91	4.33	3.13	3.95	4.89	4.09	3.86	4.62	3.84	112.66	243.00	8748
		$U_{17} - L_{17}$	3.44	3.97	3.28	3.76	4.44	3.89	3.75	4.47	3.89	118.20	173.12	6232
		$U_{18} - L_{18}$	3.24	4.05	3.48	3.38	4.41	4.09	3.35	4.41	4.09	116.48	128.64	4631
		$U_{19} - L_{19}$	3.08	3.74	3.23	3.26	4.18	3.90	2.95	4.18	3.88	106.30	177.81	6401
		$U_{20} - L_{20}$	2.95	3.66	2.99	3.19	4.17	3.98	3.21	4.17	3.98	106.03	161.50	5814
		$U_{21} - L_{21}$	3.39	4.11	4.43	3.50	4.45	6.45	3.50	4.45	6.49	122.20	164.57	5924
		$U_{22} - L_{22}$	4.48	5.78	4.63	9.05	10.76	14.77	17.75	13.20	16.88	161.14	277.46	9988
		$U_{23} - L_{23}$	3.67	4.53	4.47	3.71	4.51	4.47	3.66	4.51	4.47	131.90	170.69	6145
		$U_{24} - L_{24}$	2.91	3.81	3.59	2.90	3.80	3.60	2.91	3.80	3.60	104.36	155.16	5586
		$U_{25} - L_{25}$	2.80	3.66	3.54	2.80	3.66	3.54	2.80	3.66	3.54	100.66	148.10	5332
		$U_{26} - L_{26}$	3.17	3.95	3.89	3.16	3.99	3.94	3.15	3.99	3.94	113.44	111.70	4021
		$U_{27} - L_{27}$	3.25	3.88	4.41	3.24	3.85	4.38	3.23	3.85	4.38	116.10	137.65	4955
		$U_{28} - L_{28}$	3.41	3.89	3.69	3.42	3.90	3.92	3.41	3.90	3.92	122.84	182.30	6563
		$U_{29} - L_{29}$	3.78	4.20	5.04	3.76	4.02	5.27	3.77	4.04	5.04	135.35	203.95	7342
		$U_{30} - L_{30}$	4.81	4.76	4.83	6.10	5.49	6.54	6.07	5.49	6.54	171.40	401.56	14456
		$U_{31} - L_{31}$	4.22	3.21	2.50	4.23	3.92	3.17	4.26	3.90	3.18	89.98	408.35	14701
		$U_{32} - L_{32}$	4.06	4.68	2.94	4.07	5.24	3.63	4.08	5.27	3.64	105.96	352.28	12682
		$U_{33} - L_{33}$	3.94	4.70	3.35	4.15	5.26	4.28	4.15	4.91	4.28	120.52	251.25	9045
		$U_{34} - L_{34}$	4.38	5.24	3.24	4.77	5.86	4.87	4.40	5.90	4.89	116.80	206.32	7427
		$U_{35} - L_{35}$	3.96	4.76	3.52	4.26	5.25	4.61	4.25	5.25	4.61	126.57	127.83	4602
		$U_{36} - L_{36}$	3.34	3.97	3.84	3.35	4.09	4.51	3.36	4.09	4.51	120.25	120.93	4353
		$U_{37} - L_{37}$	4.44	5.17	4.25	12.92	9.99	8.91	12.98	17.15	11.38	153.01	241.40	8690
		$U_{38} - L_{38}$	5.80	5.52	6.79	5.81	5.50	8.17	5.81	5.50	8.17	198.05	241.00	8676
		$U_{39} - L_{39}$	4.37	5.13	5.52	4.37	5.13	6.25	4.37	5.13	5.52	157.14	195.80	7049
		$U_{40} - L_{40}$	3.05	3.91	3.79	3.04	3.95	3.79	3.05	3.95	3.79	109.42	150.91	5433
		$U_{41} - L_{41}$	2.93	3.71	3.15	2.95	3.73	3.15	2.95	3.74	3.15	105.56	189.09	6807
		$U_{42} - L_{42}$	3.04	3.89	4.10	3.02	3.90	4.10	3.03	3.90	4.10	108.85	119.15	4290
		$U_{43} - L_{43}$	3.27	3.95	4.98	3.25	3.95	4.98	3.26	3.95	4.98	117.00	157.93	5686
		$U_{44} - L_{44}$	2.77	2.84	4.24	2.72	2.94	4.00	2.71	3.18	4.15	97.68	273.48	9845
	Structure 3												
		$U_0 - L_0$	2.45	2.52	2.01	2.45	3.00	2.01	2.45	3.01	2.29	72.46	251.07	9039
		$U_1 - L_1$	3.38	3.63	3.27	3.59	4.86	3.86	3.62	4.46	3.86	117.70	210.41	7575
		$U_2 - L_2$	2.99	3.90	2.68	3.39	4.61	3.48	3.01	4.61	3.48	96.55	145.42	5235
		$U_3 - L_3$	2.53	3.47	2.38	2.84	3.89	2.75	2.84	3.87	2.75	85.57	199.54	7184
		$U_4 - L_4$	3.14	4.27	3.40	3.22	4.54	5.23	3.21	4.54	4.52	113.15	162.76	5859
		$U_5 - L_5$	4.28	5.40	4.48	4.98	6.33	7.90	4.99	6.33	7.90	154.00	176.25	6345
		$U_6 - L_6$	4.54	6.13	4.27	11.26	10.38	8.06	11.25	10.38	11.11	153.60	254.29	9154
		$U_7 - L_7$	2.90	3.40	3.59	2.88	3.57	3.60	2.90	3.42	3.56	103.78	130.45	4696
		$U_8 - L_8$	3.24	4.17	4.06	3.25	4.26	4.28	3.23	4.26	4.06	116.35	108.76	3915
		$U_9 - L_9$	3.36	4.43	3.67	3.36	4.44	4.30	3.37	4.44	3.94	120.80	98.05	3530
		$U_{10} - L_{10}$	3.47	4.66	3.45	3.44	4.68	3.43	3.45	4.68	3.44	123.55	148.98	5363
		$U_{11} - L_{11}$	2.41	2.88	3.28	2.39	2.88	3.35	2.40	2.90	3.33	86.21	90.37	3253
		$U_{12} - L_{12}$	3.74	4.34	3.63	4.78	5.06	6.19	4.76	5.06	6.25	130.59	239.42	8619
		$U_{13} - L_{13}$	2.80	2.57	2.44	3.09	2.96	2.82	3.06	2.96	2.43	87.58	162.80	5861
		$U_{14} - L_{14}$	3.37	4.10	3.13	3.43	5.10	4.59	3.51	5.12	4.38	112.61	134.11	4828
		$U_{15} - L_{15}$	3.34	4.07	2.97	4.30	4.88	4.72	4.26	4.85	4.74	107.08	156.38	5630
		$U_{16} - L_{16}$	4.26	5.00	3.82	8.60	8.95	7.14	12.65	8.97	17.55	137.40	151.82	5465
		$U_{17} - L_{17}$	8.19	7.37	8.39	8.22	7.37	9.45	8.22	7.37	8.39	265.31	185.95	6694
		$U_{18} - L_{18}$	5.18	7.57	7.43	5.05	6.06	8.31	5.06	6.06	7.40	181.63	102.81	3701
		$U_{19} - L_{19}$	3.17	4.28	5.58	2.99	4.14	5.57	2.99	4.14	5.58	107.65	60.91	2193
		$U_{20} - L_{20}$	1.38	1.54	3.11	1.63	2.03	3.19	1.84	2.08	3.20	49.57	88.89	3200

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Load Rating Analysis - Truss Spans Gross Tonnage **36** **tons**

As-Built Load Rating 5C1

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	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.63
Maximum Moment (End)	1.68
	Operating
Maximum Shear Force	26.96

		Axial Load Case			Moment (Start)			Moment (End)			Controlling	Maximum Shear Force	
		North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	North Truss	Center Truss	South Truss	Tonnages	Operating	
Location	Member	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	3.88	5.40	5.38	4.17	5.25	4.64	4.17	5.27	4.60	139.85	144.06	5186
		U_1 - L_2	3.89	5.27	5.79	4.36	9.92	5.10	4.05	5.72	6.68	140.10	804.97	28979
		U_2 - L_3	6.51	7.25	9.21	7.27	8.04	7.56	10.91	8.57	9.04	234.26	1219.09	43887
		U_3 - L_4	3.70	4.04	4.97	5.35	6.25	5.41	5.42	4.28	10.34	133.20	1534.85	55255
		U_3 - L_4	3.47	5.23	5.37	3.76	5.38	5.87	5.89	6.92	7.72	124.83	1030.83	37110
		U_4 - L_5	3.57	5.04	5.96	3.49	5.19	6.01	3.57	5.06	6.13	125.73	348.63	12551
		U_5 - L_6	2.54	4.11	5.07	2.68	3.98	5.05	2.68	4.16	5.18	91.55	223.67	8052
		U_5 - L_7	2.62	3.74	6.20	2.50	3.71	6.32	2.67	3.73	6.26	90.05	340.70	12265
		U_6 - L_8	4.20	4.56	4.56	4.21	4.95	4.56	4.26	4.56	4.80	151.19	507.64	18275
		U_8 - L_{10}	4.14	4.94	4.31	4.44	6.67	4.34	4.81	6.09	5.01	149.02	349.59	12585
		U_{10} - L_{11}	3.74	5.19	4.84	3.72	5.36	4.70	4.22	6.20	5.71	133.91	370.75	13347
		U_{11} - L_{12}	3.50	4.77	4.29	3.51	5.51	4.16	4.37	5.89	4.30	126.05	447.69	16117
		U_{12} - L_{13}	3.18	3.77	4.43	3.71	3.77	4.40	3.75	4.73	4.52	114.63	381.66	13740
		U_{13} - L_{14}	2.93	3.33	4.78	2.94	3.33	4.62	4.36	3.92	4.95	105.45	845.26	30429
		U_{15} - L_{16}	4.55	4.60	6.77	5.48	5.83	10.33	4.54	6.02	12.62	163.40	1072.75	38619
		U_{16} - L_{15}	3.30	4.93	5.98	3.78	6.00	6.20	3.63	4.93	6.01	118.75	552.90	19905
		U_{17} - L_{18}	2.43	3.99	3.71	2.48	4.22	3.83	2.47	3.98	3.68	87.59	455.83	16410
		U_{18} - L_{17}	2.55	4.24	4.27	2.55	4.28	4.49	2.55	4.33	4.27	91.67	252.48	9089
		U_{19} - L_{19}	2.45	4.24	4.47	2.42	4.14	4.47	2.47	4.23	4.47	86.95	265.29	9550
		U_{20} - L_{19}	2.60	3.86	4.86	2.72	4.34	4.90	2.54	3.73	4.90	91.57	397.25	14301
	Structure 2	U_0 - L_1	3.71	4.06	3.51	3.72	3.92	3.16	3.72	3.92	3.30	113.73	341.45	12292
		U_1 - L_2	3.67	4.55	3.18	3.67	4.55	3.18	4.12	5.42	3.52	114.54	304.56	10964
		U_2 - L_3	3.07	3.99	3.32	3.07	4.11	3.39	3.40	4.27	3.30	110.42	262.42	9447
		U_3 - L_4	3.21	3.98	3.39	3.30	4.14	3.39	3.21	4.71	4.12	115.50	473.80	17057
		U_4 - L_5	3.43	4.12	5.68	3.43	4.14	5.17	3.97	4.73	5.65	123.58	503.12	18112
		U_5 - L_6	4.92	5.53	6.81	4.79	5.52	8.67	5.31	5.66	7.25	172.51	651.28	23446
		U_5 - L_7	3.26	3.22	3.68	3.29	3.23	4.20	3.26	3.22	3.39	115.89	897.20	32299
		U_7 - L_7	3.46	4.41	4.51	4.48	5.21	5.00	4.43	4.58	4.61	124.49	453.40	16323
		U_8 - L_8	3.07	4.13	3.70	3.20	4.59	3.73	3.25	4.21	3.84	110.53	308.92	11121
		U_{10} - L_9	3.13	4.32	4.09	3.19	4.70	4.06	3.13	4.30	4.09	112.60	330.97	11915
		U_{11} - L_{10}	3.00	4.38	3.99	3.00	4.58	4.00	3.00	4.31	4.08	107.83	322.92	11625
		U_{12} - L_{11}	2.91	3.56	3.79	2.99	3.97	3.86	2.92	3.87	3.82	104.74	318.24	11456
		U_{13} - L_{12}	2.48	3.20	4.08	2.54	3.27	3.86	2.48	3.18	3.79	89.38	280.34	10092
		U_{14} - L_{13}	3.00	3.42	6.29	3.10	3.84	6.20	3.00	3.68	6.29	107.91	411.76	14823
		U_{15} - L_{15}	4.34	3.97	3.76	4.31	4.16	3.77	4.33	3.97	3.77	135.28	502.59	18093
		U_{15} - L_{16}	3.80	3.41	2.75	3.80	3.41	2.75	3.91	3.41	2.96	99.17	325.67	11724
		U_{16} - L_{17}	3.47	4.25	3.58	3.47	4.25	3.58	3.45	4.25	3.80	124.09	316.72	11402
		U_{17} - L_{19}	3.11	4.12	3.58	3.10	4.29	3.58	3.46	4.45	3.56	111.65	290.38	10454
		U_{19} - L_{19}	3.52	4.43	3.92	3.46	4.56	3.90	3.55	4.68	4.66	124.53	302.89	10904
		U_{19} - L_{20}	3.49	4.37	4.32	3.49	4.38	4.32	4.09	5.04	4.88	125.55	314.20	11311
		U_{20} - L_{21}	3.21	3.74	4.30	3.20	3.74	5.25	3.58	4.31	5.13	115.20	494.84	17814
		U_{21} - L_{22}	4.81	5.36	6.54	5.00	5.82	7.11	5.63	6.25	7.94	173.08	808.87	29119
		U_{21} - L_{22}	4.36	5.66	6.46	5.30	6.82	6.76	5.87	7.45	6.27	156.97	897.53	32311
		U_{24} - L_{23}	3.08	4.35	4.08	3.58	5.09	4.26	3.37	4.43	4.16	110.72	528.36	19021
		U_{25} - L_{24}	3.35	4.74	4.35	3.47	5.34	4.39	3.36	4.75	4.44	120.53	312.94	11266
		U_{26} - L_{25}	3.35	4.47	4.29	3.39	4.96	4.26	3.36	4.48	4.29	120.43	290.80	10469
		U_{27} - L_{26}	3.16	4.09	3.72	3.19	4.08	3.78	3.16	4.08	3.75	113.59	280.61	10102
		U_{28} - L_{27}	3.32	3.98	3.94	3.45	4.04	3.94	3.33	3.93	3.92	119.67	281.43	10131
		U_{29} - L_{28}	3.17	3.24	4.39	3.14	3.32	4.17	3.17	3.32	4.06	112.87	274.57	9884
		U_{30} - L_{29}	3.56	3.39	6.27	3.56	3.73	6.29	3.71	3.75	6.27	122.06	436.09	15699
		U_{32} - L_{31}	4.89	4.30	3.75	4.90	4.32	3.79	4.89	4.30	3.74	134.80	523.97	18863
		U_{31} - L_{32}	4.07	3.94	2.83	4.68	3.94	2.79	4.07	3.94	2.87	100.52	348.60	12550
		U_{32} - L_{33}	3.87	4.53	3.49	3.85	4.60	3.59	4.24	4.85	3.47	125.02	356.91	12849
		U_{33} - L_{34}	3.97	4.73	3.47	3.88	4.96	3.46	4.00	5.70	4.15	124.53	339.97	12239
		U_{34} - L_{35}	3.74	4.28	3.64	3.75	4.26	3.64	4.22	5.00	4.02	131.04	330.82	11910
		U_{35} - L_{36}	3.55	4.06	3.84	3.55	4.33	3.73	3.94	4.60	4.11	127.88	293.00	10548
		U_{36} - L_{37}	4.01	4.25	4.65	4.07	4.43	4.99	4.63	5.21	5.37	144.29	378.48	13625
		U_{38} - L_{37}	2.69	3.06	3.62	3.33	3.76	6.85	3.48	3.76	4.21	96.74	805.16	28986
		U_{39} - L_{38}	4.42	4.86	7.70	5.48	6.00	7.68	5.66	5.95	8.57	159.01	782.68	28176
		U_{40} - L_{39}	3.70	4.67	4.92	4.18	5.34	5.11	3.83	4.66	4.92	133.21	539.99	19440
		U_{41} - L_{40}	3.16	4.27	3.68	3.13	4.89	3.81	3.13	4.26	3.68	112.75	465.92	16773
		U_{42} - L_{41}	3.08	4.25	3.77	3.17	4.44	3.87	3.08	4.22	3.77	110.83	248.38	8942
		U_{43} - L_{42}	3.24	4.51	4.68	3.23	4.40	4.72	3.24	4.49	4.68	116.27	261.89	9428
		U_{44} - L_{43}	3.32	4.20	5.16	3.23	4.07	5.19	3.24	4.11	5.23	116.21	382.52	13771
	Structure 3	U_0 - L_1	3.45	4.10	3.69	3.13	3.70	3.22	3.13	3.70	3.28	112.70	280.07	10082
		U_1 - L_2	3.63	4.34	3.21	3.73	4.97	3.21	3.63	4.62	3.20	115.15	320.57	11540
		U_2 - L_3	3.25	4.19	3.58	3.26	4.24	3.60	3.26	5.09	3.99	117.33	269.58	9705
		U_3 - L_4	3.06	3.91	3.73	3.06	4.15	3.56	3.35	4.53	4.28	110.00	473.02	17029
		U_4 - L_5	3.97	4.59	5.37	4.13	4.92	5.93	3.97	5.77	6.58	142.77	539.42	19419
		U_5 - L_6	5.63	4.67	8.05	6.85	6.27	9.49	5.64	4.59	6.79	165.27	996.11	35860
		U_7 - L_8	3.16	3.87	3.82	3.75	4.49	4.98	4.70	4.44	4.94	114.30	1053.33	37920
		U_8 - L_7	3.22	4.26	3.86	3.51	4.88	4.72	3.23	4.22	4.72	115.82	389.25	14013
		U_9 - L_9	3.35	5.03	4.85	3.64	5.37	5.05	3.32	5.01	4.26	119.40	444.30	15995
		U_{10} - L_9	3.73	4.75	5.61	3.77	5.26	5.76	3.93	5.45	5.78	134.29	337.81	12161
		U_{11} - L_{10}	3.54	4.76	6.18	3.52	4.88	6.32	3.54	4.80	6.19	126.74	293.58	10569
		U_{12} - L_{11}	3.65	4.41	7.04	3.69	4.52	6.95	3.65	4.48	6.88	131.41	423.67	15252
		U_{12} - L_{13}	3.89	3.89	3.84	3.93	4.07	3.78	3.89	3.87	3.92	135.96	402.05	14474
		U_{13} - L_{14}	3.90	4.16	3.70	3.90	4.23	3.70	4.23	4.57	3.99	133.05	260.11	9364
		U_{14} - L_{15}	4.35	5.10	5.33	5.19	5.53	5.33	5.46	6.16	6.10	156.43	381.64	13739
		U_{15} - L_{16}	4.26	5.02	5.49	6.83	10.48	5.48	13.68	6.78	6.67	153.23	972.98	35027
		U_{17} - L_{16}	3.89	4.11	5.11	7.08	5.43	9.18	5.53	27.19	7.34	139.92	1521.56	54776
		U_{18} - L_{17}	5.76	5.97	9.95	5.93	9.45	11.31	5.87	6.22	10.33	207.26	1246.05	44858
		U_{19} - L_{18}	3.58	5.74	6.27	3.58	5.92	6.76	3.79	5.73	6.61	129.03	598.71	21553
		U_{20} - L_{19}	3.63	4.50	7.02	7.96	7.26	6.44	3.49	6.02	6.81	125.70	269.95	9718

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 5C1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.54
Maximum Moment (End)	1.59
	Operating
Maximum Shear Force	26.96

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	$U_0 - U_1$	3.97	5.08	6.73	4.15	5.94	9.07	4.03	5.04	5.72	142.85	62.24	2241
		$U_1 - U_2$	2.44	3.54	4.05	4.15	4.65	4.87	2.45	3.47	4.05	88.00	54.60	1966
		$U_2 - U_3$	2.42	3.55	4.48	2.79	4.40	5.23	2.42	3.57	5.75	87.08	75.24	2709
		$U_3 - U_4$	3.01	4.57	6.17	3.72	5.84	6.72	3.00	5.19	6.18	108.05	92.01	3312
		$U_4 - U_5$	3.20	4.47	6.05	3.20	4.47	6.09	3.64	6.20	7.15	115.03	72.52	2611
		$U_5 - U_6$	3.90	5.09	5.16	3.90	4.89	5.07	4.42	9.59	5.41	140.22	65.15	2346
		$U_6 - U_7$	3.67	4.90	4.93	3.67	9.14	4.91	4.13	5.35	4.49	132.12	181.21	6524
		$U_7 - U_8$	4.18	5.40	4.73	3.37	5.28	7.18	6.52	7.69	5.99	121.31	64.62	2326
		$U_8 - U_9$	3.75	6.34	4.79	5.86	8.10	5.87	8.80	7.44	5.25	134.89	35.97	1295
		$U_9 - U_{10}$	4.59	7.08	7.72	23.92	34.88	20.72	4.66	7.35	7.40	165.22	81.70	2941
		$U_{10} - U_{11}$	3.48	4.47	4.10	4.69	7.52	6.29	3.46	4.46	4.08	124.68	44.58	1605
		$U_{11} - U_{12}$	2.43	3.78	2.97	4.75	4.90	3.84	2.44	3.78	3.09	87.52	74.20	2671
		$U_{12} - U_{13}$	2.50	3.79	3.26	3.53	4.85	4.17	2.51	3.81	3.42	90.11	215.82	7770
		$U_{13} - U_{14}$	2.58	3.76	3.02	3.15	4.26	3.49	2.46	3.74	3.03	88.64	162.96	5866
		$U_{14} - U_{15}$	2.53	3.58	2.98	2.48	3.78	2.97	2.58	4.06	3.29	89.28	217.41	7827
		$U_{15} - U_{16}$	2.27	3.40	3.26	2.27	3.71	3.26	2.55	6.02	3.69	81.70	284.61	10246
		$U_{16} - U_{17}$	2.57	3.62	3.78	2.57	4.70	3.91	5.44	6.53	4.73	92.47	220.44	7936
		$U_{17} - U_{18}$	2.53	3.16	3.82	3.63	3.14	3.89	3.51	4.06	4.41	90.96	170.07	6123
		$U_{18} - U_{19}$	2.66	3.27	4.22	2.54	3.00	4.39	2.94	6.04	4.27	91.26	73.55	2648
		$U_{19} - U_{20}$	5.99	7.84	11.97	5.98	6.77	11.89	6.30	9.24	12.88	215.36	37.30	1343
	Structure 2	$U_0 - U_1$	5.76	5.78	6.96	6.48	9.01	9.13	6.17	5.80	6.97	207.38	56.37	2029
		$U_1 - U_2$	3.35	3.30	3.51	4.08	5.85	4.09	3.36	3.45	3.51	118.70	127.60	4594
		$U_2 - U_3$	3.02	3.77	3.46	3.65	4.93	4.42	3.02	3.64	3.46	108.62	59.89	2156
		$U_3 - U_4$	2.52	3.82	3.21	2.92	4.66	4.24	2.65	3.76	3.12	90.61	190.51	6858
		$U_4 - U_5$	2.71	3.69	3.44	3.49	4.42	4.03	2.78	3.84	3.27	97.67	178.86	6439
		$U_5 - U_6$	3.13	3.78	3.47	3.28	4.10	3.59	2.76	3.76	3.81	99.36	224.61	8086
		$U_6 - U_7$	2.42	3.33	3.51	2.81	4.17	3.73	2.64	3.63	4.14	87.13	159.04	5726
		$U_7 - U_8$	2.45	3.33	3.51	2.45	3.33	4.33	2.75	4.01	3.71	88.07	145.63	5243
		$U_8 - U_9$	2.42	3.57	3.60	2.43	3.57	3.61	4.25	5.87	4.17	87.03	143.63	5171
		$U_9 - U_{10}$	2.86	3.96	4.88	2.87	3.95	4.88	5.22	7.19	5.56	102.80	68.40	2462
		$U_{10} - U_{11}$	3.83	5.63	6.47	3.83	5.64	6.43	4.69	8.75	7.38	137.70	70.16	2526
		$U_{11} - U_{12}$	4.37	5.51	5.23	4.37	5.58	5.19	16.88	17.51	15.19	157.22	60.79	2188
		$U_{12} - U_{13}$	5.30	7.82	6.36	5.20	6.12	6.11	5.52	11.59	8.25	187.04	227.02	8173
		$U_{13} - U_{14}$	6.30	6.50	5.21	4.83	6.08	7.06	7.00	7.80	5.59	173.87	77.28	2782
		$U_{14} - U_{15}$	5.23	7.57	6.27	8.36	8.03	4.85	8.33	6.88	4.60	165.51	88.97	3203
		$U_{15} - U_{16}$	6.47	9.47	8.12	9.53	8.75	9.69	5.65	7.67	6.69	203.39	241.55	8696
		$U_{16} - U_{17}$	5.02	6.86	6.07	27.47	26.12	33.50	5.05	6.66	5.89	180.89	76.86	2767
		$U_{17} - U_{18}$	3.95	5.85	5.14	11.12	13.01	5.45	3.69	5.94	5.17	132.67	54.98	1979
		$U_{18} - U_{19}$	4.71	5.69	6.04	5.73	7.74	7.02	4.66	6.54	6.36	167.91	52.56	1892
		$U_{19} - U_{20}$	3.62	4.79	4.20	4.06	5.38	5.31	3.42	4.79	4.20	123.06	92.78	3340
		$U_{20} - U_{21}$	3.45	4.54	4.15	4.00	5.57	4.54	3.41	4.71	4.51	122.81	109.98	3959
		$U_{21} - U_{22}$	2.76	4.10	3.82	3.10	4.83	4.23	2.90	4.28	4.38	99.29	128.58	4629
		$U_{22} - U_{23}$	2.69	3.94	3.79	2.69	3.90	3.77	3.01	4.56	4.07	96.70	128.57	4628
		$U_{23} - U_{24}$	3.01	4.05	4.31	3.01	4.08	4.28	4.62	6.50	5.02	108.42	152.16	5478
		$U_{24} - U_{25}$	3.21	4.24	5.00	3.53	4.58	5.00	4.45	5.91	10.33	115.70	87.45	3148
		$U_{25} - U_{26}$	3.94	5.17	6.70	3.94	5.13	6.77	7.08	7.59	7.89	141.86	58.55	2108
		$U_{26} - U_{27}$	4.03	5.93	4.97	4.06	6.00	5.03	13.64	14.67	27.33	145.02	56.48	2033
		$U_{27} - U_{28}$	5.49	6.74	6.67	5.44	6.83	6.75	36.37	30.44	11.83	195.79	93.68	3373
		$U_{28} - U_{29}$	7.38	10.56	8.50	5.97	12.86	15.78	9.52	10.16	7.34	215.05	233.56	8408
		$U_{29} - U_{30}$	7.22	7.53	4.04	5.48	6.68	8.53	7.33	8.24	5.42	145.39	77.75	2799
		$U_{30} - U_{31}$	6.05	7.29	6.10	9.12	8.79	5.92	10.86	7.07	4.45	160.09	85.31	3071
		$U_{31} - U_{32}$	5.94	7.31	6.91	9.96	7.07	6.29	5.40	6.78	5.93	194.40	242.33	8724
		$U_{32} - U_{33}$	4.58	5.35	5.52	21.51	17.89	19.69	4.32	5.77	5.39	155.54	55.73	2006
		$U_{33} - U_{34}$	4.77	6.80	6.62	5.43	8.27	7.48	4.80	7.11	6.64	171.55	71.71	2581
		$U_{34} - U_{35}$	3.93	4.73	4.05	5.27	6.48	5.42	4.06	4.76	4.15	141.61	57.97	2087
		$U_{35} - U_{36}$	3.27	4.30	3.43	4.58	5.56	3.74	3.27	4.22	3.40	117.87	119.19	4291
		$U_{36} - U_{37}$	3.36	3.78	3.20	3.55	4.67	3.58	3.23	3.78	3.18	114.39	147.11	5296
		$U_{37} - U_{38}$	3.42	3.64	3.17	3.09	3.64	3.20	3.42	4.48	3.20	111.17	174.44	6280
		$U_{38} - U_{39}$	3.33	3.95	3.16	3.10	3.95	3.17	4.58	5.42	3.35	111.55	174.43	6280
		$U_{39} - U_{40}$	3.08	3.41	3.22	3.64	3.46	3.12	3.36	5.34	3.61	110.84	231.92	8349
		$U_{40} - U_{41}$	2.87	3.23	3.39	2.87	3.25	3.36	3.36	3.86	4.21	103.32	167.60	6033
		$U_{41} - U_{42}$	3.10	3.49	4.09	3.10	3.49	4.22	4.96	5.27	4.80	111.56	65.00	2340
		$U_{42} - U_{43}$	3.36	3.68	4.82	3.36	3.78	5.16	8.11	7.02	4.99	121.09	152.14	5477
		$U_{43} - U_{44}$	6.00	6.70	9.89	5.82	6.24	9.89	6.05	9.60	11.13	209.64	30.93	1114
	Structure 3	$U_0 - U_1$	6.52	6.84	9.32	8.05	8.70	10.36	6.69	7.55	9.07	234.61	66.05	2378
		$U_1 - U_2$	2.90	3.16	3.48	3.22	4.56	4.56	2.94	3.15	3.39	104.46	67.01	2412
		$U_2 - U_3$	2.99	3.66	3.52	2.96	3.88	4.17	2.98	3.57	3.45	106.45	153.65	5531
		$U_3 - U_4$	2.97	4.26	4.03	4.55	5.86	4.76	3.04	4.31	3.84	106.98	215.31	7751
		$U_4 - U_5$	2.86	3.68	3.54	2.88	4.37	3.92	2.60	3.79	3.96	93.49	223.37	8041
		$U_5 - U_6$	2.58	3.63	3.13	2.88	4.48	4.32	2.45	4.27	3.13	88.35	211.75	7623
		$U_6 - U_7$	2.51	3.65	3.17	2.45	3.58	3.21	3.98	4.20	3.86	88.20	192.96	6946
		$U_7 - U_8$	2.48	3.42	3.53	2.48	3.44	3.52	4.08	4.42	6.53	89.19	254.83	9174
		$U_8 - U_9$	2.19	3.36	3.69	2.19	3.36	3.63	2.58	6.87	4.87	78.92	74.08	2667
		$U_9 - U_{10}$	2.63	3.90	5.84	2.63	3.89	5.84	4.38	6.80	7.79	94.65	45.68	1644
		$U_{10} - U_{11}$	5.19	6.95	7.46	5.23	10.17	7.48	17.26	24.80	10.38	186.92	78.26	2817
		$U_{11} - U_{12}$	5.16	6.30	3.96	4.67	6.82	7.47	7.62	6.99	5.23	142.43	31.76	1143
		$U_{12} - U_{13}$	4.38	5.38	5.56	7.46	9.13	6.04	4.05	5.21	4.40	145.90	75.16	2706
		$U_{13} - U_{14}$	3.84	5.28	5.45	3.97	5.76	5.23	3.85	5.34	5.35	138.33	194.54	7003
		$U_{14} - U_{15}$	3.93	5.42	5.26	4.25	10.27	5.56	3.82	4.97	5.22	137.54	58.36	2101
		$U_{15} - U_{16}$	3.68	4.47	4.81	5.31	6.22	5.56	4.28	4.98	4.81	132.62	67.61	2434
		$U_{16} - U_{17}$	3.98	4.63	4.86	4.26	5.17	4.86	4.28	5.62	5.34	143.30	75.06	2702
		$U_{17} - U_{18}$	2.70	3.31	3.92	2.70	3.31	3.96	3.22	4.26	5.10	97.12	75.80	2729
		$U_{18} - U_{19}$	2.51	3.20	4.10	2.51	3.22	4.37	6.57	5.71	4.47	90.31	72.70	2617
		$U_{19} - U_{20}$	4.46	4.72	8.47	5.39	6.00	7.22	6.06	7.07	12.62	160.70	26.96	970

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 5C1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.54
Maximum Moment (End)	1.59
	Operating
Maximum Shear Force	26.96

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	44.96	15.59	18.10	24.34	17.71	15.39	23.57	19.61	16.04	553.94	76.16	2742
		L_1 - L_2	3.68	4.19	4.19	3.72	4.87	6.00	3.77	5.79	5.84	132.58	65.44	2356
		L_2 - L_3	3.25	4.59	5.02	3.26	4.96	4.85	3.77	5.93	5.27	117.17	150.89	5432
		L_3 - L_4	3.14	4.46	4.48	3.14	4.48	4.47	3.58	5.87	5.75	113.05	153.32	5520
		L_4 - L_5	2.99	4.44	3.20	2.80	3.96	3.13	3.01	10.30	3.15	100.72	77.76	2799
		L_5 - L_6	2.91	4.37	3.00	2.88	4.43	2.97	2.88	4.38	3.00	103.60	174.09	6267
		L_6 - L_7	4.58	6.41	4.66	3.98	5.59	4.75	8.52	11.77	5.89	143.22	220.92	7953
		L_7 - L_8	4.35	5.51	3.01	4.27	6.07	3.69	4.52	5.73	4.19	108.40	120.66	4344
		L_8 - L_9	4.11	5.58	2.18	4.88	5.84	2.91	5.23	6.45	4.01	78.62	130.43	4696
		L_9 - L_{10}	6.44	10.09	5.49	7.97	11.82	8.26	5.72	9.64	9.43	197.73	262.32	9443
		L_{10} - L_{11}	3.92	6.17	6.24	3.94	10.90	6.89	3.81	6.18	6.26	137.10	81.66	2940
		L_{11} - L_{12}	4.22	4.28	4.23	5.32	5.69	4.56	5.28	6.89	4.62	151.91	90.52	3259
		L_{12} - L_{13}	4.41	4.88	4.51	4.43	5.19	4.73	4.83	6.18	4.51	158.65	297.89	10724
		L_{13} - L_{14}	3.78	4.62	3.82	3.57	4.66	4.91	4.35	5.72	4.21	128.63	148.60	5350
		L_{14} - L_{15}	3.98	5.20	4.35	4.38	5.20	4.53	4.00	5.23	4.36	143.17	285.47	10277
		L_{15} - L_{16}	4.44	5.41	6.04	4.85	6.19	6.12	4.42	5.35	5.38	159.03	544.96	19618
		L_{16} - L_{17}	4.46	4.88	5.63	4.72	5.27	5.71	6.19	6.94	6.23	160.51	191.19	6883
		L_{17} - L_{18}	6.30	5.68	7.68	6.20	5.79	7.26	10.09	7.64	8.31	204.39	166.33	5988
		L_{18} - L_{19}	5.68	5.08	5.15	9.36	4.92	7.92	7.20	6.63	8.09	177.28	66.72	2402
		L_{19} - L_{20}	4.37	14.29	6.94	5.25	15.09	10.81	4.68	14.96	12.73	157.32	73.13	2633
	Structure 2	L_2 - L_1	20.11	16.27	17.99	17.62	15.74	14.66	17.64	16.62	14.66	527.59	97.71	3518
		L_1 - L_2	5.63	5.04	5.89	6.72	7.24	7.82	6.36	5.80	7.77	181.26	102.00	3672
		L_2 - L_3	5.14	5.27	5.64	6.53	6.62	8.24	5.76	6.92	5.85	185.01	156.99	5652
		L_3 - L_4	4.31	5.14	4.77	5.95	8.18	5.55	4.74	6.06	4.86	155.07	230.94	8314
		L_4 - L_5	4.76	5.76	5.09	5.98	5.95	5.60	5.01	6.97	5.96	171.33	343.24	12357
		L_5 - L_6	4.56	5.33	4.64	4.60	6.12	4.64	4.46	7.07	4.85	160.54	295.84	10650
		L_6 - L_7	4.25	5.32	4.37	4.18	5.34	4.37	5.02	7.33	4.64	150.30	388.78	13996
		L_7 - L_8	3.79	5.42	5.00	3.76	5.31	4.90	4.90	6.46	5.08	135.29	217.92	7845
		L_8 - L_9	4.29	6.08	5.30	4.47	6.24	5.57	5.13	7.40	8.15	154.39	165.37	5953
		L_9 - L_{10}	5.14	7.26	5.68	4.90	6.61	5.63	5.40	7.59	5.84	176.52	131.18	4722
		L_{10} - L_{11}	3.45	4.74	3.46	3.31	4.49	3.45	13.90	18.81	16.61	119.19	103.38	3722
		L_{11} - L_{12}	4.36	5.67	3.63	4.28	5.44	3.69	9.04	12.62	3.71	130.84	185.91	6693
		L_{12} - L_{13}	6.59	6.93	5.51	5.39	6.84	5.38	5.45	9.44	6.08	193.64	317.52	11431
		L_{13} - L_{14}	4.19	6.11	3.48	5.74	7.12	4.61	4.52	6.50	5.44	125.43	95.12	3424
		L_{14} - L_{15}	5.66	5.59	3.93	6.51	6.20	4.47	5.52	6.57	3.33	120.06	102.63	3695
		L_{15} - L_{16}	5.28	7.80	4.38	5.38	7.10	7.18	5.06	7.86	8.06	157.59	273.14	9833
		L_{16} - L_{17}	4.38	6.42	3.45	7.15	10.57	5.44	4.37	6.37	5.92	124.25	204.59	7365
		L_{17} - L_{18}	3.51	4.80	4.63	11.38	17.82	7.73	3.24	4.85	4.57	116.50	126.59	4557
		L_{18} - L_{19}	3.24	4.74	4.67	3.22	9.20	4.67	3.23	4.67	4.66	115.77	100.78	3628
		L_{19} - L_{20}	4.40	6.14	6.03	6.58	6.73	6.45	4.29	6.04	6.57	154.42	131.21	4724
		L_{20} - L_{21}	5.80	6.57	5.92	5.84	7.18	6.80	7.68	9.30	6.43	208.80	159.18	5730
		L_{21} - L_{22}	4.29	5.37	4.52	4.57	5.81	4.52	5.42	5.57	4.77	154.31	123.30	4439
		L_{22} - L_{23}	4.41	5.43	5.01	4.46	5.62	5.28	4.40	6.11	5.01	158.23	142.02	5113
		L_{23} - L_{24}	6.20	6.97	7.50	6.38	7.13	7.30	6.42	7.50	7.50	223.15	181.97	6551
		L_{24} - L_{25}	6.27	6.75	6.77	5.85	6.01	6.57	6.56	6.74	7.42	210.71	125.52	4519
		L_{25} - L_{26}	4.99	5.22	4.58	4.59	4.88	4.58	11.97	12.82	4.59	164.78	108.60	3910
		L_{26} - L_{27}	4.65	5.54	5.03	5.05	5.00	4.68	5.22	13.86	8.45	167.44	116.88	4208
		L_{27} - L_{28}	4.37	7.18	4.33	7.30	6.92	6.13	4.79	9.65	5.47	155.99	190.13	6845
		L_{28} - L_{29}	4.67	8.81	5.55	6.67	7.74	7.56	4.04	9.12	6.18	145.47	344.54	12403
		L_{29} - L_{30}	3.92	5.69	3.84	10.95	7.98	4.93	7.68	7.01	5.37	138.30	98.03	3529
		L_{30} - L_{31}	6.06	6.31	2.83	7.78	6.62	3.47	7.31	7.20	2.45	88.25	101.15	3641
		L_{31} - L_{32}	8.00	7.90	5.00	6.39	8.53	6.93	11.31	7.42	6.09	179.84	275.73	9926
		L_{32} - L_{33}	6.24	5.65	4.20	10.41	15.57	3.84	6.04	5.84	4.17	138.10	183.27	6598
		L_{33} - L_{34}	5.38	4.74	4.03	19.79	25.59	9.41	4.77	4.62	3.77	135.81	121.98	4391
		L_{34} - L_{35}	6.51	6.97	6.96	6.94	7.21	7.08	6.27	6.63	6.76	225.72	123.84	4458
		L_{35} - L_{36}	5.56	5.86	5.82	5.44	8.18	7.92	6.70	7.92	6.84	195.94	168.27	6058
		L_{36} - L_{37}	4.91	5.65	5.11	5.07	5.66	5.11	4.72	5.68	5.10	169.78	103.30	3719
		L_{37} - L_{38}	4.36	5.52	5.10	5.17	6.51	5.75	4.41	5.97	5.10	156.95	271.42	9771
		L_{38} - L_{39}	4.77	5.73	5.25	4.91	6.09	5.46	5.48	5.78	5.27	171.84	340.31	12251
		L_{39} - L_{40}	4.41	5.52	6.15	4.66	5.90	6.15	4.39	5.44	6.47	158.17	436.94	15730
		L_{40} - L_{41}	4.27	5.10	5.68	4.34	5.16	5.74	6.47	7.89	6.15	153.77	202.02	7273
		L_{41} - L_{42}	5.16	5.52	7.19	5.20	5.60	7.52	7.99	8.22	8.49	185.93	152.05	5474
		L_{42} - L_{43}	5.66	5.93	8.81	5.71	6.20	8.98	7.62	7.59	9.54	203.79	42.75	1539
		L_{43} - L_{44}	11.54	23.75	23.37	11.72	18.74	16.33	11.57	23.25	26.89	415.40	85.90	3092
	Structure 3	L_2 - L_1	7.59	14.98	6.44	8.18	17.80	5.76	8.18	17.11	5.85	207.36	82.06	2954
		L_1 - L_2	5.85	4.43	5.21	11.95	5.38	11.35	9.10	5.37	10.50	159.40	80.69	2905
		L_2 - L_3	6.56	5.39	8.20	7.69	7.08	8.98	6.61	7.14	8.06	194.06	188.03	6769
		L_3 - L_4	5.30	5.40	5.81	5.95	7.52	7.89	5.00	5.29	5.92	180.12	223.61	8050
		L_4 - L_5	5.29	5.67	6.16	6.07	5.62	5.86	5.98	7.91	6.19	190.54	412.65	14856
		L_5 - L_6	3.79	5.04	4.75	4.07	5.12	4.78	3.94	5.33	4.90	136.50	244.36	8797
		L_6 - L_7	3.63	5.15	4.34	3.70	4.99	4.40	4.24	5.88	5.34	130.60	160.97	5795
		L_7 - L_8	3.78	5.04	5.44	3.82	5.11	5.45	3.80	5.81	6.77	136.01	326.82	11765
		L_8 - L_9	3.10	4.31	5.42	3.50	4.65	6.07	5.11	6.80	6.89	111.55	91.97	3311
		L_9 - L_{10}	4.84	6.43	5.28	4.47	5.85	5.13	4.84	12.39	5.25	160.98	82.92	2985
		L_{10} - L_{11}	6.40	10.48	6.67	6.92	8.24	8.55	7.40	11.71	7.93	230.30	215.77	7768
		L_{11} - L_{12}	3.66	5.60	3.93	5.33	7.02	5.87	3.91	6.40	4.70	131.66	119.80	4313
		L_{12} - L_{13}	3.96	5.33	3.12	5.29	5.66	4.23	5.87	5.78	2.96	106.55	132.52	4771
		L_{13} - L_{14}	3.96	6.19	4.67	7.59	10.75	8.16	3.98	6.45	5.98	142.72	258.11	9292
		L_{14} - L_{15}	2.74	4.31	3.80	2.76	4.44	3.84	2.71	4.83	3.91	97.45	174.10	6268
		L_{15} - L_{16}	2.62	4.44	4.16	2.62	7.55	4.38	2.55	4.08	4.14	91.78	85.13	3065
		L_{16} - L_{17}	3.19	4.22	4.49	4.52	5.33	4.97	3.17	4.23	4.39	114.29	155.95	5614
		L_{17} - L_{18}	3.29	4.30	4.90	3.63	4.95	5.03	3.29	4.12	5.81	118.36	153.75	5535
		L_{18} - L_{19}	3.53	4.57	5.64	3.51	4.55	6.02	4.73	5.62	7.07	126.49	68.34	2460
		L_{19} - L_{20}	15.14	23.19	36.02	15.84	22.04	26.92	14.40	28.22	34.03	518.42	73.71	2654

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As-Built Load Rating 5C1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.54
Maximum Moment (End)	1.59
	Operating
Maximum Shear Force	26.96

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												
		$U_0 - L_0$	1.46	1.40	1.63	1.54	2.17	1.72	1.59	1.88	1.73	90.51	79.23	2852
		$U_1 - L_1$	3.40	4.32	3.44	3.70	4.89	5.47	3.68	4.88	5.45	122.57	79.67	2868
		$U_2 - L_2$	4.69	6.34	4.49	5.46	7.09	6.71	5.43	7.09	6.71	161.49	103.37	3721
		$U_3 - L_3$	7.10	9.23	5.68	11.60	11.10	8.66	8.72	11.10	12.11	204.51	192.46	6929
		$U_4 - L_4$	4.45	5.52	4.96	8.94	9.19	8.42	8.94	9.19	8.45	160.06	150.93	5433
		$U_5 - L_5$	3.11	3.97	3.42	3.00	3.94	3.60	2.97	3.94	3.57	106.88	128.23	4616
		$U_6 - L_6$	2.46	4.14	3.23	2.45	3.89	3.24	2.46	3.90	3.24	88.31	104.15	3749
		$U_1 - L_7$	1.61	2.51	3.11	1.61	2.51	3.11	1.61	2.51	3.14	57.81	118.04	4249
		$U_8 - L_8$	3.75	4.51	3.56	3.91	5.33	5.96	3.90	5.33	5.97	128.18	220.75	7947
		$U_9 - L_9$	2.65	2.76	2.41	2.69	3.35	2.89	2.67	3.48	2.86	86.60	125.06	4502
		$U_{10} - L_{10}$	3.15	4.61	3.13	3.21	5.29	4.17	3.16	5.26	4.39	112.80	186.74	6723
		$U_{11} - L_{11}$	3.14	4.26	3.86	3.39	4.82	4.76	3.41	4.85	3.85	113.15	110.77	3988
		$U_{12} - L_{12}$	3.22	4.08	3.08	3.49	4.51	4.90	3.09	4.51	4.92	110.74	118.84	4278
		$U_{13} - L_{13}$	2.57	3.27	3.04	2.82	3.78	4.51	2.82	3.78	4.53	92.47	132.84	4782
		$U_{14} - L_{14}$	4.38	5.60	4.27	11.48	9.70	12.62	11.48	9.70	12.54	153.86	213.19	7675
		$U_{15} - L_{15}$	4.36	5.46	5.94	4.36	5.43	6.08	4.36	5.43	5.87	156.82	164.62	5926
		$U_{16} - L_{16}$	3.02	4.17	4.48	2.99	4.16	4.47	3.01	4.16	4.47	107.67	157.46	5668
		$U_{17} - L_{17}$	2.22	3.26	3.06	2.21	3.28	3.10	2.23	3.34	3.10	79.51	165.45	5956
		$U_{18} - L_{18}$	2.31	3.57	4.04	2.32	3.54	4.04	2.33	3.54	4.04	83.07	116.66	4200
		$U_{19} - L_{19}$	2.63	3.90	5.04	2.62	3.98	4.96	2.61	3.89	5.01	94.11	158.16	5694
		$U_{20} - L_{20}$	1.72	2.66	3.09	1.84	2.79	2.83	1.86	2.67	3.11	61.98	271.63	9779
	Structure 2												
		$U_0 - L_0$	2.82	2.72	2.08	2.82	2.88	2.08	2.81	2.88	2.08	74.71	284.46	10240
		$U_1 - L_1$	3.57	3.53	3.06	3.90	4.82	3.74	3.65	4.38	3.73	110.03	215.12	7744
		$U_2 - L_2$	3.09	3.93	2.85	3.36	4.36	3.42	3.35	4.36	3.42	102.50	140.30	5051
		$U_3 - L_3$	2.72	3.60	2.78	2.88	4.00	3.15	2.88	4.00	3.15	97.86	216.10	7780
		$U_4 - L_4$	2.91	3.74	2.91	3.23	4.16	4.08	3.21	4.16	4.07	104.63	163.99	5904
		$U_5 - L_5$	3.84	4.95	4.30	4.14	5.57	5.70	4.18	5.57	5.72	138.36	182.24	6561
		$U_6 - L_6$	5.46	6.66	5.06	6.84	7.96	7.97	6.84	6.70	8.84	182.30	218.97	7883
		$U_7 - L_7$	4.28	5.33	4.97	7.51	10.17	8.81	7.65	10.14	12.38	154.23	274.35	9877
		$U_8 - L_8$	3.23	3.79	3.54	3.21	3.76	3.55	3.21	3.76	3.54	115.50	122.11	4396
		$U_9 - L_9$	3.63	4.55	4.49	3.63	4.58	4.54	3.65	4.58	4.49	130.63	120.24	4329
		$U_{10} - L_{10}$	3.64	4.80	4.37	3.67	4.82	4.42	3.66	4.82	4.42	131.13	177.37	6385
		$U_{11} - L_{11}$	3.30	4.34	3.54	3.31	4.37	3.54	3.28	4.37	3.54	118.24	214.83	7734
		$U_{12} - L_{12}$	3.30	4.34	3.18	3.27	4.35	3.48	3.27	4.32	3.48	114.56	270.69	9745
		$U_{13} - L_{13}$	2.89	3.28	3.47	2.72	3.29	3.47	2.71	3.29	3.52	99.82	287.69	10357
		$U_{14} - L_{14}$	3.72	4.53	4.73	5.15	5.30	7.48	5.18	5.30	7.48	134.03	408.53	14707
		$U_{15} - L_{15}$	4.61	4.41	3.62	4.80	4.79	4.30	4.81	3.80	4.30	130.48	278.02	10009
		$U_{16} - L_{16}$	3.91	4.32	3.13	3.93	4.89	4.07	3.90	4.66	3.85	112.52	243.00	8748
		$U_{17} - L_{17}$	3.45	3.97	3.28	3.74	4.44	3.90	3.74	4.46	3.90	118.09	173.12	6232
		$U_{18} - L_{18}$	3.22	4.03	3.50	3.36	4.41	4.08	3.37	4.41	4.08	116.04	128.64	4631
		$U_{19} - L_{19}$	3.08	3.72	3.24	3.28	4.18	3.87	2.98	4.18	3.90	107.29	177.81	6401
		$U_{20} - L_{20}$	2.96	3.66	2.99	3.20	4.17	3.99	3.19	4.17	3.99	106.53	161.50	5814
		$U_{21} - L_{21}$	3.37	4.11	4.43	3.49	4.45	6.45	3.50	4.45	6.49	121.20	164.57	5924
		$U_{22} - L_{22}$	4.48	5.78	4.63	9.04	10.70	14.76	17.73	13.20	16.88	161.10	277.46	9988
		$U_{23} - L_{23}$	3.69	4.52	4.46	3.71	4.50	4.46	3.68	4.50	4.46	132.65	170.69	6145
		$U_{24} - L_{24}$	2.91	3.81	3.59	2.89	3.80	3.61	2.90	3.80	3.61	104.09	155.16	5586
		$U_{25} - L_{25}$	2.80	3.66	3.54	2.81	3.66	3.54	2.80	3.66	3.54	100.87	148.10	5332
		$U_{26} - L_{26}$	3.15	3.98	3.91	3.18	3.96	3.96	3.16	3.96	3.96	113.58	111.70	4021
		$U_{27} - L_{27}$	3.23	3.88	4.41	3.25	3.85	4.39	3.24	3.85	4.39	116.36	137.65	4955
		$U_{28} - L_{28}$	3.40	3.89	3.69	3.42	3.90	3.90	3.42	3.90	3.90	122.51	182.30	6563
		$U_{29} - L_{29}$	3.78	4.22	5.02	3.76	4.02	5.26	3.77	4.04	5.02	135.35	203.95	7342
		$U_{30} - L_{30}$	4.69	4.77	4.51	5.98	5.44	6.04	5.96	5.44	6.04	162.49	401.56	14456
		$U_{31} - L_{31}$	4.21	3.21	2.50	4.24	3.92	3.19	4.25	3.90	3.20	89.98	408.35	14701
		$U_{32} - L_{32}$	4.07	4.68	2.92	4.05	5.24	3.64	4.08	5.26	3.64	105.06	352.28	12682
		$U_{33} - L_{33}$	3.91	4.72	3.35	4.12	5.25	4.30	4.10	4.91	4.27	120.46	251.25	9045
		$U_{34} - L_{34}$	4.39	5.20	3.22	4.78	5.85	4.90	4.40	5.90	4.88	116.05	206.32	7427
		$U_{35} - L_{35}$	3.96	4.76	3.52	4.24	5.25	4.59	4.24	5.25	4.59	126.71	127.83	4602
		$U_{36} - L_{36}$	3.34	3.97	3.83	3.37	4.09	4.59	3.35	4.09	4.54	120.39	120.93	4353
		$U_{37} - L_{37}$	4.45	5.18	4.25	12.90	9.99	8.93	12.98	17.15	11.40	153.01	241.40	8690
		$U_{38} - L_{38}$	5.83	5.54	6.79	5.81	5.49	8.16	5.81	5.49	8.16	197.66	241.00	8676
		$U_{39} - L_{39}$	4.34	5.13	5.50	4.36	5.13	6.23	4.35	5.13	5.51	156.30	195.80	7049
		$U_{40} - L_{40}$	3.04	3.94	3.80	3.02	3.95	3.80	3.05	3.95	3.80	108.70	150.91	5433
		$U_{41} - L_{41}$	2.95	3.70	3.15	2.95	3.73	3.15	2.95	3.74	3.15	106.04	189.09	6807
		$U_{42} - L_{42}$	3.03	3.89	4.10	3.04	3.88	4.10	3.02	3.88	4.10	108.80	119.15	4290
		$U_{43} - L_{43}$	3.26	3.95	4.93	3.26	3.96	4.93	3.26	3.96	4.93	117.40	157.93	5686
		$U_{44} - L_{44}$	2.78	2.84	4.25	2.72	2.93	4.00	2.72	3.15	4.17	97.87	273.48	9845
	Structure 3												
		$U_0 - L_0$	2.34	2.52	1.71	2.34	3.00	1.70	2.33	2.99	1.92	61.35	251.07	9039
		$U_1 - L_1$	3.39	3.62	3.28	3.58	4.80	3.88	3.59	4.48	3.88	118.02	210.41	7575
		$U_2 - L_2$	3.00	3.90	2.66	3.39	4.61	3.49	3.01	4.61	3.47	95.94	145.42	5235
		$U_3 - L_3$	2.54	3.47	2.39	2.86	3.90	2.75	2.84	3.88	2.75	85.87	199.54	7184
		$U_4 - L_4$	3.14	4.27	3.38	3.23	4.54	5.29	3.22	4.54	4.54	113.11	162.76	5859
		$U_5 - L_5$	4.29	5.40	4.48	4.98	6.33	7.91	4.99	6.33	7.91	154.44	176.25	6345
		$U_6 - L_6$	4.55	6.18	4.27	11.21	10.38	8.06	11.14	10.38	11.14	153.70	254.29	9154
		$U_7 - L_7$	2.89	3.39	3.59	2.89	3.56	3.62	2.90	3.41	3.55	103.86	130.45	4696
		$U_8 - L_8$	3.24	4.19	4.07	3.24	4.26	4.30	3.25	4.26	4.07	116.75	108.76	3915
		$U_9 - L_9$	3.36	4.43	3.67	3.37	4.39	4.28	3.37	4.39	3.97	120.84	98.05	3530
		$U_{10} - L_{10}$	3.47	4.66	3.45	3.44	4.62	3.43	3.47	4.62	3.42	123.00	148.98	5363
		$U_{11} - L_{11}$	2.41	2.88	3.25	2.39	2.88	3.35	2.40	2.90	3.33	86.21	90.37	3253
		$U_{12} - L_{12}$	3.73	4.34	3.63	4.79	5.04	6.26	4.80	5.04	6.18	130.71	239.42	8619
		$U_{13} - L_{13}$	2.80	2.58	2.45	3.09	2.97	2.85	3.09	2.97	2.44	87.77	162.80	5861
		$U_{14} - L_{14}$	3.34	4.10	3.14	3.45	5.10	4.59	3.52	5.12	4.40	113.04	134.11	4828
		$U_{15} - L_{15}$	3.34	4.07	2.98	4.31	4.88	4.74	4.22	4.85	4.74	107.33	156.38	5630
		$U_{16} - L_{16}$	4.28	4.98	3.81	8.54	8.89	7.14	12.71	8.90	17.55	137.30	151.82	5465
		$U_{17} - L_{17}$	8.21	7.37	8.39	8.21	7.45	9.42	8.21	7.45	8.35	265.40	185.95	6694
		$U_{18} - L_{18}$	5.18	7.55	7.41	5.03	6.07	8.26	5.04	6.07	7.43	181.15	102.81	3701
		$U_{19} - L_{19}$	3.18	4.28	5.56	3.00	4.14	5.51	3.00	4.14	5.37	107.92	60.91	2193
		$U_{20} - L_{20}$	1.38	1.54	3.12	1.63	2.03	3.19	1.83	2.08	3.20	49.54	88.89	3200

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 5C1

Controlling As-Inspected F

	Operating
Maximum Axial Force	1.38
Maximum Moment (Start)	1.54
Maximum Moment (End)	1.59
	Operating
Maximum Shear Force	26.96

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	3.88	5.37	5.41	4.13	5.25	4.66	4.13	5.27	4.58	139.85	144.06	5186
		U_1 - L_2	3.87	5.27	5.79	4.34	9.94	5.09	4.09	5.72	6.67	139.41	804.97	28979
		U_2 - L_3	6.49	7.25	9.24	7.28	8.05	7.55	10.89	8.57	9.04	233.54	1219.09	43887
		U_3 - L_4	3.69	4.04	4.98	5.33	6.32	5.40	6.24	4.29	10.48	132.79	1534.85	55255
		U_3 - L_4	3.43	5.23	5.37	3.75	5.38	5.86	5.85	6.88	7.74	123.36	1030.83	37110
		U_4 - L_5	3.57	5.04	5.93	3.51	5.19	6.02	3.57	5.04	6.11	126.39	348.63	12551
		U_5 - L_6	2.53	4.15	5.06	2.65	3.96	5.05	2.67	4.13	5.18	91.07	223.67	8052
		U_5 - L_7	2.61	3.74	6.20	2.49	3.68	6.38	2.66	3.73	6.24	89.74	340.70	12265
		U_6 - L_8	4.22	4.54	4.51	4.21	4.95	4.52	4.26	4.54	4.88	151.52	507.64	18275
		U_8 - L_{10}	4.14	4.94	4.34	4.43	6.67	4.34	4.81	6.08	5.00	149.02	349.59	12585
		U_{10} - L_{11}	3.71	5.19	4.88	3.74	5.36	4.72	4.23	6.20	5.71	133.60	370.75	13347
		U_{11} - L_{12}	3.49	4.83	4.30	3.49	5.51	4.19	4.38	5.81	4.30	125.49	447.69	16117
		U_{12} - L_{13}	3.19	3.77	4.45	3.74	3.77	4.42	3.73	4.75	4.57	114.79	381.66	13740
		U_{13} - L_{14}	2.94	3.33	4.78	2.93	3.33	4.63	4.36	3.92	4.99	105.62	845.26	30429
		U_{15} - L_{14}	4.52	4.59	6.79	5.51	5.81	10.34	4.52	5.95	12.77	162.65	1072.75	38619
		U_{16} - L_{15}	3.28	4.93	6.01	3.75	5.99	6.17	3.63	4.96	6.01	118.16	552.90	19905
		U_{17} - L_{16}	2.43	4.01	3.72	2.48	4.26	3.83	2.47	3.98	3.68	87.59	455.83	16410
		U_{18} - L_{17}	2.55	4.24	4.27	2.55	4.28	4.45	2.55	4.29	4.27	91.67	252.48	9089
		U_{19} - L_{18}	2.45	4.19	4.47	2.43	4.13	4.47	2.45	4.22	4.47	87.36	265.29	9550
		U_{20} - L_{19}	2.57	3.84	4.83	2.72	4.38	4.86	2.60	3.70	4.86	92.58	397.25	14301
	Structure 2	U_0 - L_1	3.72	4.07	3.50	3.73	3.91	3.14	3.73	3.91	3.27	113.05	341.45	12292
		U_1 - L_2	3.65	4.55	3.18	3.67	4.55	3.18	4.14	5.40	3.51	114.41	304.56	10964
		U_2 - L_3	3.06	3.99	3.32	3.06	4.11	3.39	3.39	4.27	3.27	110.04	262.42	9447
		U_3 - L_4	3.22	3.98	3.36	3.31	4.14	3.36	3.19	4.71	4.08	114.86	473.80	17057
		U_4 - L_5	3.43	4.12	5.70	3.43	4.14	5.19	3.97	4.75	5.66	123.58	503.12	18112
		U_5 - L_6	4.92	5.53	6.80	4.82	5.52	8.69	5.33	5.61	7.21	173.55	651.28	23446
		U_5 - L_7	3.26	3.22	3.67	3.27	3.23	4.22	3.27	3.23	3.41	116.03	897.20	32299
		U_7 - L_7	3.46	4.41	4.49	4.50	5.21	5.00	4.43	4.58	4.61	124.49	453.40	16323
		U_8 - L_8	3.07	4.13	3.77	3.20	4.60	3.73	3.24	4.21	3.85	110.53	308.92	11121
		U_8 - L_9	3.13	4.32	4.09	3.19	4.70	4.06	3.13	4.30	4.09	112.60	330.97	11915
		U_{11} - L_{10}	3.00	4.38	3.99	2.99	4.57	4.04	3.00	4.34	4.08	107.48	322.92	11625
		U_{12} - L_{11}	2.90	3.56	3.79	2.99	3.97	3.86	2.92	3.87	3.82	104.55	318.24	11456
		U_{13} - L_{12}	2.49	3.20	4.02	2.55	3.27	3.85	2.45	3.20	3.80	88.06	280.34	10092
		U_{14} - L_{13}	3.02	3.42	6.29	3.08	3.84	6.18	3.03	3.69	6.29	108.65	411.76	14823
		U_{14} - L_{15}	4.34	3.97	3.76	4.32	4.16	3.77	4.33	3.97	3.76	135.28	502.59	18093
		U_{15} - L_{16}	3.83	3.41	2.74	3.79	3.41	2.74	3.94	3.41	2.94	98.74	325.67	11724
		U_{16} - L_{17}	3.47	4.25	3.61	3.47	4.25	3.61	3.44	4.25	3.77	123.87	316.72	11402
		U_{17} - L_{18}	3.11	4.12	3.55	3.10	4.28	3.58	3.48	4.47	3.55	111.43	290.38	10454
		U_{19} - L_{18}	3.52	4.46	3.89	3.44	4.56	3.92	3.54	4.68	4.64	123.86	302.89	10904
		U_{19} - L_{20}	3.47	4.37	4.30	3.47	4.38	4.30	4.10	5.05	4.90	125.10	314.20	11311
		U_{20} - L_{21}	3.20	3.74	4.30	3.20	3.74	5.24	3.54	4.31	5.16	115.16	494.84	17814
		U_{21} - L_{22}	4.82	5.36	6.56	5.01	5.82	7.09	5.61	6.28	7.91	173.37	808.87	29119
		U_{21} - L_{22}	4.36	5.65	6.46	5.30	6.82	6.76	5.87	7.47	6.27	156.97	897.53	32311
		U_{24} - L_{23}	3.05	4.35	4.08	3.57	5.09	4.30	3.38	4.43	4.16	109.76	528.36	19021
		U_{25} - L_{24}	3.34	4.74	4.35	3.47	5.34	4.34	3.35	4.75	4.44	120.33	312.94	11266
		U_{26} - L_{25}	3.34	4.51	4.34	3.39	4.96	4.26	3.36	4.48	4.34	120.07	290.80	10469
		U_{27} - L_{26}	3.16	4.09	3.72	3.19	4.12	3.78	3.16	4.08	3.75	113.60	280.61	10102
		U_{28} - L_{27}	3.34	3.93	3.94	3.45	4.04	3.94	3.34	3.93	3.92	120.08	281.43	10131
		U_{29} - L_{28}	3.17	3.24	4.39	3.15	3.31	4.19	3.17	3.31	4.06	113.38	274.57	9884
		U_{30} - L_{29}	3.55	3.39	6.29	3.55	3.73	6.29	3.70	3.75	6.29	122.06	436.09	15699
		U_{30} - L_{31}	4.88	4.30	3.76	4.93	4.32	3.75	4.91	4.30	3.73	134.28	523.97	18863
		U_{31} - L_{32}	3.81	3.94	2.82	4.37	3.88	2.80	3.81	3.88	2.91	100.82	348.60	12550
		U_{32} - L_{33}	3.87	4.53	3.50	3.87	4.60	3.59	4.21	4.85	3.46	124.50	356.91	12849
		U_{33} - L_{34}	3.96	4.73	3.47	3.87	4.96	3.47	4.01	5.70	4.13	124.96	339.97	12239
		U_{34} - L_{35}	3.74	4.27	3.67	3.74	4.26	3.57	4.23	4.99	4.02	128.41	330.82	11910
		U_{35} - L_{36}	3.55	4.06	3.84	3.55	4.33	3.72	3.94	4.60	4.13	127.69	293.00	10548
		U_{36} - L_{37}	4.00	4.25	4.64	4.07	4.43	4.99	4.63	5.22	5.37	144.08	378.48	13625
		U_{38} - L_{37}	2.68	3.06	3.60	3.32	3.76	6.94	3.49	3.78	4.22	96.36	805.16	28986
		U_{39} - L_{38}	4.42	4.84	7.69	5.48	5.94	7.71	5.67	5.94	8.56	159.00	782.68	28176
		U_{40} - L_{39}	3.70	4.63	4.96	4.19	5.30	5.08	3.84	4.66	4.96	133.15	539.99	19440
		U_{41} - L_{40}	3.16	4.27	3.68	3.13	4.89	3.79	3.13	4.26	3.68	112.75	465.92	16773
		U_{42} - L_{41}	3.07	4.25	3.77	3.16	4.42	3.87	3.06	4.26	3.77	110.26	248.38	8942
		U_{43} - L_{42}	3.24	4.51	4.68	3.23	4.40	4.72	3.24	4.49	4.68	116.27	261.89	9428
		U_{44} - L_{43}	3.32	4.19	5.22	3.22	4.07	5.22	3.24	4.11	5.29	116.06	382.52	13771
	Structure 3	U_0 - L_1	3.45	4.08	3.68	3.11	3.67	3.22	3.11	3.67	3.28	112.01	280.07	10082
		U_1 - L_2	3.63	4.32	3.20	3.73	4.96	3.20	3.63	4.61	3.19	115.01	320.57	11540
		U_2 - L_3	3.25	4.23	3.58	3.25	4.20	3.59	3.27	5.10	3.99	117.05	269.58	9705
		U_3 - L_4	3.03	3.92	3.74	3.06	4.16	3.57	3.36	4.53	4.27	109.04	473.02	17029
		U_4 - L_5	3.99	4.59	5.37	4.13	4.92	5.89	3.99	5.77	5.89	143.55	539.42	19419
		U_5 - L_6	5.65	4.67	8.01	6.83	6.27	9.49	5.69	4.60	6.77	165.57	996.11	35860
		U_7 - L_8	3.17	3.85	3.80	3.75	4.49	4.95	4.72	4.43	4.96	113.97	1053.33	37920
		U_8 - L_7	3.22	4.20	3.85	3.53	4.84	4.72	3.24	4.22	4.75	115.82	389.25	14013
		U_8 - L_8	3.33	4.98	4.88	3.63	5.38	5.05	3.32	5.03	4.26	119.66	444.30	15995
		U_8 - L_9	3.73	4.75	5.61	3.77	5.22	5.80	3.93	5.45	5.81	134.29	337.81	12161
		U_{11} - L_{10}	3.55	4.77	6.11	3.54	4.88	6.36	3.55	4.80	6.19	127.44	293.58	10569
		U_{12} - L_{11}	3.63	4.41	7.04	3.71	4.48	6.99	3.66	4.48	6.85	130.60	423.67	15252
		U_{12} - L_{13}	3.87	3.85	3.85	3.93	4.07	3.75	3.86	3.87	3.93	134.90	402.05	14474
		U_{13} - L_{14}	3.89	4.16	3.69	3.88	4.23	3.72	4.24	4.57	4.00	132.80	260.11	9364
		U_{14} - L_{15}	4.34	5.09	5.33	5.18	5.50	5.34	5.48	6.16	6.06	156.31	381.64	13739
		U_{15} - L_{16}	4.26	5.02	5.48	6.85	10.40	5.46	13.66	6.78	6.66	153.31	972.98	35027
		U_{17} - L_{16}	3.88	4.11	5.10	7.02	5.41	9.10	5.49	27.21	7.35	139.72	1521.56	54776
		U_{18} - L_{17}	5.76	5.95	9.91	5.90	9.45	11.31	5.88	6.22	10.34	207.26	1246.05	44858
		U_{19} - L_{18}	3.59	5.74	6.32	3.59	5.91	6.71	3.77	5.73	6.62	129.39	598.71	21553
		U_{20} - L_{19}	3.63	4.51	7.06	7.96	7.28	6.42	3.49	6.00	6.82	125.58	269.95	9718